Solid Waste Integrated Forecast Technical (SWIFT) Report

FY2001-FY2046
2001.0

Vol. I
August, 2000
INFORMATION CLEARANCE FORM

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☐ Full Paper
☒ Report
☐ Other

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C. Title


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SWIFT Report Table of Contents

Select (click on) the linked names of functional groups, generators, waste classes, and tools to view the summary analysis and data; click on the [Annual Totals] text to view the associated volume details by year and waste class.

SWIFT FY2001 Report [Annual Totals]

SWIFT FY2001 Report Overview

Functional Groups and Generators

Analytical Services [Annual Totals]

222-S Analytical Laboratory [Annual Totals]
6266 Waste Sampling & Characterization Facility [Annual Totals]

Environmental Restoration [Annual Totals]

Surplus Facilities

Infrastructure [Annual Totals]

DynCorp

Liquid Waste [Annual Totals]

200 Area Liquid Waste Processing Facilities [Annual Totals]
300 Area Liquid Effluent Facilities [Annual Totals]

Offsite [Annual Totals]

Ames Laboratory-Ames, Iowa [Annual Totals]
Argonne National Laboratory-East [Annual Totals]
Bates Accelerator-Massachusetts [Annual Totals]
Battelle Columbus Laboratories [Annual Totals]
Bettis Atomic Power-Laboratory [Annual Totals]
Bettis Atomic Power-Shipyards [Annual Totals]
Brookhaven National Laboratory [Annual Totals]
Energy Technology Engineering Center (ETEC) [Annual Totals]
Fermi National Accelerator Laboratory  [Annual Totals]
Knolls Atomic Power-Laboratory  [Annual Totals]
Knolls Atomic Power-Shipyards  [Annual Totals]
Lawrence Berkeley Laboratory  [Annual Totals]
Missouri University Research Reactor  [Annual Totals]
Paducah Energy Systems  [Annual Totals]
Parks Township  [Annual Totals]
Pearl Harbor Naval Shipyards  [Annual Totals]
Portsmouth Energy Systems  [Annual Totals]
Portsmouth Naval Shipyards  [Annual Totals]
Princeton Plasma Physics laboratory  [Annual Totals]
Puget Sound Naval Shipyards  [Annual Totals]
Rocky Flats  [Annual Totals]
Siemens Power Corp.  [Annual Totals]
Stanford Linear Accelerator Center  [Annual Totals]
University of California-Davis (LEHR)  [Annual Totals]

PNPL  [Annual Totals]
Pacific Northwest National Laboratory

River Protection Program  [Annual Totals]

BNFL Tank Waste Pretreatment and Vitrification  [Annual Totals]
DST Retrieval Phase II (10 tanks)  [Annual Totals]
SST Long Length Equipment  [Annual Totals]
SST Retrieval (149 tanks)  [Annual Totals]
SST/DST Tank Farm Operations  [Annual Totals]
Vadose Zone Well Drilling  [Annual Totals]
W-211 DST Retrieval Systems (10 tanks)  [Annual Totals]
W-314 Tank Farm Restoration  [Annual Totals]
Waste Feed Delivery System (8 tanks)  [Annual Totals]

Solid Waste  [Annual Totals]

218 E/W Low Level Burial Grounds  [Annual Totals]
221-T/2706-T T-Plant Operations  [Annual Totals]
224-T TRU Storage & Assay Facility
2336-W Waste Receiving and Processing (WRAP) Facility  [Annual Totals]
Central Waste Complex  [Annual Totals]

Spent Nuclear Fuel  [Annual Totals]

100-K K-Basin Fuel Retrieval
100-K K-Basin Operations  [Annual Totals]
K-Basin Fuel Sampling Project

Transition Activities  [Annual Totals]

200 Area Accelerated Deactivation  [Annual Totals]
2345-Z Plutonium Finishing Plant  [Annual Totals]
300 Area Accelerated Closure Project  [Annual Totals]
303-K Fuels Fabrication Transition  [Annual Totals]
309 PRTR Vault Waste  [Annual Totals]
324 Building  [Annual Totals]
327 Building  [Annual Totals]
Fast Flux Test Facility  [Annual Totals]
Waste Classes

LLW I
LLW III
CH MLLW
RH MLLW
CH TRU(M) WASTE
RH TRU(M) WASTE
GTC III WASTE
Hazardous Waste (HAZ)

Reports

Forecast Comparison, FY2001.0 to FY2000.0 Forecast
Solid Waste Generators: by Total Volume
Solid Waste Generators: by Functional Group and Total Volume

Tools

Navigating in SWIFT FY2001
Web Site Map
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Welcome

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

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

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

This report does not include:

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

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

SWIFT 2001.0 Report Sections
Additional information is available in specialty reports/sections; highlighted text identifies the hypertext locations.

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

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

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

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

- A total of 175,110 m$^3$ of LLW, MLLW, and TRU(M) waste is forecast for shipment to Hanford Waste Management (WM) over the life cycle of the site (2046).

- Based on ranges provided by the various programs the LLW, MLLW, and TRU(M) waste estimate could fluctuate between 95,820 m$^3$ and 330,770 m$^3$.

- As shown in the waste class distribution chart below, LLW-I will be the most common waste class representing 51% (89,740 m$^3$) of the waste. Large volumes of RH_MLLW (30,990 m$^3$), CH_MLLW (26,690 m$^3$), and CH_TRU(M) waste (15,900 m$^3$) are also forecast. Smaller amounts of other waste classes are also forecast, as shown below.

- The Functional Group chart below shows that the River Protection Program and Offsite are the largest generators of LLW, MLLW, and TRU(M) waste, forecasting 53% (92,470 m$^3$) and 17% (30,090 m$^3$) of the total waste volume respectively. Other groups forecast large amounts of waste are also shown in the chart.

- The LLW, MLLW, and TRU(M) waste forecast increased 12% (18,260 m$^3$) from the FY2000.0 forecast of 156,850 m$^3$. This overall increase results from increases in the River Protection Program and Environmental Restoration countered by decreases in Transition Activities. Forecast changes by waste class can be seen in the table below.
### Waste Class Data

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

### Waste Class Distribution

<table>
<thead>
<tr>
<th>Waste Class</th>
<th>FY2001.0 Forecast (m³)</th>
<th>FY2000.9 Forecast (m³)</th>
<th>FY1999.9 Forecast (m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LLW_I</td>
<td>89,740</td>
<td>94,680</td>
<td>98,780</td>
</tr>
<tr>
<td>LLW_II</td>
<td>7,870</td>
<td>5,890</td>
<td>39,950</td>
</tr>
<tr>
<td>CH_MLLW</td>
<td>29,690</td>
<td>15,700</td>
<td>24,110</td>
</tr>
<tr>
<td>RH_MLLW</td>
<td>30,990</td>
<td>30,540</td>
<td>28,740</td>
</tr>
<tr>
<td>CH_TRU(M)</td>
<td>15,800</td>
<td>8,300</td>
<td>7,300</td>
</tr>
<tr>
<td>RH_TRU(M)</td>
<td>920</td>
<td>1,560</td>
<td>1,680</td>
</tr>
<tr>
<td>GTCII</td>
<td>6</td>
<td>6</td>
<td>--</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>175,110</strong></td>
<td><strong>156,850</strong></td>
<td><strong>208,570</strong></td>
</tr>
</tbody>
</table>

### Functional Group Distribution

<table>
<thead>
<tr>
<th>Functional Group</th>
<th>FY2001.0 Forecast (m³)</th>
<th>FY2000.9 Forecast (m³)</th>
<th>FY1999.9 Forecast (m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environmental Restoration</td>
<td>14% (25,070 m³)</td>
<td>14% (11,670 m³)</td>
<td>14% (9,070 m³)</td>
</tr>
<tr>
<td>Transition Activities</td>
<td>9% (15,810 m³)</td>
<td>9% (15,810 m³)</td>
<td>9% (15,810 m³)</td>
</tr>
<tr>
<td>River Protection Program (RPP)</td>
<td>53% (92,470 m³)</td>
<td>53% (92,470 m³)</td>
<td>53% (92,470 m³)</td>
</tr>
<tr>
<td>Offsite</td>
<td>17% (30,990 m³)</td>
<td>17% (30,990 m³)</td>
<td>17% (30,990 m³)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>175,110</strong></td>
<td><strong>156,850</strong></td>
<td><strong>208,570</strong></td>
</tr>
</tbody>
</table>

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

Functional Group Distribution

- Other: 13% (12,830 m3)
- Infrastructure: 7% (7,140 m3)
- Transition Activities: 13% (12,950 m3)
- Offsite: 31% (30,020 m3)

Soil Gravel
- Organic Solids: 2% (1,640 m3)
- Inorganic Solids: 12% (12,060 m3)
- Other: <1% (210 m3)

Soil Gravel
- Other: 84% (91,540 m3)

Physical Waste Form

- Debris Wastes: 84% (91,540 m3)

Forecast Total
LLW Total = 97,600 m3

Container Distribution

- Other: 6% (5,710 m3)
- 208 Liter Drums: 17% (16,680 m3)
- Medium Boxes: 32% (31,310 m3)
- Small Boxes: 13% (18,950 m3)
- MB-Vs: 26% (24,960 m3)

Forecast Total
LLW Total = 97,600 m3
MLLW Data

Functional Group Distribution

<table>
<thead>
<tr>
<th>Transition Activities</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Liquid Waste</td>
<td>4% (2,210 m³)</td>
</tr>
<tr>
<td>Analytical Services</td>
<td>4% (2,380 m³)</td>
</tr>
</tbody>
</table>

Hazardous Characteristic Distribution

<table>
<thead>
<tr>
<th>Metals</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ignitable</td>
<td>3% (1,780 m³)</td>
</tr>
<tr>
<td>Corrosive</td>
<td>3% (1,610 m³)</td>
</tr>
<tr>
<td>Metals + VA State Regulated</td>
<td>2% (2,090 m³)</td>
</tr>
<tr>
<td>Organic</td>
<td>25% (17,750 m³)</td>
</tr>
</tbody>
</table>

Physical Waste Form Distribution

Inorganic Solids

<table>
<thead>
<tr>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>2% (1,210 m³)</td>
</tr>
</tbody>
</table>

Organic Solids

<table>
<thead>
<tr>
<th>Shielding</th>
</tr>
</thead>
<tbody>
<tr>
<td>27% (16,480 m³)</td>
</tr>
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</table>

Debris Wastes

<table>
<thead>
<tr>
<th>LECs</th>
</tr>
</thead>
<tbody>
<tr>
<td>4% (28,130 m³)</td>
</tr>
</tbody>
</table>

Container

<table>
<thead>
<tr>
<th>Small Boxes</th>
</tr>
</thead>
<tbody>
<tr>
<td>13% (8,000 m³)</td>
</tr>
</tbody>
</table>

Medium Boxes

<table>
<thead>
<tr>
<th>Medium Boxes</th>
</tr>
</thead>
<tbody>
<tr>
<td>16% (9,460 m³)</td>
</tr>
</tbody>
</table>

LDR Waste Stream Identification Distribution

<table>
<thead>
<tr>
<th>MLLW-07</th>
</tr>
</thead>
<tbody>
<tr>
<td>4% (2,360 m³)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MLLW-04 (Non-OC)</th>
</tr>
</thead>
<tbody>
<tr>
<td>19% (11,390 m³)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MLLW-04 (OC)</th>
</tr>
</thead>
<tbody>
<tr>
<td>23% (13,660 m³)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MLLW-01</th>
</tr>
</thead>
<tbody>
<tr>
<td>51% (31,010 m³)</td>
</tr>
</tbody>
</table>

Forecast Total
MLLW Total = 60,570 m³
### TRU(M) Waste Data

#### Functional Group Distribution

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>LLW_J</td>
<td>4,890</td>
<td>5,880</td>
<td>5,150</td>
<td>3,270</td>
<td>3,130</td>
<td>3,720</td>
<td>3,710</td>
<td>3,000</td>
<td>3,110</td>
<td>3,350</td>
<td>67,580</td>
</tr>
<tr>
<td>LLW_II</td>
<td>270</td>
<td>760</td>
<td>710</td>
<td>860</td>
<td>770</td>
<td>650</td>
<td>410</td>
<td>330</td>
<td>360</td>
<td>330</td>
<td>2,370</td>
</tr>
<tr>
<td>CH_MLLV</td>
<td>330</td>
<td>800</td>
<td>590</td>
<td>580</td>
<td>720</td>
<td>830</td>
<td>850</td>
<td>1,120</td>
<td>1,120</td>
<td>1,340</td>
<td>21,570</td>
</tr>
<tr>
<td>FH_MLLV</td>
<td>7</td>
<td>40</td>
<td>220</td>
<td>600</td>
<td>650</td>
<td>430</td>
<td>250</td>
<td>650</td>
<td>410</td>
<td>410</td>
<td>27,520</td>
</tr>
<tr>
<td>CH_TRU(M)</td>
<td>20</td>
<td>50</td>
<td>240</td>
<td>510</td>
<td>430</td>
<td>380</td>
<td>240</td>
<td>280</td>
<td>340</td>
<td>350</td>
<td>12,890</td>
</tr>
<tr>
<td>FH_TRU(M)</td>
<td>-</td>
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<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>GTL_III</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Total</td>
<td>6,230</td>
<td>7,220</td>
<td>6,880</td>
<td>6,470</td>
<td>5,690</td>
<td>5,670</td>
<td>5,240</td>
<td>5,500</td>
<td>5,340</td>
<td>5,620</td>
<td>123,980</td>
</tr>
</tbody>
</table>

#### Annual Waste Class Volumes

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

<table>
<thead>
<tr>
<th>Summary Waste Volume (m³)</th>
<th>Actual Precons.</th>
<th>FY2001 &amp; Forecast Volumes</th>
</tr>
</thead>
<tbody>
<tr>
<td>LLW_I</td>
<td>4,890</td>
<td>5,880</td>
</tr>
<tr>
<td>LLW_II</td>
<td>270</td>
<td>760</td>
</tr>
<tr>
<td>CH_MLLV</td>
<td>330</td>
<td>800</td>
</tr>
<tr>
<td>FH_MLLV</td>
<td>7</td>
<td>40</td>
</tr>
<tr>
<td>CH_TRU(M)</td>
<td>20</td>
<td>50</td>
</tr>
<tr>
<td>FH_TRU(M)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>GTL_III</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Total</td>
<td>6,230</td>
<td>7,220</td>
</tr>
</tbody>
</table>

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

The majority of LLW, MLLW, and TRU(M) waste is forecast for the period 2000 through
2028, during which time many generators expect to complete their waste-generating activities. A large amount (10,280 m³) of TRU(M) waste, however, has been added to the forecast by Environmental Restoration. By far the largest contributor to the overall forecast is the River Protection Program. Baseline volumes significantly decrease in 2029 with the assumed completion of the tank waste treatment projects.

**Annual Baseline Volumes by Waste Class**

**Annual LLW Baseline Volumes**

**Annual MLLW Baseline Volumes**

**Annual TRU(M) Waste Baseline Volumes**
Summary Table (LLW, MLLW, and TRU(M) waste volumes in m³)

<table>
<thead>
<tr>
<th>Functional Groups</th>
<th>LLW_I</th>
<th>LLW_III</th>
<th>CH_MLLW</th>
<th>RH_MLLW</th>
<th>CH_TRU(M)</th>
<th>RH_TRU(M)</th>
<th>FY 2001.9 Forecast</th>
<th>% of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>River Protection Program</td>
<td>34,240</td>
<td>1,220</td>
<td>23,970</td>
<td>30,880</td>
<td>1,480</td>
<td>570</td>
<td>92,470</td>
<td>53%</td>
</tr>
<tr>
<td>Offsite</td>
<td>27,320</td>
<td>2,700</td>
<td>40</td>
<td>--</td>
<td>5</td>
<td>40</td>
<td>30,090</td>
<td>17%</td>
</tr>
<tr>
<td>Transition Activities</td>
<td>10,630</td>
<td>1,750</td>
<td>590</td>
<td>6</td>
<td>2,770</td>
<td>90</td>
<td>15,810</td>
<td>9%</td>
</tr>
<tr>
<td>Environmental Restoration</td>
<td>1,800</td>
<td>--</td>
<td>50</td>
<td>--</td>
<td>1,340</td>
<td>100</td>
<td>11,870</td>
<td>7%</td>
</tr>
<tr>
<td>Infrastructure</td>
<td>7,140</td>
<td>--</td>
<td>10</td>
<td>--</td>
<td>--</td>
<td>7,150</td>
<td>4%</td>
<td></td>
</tr>
<tr>
<td>Analytical Services</td>
<td>2,450</td>
<td>2,480</td>
<td>2,380</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>6,940</td>
<td>4%</td>
</tr>
<tr>
<td>Liquid Waste</td>
<td>4,700</td>
<td>--</td>
<td>2,210</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>6,900</td>
<td>4%</td>
</tr>
<tr>
<td>Solid Waste</td>
<td>2,380</td>
<td>--</td>
<td>230</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>2,590</td>
<td>1%</td>
</tr>
<tr>
<td>Spent Nuclear Fuel</td>
<td>500</td>
<td>--</td>
<td>40</td>
<td>--</td>
<td>280</td>
<td>120</td>
<td>940</td>
<td>&lt;1%</td>
</tr>
<tr>
<td>Pacific Northwest National Lab</td>
<td>240</td>
<td>90</td>
<td>170</td>
<td>--</td>
<td>30</td>
<td>10</td>
<td>540</td>
<td>&lt;1%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>68,740</td>
<td>7,970</td>
<td>29,690</td>
<td>30,990</td>
<td>15,900</td>
<td>920</td>
<td>175,110</td>
<td>100%</td>
</tr>
</tbody>
</table>

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

Forecast Accuracy

- The overall trend in the forecast accuracy has improved significantly in recent years. In the first three years of the forecast (1990-1992), an average of only about 45% of forecasted waste was actually received but in the last seven years the average has been approximately 106%.

- The FY 1993 and FY 1994 receipt data include backlog wastes from Tank Farms resulting in more waste being received than was forecasted since these wastes weren't included in the forecasts for these years.

- Waste from offsite generators has been excluded from the comparison because the forecasts are technical in nature and don't reflect the changing political environment typically affecting receipts from offsite.

- A comparison of the FY 2000 receipts to the forecasted volumes will be added to the graph when year-end receipt information is available.
Comparison to Previous Baseline(s)

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

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

<table>
<thead>
<tr>
<th>Waste Class</th>
<th>FY2001.0 Forecast (m³)</th>
<th>FY2000.0 Forecast (m³)</th>
<th>FY1999.0 Forecast (m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LLW_I</td>
<td>89,740</td>
<td>94,680</td>
<td>98,780</td>
</tr>
<tr>
<td>LLW_II</td>
<td>7,870</td>
<td>5,890</td>
<td>39,950</td>
</tr>
<tr>
<td>CH_MLLW</td>
<td>29,690</td>
<td>15,700</td>
<td>24,110</td>
</tr>
<tr>
<td>RH_MLLW</td>
<td>30,950</td>
<td>30,840</td>
<td>26,740</td>
</tr>
<tr>
<td>CH_TRU(M)</td>
<td>15,900</td>
<td>8,380</td>
<td>7,300</td>
</tr>
<tr>
<td>RH_TRU(M)</td>
<td>920</td>
<td>1,560</td>
<td>1,580</td>
</tr>
<tr>
<td>GTCII</td>
<td>6</td>
<td>6</td>
<td>--</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>175,110</strong></td>
<td><strong>156,850</strong></td>
<td><strong>200,570</strong></td>
</tr>
</tbody>
</table>

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

The largest percent changes for any waste classes occurred with CH_TRU(M) waste and CH_MLLW, which increased 90% (7,530 m³) and 89% (13,990 m³) respectively. The increase in CH_TRU(M) waste was due almost entirely to Environmental Restoration which added large amounts of waste from the retrieval of the 618-10 and 618-11 burial grounds.
The majority of the increase in the CH_MLLW forecast resulted from increases in the forecasts from SST/DST Tank Farm Operations and BNFL Tank Waste Pretreatment and Vitrification.

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

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

Summary of Forecast Changes by Generator and Waste Class

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

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

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

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>LLW</td>
<td>97,610</td>
<td>100,570</td>
<td>136,740</td>
<td>97,610</td>
<td>100,570</td>
<td>158,930</td>
<td>130,320</td>
<td>89,000</td>
<td>NA</td>
<td>359,730</td>
</tr>
<tr>
<td>MLLW</td>
<td>60,676</td>
<td>46,340</td>
<td>52,880</td>
<td>60,676</td>
<td>46,340</td>
<td>69,100</td>
<td>63,740</td>
<td>36,000</td>
<td>NA</td>
<td>104,790</td>
</tr>
<tr>
<td>TRU(M) Waste</td>
<td>16,825</td>
<td>9,940</td>
<td>8,960</td>
<td>16,825</td>
<td>9,940</td>
<td>NA</td>
<td>8,930</td>
<td>52,000</td>
<td>13,110</td>
<td>26,230</td>
</tr>
</tbody>
</table>

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

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

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

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

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

The Baseline Environmental Management Report (BEMR) differs from all data calls because it includes both before- and after-processing disposal volumes while other national data calls require before-processing volumes.
Identified But Not Forecasted Activities

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

Secondary Waste Generation from Phase 2 Tank Waste Privatization:

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

Stored Equipment:

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

D&D of future facilities and the Tank Farms:

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

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

Forecast Background

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

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

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

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

Other Forecast Data

Hazardous Waste

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

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


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Analytical Services

Analytical Services Report Sections

- Highlights
- Waste Class Data
- Annual Waste Class Volumes
- Summary Table
- Comparison to Previous Baseline(s)
- Background
- Forecast Assumptions and Comments
- Other Analytical Services Forecast Data
- Detailed Forecast Data

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

- The life cycle total of LLW and MLLW expected from Analytical Services is 6,940 m³, or 4% of the forecast total.

- The forecast life cycle for the Analytical Services functional group ends in 2046.

- The waste classes forecast by Analytical Services are CH_MLLW (34%), LLW_I (35%), and LLW_III (30%).

- As shown in the generator distribution chart below, the 222-S Analytical Laboratory is the major source of waste, forecasting 93% (6,450 m³) of the waste volume. The 6266 Waste Sampling and Characterization Facility accounts for 7% (490 m³) of the waste.

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

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

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

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

**LLW Data**

**Physical Waste Form Distribution**

- Soil (Gravel) 4x (170 m3)
- Debris Wastes 96x (1,380 m3)

Analytical Services Functional Group
LLW Total = 4,560 m3

**Container Distribution**

- 222 Liter Drums 8x (240 m3)
- 208 Liter Drums 24x (1,200 m3)
- MB-Vs 66x (3,000 m3)
- Other Drums 2x (110 m3)
- Other 1x (7 m3)

**MLLW Data**

**Generator Distributions**

- 222-S Analytical Laboratory 5x (6,400 m3)

Analytical Services Functional Group
Total (excl. HAZ) = 6,840 m3
Physical Waste Form Distribution

- Lab Packs: 11% (270 m3)
- Debris Wastes: 85% (2,110 m3)

Analytical Services Functional Group
MLLV Total = 2,380 m3

Hazardous Characteristic Distribution

- Organic: 47% (1,110 m3)
- PCB ≤ 50 ppm: 8% (220 m3)
- Corrosive - VA State Regulated: 10% (250 m3)
- Ignitable: 11% (250 m3)

Other: 23% (550 m3)

Analytical Services Functional Group
MLLV Total = 2,380 m3

Container Distribution

- 322 Liter Drums: 3x (80 m3)
- Medium Boxes: 42x (1,010 m3)
- 208 Liter Drums: 54x (1,280 m3)

Analytical Services Functional Group
MLLV Total = 2,380 m3

LDR Waste Stream Identification Distribution

- MLLV-01: <1% (10 m3)
- MLLV-02: <1% (20 m3)
- MLLV-03: 12% (280 m3)
- MLLV-04 (OC): 88% (2,080 m3)

Other: <1% (10 m3)

Analytical Services Functional Group
MLLV Total = 2,380 m3

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

Annual Waste Class Volumes

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

Annual Minimum, Baseline and Maximum Volumes

Annual Baseline by Waste Class
Annual LLW Baseline Volumes

![Annual LLW Baseline By Waste Class](chart1.png)

Annual MLLW Baseline Volumes

![Annual MLLW Baseline By Waste Class](chart2.png)

Summary Table (Volumes in m³)

(in descending order by total volume)

<table>
<thead>
<tr>
<th>Analytical Services</th>
<th>LLW_II</th>
<th>LLW_III</th>
<th>CH_MLLW</th>
<th>RH_MLLW</th>
<th>CH_TRU(M)</th>
<th>RH_TRU(M)</th>
<th>FY 2001.0 Forecast (m³)</th>
<th>% of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Generators</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>222-S Analytical Laboratory</td>
<td>2,150</td>
<td>2,110</td>
<td>2,190</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>6,450</td>
<td>93%</td>
</tr>
<tr>
<td>6266 Waste Sampling &amp; Characterization Facility</td>
<td>300</td>
<td>--</td>
<td>190</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>490</td>
<td>7%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>2,450</td>
<td>2,110</td>
<td>2,380</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>6,940</td>
<td>100%</td>
</tr>
<tr>
<td>Percent</td>
<td>35%</td>
<td>30%</td>
<td>34%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

Comparison to Previous Baseline(s)

The FY2001.0 forecast shows a 10% decrease from the FY2000.0 forecast of 7,700 m³, due to the removal of overpack containers from the 6266 Waste Sampling & Characterization Facility's forecast and waste reduction goals at the 222-S Analytical Laboratory.
The FY2000.0 forecast shows a 58% increase from the FY99.0 forecast, mainly due to an increase in the forecast of 222-S Analytical Laboratory.

Comparison to Previous Baseline(s) by Waste Class

<table>
<thead>
<tr>
<th>Analytical Services Comparison to Previous Forecasts</th>
<th>FY2001.0 Forecast (m³)</th>
<th>FY2000.0 Forecast (m³)</th>
<th>FY1999.0 Forecast (m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LLW_I</td>
<td>2,450</td>
<td>2,720</td>
<td>3,220</td>
</tr>
<tr>
<td>LLW_II</td>
<td>2,110</td>
<td>2,240</td>
<td>110</td>
</tr>
<tr>
<td>CH_MLLW</td>
<td>2,380</td>
<td>2,750</td>
<td>1,550</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>6,940</strong></td>
<td><strong>7,720</strong></td>
<td><strong>6,870</strong></td>
</tr>
</tbody>
</table>

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

Background

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

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

Forecast Assumptions and Comments

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

Other Forecast Data

- Hazardous Waste
  - A life cycle total of 900 m³ of hazardous waste has been reported by generators in this functional group.
Analytical Services — 222-S Analytical Laboratory

222-S Analytical Laboratory Report Sections

» Highlights
» Waste Class Data
» Annual Volumes
» Comparison to Previous Baseline(s)

» Background
» Forecast Assumptions and Comments
» Other 222-S Analytical Laboratory Forecast Data
» Detailed Forecast Data

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

- This generator contributes 6,450 m³, or 93% of Analytical Services' waste forecast.

- The forecast life cycle for the 222-S Analytical Laboratory ends in 2035.

- The waste classes forecast are divided roughly evenly between LLW_I, LLW_III and CH_MLLW as shown in the chart below.

- The FY2001.0 forecast shows a 4% decrease from the FY2000.0 forecast of 6,740 m³ due to facility waste reduction goals.

Waste Class Distribution

Waste Class Data

The expected physical waste forms, hazardous characteristics, container types, and LDR waste stream
identification distribution of the 222-S Analytical Laboratory's forecasted wastes are described in the following charts.

**LLW Data**

**Physical Waste Form Distribution**

- Soil Gravel
  - 4x (150 m³)
- Debris Waste
  - 96% (4,110 m³)

222-S Analytical Laboratory
LLW Total = 4,260 m³

**Container Distribution**

- 322 Liter Drums
  - 4x (160 m³)
- 208 Liter Drums
  - 20x (1,110 m³)
- MIS-YS
  - 70% (3,060 m³)

222-S Analytical Laboratory
LLW Total = 4,260 m³

**MLLW Data**

**Physical Waste Form Distribution**

- Lab Packs
  - 5x (120 m³)
- Debris Waste
  - 99% (2,070 m³)

222-S Analytical Laboratory
MLLW Total = 2,190 m³

**Hazardous Characteristic Distribution**

- Other
  - 20% (140 m³)
- PCB ≤ 50 ppm
  - 10% (220 m³)
- Corrosive + WA State Regulated
  - 10% (220 m³)
- Organic
  - 50% (1,080 m³)
- Ignitable
  - 10% (220 m³)

222-S Analytical Laboratory
MLLW Total = 2,190 m³

**Container Distribution**

- 322 Liter Drums
  - 4x (90 m³)
- Medium Boxes
  - 48x (1,010 m³)
- 208 Liter Drums
  - 50x (1,100 m³)

222-S Analytical Laboratory
MLLW Total = 2,190 m³

**LDR Waste Stream Identification Distribution**

- MLLW-01
  - <1% (10 m³)
- MLLW-01
  - <1% (10 m³)
- MLLW-03
  - 4x (50 m³)
- MLLW-04 (OC)
  - 54% (2,060 m³)

222-S Analytical Laboratory
MLLW Total = 2,190 m³

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

**Annual Volumes**

Annual Minimum, Baseline, and Maximum Volumes
The FY2001.0 forecast shows a 4% decrease from the FY2000.0 forecast due to facility waste reduction goals.

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

Comparison to Previous Baseline(s) by Waste Class

<table>
<thead>
<tr>
<th>Waste Class</th>
<th>FY2001.0 Forecast (m³)</th>
<th>FY2000.0 Forecast (m³)</th>
<th>FY1999.0 Forecast (m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LLW, I</td>
<td>2,150</td>
<td>2,240</td>
<td>2,380</td>
</tr>
<tr>
<td>LLW, II</td>
<td>2,110</td>
<td>2,240</td>
<td>110</td>
</tr>
<tr>
<td>CH_MLLW</td>
<td>2,190</td>
<td>2,280</td>
<td>1,050</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>6,450</strong></td>
<td><strong>6,740</strong></td>
<td><strong>3,530</strong></td>
</tr>
</tbody>
</table>

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

Background

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

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

Forecast Assumptions and Comments

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

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

Other Forecast Data

- Hazardous Waste
  - A life cycle total of 890 m³ of hazardous waste has been reported by 222-S Analytical Laboratory.
Analytical Services — 6266 Waste Sampling & Characterization Facility

6266 Waste Sampling & Characterization Facility Report Sections

- Highlights
- Waste Class Data
- Annual Volumes
- Comparison to Previous Baseline(s)

- Background
- Forecast Assumptions and Comments
- Other 6266 Waste Sampling & Characterization Facility Forecast Data

- Detailed Forecast Data

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

- This generator contributes 490 m³, or 7% of Analytical Services' waste forecast.

- The forecast life cycle for the 6266 Waste Sampling and Characterization Facility ends in 2046.

- As shown in the chart below, LLW_I (61%) and CH_MLLW (39%) are the only waste classes forecast.

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

- This forecast includes waste from 622F (Weather Station) Accumulation Pad.

Waste Class Distribution

6266 Waste Sampling & Characterization Facility

Total (excl. HAZ) = 490 m³
Waste Class Data

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

LLW Data

Physical Waste Form Distribution

Soil Gravel
60% (20 m³)

Debris Wastes
94% (260 m³)

Container Distribution

Medium Boxes
2% (7 m³)

322 Liter Drums
29% (90 m³)

Other Drums
37% (110 m³)

208 Liter Drums
32% (90 m³)

MLLW Data

Physical Waste Form Distribution

Debris Wastes
20% (40 m³)

Lab Packs
60% (150 m³)

Hazardous Characteristic Distribution

Organic + VA State Regulated
16% (30 m³)

Other
7% (10 m³)

Ignitiable
18% (30 m³)

Container Distribution

208 Liter Drums
100% (190 m³)

LDR Waste Stream Identification Distribution

MLLW-03
100% (190 m³)

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

Annual Minimum, Baseline and Maximum Volumes

![Graph of Annual Minimum, Baseline, and Maximum Volumes](image)

Annual LLW Baseline Volumes

![Graph of Annual LLW Baseline Volumes](image)

Annual MLLW Baseline Volumes

![Graph of Annual MLLW Baseline Volumes](image)

Comparison to Previous Baseline(s)

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

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

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

Comparison to Previous Baseline(s) by Waste Class

<table>
<thead>
<tr>
<th>Waste Class</th>
<th>FY2001.0 Forecast (m³)</th>
<th>FY2000.0 Forecast (m³)</th>
<th>FY1999.0 Forecast (m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LLW</td>
<td>300</td>
<td>480</td>
<td>820</td>
</tr>
<tr>
<td>CH_MLLW</td>
<td>190</td>
<td>480</td>
<td>490</td>
</tr>
<tr>
<td>Total</td>
<td>490</td>
<td>970</td>
<td>1,320</td>
</tr>
</tbody>
</table>

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

Background

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

Forecast Assumptions and Comments

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

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

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

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

Other Forecast Data

- Hazardous Waste
  - A life cycle total of 9 m³ of hazardous waste has been reported by 6266 Waste Sampling and Characterization Facility.
For questions or comments, please contact Roberta Barcot
(e-mail: Roberta_A_Barcot@rl.gov, voice: (509) 373-4752).


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Environmental Restoration

Environmental Restoration Report Sections

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

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

- The life cycle total of LLW, MLLW, and TRU(M) waste expected from Environmental Restoration is 11,670 m³, or 7% of the forecast total.

- The forecast life cycle for the Environmental Restoration functional group ends in 2042.

- CH_TRU(M) is the primary waste class forecast, representing 97% (11,340 m³) of the Environmental Restoration waste volume.

- As shown in the generator distribution chart below, the only generator included in this program is Surplus Facilities.

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

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

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

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

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

LLW Data

Physical Waste Form Distribution

Container Distribution

MLLW Data
Physical Waste Form Distribution

Debris Wastes 25% (10 m^3)
Organic Solids 75% (40 m^3)

Environmental Restoration Functional Group
MLLV Total = 50 m^3

Container Distribution

114 Liter Drums 9% (4 m^3)
208 Liter Drums 36% (20 m^3)
MB-Vs 55% (30 m^3)

Environmental Restoration Functional Group
MLLV Total = 50 m^3

TRU(M) Waste Data

Physical Waste Form Distribution

Organic Solids <1% (0.08 m^3)
Debris Wastes 100% (11,440 m^3)

Environmental Restoration Functional Group
TRU(M) Total = 11,440 m^3

Hazardous Characteristic Distribution

Metals 27% (10 m^3)

Environmental Restoration Functional Group
MLLV Total = 50 m^3

LDR Waste Stream Identification Distribution

MLLW-04 (Non-OC) 12% (6 m^3)

Environmental Restoration Functional Group
MLLV Total = 50 m^3
Environmental Restoration Functional Group
TRU(M) Total = 11,440 m³

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

Annual Waste Class Volumes

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

Annual Minimum, Baseline, and Maximum Volumes

Annual Baseline by Waste Class

Annual LLW Baseline Volumes
Annual LLW Baseline Volumes

Annual MLLW Baseline Volumes

Annual TRU(M) Waste Baseline Volumes

Summary Table (Volumes in m³)

(in descending order by total volume)
Comparison to Previous Baseline(s)

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

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

Comparison to Previous Baseline(s) by Waste Class

<table>
<thead>
<tr>
<th>Waste Class</th>
<th>FY2001.0 Forecast (m³)</th>
<th>FY2000.0 Forecast (m³)</th>
<th>FY1999.0 Forecast (m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LLW-I</td>
<td>180</td>
<td>430</td>
<td>40</td>
</tr>
<tr>
<td>CH_MILLW</td>
<td>50</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td>CH_TRU(M)</td>
<td>11,340</td>
<td>1,410</td>
<td>1,490</td>
</tr>
<tr>
<td>RH_TRU(M)</td>
<td>100</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>11,670</strong></td>
<td><strong>1,890</strong></td>
<td><strong>1,590</strong></td>
</tr>
</tbody>
</table>

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

Background

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

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

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

Forecast Assumptions and Comments

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

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

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

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

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

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

Estimates for transuranic waste changed significantly with the FY2000 forecast due to new engineering estimates for 618-10 and 618-11 burial grounds. At this time, we find that predicting projects and waste generation beyond 12 months produces very low forecast confidence. Other projects which were previously forecast for a different time period are...
presently in progress. Any forecasting beyond 6 months may fluctuate as priorities, budgets, and work scopes change.

Other Forecast Data

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

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


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Environmental Restoration — Surplus Facilities

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

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


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Infrastructure

Infrastructure Report Sections

» Highlights
» Waste Class Data
» Annual Waste Class Volumes
» Summary Table
» Comparison to Previous Baseline(s)

» Background
» Forecast Assumptions and Comments
» Other Infrastructure Forecast Data
» Detailed Forecast Data

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

- The life cycle total of LLW and MLLW expected from the Infrastructure functional group is 7,150 m³, or 4% of the forecast total.

- The forecast life cycle for the Infrastructure functional group ends in 2046.

- LLW_I is the primary waste class forecast, representing almost 100% (7,140 m³) of the Infrastructure functional group waste volume. As shown below, a very small amount of CH_MLLW (10 m³) is also forecasted by this functional group.

- As shown in the generator distribution chart below, the only generator included in this functional group is DynCorp.

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

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

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

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

LLW Data

Physical Waste Form Distribution

MLLW Data

Physical Waste Form Distribution

Hazardous Characteristic Distribution
Container Distribution

LDR Waste Stream Identification Distribution

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m$^3$ are rounded to the nearest 10 m$^3$, numbers less than 10 m$^3$ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m$^3$.

Annual Waste Class Volumes

The waste generation of the Infrastructure functional group is expected to decrease linearly until 2011 after which it will be nearly constant at about 130 m$^3$ per year.

Annual Minimum, Baseline, and Maximum Volumes

Annual Baseline by Waste Class

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

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

<table>
<thead>
<tr>
<th>Waste Class</th>
<th>FY2001.0 Forecast (m³)</th>
<th>FY2000.0 Forecast (m³)</th>
<th>FY1999.0 Forecast (m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LLW</td>
<td>7,140</td>
<td>190</td>
<td>9,730</td>
</tr>
<tr>
<td>CH, MLLW</td>
<td>10</td>
<td>10</td>
<td>120</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>7,150</strong></td>
<td><strong>200</strong></td>
<td><strong>9,850</strong></td>
</tr>
</tbody>
</table>

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

### Background

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

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

### Forecast Assumptions and Comments

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

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

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

### Other Forecast Data

- **Hazardous Waste**

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

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Liquid Waste

Liquid Waste Report Sections

» Highlights
» Waste Class Data
» Annual Waste Class Volumes
» Summary Table
» Comparison to Previous Baseline(s)

» Background
» Forecast Assumptions and Comments
» Other Liquid Waste Forecast Data
» Detailed Forecast Data

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

- The life cycle total of LLW and MLLW expected from the Liquid Waste functional group is 6,900 m³, or 4% of the forecast total.

- The forecast life cycle for Liquid Waste ends in 2046.

- LLW_I is the primary waste class forecast, representing 68% (4,700 m³) of the Liquid Waste functional group waste volume. As shown in the waste class distribution chart below, the remaining 32% (2,210 m³) of the waste volume is CH_MLLW.

- The 300 Area Liquid Effluent Facilities (LEF) are the major source of waste, forecasting 67% (4,640 m³) of the waste volume. The 200 Area Liquid Waste Processing Facilities (LWPF) account for 33% (2,260 m³).

- The FY2001.0 forecast shows a 6% decrease from the FY2000.0 forecast of 7,350 m³.
Waste Class Distribution

LLW Data

Physical Waste Form Distribution

Organic Solids 4% (170 m³)
Debris Wastes 5% (240 m³)
Inorganic Solids 91% (4,280 m³)

Liquid Waste Functional Group
LLV Total = 4,700 m³

MLLW Data

Container Distribution

208 Liter Drums 3% (120 m³)
Medium Boxes 95% (4,450 m³)

MLLW Total = 4,700 m³

Generator Distributions

Waste Class Data

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

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

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

- Organic Solids: 22% (50 m3)
- Inorganic Solids: 78% (1,680 m3)

Debris Waste: 22% (500 m3)

Liquid Waste Functional Group
MLLV Total = 2,218 m3

Hazardous Characteristic Distribution

- Metals: Organic <1% (10 m3)
- VA State Regulated: <1% (20 m3)
- Ignitable + Corrosive + Metals: Organic + VA State Regulate 95% (2,030 m3)

Liquid Waste Functional Group
MLLV Total = 2,218 m3

Container Distribution

- Extra Large Boxes: 3% (70 m3)
- 208 Liter Drums: 97% (2,140 m3)

Liquid Waste Functional Group
MLLV Total = 2,218 m3

LDR Waste Stream Identification Distribution

- MLLV-02: 3% (70 m3)
- MLLV-03: <1% (7 m3)
- MLLV-04 (OC): 11% (240 m3)
- MLLV-01: 96% (1,880 m3)

Liquid Waste Functional Group
MLLV Total = 2,218 m3

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

Annual Waste Class Volumes

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

Annual Minimum, Baseline, and Maximum Volumes

![Annual Minimum, Baseline, and Maximum Volumes](image-url)
Annual Baseline by Waste Class

Annual LLW Baseline Volumes

![Annual LLW Baseline By Waste Class](chart)

Annual MLLW Baseline Volumes

![Annual MLLW Baseline By Waste Class](chart)

Summary Table (Volumes in m³)

<table>
<thead>
<tr>
<th>Liquid Waste Summary Volumes</th>
<th>LLW_I</th>
<th>LLW_M</th>
<th>CH_MLLW</th>
<th>RIL_MLLW</th>
<th>CH_TRU(M)</th>
<th>RIL_TRU(M)</th>
<th>FY 2001.0 Forecast (m³)</th>
<th>% of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Generators</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>300 Area Liquid Effluent Facilities</td>
<td>4,590</td>
<td>--</td>
<td>50</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>4,640</td>
<td>67%</td>
</tr>
<tr>
<td>200 Area Liquid Waste Processing Facilities</td>
<td>100</td>
<td>--</td>
<td>2,160</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>2,260</td>
<td>33%</td>
</tr>
<tr>
<td>Total</td>
<td>4,690</td>
<td>--</td>
<td>2,210</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>6,900</td>
<td>100%</td>
</tr>
</tbody>
</table>

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

Comparison to Previous Baseline(s)

The FY2001.0 forecast shows a 6% decrease from the FY2000.0 forecast of 7,350 m³ primarily due to the elimination of the year 2000 volumes.
The FY2000.0 forecast shows a 2% decrease from the FY99.0 forecast of 7,520 m³ primarily due to the elimination of the FY99 forecasted volumes.

### Comparison to Previous Baseline(s) by Waste Class

<table>
<thead>
<tr>
<th>Liquid Waste</th>
<th>FY2001.0 Forecast (m³)</th>
<th>FY2000.0 Forecast (m³)</th>
<th>FY1999.0 Forecast (m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LLW</td>
<td>4,700</td>
<td>4,770</td>
<td>5,100</td>
</tr>
<tr>
<td>CH_MLLW</td>
<td>2,210</td>
<td>2,550</td>
<td>2,420</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>5,910</strong></td>
<td><strong>7,350</strong></td>
<td><strong>7,520</strong></td>
</tr>
</tbody>
</table>

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

### Background

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

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

### Forecast Assumptions and Comments

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

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

### Other Forecast Data
- Hazardous Waste

- A life cycle total of 170 m$^3$ of hazardous waste has been reported by generators in this functional group.

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


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Liquid Waste — 200 Area Liquid Waste Processing Facilities

200 Area Liquid Waste Processing Facilities Report Sections

» Highlights
» Waste Class Data
» Annual Volumes
» Comparison to Previous Baseline(s)
» Background
» Forecast Assumptions and Comments
» Other 200 Area Liquid Waste Processing Facilities Forecast Data
»» Detailed Forecast Data

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

- This generator contributes 2,260 m³, or 33% of the Liquid Waste's forecast.

- The forecast life cycle for the 200 Area Liquid Waste Processing Facilities ends in 2046.

- CH_MLLW is the primary waste class forecast, representing 95% (2,160 m³) of the waste volume. A small amount of LLW_I (100 m³) is also shown in the chart below.

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

Waste Class Distribution

Waste Class Data

The expected physical waste forms, hazardous characteristics, container types, and LDR waste stream...
identification distribution of the 200 Area Liquid Waste Processing Facilities' forecasted wastes are described in the following charts.

**LLW Data**

### Physical Waste Form Distribution

- Soil Gravel: 10% (10 m³)
- Organic Solids: 10% (10 m³)
- Debris Vastes: 80% (80 m³)

**Container Distribution**

- 200 Litre Drums: 100% (100 m³)

**MLLW Data**

### Physical Waste Form Distribution

- Organic Solids: 2% (0.7 m³)
- Debris Vastes: 21% (143 m³)
- Inorganic Solids: 77% (1,850 m³)

### Hazardous Characteristic Distribution

- Organic: 2% (0.7 m³)
- Ignitability Corrosive - Metals: 97% (2,080 m³)
- Organic - VA State Regulated: 97% (2,080 m³)

### Container Distribution

- Extra Large Bows: 3% (70 m³)
- 200 Litre Drums: 97% (2,050 m³)

### LDR Waste Stream Identification Distribution

- MLLW-02: 3% (70 m³)
- MLLW-01: 97% (1,850 m³)

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

**Annual Volumes**

**Annual Minimum, Baseline, and Maximum Volumes**
Comparison to Previous Baseline(s)

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

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

Comparison to Previous Baseline(s) by Waste Class
## Background

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

## Forecast Assumptions and Comments

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

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

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

## Other Forecast Data

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

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

### Table: Comparison to Previous Forecasts

<table>
<thead>
<tr>
<th>Waste Class</th>
<th>FY2001.0 Forecast (m³)</th>
<th>FY2000.0 Forecast (m³)</th>
<th>FY1999.0 Forecast (m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LLW</td>
<td>100</td>
<td>70</td>
<td>70</td>
</tr>
<tr>
<td>CH, MLLW</td>
<td>2,180</td>
<td>2,530</td>
<td>2,420</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>2,280</strong></td>
<td><strong>2,500</strong></td>
<td><strong>2,500</strong></td>
</tr>
</tbody>
</table>

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Liquid Waste — 300 Area Liquid Effluent Facilities

300 Area Liquid Effluent Facilities Report Sections

» Highlights
» Waste Class Data
» Annual Volumes
» Comparison to Previous Baseline(s)

» Background
» Forecast Assumptions and Comments
» Other 300 Area Liquid Effluent Facilities Forecast Data
» Detailed Forecast Data

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

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

Waste Class Distribution

Waste Class Data

The expected physical waste forms, hazardous characteristics, container types, and LDR waste stream
identification of the 300 Area Liquid Effluent Facilities' forecasted wastes are described in the following charts.

**LLW Data**

**Physical Waste Form Distribution**

- **Organic Solids**: 16% (7 m³)
- **Inorganic Solids**: 17% (8 m³)
- **Debris Wastes**: 68% (30 m³)

**Container Distribution**

- **MB-Vs**: 3 x (120 m³)
- **< 1 x (20 m³)**
- **Medium Boxes**: 97% (4,450 m³)

**MLLW Data**

**Physical Waste Form Distribution**

- **Organic Solids**: 19% (7 m³)
- **Inorganic Solids**: 17% (8 m³)
- **Debris Wastes**: 68% (30 m³)

**Hazardous Characteristic Distribution**

- **Ignitable**: 12% (9 m³)
- **Other**: 6% (3 m³)
- **WA State Regulated**: 27% (20 m³)
- **Metals**: 27% (10 m³)

**Container Distribution**

- **208 Liter Drums**: 100% (50 m³)

**LDR Waste Stream Identification Distribution**

- **MLLW-03**: 18% (7 m³)
- **MLLW-05**: < 1% (0.15 m³)
- **MLLW-02**: 17% (8 m³)
- **MLLW-04 (OC)**: 68% (30 m³)

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

**Annual Volumes**

**Annual Minimum, Baseline, and Maximum Volumes**
Comparison to Previous Baseline(s)

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

The FY2000.0 forecast shows a 6% decrease from the FY99.0 forecast due to the
elimination of the FY99 forecast volumes. In addition, the FY2000.0 forecast shows CH_MLLW that was not previously forecast, which will be generated from the removal of the resins at the 300 Area Treated Effluent Disposal Facility.

Comparison to Previous Baseline(s) by Waste Class

<table>
<thead>
<tr>
<th>Waste Class</th>
<th>FY2001.0 Forecast (m³)</th>
<th>FY2000.0 Forecast (m³)</th>
<th>FY1999.0 Forecast (m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LLW</td>
<td>4,590</td>
<td>4,680</td>
<td>5,030</td>
</tr>
<tr>
<td>CH_MLLW</td>
<td>50</td>
<td>60</td>
<td>--</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>4,640</strong></td>
<td><strong>4,750</strong></td>
<td><strong>5,030</strong></td>
</tr>
</tbody>
</table>

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

Background

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

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

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

Forecast Assumptions and Comments

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

Other Forecast Data

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

Offsite Report Sections

» Highlights
» Waste Class Data
» Annual Waste Class Volumes
» Summary Table
» Comparison to Previous Baseline(s)

» Background
» Forecast Assumptions and Comments
» Other Offsite Forecast Data
» Detailed Forecast Data

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

- The life cycle total of LLW, MLLW, and TRU(M) waste expected from Offsite is 30,090 m³, or 17% of the forecast total.

- The forecast life cycle for the Offsite functional group ends in 2046.

- LLW-I is the primary waste class forecast, representing 91% (27,320 m³) of the Offsite waste volume. The remaining waste classes are shown below.

- Argonne National Laboratory-East and Brookhaven National Laboratory are the largest generators in this functional group representing 34% and 29% of the waste respectively. As shown in the generator distribution chart below, a number of other generators account for the remainder of the waste.

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

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

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

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

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

LLW Data

Physical Waste Form Distribution

- Organic Solids: 1% (530 m3)
- Inorganic Solids: 1% (410 m3)
- Soil Gravel: 6% (1,380 m3)
- Debris Wastes: 92% (27,660 m3)

Offsite Functional Group
LLW Total = 30,620 m3

Container Distribution

- Extra Large Boxes: 8% (2,470 m3)
- Large Boxes: 13% (3,820 m3)
- Medium Boxes: 14% (1,410 m3)
- Small Boxes: 60% (17,960 m3)

MLLW Data
Physical Waste Form Distribution

Debris Waste 46% (20 m³)
Inorganic Solids 54% (20 m³)

Offsite Functional Group
MLLV Total = 40 m³

Container Distribution

208 Liter Drums 100% (40 m³)

Offsite Functional Group
MLLV Total = 40 m³

TRU(M) Waste Data

Physical Waste Form Distribution

Organic Solids 3% (1 m³)
Other 2% (0.94 m³)
Inorganic Solids 25% (10 m³)
Debris Waste 37% (20 m³)

Final Form 33% (13 m³)

Offsite Functional Group
TRU(M) Total = 40 m³

Hazardous Characteristic Distribution

Mercury > 260 ppm
3% (1 m³)

Metals 97% (20 m³)

Offsite Functional Group
MLLV Total = 40 m³

LDR Waste Stream Identification Distribution

MLLV-06 3% (1 m³)
MLLV-04 (Non-OC) 46% (20 m³)
MLLV-02 51% (20 m³)

Offsite Functional Group
MLLV Total = 40 m³

Hazardous Characteristic Distribution

Mercury > 260 ppm
1% (0.29 m³)

Metals 18% (4 m³)
Organic 22% (4 m³)

Metals + PCB < 50 ppm 55% (10 m³)

Offsite Functional Group
Total (TRU(M) only) = 20 m³
Annual Waste Class Volumes

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

Annual Minimum, Baseline, and Maximum Volumes

Annual Baseline by Waste Class

Annual LLW Baseline Volumes
Annual LLW Baseline Volumes

Annual MLLW Baseline Volumes

Annual TRU(M) Waste Baseline Volumes
Summary Table (Volumes in m³)

(in descending order by total volume)

<table>
<thead>
<tr>
<th>Offsite Summary Volumes</th>
<th>LLW-I</th>
<th>LLW-III</th>
<th>CH_MILW</th>
<th>RIL_MILW</th>
<th>CH_TRU(M)</th>
<th>RIL_TRU(M)</th>
<th>FY 2001.0 Forecast (m³)</th>
<th>% of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Argonne National Laboratory-East</td>
<td>9,420</td>
<td>860</td>
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<td>--</td>
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<td>10,280</td>
<td>34%</td>
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<tr>
<td>Brookhaven National Laboratory</td>
<td>8,590</td>
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<td>--</td>
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<td>--</td>
<td>8,590</td>
<td>28%</td>
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<td>Princeton Plasma Physics Lab</td>
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<td>2,370</td>
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<tr>
<td>Fermi National Accelerator Laboratory</td>
<td>1,700</td>
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<td>1,700</td>
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<td>Parks Township</td>
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<td>--</td>
<td>--</td>
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<tr>
<td>Energy Technology Engineering Center (ETEC)</td>
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<td>--</td>
<td>3</td>
<td>10</td>
<td>1,530</td>
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<tr>
<td>Battelle Columbus Laboratories</td>
<td>410</td>
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<td>1,010</td>
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<td>840</td>
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<td>Knolls Atomic Power-Shipyards</td>
<td>250</td>
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<td>--</td>
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<td>--</td>
<td>310</td>
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<td>Portsmouth Energy Systems</td>
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<td>250</td>
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<tr>
<td>Lawrence Berkeley Laboratory</td>
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<td>&lt;1%</td>
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<tr>
<td>Ames Laboratory-Ames, Iowa</td>
<td>120</td>
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<td>120</td>
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<tr>
<td>Paducah Energy Systems</td>
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<td>--</td>
<td>90</td>
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<tr>
<td>Knolls Atomic Power-Laboratory</td>
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<td>--</td>
<td>20</td>
<td>--</td>
<td>--</td>
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<td>20</td>
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<tr>
<td>Bates Accelerator-Massachusetts</td>
<td>10</td>
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<td>--</td>
<td>--</td>
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<td>10</td>
<td>&lt;1%</td>
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<tr>
<td>Puget Sound Naval Shipyards</td>
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<td>--</td>
<td>10</td>
<td>--</td>
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<td>10</td>
<td>&lt;1%</td>
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<tr>
<td>Siemens Power Corp.</td>
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<td>--</td>
<td>9</td>
<td>&lt;1%</td>
</tr>
<tr>
<td>Pearl Harbor Naval Shipyards</td>
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<td>--</td>
<td>3</td>
<td>--</td>
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<td>--</td>
<td>3</td>
<td>&lt;1%</td>
</tr>
<tr>
<td>Missouri University Research Reactor</td>
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<td>--</td>
<td>--</td>
<td>2</td>
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<td>--</td>
<td>2</td>
<td>&lt;1%</td>
</tr>
<tr>
<td>Bettis Atomic Power-Shipyards</td>
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<td>--</td>
<td>1</td>
<td>&lt;1%</td>
</tr>
<tr>
<td>Portsmouth Naval Shipyards</td>
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<td>--</td>
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<td>--</td>
<td>0.77</td>
<td>&lt;1%</td>
</tr>
<tr>
<td>University of California, Davis (LEHR)</td>
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<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
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</tr>
<tr>
<td>Rocky Flats</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>27,320</td>
<td>2,700</td>
<td>40</td>
<td>--</td>
<td>5</td>
<td>40</td>
<td>38,090</td>
<td>100%</td>
</tr>
<tr>
<td><strong>Percent</strong></td>
<td>91%</td>
<td>9%</td>
<td>&lt;1%</td>
<td>&lt;1%</td>
<td>&lt;1%</td>
<td>&lt;1%</td>
<td>100%</td>
<td>--</td>
</tr>
</tbody>
</table>

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

Comparison to Previous Baseline(s)

The FY2001.0 forecast shows a 7% decrease from the FY2000.0 forecast of 32,390 m³ due primarily to a decrease in waste expected from Parks Township since the waste forecast for shipment in FY2000 is no longer included in the forecast.
The FY2000.0 forecast for Offsite shows a 25% increase from the FY99.0 forecast of 25,930 m³ due to increased environmental waste expected from Brookhaven National Laboratory.

### Comparison to Previous Baseline(s) by Waste Class

<table>
<thead>
<tr>
<th>Waste Class</th>
<th>FY2000.0 Forecast (m³)</th>
<th>FY2001.0 Forecast (m³)</th>
<th>FY1999.0 Forecast (m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LLW_I</td>
<td>27,320</td>
<td>30,140</td>
<td>23,250</td>
</tr>
<tr>
<td>LLW_III</td>
<td>2,700</td>
<td>2,220</td>
<td>2,540</td>
</tr>
<tr>
<td>CH_MLLW</td>
<td>40</td>
<td>30</td>
<td>150</td>
</tr>
<tr>
<td>CH_TRU(M)</td>
<td>5</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>RH_TRU(M)</td>
<td>40</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>36,090</strong></td>
<td><strong>32,390</strong></td>
<td><strong>25,830</strong></td>
</tr>
</tbody>
</table>

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

### Background

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

### Forecast Assumptions and Comments

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

### Other Forecast Data

- **Hazardous Waste**
  - No hazardous waste has been reported by Offsite generators.

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


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**Offsite — Ames**

Ames Report Sections

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

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

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

**Waste Class Distribution**

```
\[ \text{Ames Laboratory-Ames, Iowa} \\
\text{Total (excl. HAZ) = 120 m}^3 \]
```

**Waste Class Data**

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

- LLW Data
Physical Waste Form Distribution

Final Form
100% (120 m³)

Ames Laboratory - Ames, Iowa
LLV Total = 120 m³

Container Distribution

208 Liter Drums
<1% (0.25 m³)

Other Drums
<1% (0.04 m³)

Small Boxes
100% (120 m³)

Ames Laboratory - Ames, Iowa
LLV Total = 120 m³

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

Annual Volumes

Annual Minimum, Baseline, and Maximum Volumes

Annual LLW Baseline Volumes

Comparison to Previous Baseline(s)
The FY2001.0 forecast shows a 2% increase from the FY2000.0 forecast of 110 m$^3$ due to additional processing knowledge.

The FY2000.0 forecast shows a 29% increase from the FY99.0 forecast of 90 m$^3$. All of the forecasted waste will be in the form of inorganic debris, as opposed to previous forecasts which included some inorganic solids.

### Comparison to Previous Baseline(s) by Waste Class

<table>
<thead>
<tr>
<th>Waste Class</th>
<th>FY2001.0 Forecast (m$^3$)</th>
<th>FY2000.0 Forecast (m$^3$)</th>
<th>FY1999.0 Forecast (m$^3$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LLW_I</td>
<td>120</td>
<td>110</td>
<td>90</td>
</tr>
<tr>
<td>LLW_II</td>
<td>0.26</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>120</strong></td>
<td><strong>110</strong></td>
<td><strong>90</strong></td>
</tr>
</tbody>
</table>

*Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m$^3$ are rounded to the nearest 10 m$^3$, numbers less than 10 m$^3$ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m$^3$."

### Background

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

### Forecast Assumptions and Comments

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

### Other Forecast Data

- **Hazardous Waste**
  - No hazardous waste has been reported by Ames Laboratory.

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


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Offsite — Argonne National Laboratory - East

Argonne National Laboratory - East Report Sections

» Highlights
» Waste Class Data
» Annual Volumes
» Comparison to Previous Baseline(s)

» Background
» Forecast Assumptions and Comments
» Other Argonne National Laboratory - East Forecast Data
» Detailed Forecast Data

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

- Argonne National Laboratory - East is expected to send the most offsite waste, contributing 10,280 m³, or 34% of Offsite's waste forecast.

- The forecast life cycle for the Argonne National Laboratory - East ends in 2046.

- LLW_I and LLW_III are the only waste classes forecast. LLW_I accounts for 92% (9,420 m³).

- The FY2001.0 forecast shows a 7% decrease from the FY2000.0 forecast of 11,040 m³.

Waste Class Distribution

Waste Class Data

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

Physical Waste Form Distribution

- Inorganic Solids: 2x (200 m³)
- Soil Gravel: ≤1x (100 m³)
- Organic Solids: 2x (200 m³)
- Debris Wastes: 96x (8,770 m³)

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

Container Distribution

- 208 Liter Drums: 26x (2,720 m³)
- Small Boxes: 74x (7,570 m³)

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

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

Annual Volumes

Annual Minimum, Baseline, and Maximum Volumes

Annual LLW Baseline Volumes
Comparison to Previous Baseline(s)

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

The FY2000.0 forecast shows a 13% decrease from the FY99.0 forecast of 12,740 m$^3$

Comparison to Previous Baseline(s) by Waste Class

<table>
<thead>
<tr>
<th>Argonne National Laboratory - East</th>
<th>FY2001.0 Forecast (m$^3$)</th>
<th>FY2000.0 Forecast (m$^3$)</th>
<th>FY1999.0 Forecast (m$^3$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LLW_I</td>
<td>9,420</td>
<td>10,150</td>
<td>11,860</td>
</tr>
<tr>
<td>LLW_II</td>
<td>860</td>
<td>890</td>
<td>890</td>
</tr>
<tr>
<td>Total</td>
<td>10,280</td>
<td>11,040</td>
<td>12,740</td>
</tr>
</tbody>
</table>

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m$^3$ are rounded to the nearest 10 m$^3$; numbers less than 10 m$^3$ are rounded to integers; and numbers less than 1 are rounded to nearest 0.01 m$^3$.

Background

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

Forecast Assumptions and Comments

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

Other Forecast Data

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

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


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

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

Waste Class Distribution

Waste Class Data

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

Physical Waste Form Distribution

- **Organic Solids**: 100% (10 m³)

Container Distribution

- **208 Liter Drums**: 100% (10 m³)

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

Annual Volumes

Annual Minimum, Baseline, and Maximum Volumes

Annual LLW Baseline Volumes
Comparison to Previous Baseline(s)

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

Comparison to Previous Baseline(s) by Waste Class

<table>
<thead>
<tr>
<th>Bates Accelerator-Massachusetts</th>
<th>FY2001.0 Forecast (m³)</th>
<th>FY2000.0 Forecast (m³)</th>
<th>FY1999.0 Forecast (m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Waste Class</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LLW-I</td>
<td>10</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>10</strong></td>
<td><strong>10</strong></td>
<td><strong>10</strong></td>
</tr>
</tbody>
</table>

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

Background

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

Forecast Assumptions and Comments

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

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

Other Forecast Data

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

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Offsite — Battelle Columbus Laboratories

Battelle Columbus Laboratories Report Sections

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

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

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

Waste Class Distribution

- LLW I: 37% (410 m³)
- CH_MLLW: 11% (8 m³)
- LLW II: 61% (870 m³)
- RH_TRU(M): 2% (20 m³)

Battelle Columbus Laboratories
Total (ass. HAZ) = 1,110 m³

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

**LLW Data**

**Physical Waste Form Distribution**

- Organic Solids: 2% (30 m3)
- Inorganic Solids: < 1% (4 m3)
- Soil Gravel: 10% (110 m3)
- Debris Wastes: 87% (950 m3)

Battelle Columbus Laboratories
LLV Total = 1,080 m3

**Container Distribution**

- Medium Boxes: 1% (20 m3)
- Small Boxes: 99% (1,070 m3)

Battelle Columbus Laboratories
LLV Total = 1,080 m3

**MLLW Data**

**Physical Waste Form Distribution**

- Inorganic Solids: 100% (6 m3)

Battelle Columbus Laboratories
MLLW Total = 6 m3

**Hazardous Characteristic Distribution**

- Mercury > 280 ppm: 15% (0.89 m3)
- Metals: 95% (0.46 m3)

Battelle Columbus Laboratories
MLLW Total = 6 m3

**LDR Waste Stream Identification Distribution**

- MLLW-06: 15% (0.89 m3)
- MLLW-02: 85% (0.46 m3)

Battelle Columbus Laboratories
MLLW Total = 6 m3

**TRU(M) Waste Data**
Physical Waste Form Distribution

Special Vastes 4% (0.72 m3)
Debris Vastes 17% (3 m3)
Final Form 78% (10 m3)

Battelle Columbus Laboratories
TRU(M) Total = 28 m3

Hazardous Characteristic Distribution

Mercury ≥ 260 ppm
8% (0.29 m3)

Organic
40% (1 m3)

Metals
50% (2 m3)

Battelle Columbus Laboratories
Total (TRU(M) only) = 4 m3

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

Annual Volumes

Annual Minimum, Baseline, and Maximum Volumes

Annual LLW Baseline Volumes
Annual MLLW Baseline Volumes

Comparison to Previous Baseline(s)

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

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

<table>
<thead>
<tr>
<th>Waste Class</th>
<th>FY2001.0 Forecast (m³)</th>
<th>FY2004.0 Forecast (m³)</th>
<th>FY2008.0 Forecast (m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LLW_I</td>
<td>410</td>
<td>500</td>
<td>760</td>
</tr>
<tr>
<td>LLW_II</td>
<td>870</td>
<td>730</td>
<td>940</td>
</tr>
<tr>
<td>CH_MLLW</td>
<td>8</td>
<td>6</td>
<td>8</td>
</tr>
<tr>
<td>RH_TRU(M)</td>
<td>20</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1,118</strong></td>
<td><strong>1,248</strong></td>
<td><strong>1,700</strong></td>
</tr>
</tbody>
</table>

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

Background

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

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

Forecast Assumptions and Comments

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

Other Forecast Data

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

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


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Offsite — Bettis Atomic Power-Laboratory

Bettis Atomic Power-Laboratory Report Sections

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

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

- This generator contributes 1,010 m³, or 3% of Offsite’s waste forecast.

- The forecast life cycle for the Bettis Atomic Power-Laboratory ends in 2008.

- LLW_III is the primary waste class forecast. As shown below, a small amount CH_MLLW is also forecast. The amount of CH_MLLW forecast is consistent with the Site Treatment Plan (STP) for BAPL.

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

Waste Class Distribution

Waste Class Data

1 of 4
The expected physical waste forms, hazardous characteristics, container types, and LDR waste stream identification distribution of Bettis Atomic Power-Laboratory's forecast wastes are described in the following charts.

**LLW Data**

**Physical Waste Form Distribution**

Debris Wastes 100% (1,010 m³)

**Container Distribution**

208 Litre Drums 96% (980 m³)

Bettis Atomic Power-Laboratory
LLW Total = 1,010 m³

**MLLW Data**

**Physical Waste Form Distribution**

Inorganic Solids 100% (0.26 m³)

**Hazardous Characteristic Distribution**

Mercury > 280 ppm 100% (0.26 m³)

Bettis Atomic Power-Laboratory
MLLV Total = 0.26 m³

**Container Distribution**

208 Litre Drums 100% (0.26 m³)

Bettis Atomic Power-Laboratory
MLLV Total = 0.26 m³

**LDR Waste Stream Identification Distribution**

MLLV-06 100% (0.26 m³)

Bettis Atomic Power-Laboratory
MLLV Total = 0.26 m³

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

**Annual Volumes**
Annual Minimum, Baseline, and Maximum Volumes

Annual LLW Baseline Volumes

Annual MLLW Baseline Volumes

Comparison to Previous Baseline(s)

The FY2001.0 forecast shows a 43% increase from the FY2000.0 forecast of 710 m³ due to the extension of the forecast life-cycle from 2005 to 2008.
The FY2000.0 forecast shows a 2% decrease from the FY99.0 forecast of 730 m³.

**Comparison to Previous Baseline(s) by Waste Class**

<table>
<thead>
<tr>
<th>Waste Class</th>
<th>FY2001.0 Forecast</th>
<th>FY2000.0 Forecast</th>
<th>FY1999.0 Forecast</th>
</tr>
</thead>
<tbody>
<tr>
<td>LLW, I</td>
<td>350</td>
<td>-</td>
<td>360</td>
</tr>
<tr>
<td>LLW, II</td>
<td>360</td>
<td>1,010</td>
<td>370</td>
</tr>
<tr>
<td>CH, MLLW</td>
<td>1</td>
<td>0.26</td>
<td>0.77</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1,071</strong></td>
<td><strong>770</strong></td>
<td><strong>730</strong></td>
</tr>
</tbody>
</table>

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

**Background**

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

**Forecast Assumptions and Comments**

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

**Other Forecast Data**

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

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


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Offsite — Bettis Atomic Power-Shipyards

Bettis Atomic Power-Shipyards Report Sections

» Highlights
» Waste Class Data
» Annual Volumes
» Comparison to Previous Baseline(s)

» Background
» Forecast Assumptions and Comments
» Other Bettis Atomic Power-Shipyards Forecast Data
» Detailed Forecast Data

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

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

Waste Class Distribution

Waste Class Data

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

Physical Waste Form Distribution

Container Distribution

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

Annual Volumes

Annual Minimum, Baseline, and Maximum Volumes

Annual LLW Baseline Volumes
Comparison to Previous Baseline(s)

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

Comparison to Previous Baseline(s) by Waste Class

<table>
<thead>
<tr>
<th>Waste Class</th>
<th>FY2001.0 Forecast (m³)</th>
<th>FY2000.0 Forecast (m³)</th>
<th>FY1999.0 Forecast (m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LLW</td>
<td>1</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1</strong></td>
<td><strong>1</strong></td>
<td><strong>6</strong></td>
</tr>
</tbody>
</table>

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

Background

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

Forecast Assumptions and Comments

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

Other Forecast Data

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

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


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

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

Waste Class Distribution

Waste Class Data
The expected physical waste forms and container types of Brookhaven National Laboratory's forecasted
waste are described in the following charts.

**LLW Data**

**Physical Waste Form Distribution**

- Soil Gravel: 12% (1,050 m³)
- Debris Wastes: 88% (7,530 m³)

**Container Distribution**

- 208 Liter Drums: 1% (20 m³)
- Extra Large Boxes: 10% (870 m³)
- Medium Boxes: 36% (3,120 m³)
- Small Boxes: 53% (4,570 m³)

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

**Annual Volumes**

**Annual Minimum, Baseline, and Maximum Volumes**

**Annual LLW Baseline Volumes**

- **Annual LLW Baseline By Waste Class**
  - Offsite — Brookhaven National Laboratory
Comparison to Previous Baseline(s)

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

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

Comparison to Previous Baseline(s) by Waste Class

<table>
<thead>
<tr>
<th>Waste Class</th>
<th>FY2001.0 Forecast (m³)</th>
<th>FY2000.0 Forecast (m³)</th>
<th>FY1999.0 Forecast (m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LLW, I</td>
<td>8,590</td>
<td>8,990</td>
<td>1,680</td>
</tr>
<tr>
<td>Total</td>
<td>8,590</td>
<td>8,990</td>
<td>1,680</td>
</tr>
</tbody>
</table>

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

Background

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

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

Forecast Assumptions and Comments

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

Other Forecast Data

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

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


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Offsite — Energy Technology Engineering Center (ETEC)

Energy Technology Engineering Center (ETEC) Report Sections

» Highlights
» Waste Class Data
» Annual Volumes
» Comparison to Previous Baseline(s)

» Background
» Forecast Assumptions and Comments
» Other Energy Technology Engineering Center (ETEC) Forecast Data
» Detailed Forecast Data

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

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

Waste Class Distribution

LLW_I 98% (1,510 m³)

Energy Technology Engineering Center (ETEC)
Total (excl. HAZ) = 1,538 m³

Waste Class Data

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

Physical Waste Form Distribution

- Soil Gravel: 5% (70 m³)
- Debris Wastes: 95% (1,440 m³)

Energy Technology Engineering Center (ETEC)
LLW Total = 1,510 m³

Container Distribution

- Small Boxes: 34% (510 m³)
- Other Containers: 66% (1,000 m³)

Energy Technology Engineering Center (ETEC)
LLW Total = 1,510 m³

TRU(M) Waste Data

Physical Waste Form Distribution

- Organic Solids: 8% (1 m³)
- Special Wastes: < 1% (0.12 m³)
- Debris Wastes: 18% (3 m³)
- Inorganic Solids: 72% (10 m³)

Energy Technology Engineering Center (ETEC)
TRU(M) Total = 10 m³

Hazardous Characteristic Distribution

- Organic: 20% (3 m³)
- Metals + PCE < 50 ppm: 80% (10 m³)

Energy Technology Engineering Center (ETEC)
Total (TRU&M only) = 10 m³

Container Distribution

- 208 Liter Drums: 100% (10 m³)

Energy Technology Engineering Center (ETEC)
TRU(M) Total = 10 m³

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

Annual Volumes

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

The FY2000.0 forecast shows a 32% decrease from the FY99.0 forecast of 2,210 due to changes in schedule and work estimation.
Comparison to Previous Baseline(s) by Waste Class

<table>
<thead>
<tr>
<th>Waste Class</th>
<th>FY2001.0 Forecast (m³)</th>
<th>FY2002.0 Forecast (m³)</th>
<th>FY2003.0 Forecast (m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LLW, J</td>
<td>1,510</td>
<td>1,510</td>
<td>2,210</td>
</tr>
<tr>
<td>CH, TRU(M)</td>
<td>3</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>RM, TRU(M)</td>
<td>10</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>5,030</strong></td>
<td><strong>5,510</strong></td>
<td><strong>2,210</strong></td>
</tr>
</tbody>
</table>

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

Background

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

Forecast Assumptions and Comments

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

Other Forecast Data

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

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


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Survey - Fermi National Accelerator Laboratory

Fermi National Accelerator Laboratory Report Sections

» Highlights
» Waste Class Data
» Annual Volumes
» Comparison to Previous Baseline(s)

Fermi National Accelerator Laboratory Report Sections

» Background
» Forecast Assumptions and Comments
» Other Fermi National Accelerator Laboratory Forecast Data
»» Detailed Forecast Data

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

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

Waste Class Distribution

Waste Class Data

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

Physical Waste Form Distribution

- Soil Gravel: 3% (40 m³)
- Inorganic Solids: 4% (60 m³)
- Organic Solids: <1% (3 m³)
- Debris Wastes: 94% (1,850 m³)

Fermi National Accelerator Laboratory
LLW Total = 1,780 m³

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

Annual Volumes

Annual Minimum, Baseline, and Maximum Volumes

Annual LLW Baseline Volumes
Comparison to Previous Baseline(s)

The FY2001.0 forecast shows a 4% decrease from the FY2000.0 forecast of 1,770 m$^3$ due to the shipment of previously forecast waste in FY2000.

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

Comparison to Previous Baseline(s) by Waste Class

<table>
<thead>
<tr>
<th>Waste Class</th>
<th>FY2001.0 Forecast (m$^3$)</th>
<th>FY2000.0 Forecast (m$^3$)</th>
<th>FY1999.0 Forecast (m$^3$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LLW</td>
<td>1,700</td>
<td>1,770</td>
<td>1,830</td>
</tr>
<tr>
<td>Total</td>
<td>3,400</td>
<td>3,570</td>
<td>3,660</td>
</tr>
</tbody>
</table>

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m$^3$ are rounded to the nearest 10 m$^3$, numbers less than 10 m$^3$ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m$^3$.

Background

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

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

Forecast Assumptions and Comments

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

Other Forecast Data

- Hazardous Waste
  - No hazardous waste has been reported by Fermi National Accelerator Laboratory.
Offsite — Knolls Atomic Power-Laboratory

Knolls Atomic Power-Laboratory Report Sections

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

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

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

Waste Class Distribution

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

**MLLW Data**

**Physical Waste Form Distribution**

- Inorganic Solids: 32% (5 m³)
- Debris Wastes: 67% (10 m³)

**Hazardous Characteristic Distribution**

- Metals: 100% (20 m³)

**Container Distribution**

- 208 Liter Drums: 100% (20 m³)

**LDR Waste Stream Identification Distribution**

- MLLW-02: 32% (5 m³)
- MLLW-04 (Non-OC): 67% (10 m³)

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

**Annual Volumes**

**Annual Minimum, Baseline, and Maximum Volumes**

![Graph showing annual minimum, baseline, and maximum volumes](image)

**Annual MLLW Baseline Volumes**
Comparison to Previous Baseline(s)

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

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

Comparison to Previous Baseline(s) by Waste Class

<table>
<thead>
<tr>
<th>Waste Class</th>
<th>FY2001.0 Forecast (m³)</th>
<th>FY2000.0 Forecast (m³)</th>
<th>FY1999.0 Forecast (m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CH, MLLW</td>
<td>20</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>Total</td>
<td>20</td>
<td>10</td>
<td>10</td>
</tr>
</tbody>
</table>

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

Background

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

Forecast Assumptions and Comments

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

Other Forecast Data

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

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


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**Offsite — Knolls Atomic Power-Shipyards**

Knolls Atomic Power-Shipyards Report Sections

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

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

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

### Waste Class Distribution

**Waste Class Data**

The expected physical waste forms and container types for Knolls Atomic Power-Shipyards' forecasted
waste is displayed in the following charts.

**LLW Data**

**Physical Waste Form Distribution**

- Debris Waste: 100X (310 m³)

**Container Distribution**

- Large Boxes: 7% (250 m³)
- Extra Large Boxes: 12% (40 m³)
- Medium Boxes: 81% (250 m³)

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

**Annual Volumes**

**Annual Minimum, Baseline, and Maximum Volumes**

**Annual LLW Baseline Volumes**
Comparison to Previous Baseline(s)

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

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

Comparison to Previous Baseline(s) by Waste Class

<table>
<thead>
<tr>
<th>Waste Class</th>
<th>FY2001.0 Forecast (m³)</th>
<th>FY2000.0 Forecast (m³)</th>
<th>FY1999.0 Forecast (m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LLW_I</td>
<td>250</td>
<td>250</td>
<td>320</td>
</tr>
<tr>
<td>LLW_II</td>
<td>60</td>
<td>140</td>
<td>150</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>310</strong></td>
<td><strong>390</strong></td>
<td><strong>490</strong></td>
</tr>
</tbody>
</table>

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

Background

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

Forecast Assumptions and Comments

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

Other Forecast Data

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

For questions or comments, please contact Roberta Barcot
(e-mail: Roberta_A_Barcot@rl.gov, voice: (509) 373-4732).


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

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

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

LLW Data

**Physical Waste Form Distribution**

- Debris Vases: 42% (100 m$^3$)
- Inorganic Solids: 58% (140 m$^3$)

**Container Distribution**

- Small Bases: 42% (100 m$^3$)
- 208 Liter Drums: 58% (140 m$^3$)

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m$^3$ are rounded to the nearest 10 m$^3$, numbers less than 10 m$^3$ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m$^3$.

Annual Volumes

Annual Minimum, Baseline, and Maximum Volumes

Annual LLW Baseline Volumes
Comparison to Previous Baseline(s)

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

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

Comparison to Previous Baseline(s) by Waste Class

<table>
<thead>
<tr>
<th>Waste Class</th>
<th>FY2001.0 Forecast (m³)</th>
<th>FY2000.0 Forecast (m³)</th>
<th>FY1999.0 Forecast (m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LLW/J</td>
<td>250</td>
<td>270</td>
<td>220</td>
</tr>
<tr>
<td>Total</td>
<td>250</td>
<td>270</td>
<td>220</td>
</tr>
</tbody>
</table>

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

Background

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

Forecast Assumptions and Comments

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

Lawrence Berkeley Laboratory waste volumes are made up of two components. The first is the waste generated from normal ongoing research and support activities, and the second is waste from the Decontamination and Decommissioning of Bevatron and 88-in Cyclotron. Only the first type is funded by EM-30 and appears in the 2006 plan. Therefore, only the waste in small boxes and 208-liter drums has been included in the baseline forecast. The
Bevatron and Cyclotron waste has been included in the maximum volume estimate. The possibility to re-use or recycle the Bevatron Decontamination and Decommissioning waste at Brookhaven National Laboratory and/or other facilities will continually be explored by Lawrence Berkeley Laboratory and DOE/HQ. If more concrete blocks are to be re-used, the maximum amount of waste to be sent to Hanford will decrease and an adjustment of estimate will then be made.

**Other Forecast Data**

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

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

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

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

**Waste Class Distribution**

```
CH_TRU(M)
100% (2 m³)
```

**Waste Class Data**

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

Physical Waste Form Distribution

- Debris Wastes: 100% (2 m³)
  Missouri University Research Reactor
  TRU(M) Total = 2 m³

Hazardous Characteristic Distribution

- Metals: 100% (2 m³)
  Missouri University Research Reactor
  Total (TRU M only) = 2 m³

Container Distribution

- 208 Liter Drums: 100% (2 m³)
  Missouri University Research Reactor
  TRU(M) Total = 2 m³

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

Annual Volumes

Annual Minimum, Baseline, and Maximum Volumes

Annual TRU(M) Waste Baseline Volumes
Comparison to Previous Baseline(s)

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

Comparison to Previous Baseline(s) by Waste Class

<table>
<thead>
<tr>
<th>Missouri University Research Reactor Comparison to Previous Forecasts</th>
<th>FY2001.0 Forecast (m³)</th>
<th>FY2002.9 Forecast (m³)</th>
<th>FY1999.9 Forecast (m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Waste Class</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CH_TRU(M)</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>2</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

Background

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

Forecast Assumptions and Comments

The forecast is based on process knowledge.

Other Forecast Data

- Hazardous Waste
  - No hazardous waste has been reported by Missouri University Research Reactor.
Offsite — Paducah Energy Systems

Paducah Energy Systems Report Sections

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

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

- This generator contributes 90 m³, or <1% of Offsite's waste forecast.

- The forecast life cycle for the Paducah Energy Systems ends in 2010; previous forecasts showed the life-cycle ending in 2002.

- LLW_III is the only waste class forecast.

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

Waste Class Distribution

![Waste Class Distribution Diagram]

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

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

**LLW Data**

**Physical Waste Form Distribution**

![Final Form Distribution](image1)

**Container Distribution**

![Container Distribution](image2)

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

**Annual Volumes**

**Annual Minimum, Baseline, and Maximum Volumes**

![Annual Volume Chart](image3)

**Annual LLW Baseline Volumes**
Comparison to Previous Baseline(s)

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

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

Comparison to Previous Baseline(s) by Waste Class

<table>
<thead>
<tr>
<th>Paducah Energy Systems Comparison to Previous Forecasts</th>
<th>FY2001.0 Forecast (m³)</th>
<th>FY2000.0 Forecast (m³)</th>
<th>FY1999.0 Forecast (m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Waste Class</td>
<td>Total</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LLW_III</td>
<td>90</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>90</strong></td>
<td><strong>100</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

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

Background

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

Forecast Assumptions and Comments

The forecast is based on facility closure plans.

Other Forecast Data

- Hazardous Waste
  - No hazardous waste has been reported by Paducah Energy Systems.
For questions or comments, please contact Roberta Barcot
(e-mail: Roberta_A_Barcot@rl.gov, voice: (509) 373-4752).


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Offsite — Parks Township

Parks Township Report Sections

» Highlights
» Waste Class Data
» Annual Volumes
» Comparison to Previous Baseline(s)

» Background
» Forecast Assumptions and Comments
» Other Parks Township Forecast Data

» Detailed Forecast Data

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

• This generator contributes 1,560 m³, or 5% of Offsite's waste forecast.

• The forecast life cycle for the Parks Township ends in 2001.

• LLW_I is the only waste class forecast.

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

Waste Class Distribution

Waste Class Data

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

Physical Waste Form Distribution

- Debris Waste: 100x (1,560 m$^3$)
- Extra Large Boxes: 100x (1,560 m$^3$)

Parks Township
LLV Total = 1,560 m$^3$

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m$^3$ are rounded to the nearest 10 m$^3$, numbers less than 10 m$^3$ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m$^3$.

Annual Volumes

Annual Minimum, Baseline, and Maximum Volumes

Annual LLW Baseline Volumes
Comparison to Previous Baseline(s)

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

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

Comparison to Previous Baseline(s) by Waste Class

<table>
<thead>
<tr>
<th>Waste Class</th>
<th>FY2001.0 Forecast (m³)</th>
<th>FY2000.0 Forecast (m³)</th>
<th>FY1999.0 Forecast (m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LLW</td>
<td>1,560</td>
<td>2,810</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>1,560</td>
<td>2,810</td>
<td></td>
</tr>
</tbody>
</table>

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

Background

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

Forecast Assumptions and Comments

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

Other Forecast Data

- **Hazardous Waste**
  - No hazardous waste has been reported by Parks Township.
Offsite — Pearl Harbor Naval Shipyards

Pearl Harbor Naval Shipyards Report Sections

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

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

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

Waste Class Distribution

Waste Class Data

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

Physical Waste Form Distribution

Debris Wastes 36% (1 m³)
Inorganic Solids 62% (2 m³)

Pearl Harbor Naval Shipyards
MLLV Total = 3 m³

Hazardous Characteristic Distribution

Metals 100% (3 m³)

Pearl Harbor Naval Shipyards
MLLV Total = 3 m³

Container Distribution

208 Liter Drums 100% (3 m³)

Pearl Harbor Naval Shipyards
MLLV Total = 3 m³

LDR Waste Stream Identification Distribution

MLLV-04 (Non-CC) 38% (1 m³)
MLLV-02 62% (2 m³)

Pearl Harbor Naval Shipyards
MLLV Total = 3 m³

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

Annual Volumes

Annual Minimum, Baseline, and Maximum Volumes

Annual MLLW Baseline Volumes
Comparison to Previous Baseline(s)

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

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

Comparison to Previous Baseline(s) by Waste Class

<table>
<thead>
<tr>
<th>Waste Class</th>
<th>FY2001.0 Forecast (m³)</th>
<th>FY2000.0 Forecast (m³)</th>
<th>FY1999.0 Forecast (m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CH_MLLW</td>
<td>3</td>
<td>7</td>
<td>7</td>
</tr>
</tbody>
</table>

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

Background

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

Forecast Assumptions and Comments

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

Other Forecast Data

- Hazardous Waste
  - No hazardous waste has been reported by Pearl Harbor Naval Shipyards.
Offsite — Portsmouth Energy Systems

Portsmouth Energy Systems Report Sections

» Highlights
» Waste Class Data
» Annual Volumes
» Comparison to Previous Baseline(s)

» Background
» Forecast Assumptions and Comments
» Other Portsmouth Energy Systems Forecast Data
»» Detailed Forecast Data

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

• This generator contributes 290 m³, or 1% of Offsite's waste forecast.
• The forecast life cycle for the Portsmouth Energy Systems ends in 2006.
• LLW_1 is the only waste class forecast.
• The FY2001.0 forecast shows the same volume as the FY2000.0 forecast.

Waste Class Distribution

![Waste Class Distribution Graph]

- LLW_1
- 100% (290 m³)

Portsmouth Energy Systems
Total (excl. HAZ) = 290 m³

Waste Class Data

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

Physical Waste Form Distribution

Debris Wastes
100% (290 m³)

Container Distribution

Small Boxes
100% (290 m³)

Portsmouth Energy Systems
LLW Total = 290 m³

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

Annual Volumes

Annual Minimum, Baseline, and Maximum Volumes

Annual LLW Baseline Volumes
Comparison to Previous Baseline(s)

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

Comparison to Previous Baseline(s) by Waste Class

<table>
<thead>
<tr>
<th>Waste Class</th>
<th>FY2001.0 Forecast (m³)</th>
<th>FY2000.0 Forecast (m³)</th>
<th>FY99.0 Forecast (m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LLW</td>
<td>290</td>
<td>290</td>
<td>290</td>
</tr>
<tr>
<td>Total</td>
<td>290</td>
<td>290</td>
<td>290</td>
</tr>
</tbody>
</table>

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

Background

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

Forecast Assumptions and Comments

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

Other Forecast Data

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

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


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**Offsite — Portsmouth Naval Shipyards**

Portsmouth Naval Shipyards Report Sections

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

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

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

**Waste Class Distribution**

```
CH_MLLW
100% (0.77 m³)
```

**Waste Class Data**

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

MLLW Data

Physical Waste Form Distribution

- Inorganic Solids: 33% (0.26 m³)
- Debris Wastes: 67% (0.51 m³)

Portsmouth Naval Shipyards
MLLV Total = 0.77 m³

Hazardous Characteristic Distribution

- Metals: 100% (0.77 m³)

Portsmouth Naval Shipyards
MLLV Total = 0.77 m³

Container Distribution

- 208 Liter Drums: 33% (0.26 m³)
- MLLV-02: 100% (0.77 m³)

Portsmouth Naval Shipyards
MLLV Total = 0.77 m³

LDR Waste Stream Identification Distribution

- MLLV-04 (Non-OC): 67% (0.51 m³)

Portsmouth Naval Shipyards
MLLV Total = 0.77 m³

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

Annual Volumes

Annual Minimum, Baseline, and Maximum Volumes

Annual MLLW Baseline Volumes
Comparison to Previous Baseline(s)

The FY2001.0 forecast shows a 25% decrease from the FY2000.0 forecast of 1 m$^3$ to reflect the most recent Site Treatment Plan (STP).

The FY2000.0 forecast is the same as the FY99.0 forecast of 1 m$^3$.

Comparison to Previous Baseline(s) by Waste Class

<table>
<thead>
<tr>
<th>Waste Class</th>
<th>FY2001.0 Forecast (m$^3$)</th>
<th>FY2000.0 Forecast (m$^3$)</th>
<th>FY1999.0 Forecast (m$^3$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CH_MLLW</td>
<td>0.77</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>0.77</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m$^3$ are rounded to the nearest 10 m$^3$, numbers less than 10 m$^3$ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m$^3$.

Background

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

Forecast Assumptions and Comments

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

Other Forecast Data

- Hazardous Waste
  - No hazardous waste has been reported by Portsmouth Naval Shipyards.
Highlights of LLW, MLLW, and TRU(M) Waste Forecast

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

Waste Class Distribution

LLW_I
100% (2,370 m³)

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

Waste Class Data

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

**LLW Data**

**Physical Waste Form Distribution**

- Organic Solids: 2% (80 m³)
- Debris Wastes: 87% (2,300 m³)

**Container Distribution**

- Other Drums: 7% (170 m³)
- Other Containers: 18% (390 m³)
- Small Boxes: 67% (1,390 m³)

Princeton Plasma Physics Lab
LLV Total = 2,370 m³

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

**Annual Volumes**

**Annual Minimum, Baseline, and Maximum Volumes**

![Annual Minimum, Baseline, and Maximum Volumes](image)

**Annual LLW Baseline Volumes**

![Annual LLW Baseline By Waste Class](image)
Comparison to Previous Baseline(s)

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

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

Comparison to Previous Baseline(s) by Waste Class

<table>
<thead>
<tr>
<th>Princeton Plasma Physics Lab</th>
<th>FY2001.0 Forecast (m³)</th>
<th>FY2000.0 Forecast (m³)</th>
<th>FY1999.0 Forecast (m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LLW</td>
<td>2,370</td>
<td>2,320</td>
<td>2,280</td>
</tr>
<tr>
<td>CH, MLLW</td>
<td>-</td>
<td>-</td>
<td>100</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>2,370</strong></td>
<td><strong>2,320</strong></td>
<td><strong>2,380</strong></td>
</tr>
</tbody>
</table>

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

Background

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

Forecast Assumptions and Comments

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

Other Forecast Data

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

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


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Offsite — Puget Sound Naval Shipyards

Puget Sound Naval Shipyards Report Sections

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

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

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

Waste Class Distribution

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

Waste Class Data

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

Physical Waste Form Distribution

Debris Wastes 41% (4 m$^3$)  
Inorganic Solids 59% (8 m$^3$)

Puget Sound Naval Shipyards  
MLLV Total = 10 m$^3$

Hazardous Characteristic Distribution

Metals 100% (10 m$^3$)

Puget Sound Naval Shipyards  
MLLV Total = 10 m$^3$

Container Distribution

200 Liter Drums 100% (10 m$^3$)

Puget Sound Naval Shipyards  
MLLV Total = 10 m$^3$

LDR Waste Stream Identification Distribution

MLLVM (Non-OC) 41% (4 m$^3$)  
MLLW-02 59% (8 m$^3$)

Puget Sound Naval Shipyards  
MLLV Total = 10 m$^3$

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m$^3$ are rounded to the nearest 10 m$^3$, numbers less than 10 m$^3$ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m$^3$.

Annual Volumes

Annual Minimum, Baseline, and Maximum Volumes

Annual Minimum, Baseline, and Maximum Volumes Offsite — Puget Sound Naval Shipyards

Annual MLLW Baseline Volumes
Comparison to Previous Baseline(s)

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

The FY2000.0 forecast shows a decrease of 85% (17 m$^3$) from the FY99.0 forecast due to the shipment of previously forecast waste in FY99.

Comparison to Previous Baseline(s) by Waste Class

<table>
<thead>
<tr>
<th>Waste Class</th>
<th>FY2001.0 Forecast (m$^3$)</th>
<th>FY2000.0 Forecast (m$^3$)</th>
<th>FY1999.0 Forecast (m$^3$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CH_MLLW</td>
<td>10</td>
<td>3</td>
<td>20</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>3</td>
<td>20</td>
</tr>
</tbody>
</table>

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m$^3$ are rounded to the nearest 10 m$^3$; numbers less than 10 m$^3$ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m$^3$.

Background

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

Forecast Assumptions and Comments

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

Other Forecast Data

- Hazardous Waste
  - No hazardous waste has been reported by Puget Sound Naval Shipyards.
**Offsite — Rocky Flats**

**Rocky Flats Report Sections**

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

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

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

**Waste Class Data**

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

**Annual Volumes**

**Annual Minimum, Baseline, and Maximum Volumes**
Comparison to Previous Baseline(s)

The FY2001.0 baseline forecast shows no change from the FY2000.0 and FY99.0 baseline forecasts. Although not shown in the table below, the maximum forecast volume decreased 28,990 m$^3$ (86%) from the FY2000.0 maximum forecast of 33,680 m$^3$. This decrease resulted primarily because Rocky Flats only included waste that meets the Hanford waste acceptance criteria in the current forecast.

Comparison to Previous Baseline(s) by Waste Class

<table>
<thead>
<tr>
<th>Waste Class</th>
<th>FY2001.0 Forecast (m$^3$)</th>
<th>FY2000.0 Forecast (m$^3$)</th>
<th>FY1999.0 Forecast (m$^3$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>--</td>
<td>--</td>
<td>--</td>
</tr>
</tbody>
</table>

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m$^3$ are rounded to the nearest 10 m$^3$, numbers less than 10 m$^3$ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m$^3$.

Background

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

Forecast Assumptions and Comments

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

Other Forecast Data

- Hazardous Waste
  - No hazardous waste has been reported by Rocky Flats.
**Offsite — Siemens Power Corp.**

Siemens Power Corp. Report Sections

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

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

- This generator contributes 9 m³, or <1% of Offsite's waste forecast.
- RH_TRU(M) waste is the only waste class generated.
- Siemens Power Corp. is a new offsite waste generator.

**Waste Class Distribution**

![Graph showing waste class distribution]

Siemens Power Corp.
Total (excl. HAZ) = 9 m³

**Waste Class Data**

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

**TRU(M) Data**
Physical Waste Form Distribution

- Final Form
  - 90% (0.79 m³)
  - Inorganic Solids (0.08 m³)
- Debris Wastes (0.03 m³)

Siemens Power Corp.
TRU(M) Total = 3 m³

Container Distribution

- Other Drums (0.08 m³)
- 208 Liter Drums (0.03 m³)

Siemens Power Corp.
TRU(M) Total = 3 m³

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

Annual Volumes

Annual Minimum, Baseline, and Maximum Volumes

![Annual Minimum, Baseline, and Maximum Volumes](image)

Annual TRU(M) Waste Baseline Volumes

![Annual TRU(M) Waste Baseline Volumes](image)

Comparison to Previous Baseline(s)

Siemens Power Corp. is a new offsite waste generator for Hanford.
Comparison to Previous Baseline(s) by Waste Class

<table>
<thead>
<tr>
<th>Waste Class</th>
<th>FY2001.0 Forecast (m³)</th>
<th>FY2000.0 Forecast (m³)</th>
<th>FY1999.0 Forecast (m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RH_TRU(M)</td>
<td>9</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>9</td>
<td>--</td>
<td>--</td>
</tr>
</tbody>
</table>

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

Background

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

Forecast Assumptions and Comments

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

Other Forecast Data

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

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


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Offsite — Stanford Linear Accelerator Center

Stanford Linear Accelerator Center Report Sections

» Highlights
» Waste Class Data
» Annual Volumes
» Comparison to Previous Baseline(s)

» Background
» Forecast Assumptions and Comments
» Other Stanford Linear Accelerator Center Forecast Data
» Detailed Forecast Data

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

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

Waste Class Distribution

Waste Class Data

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

Physical Waste Form Distribution

- Organic Solids: 4% (30 m³)
- Debris Wastes: 96% (800 m³)

Container Distribution

- 208 Liter Drums: 4% (40 m³)
- Medium Boxes: 96% (800 m³)

Stanford Linear Accelerator Center
LLW Total = 848 m³

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

Annual Volumes

Annual Minimum, Baseline, and Maximum Volumes

Annual LLW Baseline Volumes
Comparison to Previous Baseline(s)

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

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

Comparison to Previous Baseline(s) by Waste Class

<table>
<thead>
<tr>
<th>Stanford Linear Accelerator Center</th>
<th>Comparison to Previous Forecasts</th>
<th>FY2001.0 Forecast (m³)</th>
<th>FY2000.0 Forecast (m³)</th>
<th>FY1999.0 Forecast (m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Waste Class</td>
<td>LLW</td>
<td>840</td>
<td>790</td>
<td>810</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>840</td>
<td>790</td>
<td>810</td>
</tr>
</tbody>
</table>

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

Background

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

Forecast Assumptions and Comments

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

Other Forecast Data

- Hazardous Waste
  - No hazardous waste has been reported by Stanford Linear Accelerator Center.
**Highlights**

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

**Waste Class Data**

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

**Annual Volumes**

Annual Minimum, Baseline, and Maximum Volumes
Comparison to Previous Baseline(s)

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

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

Comparison to Previous Baseline(s) by Waste Class

<table>
<thead>
<tr>
<th>Waste Class</th>
<th>FY2001.0 Forecast (m³)</th>
<th>FY2000.0 Forecast (m³)</th>
<th>FY1999.0 Forecast (m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LLW (I)</td>
<td>-</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>Total</td>
<td>-</td>
<td>10</td>
<td>10</td>
</tr>
</tbody>
</table>

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

Background

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

Forecast Assumptions and Comments

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

Other Forecast Data

- Hazardous Waste
  - No hazardous waste has been reported by University of California, Davis.
Pacific Northwest National Laboratory

Pacific Northwest National Laboratory Report Sections

» Highlights
» Waste Class Data
» Annual Waste Class Volumes
» Summary Table
» Comparison to Previous Baseline(s)

» Background
» Forecast Assumptions and Comments
» Other Pacific Northwest National Laboratory Forecast Data
» Detailed Forecast Data

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

- The life cycle total of LLW, MLLW, and TRU(M) waste expected from the Pacific Northwest National Laboratory is 540 m$^3$, or <1% of the forecast total.

- The forecast life cycle for the Pacific Northwest National Laboratory ends in 2010.

- LLW_I is the primary waste class forecast, representing 44% (240 m$^3$) of the Pacific Northwest National Laboratory's waste volume. As shown in the waste class distribution chart below, CH_MLLW (31% or 170 m$^3$) and LLW_III (17% or 90 m$^3$) also represent a significant fraction of the volume forecasted by this functional group.

- As shown in the generator distribution chart below, the only generator included in this functional group is the Pacific Northwest National Laboratory.

- The FY2001.0 forecast shows a 72% decrease from the FY2000.0 forecast of 1,940 m$^3$ due to implementation of a new methodology for calculating forecast estimates using container counts.
Waste Class Data

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

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

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

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

LLW Data

Physical Waste Form Distribution

Container Distribution

MLLW Data
Physical Waste Form Distribution

- Inorganic Solids: 5% (9 m³)
- Organic Solids: 6% (9 m³)
- Lab Packs: 24% (40 m³)
- Other: 4% (6 m³)
- Debris Wastes: 61% (100 m³)

Hazardous Characteristic Distribution

- WA State Regulated: 4% (8 m³)
- Corrosive + Metals + Organic + WA State Regulated: 8% (10 m³)
- Metals + Organic: 50% (80 m³)
- Other: 20% (30 m³)

Container Distribution

- 322 Liter Drums: 14% (20 m³)
- Medium Boxes: 44% (70 m³)
- 208 Liter Drums: 43% (70 m³)

LDR Waste Stream Identification Distribution

- MLLV-04 (Non-OC): 5% (6 m³)
- MLLV-02: 18% (30 m³)
- MLLV-03: 17% (30 m³)
- Other: 3% (5 m³)

TRU(M) Waste Data

Physical Waste Form Distribution

- Inorganic Solids: 15% (7 m³)
- Debris Wastes: 65% (40 m³)
- Other: 20% (2 m³)

Hazardous Characteristic Distribution

- Metals: 85% (20 m³)
- WA State Regulated: 8% (2 m³)
- Metals + Organic: 85% (20 m³)
Container Distribution

208 Liter Drums
100% (40 m3)

Pacific Northwest National Laboratory (PNNL) Functional Group
TRU(M) Total = 48 m3

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

Annual Waste Class Volumes

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

Annual Minimum, Baseline, and Maximum Volumes

Annual Baseline by Waste Class

Annual LLW Baseline Volumes
Annual MLLW Baseline Volumes

Annual TRU(M) Waste Baseline Volumes

Summary Table (Volumes in m³)

(in descending order by total volume)
Comparison to Previous Baseline(s)

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

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

Comparison to Previous Baseline(s) by Waste Class

<table>
<thead>
<tr>
<th>Waste Class</th>
<th>FY2001.0 Forecast (m³)</th>
<th>FY2000.0 Forecast (m³)</th>
<th>FY1999.0 Forecast (m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LLW_I</td>
<td>240</td>
<td>1,190</td>
<td>1,440</td>
</tr>
<tr>
<td>LLW_III</td>
<td>90</td>
<td>330</td>
<td>340</td>
</tr>
<tr>
<td>CH_MLLW</td>
<td>170</td>
<td>330</td>
<td>380</td>
</tr>
<tr>
<td>RH_MLLW</td>
<td>20</td>
<td>20</td>
<td>10</td>
</tr>
<tr>
<td>CH_TRU(M)</td>
<td>30</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>RH_TRU(M)</td>
<td>10</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>540</strong></td>
<td><strong>1,940</strong></td>
<td><strong>2,230</strong></td>
</tr>
</tbody>
</table>

Background

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

Forecast Assumptions and Comments

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

Waste streams held at the Pacific Northwest National Laboratory with no defined disposal
pathway were not included in the forecast. These waste streams include fuel-like material stored in the 325 facility hot cells. When disposal pathways are identified for these waste streams, they will be included as an update to this forecast.

Other Forecast Data

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

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


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Pacific Northwest National Laboratory — PNNL

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

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


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River Protection Program

River Protection Program Report Sections

» Highlights
» Waste Class Data
» Annual Waste Class Volumes
» Summary Table
» Comparison to Previous Baseline(s)

» Background
» Forecast Assumptions and Comments
» Other River Protection Program Forecast Data

» Detailed Forecast Data

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

- The life cycle total of LLW, MLLW, and TRU(M) waste expected from the River Protection Program is 92,470 m³, or 53% of the forecast total.

- The forecast life cycle for the River Protection Program ends in 2032.

- The forecasted waste consists primarily of LLW_I (37%), RH_MLLW (34%), and CH_MLLW (26%). Additional waste classes are shown in the chart below.

- SST Long-Length Equipment and SST/DST Tank Farm Operations are the major sources of waste; forecasting 25% (23,500 m³), and 45% (41,190 m³) of the waste volume respectively. Other generators can be found in the waste generator chart below.

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

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

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

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

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

LLW Data

Physical Waste Form Distribution

Container Distribution

MLLW Data
Physical Waste Form Distribution

- Soil Gravel: 1%, (780 m³)
- Organic Solids: 4%, (2,320 m³)
- Shielding: 30%, (16,480 m³)
- Debris Vastes: 64%, (35,280 m³)

Hazardous Characteristic Distribution

- Metals: 2%, (1,190 m³)
- Organic: 29%, (16,170 m³)
- Others: 69%, (37,660 m³)

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

Container Distribution

- Other: 10%, (5,320 m³)
- 208 Liter Drums: 10%, (5,230 m³)
- Small Boxes: 15%, (8,000 m³)
- Medium Boxes: 15%, (8,290 m³)

LDR Waste Stream Identification Distribution

- MLLW-07: 4%, (2,380 m³)
- MLLW-04 (OC): 20%, (10,940 m³)
- MLLW-04 (Non-OC): 63%, (30,100 m³)

TRU(M) Waste Data

Physical Waste Form Distribution

- Organic Solids: 3%, (60 m³)
- Debris Vastes: 44%, (810 m³)
- Shielding: 53%, (1,080 m³)

Hazardous Characteristic Distribution

- Metals: 19%, (300 m³)
- Others: 51%, (880 m³)

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

MLLV Total = 54,960 m³
Container Distribution

River Protection Program (RPP) Functional Group
TRU(M) Total = 2,049 m³

Annual Waste Class Volumes

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

Annual Minimum, Baseline, and Maximum Volumes

Annual Baseline by Waste Class

Annual LLW Baseline Volumes
Summary Table (Volumes in $m^3$)

(in descending order by total volume)
Comparison to Previous Baseline(s)

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

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

Comparison to Previous Baseline(s) by Waste Class

Background

The River Protection Program is responsible for safe operation of the tank farms, interim
stabilization, waste transfers from single-shell tanks to double-shell tanks, facility upgrades to support safe operations and waste retrieval, treatment, and disposal, and vadose zone characterization.

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

Forecast Assumptions and Comments

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

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

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

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

Other Forecast Data

- Hazardous Waste
  - A life cycle total of 440 m³ of hazardous waste has been reported by generators in this program.
River Protection Program — BNFL Tank Waste Pretreatment and Vitrification

BNFL Tank Waste Pretreatment and Vitrification Report Sections

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

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

- This generator contributes 14,980 m³, or 16% of the River Protection Program's waste forecast.


- The majority of the waste is expected to be CH_MLLW (48%). See the additional waste classes in the pie graph below.

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

Waste Class Distribution

- RH_MLLW 8% (520 m³)
- RH_TRU(M) <1% (70 m³)
- LLW_H 8% (1,220 m³)
- CH_MLLW 48% (7,270 m³)
- LLW_L 37% (5,300 m³)

BNFL Tank Waste Pretreatment and Vitrification

Total (excl. HAZ) = 14,880 m³
Waste Class Data

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

LLW Data

Physical Waste Form Distribution

- Debris Waste: 100% (6,720 m³)

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

Container Distribution

- 208 Liter Drums: 8% (6,860 m³)

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

MLLW Data

Physical Waste Form Distribution

- Organic Solids: 11% (920 m³)
- Debris Waste: 89% (7,270 m³)

BNFL Tank Waste Pretreatment and Vitrification
MLLW Total = 8,180 m³

Hazardous Characteristic Distribution

- Metals + Organic: 100% (8,180 m³)

BNFL Tank Waste Pretreatment and Vitrification
MLLW Total = 8,180 m³

Container Distribution

- Medium Boxes: 11% (920 m³)
- Small Boxes: 47% (3,860 m³)

BNFL Tank Waste Pretreatment and Vitrification
MLLW Total = 8,180 m³

LDR Waste Stream Identification Distribution

- MLLW-04 (Non-OC): 88% (7,200 m³)

BNFL Tank Waste Pretreatment and Vitrification
MLLW Total = 8,180 m³

TRU(M) Waste Data
Physical Waste Form Distribution

Debris Waste
100% (70 m³)

Hazardous Characteristic Distribution

Metals + Organic
100% (40 m³)

BNFL Tank Waste Pretreatment and Vitrification
TRU(M) Total = 70 m³

Container Distribution

200 Ltr Drums
100% (70 m³)

BNFL Tank Waste Pretreatment and Vitrification
TRU(M) Total = 70 m³

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

Annual Volumes

Annual Minimum, Baseline, and Maximum Volumes

Annual LLW Baseline Volumes
Comparison to Previous Baseline(s)

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

The FY2000.0 forecast was the first forecast submittal for BNFL Tank Waste Pretreatment and Vitrification. Previous forecasts for tank waste vitrification were as much as an order of magnitude higher, however, these forecasts cannot necessarily be assumed to representative.
of the current BNFL design or scope. In particular, the current forecast only includes Phase 1 of tank waste processing. The addition of Phase 2 processing may result in more comparable estimates.

Comparison to Previous Baseline(s) by Waste Class

<table>
<thead>
<tr>
<th>BNFL Tank Waste Pretreatment and Vitrification Comparison to Previous Forecasts</th>
<th>FY2001.0 Forecast (m³)</th>
<th>FY2000.0 Forecast (m³)</th>
<th>FY1999.0 Forecast (m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LLW_J</td>
<td>5,500</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>LLW_M</td>
<td>1,220</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>CH_MLLW</td>
<td>7,270</td>
<td>1,380</td>
<td>--</td>
</tr>
<tr>
<td>RH_MLLW</td>
<td>920</td>
<td>1,750</td>
<td>--</td>
</tr>
<tr>
<td>RH_TRU(M)</td>
<td>70</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>14,990</strong></td>
<td><strong>3,130</strong></td>
<td><strong>--</strong></td>
</tr>
</tbody>
</table>

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

Background

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

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

Forecast Assumptions and Comments

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

Other Forecast Data

- Hazardous Waste
  - No hazardous waste has been forecasted by BNFL Tank Waste Pretreatment and Vitrification.
River Protection Program — DST Retrieval Phase II (10 tanks)

DST Retrieval Phase II (10 tanks) Report Sections

» Highlights
» Waste Class Data
» Annual Volumes
» Comparison to Previous Baseline(s)

» Background
» Forecast Assumptions and Comments
» Other DST Retrieval Phase II (10 tanks) Forecast Data

» Detailed Forecast Data

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

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

Waste Class Distribution

Waste Class Data

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

**MLLW Data**

### Physical Waste Form Distribution

- Organic Solids: 1% (40 m³)
- Soil Gravel: 2% (50 m³)
- Shielding: 15% (470 m³)
- Debris Wastes: 82% (2,470 m³)

**Hazardous Characteristic Distribution**

- Metals + Organic: 100% (3,030 m³)

**DST Retrieval Phase II (10 tanks)**

- MLLV Total = 3,030 m³

### Container Distribution

- 208 Liter Drums: 7% (200 m³)
- Medium Boxes: 26% (790 m³)
- LECs: 28% (850 m³)
- MB-Ys: 40% (1,200 m³)

**DST Retrieval Phase II (10 tanks)**

- MLLV Total = 3,030 m³

### LDR Waste Stream Identification Distribution

- MLLW-04 (OC): 8% (250 m³)
- MLLW-04 (Non-OC): 34% (1,020 m³)
- MLLW-07: 27% (830 m³)
- MLLW-01: 28% (850 m³)

**DST Retrieval Phase II (10 tanks)**

- MLLV Total = 3,030 m³

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

### Annual Volumes

**Annual Minimum, Baseline, and Maximum Volumes**

**Annual Minimum, Baseline, and Maximum Volumes**

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

**Annual MLLW Baseline Volumes**

2 of 4
Comparison to Previous Baseline(s)

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

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

Comparison to Previous Baseline(s) by Waste Class

<table>
<thead>
<tr>
<th>Waste Class</th>
<th>FY2001.0 Forecast (m³)</th>
<th>FY2000.0 Forecast (m³)</th>
<th>FY1999.0 Forecast (m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CH_MLLW</td>
<td>1,350</td>
<td>1,650</td>
<td>1,480</td>
</tr>
<tr>
<td>RH_MLLW</td>
<td>1,660</td>
<td>1,960</td>
<td>1,780</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>3,630</strong></td>
<td><strong>3,630</strong></td>
<td><strong>3,240</strong></td>
</tr>
</tbody>
</table>

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

Background

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

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

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

**Other Forecast Data**

- **Hazardous Waste**
  - No hazardous waste has been forecasted by DST Retrieval.

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


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River Protection Program — SST Long-Length Equipment

SST Long-Length Equipment Report Sections

» Highlights
» Waste Class Data
» Annual Volumes
» Comparison to Previous Baseline(s)

» Background
» Forecast Assumptions and Comments
» Other SST Long-Length Equipment Forecast Data
»» Detailed Forecast Data

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

- This generator contributes 23,500 m³, or 25% of the River Protection Program's waste forecast.

- The forecast life cycle for the SST Long-Length Equipment generator begins in 2007 and ends in 2028.

- Almost all of the forecasted waste (96%) is RH_MLLW.

- The total volume in the FY2001.0 forecast is the same as that in the FY2000.0 forecast.

Waste Class Distribution

![Graph showing waste class distribution]

Waste Class Data

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

Physical Waste Form Distribution

- Organic Solids: 8% (1,130 m³)
- Debris Wastes: 40% (9,010 m³)
- Shielding: 52% (12,380 m³)

Hazardous Characteristic Distribution

- Metals + Organic: 100% (22,520 m³)

Container Distribution

- LECs: 100% (22,520 m³)

LDR Waste Stream Identification Distribution

- MLLW-01: 100% (22,520 m³)

TRU(M) Waste Data

Physical Waste Form Distribution

- Organic Solids: 5% (50 m³)
- Debris Wastes: 40% (590 m³)
- Shielding: 55% (540 m³)

Hazardous Characteristic Distribution

- Metals + Organic: 100% (980 m³)

SST Long Length Equipment
MLLW Total = 22,520 m³

SST Long Length Equipment
MLLW Total = 22,520 m³

SST Long Length Equipment
MLLW Total = 22,520 m³

SST Long Length Equipment
MLLW Total = 22,520 m³
Container Distribution

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m$^3$ are rounded to the nearest 10 m$^3$, numbers less than 10 m$^3$ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m$^3$.

Annual Volumes

Annual Minimum, Baseline, and Maximum Volumes

Annual MLLW Baseline Volumes

Annual TRU(M) Waste Baseline Volumes
Comparison to Previous Baseline(s)

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

Comparison to Previous Baseline(s) by Waste Class

<table>
<thead>
<tr>
<th>Waste Class</th>
<th>FY2001.0 Forecast (m³)</th>
<th>FY2000.0 Forecast (m³)</th>
<th>FY99.0 Forecast (m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RH_MLLW</td>
<td>22,520</td>
<td>22,520</td>
<td>22,520</td>
</tr>
<tr>
<td>CH_TRU(M)</td>
<td>490</td>
<td>490</td>
<td>490</td>
</tr>
<tr>
<td>RH_TRU(M)</td>
<td>490</td>
<td>490</td>
<td>490</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>23,500</strong></td>
<td><strong>23,500</strong></td>
<td><strong>23,500</strong></td>
</tr>
</tbody>
</table>

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

Background

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

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

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

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

Other Forecast Data

- Hazardous Waste

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

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


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River Protection Program — SST Retrieval (149 Tanks)

SST Retrieval Report Sections

» Highlights
» Waste Class Data
» Annual Volumes
» Comparison to Previous Baseline(s)

» Background
» Forecast Assumptions and Comments
» Other SST Retrieval (149 Tanks) Forecast Data

» Detailed Forecast Data

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

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

Waste Class Distribution

Waste Class Data

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

**Physical Waste Form Distribution**

- Debris Wastes: 100% (600 m³)

**Container Distribution**

- 208 Liter Drums: 100% (680 m³)

**MLLW Data**

**Physical Waste Form Distribution**

- Debris Wastes: 100% (1,280 m³)

**Hazardous Characteristic Distribution**

- Metals + Organic: 100% (1,280 m³)

**Container Distribution**

- 208 Liter Drums: 100% (1,280 m³)

**LDR Waste Stream Identification Distribution**

- MLLV-07: 30% (390 m³)
- MLLV-04 (Non-OC): 70% (890 m³)

**SST Retrieval (149 tanks)**

- LLW Total: 680 m³
- MLLW Total: 1,280 m³

**SST Retrieval (149 tanks)**

- LLV Total: 600 m³
- MLLV Total: 1,280 m³

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

**Annual Volumes**

**Annual Minimum, Baseline, and Maximum Volumes**
Annual Minimum, Baseline, and Maximum Volumes
River Protection Program (RPP) — SST Retrieval (149 tanks)

Annual LLW Baseline Volumes

Annual MLLW Baseline Volumes

Comparison to Previous Baseline(s)

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

Comparison to Previous Baseline(s) by Waste Class
### Background

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

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

### Forecast Assumptions and Comments

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

### Other Forecast Data

- **Hazardous Waste**
  - No hazardous waste has been forecasted by SST Retrieval.

---

**Table: SST Retrieval (149 tanks) Comparison to Previous Forecasts**

<table>
<thead>
<tr>
<th>Waste Class</th>
<th>FY2001.0 Forecast (m³)</th>
<th>FY2000.0 Forecast (m³)</th>
<th>FY1999.0 Forecast (m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LLW-I</td>
<td>600</td>
<td>600</td>
<td>600</td>
</tr>
<tr>
<td>CH_MLLW</td>
<td>690</td>
<td>690</td>
<td>690</td>
</tr>
<tr>
<td>RH_MLLW</td>
<td>390</td>
<td>390</td>
<td>390</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1,680</strong></td>
<td><strong>1,680</strong></td>
<td><strong>1,680</strong></td>
</tr>
</tbody>
</table>

*Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.*
River Protection Program — SST/DST Tank Farm Operations

SST/DST Tank Farm Operations Report Sections

» Highlights
» Waste Class Data
» Annual Volumes
» Comparison to Previous Baseline(s)

» Background
» Forecast Assumptions and Comments
» Other [Generator] Forecast Data
» Detailed Forecast Data

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

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

Waste Class Distribution

Waste Class Data

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

1 of 4
LLW Data

Physical Waste Form Distribution

- Organic Solids <1% (10 m³)
- Inorganic Solids <1% (10 m³)
- Debris Wastes 100% (28,046 m³)

SST/DST Tank Farm Operations
LLW Total = 28,046 m³

Container Distribution

- Other Drums 22 (960 m³)
- Medium Drums 43 (12,050 m³)

SST/DST Tank Farm Operations
LLW Total = 28,046 m³

MLLW Data

Physical Waste Form Distribution

- Shielding 2% (220 m³)
- Soil Gravel 4% (520 m³)
- Inorganic Solids <1% (130 m³)
- Other <1% (130 m³)
- Debris Wastes 92% (12,160 m³)

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

Hazardous Characteristic Distribution

- Metals 1% (130 m³)
- Organic 99% (13,020 m³)

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

Container Distribution

- 208 Liter Drums 21% (2,710 m³)
- 322 Liter Drums 2% (210 m³)
- Medium Drums 47% (8,120 m³)

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

LDR Waste Stream Identification Distribution

- LLW-03 8% (620 m³)
- LLW-04 (Non-OC) 18% (1,950 m³)
- LLW-04 (OC) 80% (10,580 m³)

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

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

Annual Volumes

Annual Minimum, Baseline, and Maximum Volumes
Comparison to Previous Baseline(s)

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

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

Comparison to Previous Baseline(s) by Waste Class

<table>
<thead>
<tr>
<th>SST/DST Tank Farm Operations</th>
<th>FY2001.0 Forecast (m³)</th>
<th>FY2000.0 Forecast (m³)</th>
<th>FY1999.9 Forecast (m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LLW_J</td>
<td>20,040</td>
<td>9,950</td>
<td>10,580</td>
</tr>
<tr>
<td>CH_MILW</td>
<td>13,020</td>
<td>3,930</td>
<td>4,120</td>
</tr>
<tr>
<td>RH_MILW</td>
<td>140</td>
<td>1,010</td>
<td>1,090</td>
</tr>
<tr>
<td>Total</td>
<td>41,190</td>
<td>14,930</td>
<td>15,790</td>
</tr>
</tbody>
</table>

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

Background

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

Forecast Assumptions and Comments

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

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

Other Forecast Data

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

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


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River Protection Program — Vadose Zone Well Drilling

Vadose Zone Well Drilling Report Sections

» Highlights
» Waste Class Data
» Annual Volumes
» Comparison to Previous Baseline(s)

» Background
» Forecast Assumptions and Comments
» Other Vadose Zone Well Drilling Forecast Data
»» Detailed Forecast Data

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

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

Waste Class Distribution

Waste Class Data

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

Physical Waste Form Distribution

- Soil Gravel: 37% (170 m³)
- Debris Wastes: 63% (300 m³)

Vadose Zone Well Drilling,
MLLW Total = 470 m³

Hazardous Characteristic Distribution

- Organic: 100% (470 m³)

Vadose Zone Well Drilling,
MLLW Total = 470 m³

Container Distribution

- 208 Liter Drums: 37% (170 m³)
- MB-Vs: 63% (300 m³)

Vadose Zone Well Drilling,
MLLW Total = 470 m³

LDR Waste Stream Identification Distribution

- MLLW-02: 100% (470 m³)

Vadose Zone Well Drilling,
MLLW Total = 470 m³

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

Annual Volumes

Annual Minimum, Baseline, and Maximum Volumes

Annual Minimum, Baseline, and Maximum Volumes
River Protection Program (RPP) — Vadose Zone Well Drilling

Annual MLLW Baseline Volumes
Comparison to Previous Baseline(s)

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

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

Comparison to Previous Baseline(s) by Waste Class

<table>
<thead>
<tr>
<th>Waste Class</th>
<th>FY2001.0 Forecast (m³)</th>
<th>FY2000.0 Forecast (m³)</th>
<th>FY1999.0 Forecast (m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CH_MLLW</td>
<td>470</td>
<td>260</td>
<td>--</td>
</tr>
<tr>
<td>Total</td>
<td>470</td>
<td>260</td>
<td>--</td>
</tr>
</tbody>
</table>

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

Background

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

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

Forecast Assumptions and Comments

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

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

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


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River Protection Program — W-211 DST Retrieval Systems (10 tanks)

W-211 DST Retrieval Systems Report Sections

» Highlights
» Waste Class Data
» Annual Volumes
» Comparison to Previous Baseline(s)

» Background
» Forecast Assumptions and Comments
» Other W-211 DST Retrieval Systems Forecast Data
» Detailed Forecast Data

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

• This generator contributes 2,590 m³, or 3% of the River Protection Program’s waste forecast.

• The forecast life cycle for the DST Retrieval generator begins in 2002 and ends in 2028.

• The majority (91%) of waste forecast is RH_MLLW.

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

Waste Class Distribution

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

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

**MLLW Data**

**Physical Waste Form Distribution**

- Organic Solids: 4% (110 m³)
- Soil Gravel: <1% (6 m³)
- Debris Wastes: 50% (1,290 m³)
- Shielding: 46% (1,190 m³)

**Hazardous Characteristic Distribution**

- Metals + Organic: 100% (2,590 m³)

**MLLV Total = 2,590 m³**

**Container Distribution**

- Medium Boxes: 7% (180 m³)
- 200 Liter Drums: 2% (50 m³)
- MB-Ys: 8% (200 m³)
- LECs: 93% (2,160 m³)

**MLLV Total = 2,590 m³**

**LDR Waste Stream Identification Distribution**

**MLLV-01 Total = 2,590 m³**

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

**Annual Volumes**

**Annual Minimum, Baseline, and Maximum Volumes**

**Annual MLLW Baseline Volumes**
Comparison to Previous Baseline(s)

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

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

Comparison to Previous Baseline(s) by Waste Class

<table>
<thead>
<tr>
<th>Waste Class</th>
<th>FY2001.0 Forecast (m³)</th>
<th>FY2000.0 Forecast (m³)</th>
<th>FY1999.0 Forecast (m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CH_MLLW</td>
<td>230</td>
<td>690</td>
<td>810</td>
</tr>
<tr>
<td>RH_MLLW</td>
<td>2,380</td>
<td>2,740</td>
<td>2,830</td>
</tr>
<tr>
<td>RH_TRU(M)</td>
<td>--</td>
<td>180</td>
<td>180</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>2,590</strong></td>
<td><strong>3,620</strong></td>
<td><strong>3,820</strong></td>
</tr>
</tbody>
</table>

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

Background

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

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

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

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

Other Forecast Data

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

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


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River Protection Program — W-314 Tank Farm Restoration

W-314 Tank Farm Restoration Report Sections

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

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

• This generator contributes 690 m³, or <1% of River Protection Program's waste forecast.

• The forecast life cycle for the W-314 Tank Farm Restoration generator ends in 2005.

• CH_MLLW and RH_MLLW are the primary waste classes forecast, representing 53% (370 m³) and 32% (220 m³) of the W-314 Tank Farm Restoration waste volume.

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

Waste Class Distribution

Waste Class Data

The expected physical waste forms, hazardous characteristics, container types, and LDR waste stream
identification distribution of W-314 Tank Farm Restoration's forecasted wastes are described in the following charts.

**LLW Data**

**Physical Waste Form Distribution**

- Debris Wastes: 100% (100 m³)
  - V-314 Tank Farm Restoration: LLW Total = 100 m³

**Container Distribution**

- MB-YS: 29% (30 m³)
- Extra Large Boxes: 71% (70 m³)
  - V-314 Tank Farm Restoration: LLW Total = 100 m³

**MLLW Data**

**Physical Waste Form Distribution**

- Soil Gravel: 4% (20 m³)
  - V-314 Tank Farm Restoration: MLLW Total = 590 m³

**Hazardous Characteristic Distribution**

- Metals: ≤ 1% (1 m³)
  - Organic: 100% (590 m³)
  - V-314 Tank Farm Restoration: MLLW Total = 590 m³

**Container Distribution**

- MB-YS: 11% (60 m³)
- Extra Large Boxes: 42% (250 m³)
  - V-314 Tank Farm Restoration: MLLW Total = 590 m³

**LDR Waste Stream Identification Distribution**

- MLLW-04 (Non-OC): 16% (50 m³)
- MLLW-04 (OC): 2% (10 m³)
  - MLLW-02: 40% (260 m³)
  - MLLW-04: 40% (260 m³)
  - MLLW-07: 38% (220 m³)
  - V-314 Tank Farm Restoration: MLLW Total = 590 m³

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

**Annual Volumes**

**Annual Minimum, Baseline, and Maximum Volumes**
**Comparison to Previous Baseline(s)**

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

The FY2000.0 forecast shows a 66% increase from the FY99.0 forecast of 470 m³ due to forecast refinements based on updated design and planning information.
Comparison to Previous Baseline(s) by Waste Class

<table>
<thead>
<tr>
<th>Waste Class</th>
<th>FY2001.0 Forecast (m³)</th>
<th>FY2002.0 Forecast (m³)</th>
<th>FY2003.0 Forecast (m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LLW_J</td>
<td>100</td>
<td>110</td>
<td>40</td>
</tr>
<tr>
<td>CH_MLLW</td>
<td>370</td>
<td>440</td>
<td>300</td>
</tr>
<tr>
<td>RH_MLLW</td>
<td>220</td>
<td>230</td>
<td>130</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>690</strong></td>
<td><strong>770</strong></td>
<td><strong>470</strong></td>
</tr>
</tbody>
</table>

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

Background

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

Forecast Assumptions and Comments

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

Other Forecast Data

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

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


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

Waste Feed Delivery System (8 tanks) Report Sections

» Highlights
» Waste Class Data
» Annual Volumes
» Comparison to Previous Baseline(s)
» Background
» Forecast Assumptions and Comments
» Other Waste Feed Delivery System (8 tanks) Forecast Data
» Detailed Forecast Data

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

- This generator contributes 4,130 m³, or 4% of the River Protection Program's waste forecast.

- The forecast life cycle for the Waste Feed Delivery System (8 tanks) generator begins in 2002 and ends in 2028.

- Most of the forecasted waste (67%) is RH_MLLW.

- This is the first forecast submittal for Waste Feed Delivery System.

Waste Class Distribution

- CH_MLLW 8% (380 m³)
- CH_TRU(M) 24% (990 m³)
- FH_MLLW 67% (2,770 m³)

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

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

**MLLW Data**

**Physical Waste Form Distribution**

- Soil Gravel: 0% (0 m³)
- Debris Vastes: 11% (910 m³)
- Shielding: 71% (2,220 m³)

**MLLV Total = 3,140 m³**

**Waste Feed Delivery System (8 tanks)**

**Hazardous Characteristic Distribution**

- Metals: 34% (1,080 m³)
- Organic: 66% (2,090 m³)

**MLLV Total = 3,140 m³**

**Container Distribution**

- Medium Bases: 9% (296 m³)
- 208 Liter Drums: 3% (91 m³)
- MB-Ys: 11% (330 m³)
- LECs: 77% (2,430 m³)

**MLLV Total = 3,140 m³**

**LDR Waste Stream Identification Distribution**

- MLLW-01: 100% (3,140 m³)

**TRU(M) Waste Data**

**Physical Waste Form Distribution**

- Organic Solids: 1% (10 m³)
- Debris Vastes: 45% (1440 m³)
- Shielding: 54% (540 m³)

**Waste Feed Delivery System (8 tanks)**

**TRU(M) Total = 990 m³**

**Hazardous Characteristic Distribution**

- Metals: 31% (300 m³)
- Organic: 69% (590 m³)

**Waste Feed Delivery System (8 tanks)**

**Total (TRU&M only) = 990 m³**
Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m$^3$ are rounded to the nearest 10 m$^3$, numbers less than 10 m$^3$ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m$^3$.

Annual Volumes

Annual Minimum, Baseline, and Maximum Volumes

Annual MLLW Baseline Volumes

Annual TRU(M) Waste Baseline Volumes
Comparison to Previous Baseline(s)

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

Comparison to Previous Baseline(s) by Waste Class

<table>
<thead>
<tr>
<th>Waste Feed Delivery System (8 tanks) Comparison to Previous Forecasts</th>
<th>FY2001.8 Forecast (m³)</th>
<th>FY2002.8 Forecast (m³)</th>
<th>FY1889.9 Forecast (m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Waste Class</td>
<td>CH_MLLW</td>
<td>380</td>
<td>--</td>
</tr>
<tr>
<td></td>
<td>RH_MLLW</td>
<td>2,770</td>
<td>--</td>
</tr>
<tr>
<td></td>
<td>CH_TRU(M)</td>
<td>980</td>
<td>--</td>
</tr>
<tr>
<td>Total</td>
<td>4,130</td>
<td>--</td>
<td>--</td>
</tr>
</tbody>
</table>

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

Background

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

Forecast Assumptions and Comments

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

Other Forecast Data

- Hazardous Waste
No hazardous waste has been forecasted by Waste Feed Delivery System.

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

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Solid Waste

Solid Waste Report Sections

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

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

- The life cycle total of LLW and MLLW expected from the Solid Waste functional group is 2,590 m³, or 1% of the forecast total.

- The forecast life cycle for Solid Waste ends in 2046.

- LLW-I is the primary waste class forecast, representing 91% (2,360 m³) of Solid Waste's forecasted volume.

- T Plant is the primary waste generator in the Solid Waste functional group, forecasting 79% of the waste volume. Other generators in the functional group are shown below.

- The FY2001.0 forecast shows a 17% decrease from the FY2000.0 forecast of 3,140 m³ primarily due to changes in the Waste Receiving and Processing Facility forecast to reflect actual processing history.
Waste Class Data

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

Debris is the primary waste form for LLW and MLLW. Hazardous characteristics are mostly organics, metals and state regulated.

LLW will be shipped primarily in MB-Vs, while MLLW will be shipped in 208 liter drums.

MLLW is mostly classified as organic carbonaceous debris requiring thermal treatment and non-organic carbonaceous debris requiring non-thermal treatment.

LLW Data

Physical Waste Form Distribution

MLLW Data

Container Distribution
Physical Waste Form Distribution

Special Wastes 4% (8 m³)
Inorganic Solids <1% (2 m³)
Organic Solids 4% (9 m³)
Debris Wastes 92% (210 m³)

Solid Waste Functional Group
MLLV Total = 230 m³

Hazardous Characteristic Distribution

Corrosive 5% (10 m³)
Other 2% (4 m³)
VA State Regulated 29% (70 m³)
Metals 34% (80 m³)
Organic 30% (70 m³)

Solid Waste Functional Group
MLLV Total = 230 m³

Container Distribution

208 Liter Drums 100% (230 m³)

Solid Waste Functional Group
MLLV Total = 230 m³

LDR Waste Stream Identification Distribution

MLLV-05 4% (8 m³)
MLLV-03 4% (9 m³)
MLLV-04 (Non-OC) 43% (100 m³)
Other 1% (2 m³)

MLLV-04 (OC) 50% (120 m³)

Solid Waste Functional Group
MLLV Total = 230 m³

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

Annual Waste Class Volumes

Waste generation by the Solid Waste functional group is expected to be fairly constant at around 70 m³ per year; however, every five years starting in 2004 there is a 10 m³ increase due to the Waste Receiving and Processing Facility. The peak in 2001 is due to waste generation at T-Plant and the Low-Level Waste Burial Grounds.

Annual Minimum, Baseline, and Maximum Volumes

Annual Baseline by Waste Class
Annual LLW Baseline Volumes

![Annual LLW Baseline Volumes Graph]

Annual MLLW Baseline Volumes

![Annual MLLW Baseline Volumes Graph]

Summary Table (Volumes in m³)

(in descending order by total volume)

<table>
<thead>
<tr>
<th>Solid Waste Summary Volumes</th>
<th>LLW-I</th>
<th>LLW-II</th>
<th>CH_MLLW</th>
<th>AK_MLLW</th>
<th>CH_TRU(M)</th>
<th>AK_TRU(M)</th>
<th>FY 2001.0 Forecast (m³)</th>
<th>% of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Generators</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>221-T/2708-T Plant Operations</td>
<td>1,830</td>
<td>--</td>
<td>230</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>2,060</td>
<td>79%</td>
</tr>
<tr>
<td>218 EMW Low Level Burial Grounds</td>
<td>310</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>310</td>
<td>12%</td>
</tr>
<tr>
<td>2336-VV Waste Receiving and Processing Facility</td>
<td>220</td>
<td>--</td>
<td>8</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>220</td>
<td>9%</td>
</tr>
<tr>
<td>Total</td>
<td>2,360</td>
<td>--</td>
<td>238</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>2,599</td>
<td>100%</td>
</tr>
<tr>
<td>Percent</td>
<td>91%</td>
<td>9%</td>
<td>9%</td>
<td>9%</td>
<td>9%</td>
<td>9%</td>
<td>100%</td>
<td></td>
</tr>
</tbody>
</table>

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

Comparison to Previous Baseline(s)

The FY2001.0 forecast shows a 17% decrease from the FY2000.0 forecast of 3,140 m³ due to changes in the Waste Receiving and Processing Facility forecast to reflect actual...
processing history.

The FY2000.0 forecast shows a 4% decrease from the FY99.0 forecast of 3,260 m³ primarily due to the elimination of the FY99 forecasted volumes. The FY2000.0 forecast does not contain waste from the TRU Storage and Assay Facility (TRUSAF) because it no longer generates any waste. Furthermore, T-Plant no longer expects to generate RH_TRU(M) waste.

Comparison to Previous Baseline(s) by Waste Class

<table>
<thead>
<tr>
<th>Waste Class</th>
<th>FY2001.0 Forecast (m³)</th>
<th>FY2000.0 Forecast (m³)</th>
<th>FY1999.0 Forecast (m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LLW,I</td>
<td>2,360</td>
<td>3,000</td>
<td>2,930</td>
</tr>
<tr>
<td>CH_MLLW</td>
<td>230</td>
<td>130</td>
<td>330</td>
</tr>
<tr>
<td>RH_MLLW</td>
<td>--</td>
<td>7</td>
<td>1</td>
</tr>
<tr>
<td>RH_TRU(M)</td>
<td>--</td>
<td>--</td>
<td>0.51</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>2,390</strong></td>
<td><strong>3,140</strong></td>
<td><strong>3,260</strong></td>
</tr>
</tbody>
</table>

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

Background

Solid Waste’s mission is to receive, store, treat, decontaminate, and dispose of solid radioactive and non-radioactive hazardous waste in a safe, cost-effective, and environmentally compliant manner. Secondary solid waste will be generated to achieve this mission.

The Solid Waste functional group includes four waste generators: T Plant, 2336-W Waste Receiving and Processing (WRAP) Facility, 218 E/W Low-level Burial Grounds (LLBG), and the Central Waste Complex (CWC). Additional waste volumes may be generated by future treatment facilities; however, forecasts for these facilities are not available.

Forecast Assumptions and Comments

Solid Waste generators assume that operations in future years will be similar to the present. Furthermore, it is assumed that routine generation will not vary significantly over the period.

Other Forecast Data

- Hazardous Waste
  - A life cycle total of 30 m³ of hazardous waste has been reported by generators in this functional group.
For questions or comments, please contact Roberta Barcot
(e-mail: Roberta_A_Barcot@rl.gov, voice: (509) 373-4752).


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Solid Waste — 218 E/W Low Level Burial Grounds

218 E/W Low Level Burial Grounds Report Sections

» Highlights
» Waste Class Data
» Annual Volumes
» Comparison to Previous Baseline(s)
» Background
» Forecast Assumptions and Comments
» Other 218 E/W Low Level Burial Grounds Forecast Data

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

- This generator contributes 310 m³, or 12% of Solid Waste's forecast.
- The forecast life cycle for the 218 E/W Low Level Burial Grounds (LLBG) ends in 2046.
- LLW_I is the only waste class forecast by LLBG.
- The FY2001.0 forecast shows a 6% decrease (310 m³) from the FY2000.0 forecast of 330 m³ since LLBG no longer expects to generate MLLW.

Waste Class Distribution

Waste Class Data

The expected physical waste forms and container types of the Low Level Burial Grounds' forecasted wastes are described in the following charts.
LLW Data

Physical Waste Form Distribution

- Soil Gravel: 4% (10 m³)
- Debris Vases: 96% (300 m³)

Container Distribution

- 200 Liter Drums: 5% (20 m³)
- Medium Boxes: 92% (290 m³)

218 E/W Low Level Burial Grounds
LLW Total = 310 m³

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

Annual Volumes

Annual Minimum, Baseline, and Maximum Volumes

Annual LLW Baseline Volumes
Comparison to Previous Baseline(s)

The FY2001.0 forecast shows a 6% decrease from the FY2000.0 forecast due to the elimination of the MLLW previously forecasted. LLBG expects the waste to be hazardous versus MLLW.

The FY2000.0 forecast shows a 2096% (310 m³) increase from the FY99.0 forecast of 10 m³ because the life cycle was extended from 2027 to 2046 and because it includes tumbleweeds previously forecasted by T Plant.

Comparison to Previous Baseline(s) by Waste Class

<table>
<thead>
<tr>
<th>218 E/W Low Level Burial Grounds</th>
<th>FY2001.0 Forecast (m³)</th>
<th>FY2000.0 Forecast (m³)</th>
<th>FY1999.0 Forecast (m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LLW, I</td>
<td>310</td>
<td>320</td>
<td>10</td>
</tr>
<tr>
<td>CH_MLLW</td>
<td>--</td>
<td>10</td>
<td>--</td>
</tr>
<tr>
<td>Total</td>
<td>320</td>
<td>330</td>
<td>10</td>
</tr>
</tbody>
</table>

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

Background

The current mission of the 218 E/W Low Level Burial Grounds is disposal of low level waste. Future disposal of mixed waste is planned in lined trenches.

Forecast Assumptions and Comments

It is assumed that any waste generated by the burial grounds will be LLW and that future operations will be similar to current operations.

Other Forecast Data

- Hazardous Waste
  - 10 m³ of hazardous waste has been reported by 218 E/W Low Level Burial Grounds.

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


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Solid Waste — 221-T/2706-T T Plant Operations

T Plant Operations Report Sections

» Highlights
» Waste Class Data
» Annual Volumes
» Comparison to Previous Baseline(s)
» Background
» Forecast Assumptions and Comments
» Other 221-T/2706-T T Plant Operations Forecast Data
» Detailed Forecast Data

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

• This generator contributes 2,060 m³, or 79% of Solid Waste's forecast.

• The forecast life cycle for the 221-T/2706-T T Plant Operations ends in 2035.

• LLW-I accounts for nearly all of the forecasted waste, representing 89% (1,830 m³).

• The FY2001.0 forecast shows a 51% increase from the FY2000.0 forecast of 1,360 m³ due to an increase in expected work activity at the facility.

Waste Class Distribution

The expected physical waste forms, hazardous characteristics, container types, and LDR waste stream identification distribution of T Plant Operations' forecasted wastes are described in the following charts.
LLW Data

**Physical Waste Form Distribution**

- Organic Solids: 2% (20 m³)
- Inorganic Solids: <1% (20 m³)

Debris Wastes: 97% (1700 m³)

221-T/2706-T Plant Operations
LLW Total = 1,836 m³

**Container Distribution**

- Medium Boxes: 14% (260 m³)
- MB-Vs: 86% (1,500 m³)

221-T/2706-T Plant Operations
LLW Total = 1,836 m³

MLLW Data

**Physical Waste Form Distribution**

- Organic Solids: 4% (8 m³)
- Inorganic Solids: <1% (2 m³)

Debris Wastes: 95% (210 m³)

221-T/2706-T Plant Operations
MLLV Total = 230 m³

**Hazardous Characteristic Distribution**

- Corrosive: 5% (10 m³)
- Other: 2% (4 m³)
- WA State Regulated: 30% (70 m³)
- Metals: 32% (70 m³)
- Organic: 31% (70 m³)

221-T/2706-T Plant Operations
MLLV Total = 230 m³

**Container Distribution**

- 208 Liter Drums: 100% (230 m³)

221-T/2706-T Plant Operations
MLLV Total = 230 m³

**LDR Waste Stream Identification Distribution**

- MLLV-02: 4% (8 m³)
- MLLV-02 (Non-OC): 44% (100 m³)
- MLLV-04 (OC): 51% (120 m³)

221-T/2706-T Plant Operations
MLLV Total = 230 m³

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

**Annual Volumes**

**Annual Minimum, Baseline, and Maximum Volumes**
Annual LLW Baseline Volumes

Annual MLLW Baseline Volumes

Comparison to Previous Baseline(s)

The FY2001.0 forecast shows an increase of 51% from the FY2000.0 forecast due to an increase in the expected work activity at the facility.

The FY2000.0 forecast shows a decrease of 22% from the FY99.0 forecast due to the transfer of previously forecast tumbleweeds to the forecast of the Low Level Burial
Comparison to Previous Baseline(s) by Waste Class

<table>
<thead>
<tr>
<th>Waste Class</th>
<th>FY2001.0 Forecast [m³]</th>
<th>FY2000.0 Forecast [m³]</th>
<th>FY1999.0 Forecast [m³]</th>
</tr>
</thead>
<tbody>
<tr>
<td>LLW</td>
<td>1,830</td>
<td>1,280</td>
<td>1,470</td>
</tr>
<tr>
<td>CH_MLLW</td>
<td>230</td>
<td>70</td>
<td>280</td>
</tr>
<tr>
<td>RH_MLLW</td>
<td>--</td>
<td>7</td>
<td>1</td>
</tr>
<tr>
<td>RH_TRU(M)</td>
<td>--</td>
<td>--</td>
<td>0.51</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>2,060</strong></td>
<td><strong>1,360</strong></td>
<td><strong>1,750</strong></td>
</tr>
</tbody>
</table>

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

Background

T Plant's current mission is treatment, verification, repackaging, and decontamination. Waste classes are produced from existing streams at T Plant or generated from the above activities. Waste will be in various forms, including waste produced from pad waste, routine cleanup, and routine maintenance.

Forecast Assumptions and Comments

This forecast is based on continued facility operation and historical data.

Other Forecast Data

- Hazardous Waste
  - A life cycle total of 5 m³ of hazardous waste has been reported by 221-T/2706-T T Plant Operations.

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


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Solid Waste — 224-T TRU Storage & Assay Facility

This generator is no longer submitting a forecast.

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


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Solid Waste — Waste Receiving and Processing (WRAP)

2336-W Waste Receiving and Processing (WRAP) Report Sections

» Highlights
» Waste Class Data
» Annual Volumes
» Comparison to Previous Baseline(s)

» Background
» Forecast Assumptions and Comments
» Other 2336-W Waste Receiving and Processing (WRAP) Forecast Data
» Detailed Forecast Data

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

- This generator contributes 220 m³, or 9% of Solid Waste's forecast.

- The forecast life cycle for the 2336-W Waste Receiving and Processing (WRAP) facility ends in 2032.

- LLW_I is the primary waste class forecast by WRAP. As shown below, a small amount of CH_MLLW is also forecast.

- The FY2001.0 forecast shows a decrease of 84% from the FY2000.0 forecast of 1,440 m³ to reflect actual processing history.

Waste Class Distribution

LLW_I
96% (220 m³)

CH_MLLW
4% (8 m³)

2336-W Waste Receiving and Processing Facility
Total (excl. HAZ) = 228 m³

Waste Class Data
The expected physical waste forms, hazardous characteristics, container types, and LDR waste stream identification distribution for the 2336-W Waste Receiving and Processing Facility's forecasted wastes are described in the following charts.

**LLW Data**

**Physical Waste Form Distribution**

- Debris Wastes: 100% (220 m³)

**Container Distribution**

- MB-Vs: 39x (90 m³)
- 208 Liter Drums: 61x (130 m³)

**MLLW Data**

**Physical Waste Form Distribution**

- Special Wastes: 100% (8 m³)

**Hazardous Characteristic Distribution**

- Metals: 100% (8 m³)

**Container Distribution**

- 208 Liter Drums: 100% (8 m³)

**LDR Waste Stream Identification Distribution**

- MLLW-05: 100% (8 m³)

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

**Annual Volumes**

**Annual Minimum, Baseline, and Maximum Volumes**
Annual LLW Baseline Volumes

Comparison to Previous Baseline(s)

The FY2001.0 forecast shows a 84% decrease from the FY2000.0 forecast of 1,440 m³ to reflect actual processing history.

The FY2000.0 forecast shows a 3% decrease from the FY99.0 forecast of 1,480 m³ due to the elimination of the FY99 forecast volumes.
Comparison to Previous Baseline(s) by Waste Class

<table>
<thead>
<tr>
<th>Waste Class</th>
<th>FY2001 Forecast [m³]</th>
<th>FY2000 Forecast [m³]</th>
<th>FY1999 Forecast [m³]</th>
</tr>
</thead>
<tbody>
<tr>
<td>LLW/J</td>
<td>220</td>
<td>1,410</td>
<td>1,450</td>
</tr>
<tr>
<td>CH-MLLW</td>
<td></td>
<td>30</td>
<td>30</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>220</td>
<td>1,440</td>
<td>1,480</td>
</tr>
</tbody>
</table>

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

Background

The mission of the 2336-W Waste Receiving and Processing Facility is to provide for characterization, processing, verification, and certification of Hanford's newly generated and retrieved waste. The forecast is based on waste generated from internal operation and maintenance activities.

Forecast Assumptions and Comments

It is assumed that most maintenance waste from the 2336-W Waste Receiving and Processing Facility process area will be collected as non-mixed LLW due to careful management of chemical materials. The forecast includes only secondary waste generated as part of facility operations.

Other Forecast Data

- Hazardous Waste
  - No hazardous waste has been reported by 2336-W Waste Receiving and Processing (WRAP) Facility.

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

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Solid Waste — Central Waste Complex

Central Waste Complex Report Sections

» Highlights
» Waste Class Data
» Annual Volumes
» Comparison to Previous Baseline(s)

» Background
» Forecast Assumptions and Comments
» Other Central Waste Complex Forecast Data

» Detailed Forecast Data

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

- This generator is not expected to generate radioactive solid waste; however, hazardous waste is expected to be generated.

- The forecast life cycle for the Central Waste Complex (CWC) ends in 2046.

- The FY2001.0 forecast differs from the FY2000.0 forecast in that all of the previously forecasted radioactive solid waste is now expected to be hazardous waste (10 m³).

Waste Class Data

Because no radioactive waste is included in the baseline forecast for the Central Waste Complex no waste class data are presented here.

Annual Volumes

Because no radioactive waste is included in the baseline forecast for the Central Waste Complex, annual volumes are not presented here.

Comparison to Previous Baseline(s)

The FY2001.0 forecast shows all of the previously forecasted radioactive waste from the FY2000.0 forecast as hazardous waste (10 m³) due to operational experience.

The FY2000.0 forecast shows a change of 1 m³ from the FY2000.0 forecast due to the elimination of the FY99 forecast volumes.

Comparison to Previous Baseline(s) by Waste Class
Background

The Central Waste Complex's mission is the storage of mixed and transuranic waste for eventual treatment and disposal. Waste may be generated from spill response or operational activities which requires the use of personal protective equipment.

Forecast Assumptions and Comments

Although some category III and TRU wastes are stored in the Central Waste Complex, it is assumed that no waste that is generated will be TRU or category III. It is also assumed that waste operations in future years will be the same as current operations.

Other Forecast Data

- Hazardous Waste
  - 10 m³ of hazardous waste has been reported by the Central Waste Complex.

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


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Spent Nuclear Fuel

Spent Nuclear Fuel Report Sections

- Highlights
- Waste Class Data
- Annual Waste Class Volumes
- Summary Table
- Comparison to Previous Baseline(s)
- Background
- Forecast Assumptions and Comments
- Other Spent Nuclear Fuel Forecast Data
- Detailed Forecast Data

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

- The life cycle total of LLW, MLLW, and TRU(M) waste expected from the Spent Nuclear Fuel functional group is 940 m³, or <1% of the forecast total.

- The forecast life cycle for the Spent Nuclear Fuel functional group ends in 2040. Previous forecasts had a life-cycle end date of 2005.

- As shown in the waste class distribution chart below, the Spent Nuclear Fuel functional group forecasts several different waste classes with the majority of the waste being LLW-I waste (54% or 500 m³).

- The Spent Nuclear Fuel functional group currently has one generator, 100-K K-Basin Operations.

- The FY2001.0 forecast shows a 4% increase from the FY2000.0 forecast of 910 m³ due primarily to the additional LLW-I expected to be generated with the extension of the life-cycle end date from 2005 to 2040. The life-cycle was extended to accommodate potential waste generation at the Canister Storage Building (CSB) and the Cold Vacuum Drying (CVD) Building.
Waste Class Data

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

LLW is expected to be solely debris waste which will be shipped in 208 liter drums.

MLLW is expected to be solely debris waste with a variety of hazardous characteristics, mainly organics. MLLW will be shipped in 208 liter drums and has a LDR waste stream identification distribution of organic debris requiring thermal treatment.

TRU(M) waste is expected to be solely debris waste with the mixed components consisting primarily of organics. Most of the TRU(M) waste will be shipped in 208 liter drums.

LLW Data

Physical Waste Form Distribution

Container Distribution

MLLW Data
Physical Waste Form Distribution

Spent Nuclear Fuel Functional Group
MLLV Total = 40 m³

Debris Wastes
100% (40 m³)

Organic Solids
3% (1.2 m³)

Inorganic Solids
7% (2.8 m³)

Hazardous Characteristic Distribution

VA State Regulated
2% (0.8 m³)

PCB < 50 ppm
2% (0.8 m³)

Organic
86% (34 m³)

Spent Nuclear Fuel Functional Group
MLLV Total = 40 m³

LDR Waste Stream Identification Distribution

Spent Nuclear Fuel Functional Group
MLLV Total = 40 m³

208 Liter Drums
100% (40 m³)

Spent Nuclear Fuel Functional Group
MLLV Total = 40 m³

TRU(M) Waste Data

Physical Waste Form Distribution

Spent Nuclear Fuel Functional Group
TRU(M) Total = 390 m³

Debris Wastes
90% (351 m³)

Organic Solids
3% (11.7 m³)

Inorganic Solids
7% (27.3 m³)

Hazardous Characteristic Distribution

Metals - VA State Regulated
100% (390 m³)

PCB < 50 ppm
1% (3.9 m³)

Spent Nuclear Fuel Functional Group
Total (TRU(M) only) = 390 m³
Container Distribution

Spent Nuclear Fuel Functional Group
TRU(M) Total = 390 m3

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

Annual Waste Class Volumes

The Spent Nuclear Fuel functional group waste is expected to be shipped consistently at approximately 20 m³ from 2007 to the end of life cycle in 2040. The largest volumes of waste are expected in 2003 and 2004 which correlates to the removal of sludge.

Annual Minimum, Baseline, and Maximum Volumes

Annual Baseline by Waste Class

Annual LLW Baseline Volumes
Annual LLW Baseline Volumes

Annual MLLW Baseline Volumes

Annual TRU(M) Waste Baseline Volumes

Summary Table (Volumes in m³)

(in descending order by total volume)
Comparison to Previous Baseline(s)

The FY2001.0 forecast shows a 4% increase from the FY2000.0 forecast of 910 m³ due primarily to the additional LLW_I expected to be generated with the extension of the life-cycle end date from 2005 to 2040. The life-cycle was extended to accommodate potential waste generation at the Canister Storage Building (CSB) and the Cold Vacuum Drying (CVD) Building. The CSB is expected to generate little if any waste, however, it has been included in the forecast as a worst case scenario. Countering the additional waste from the CSB and CVD was a large decrease in the RH_TRU(M) waste forecast. This reduction resulted from a change from shielded containers for the K-Basin sludge to containers that will be stored as RH waste, thus dramatically reducing the required number of containers.

The FY2000.0 forecast shows a 175% increase from the FY99.0 forecast of 33 m³ due primarily to the addition of RH_TRU(M) waste from the K-Basin Fuel Sampling Project.

Comparison to Previous Baseline(s) by Waste Class

<table>
<thead>
<tr>
<th>Waste Class</th>
<th>FY2001.0 Forecast (m³)</th>
<th>FY2000.0 Forecast (m³)</th>
<th>FY1999.0 Forecast (m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LLW_I</td>
<td>500</td>
<td>30</td>
<td>90</td>
</tr>
<tr>
<td>LLW_II</td>
<td>--</td>
<td>9</td>
<td>40</td>
</tr>
<tr>
<td>CH_MLLW</td>
<td>40</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>CH_TRU(M)</td>
<td>280</td>
<td>210</td>
<td>140</td>
</tr>
<tr>
<td>RH_TRU(M)</td>
<td>120</td>
<td>660</td>
<td>40</td>
</tr>
<tr>
<td>Total</td>
<td>940</td>
<td>910</td>
<td>330</td>
</tr>
</tbody>
</table>

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

Background

The Spent Nuclear Fuel's mission is to provide safe storage of spent nuclear fuel (SNF); remedy unsafe conditions; design, construct, operate, and maintain interim storage facilities until final disposition of SNF is determined; and stage the SNF for final disposition once further direction is received.

Currently, the K-Basin provides wet storage for spent fuel. Solid waste will be generated during the disposition of the spent fuel at K-Basin. Waste generating activities include:
maintenance and preparation of the K-Basins for storage and removal of all spent nuclear fuel, debris, and sludge; constructing, as necessary, new systems and facilities to condition and store the fuel; relocating the fuel to interim storage; and accepting spent nuclear fuel from other Hanford locations. Much of this waste will be designated as CERCLA and be dispositioned at the Environmental Restoration Disposal Facility (ERDF). This forecast only includes wastes that will be sent to Waste Management for disposition. This forecast also includes two new facilities: the Canister Storage Building (CSB) and the Cold Vacuum Drying (CVD) Facility.

Main categories of waste include housekeeping refuse and other debris; debris, piping, and scrap metal from basin clean-up; and spent ion exchange columns and water filters used to maintain water quality inside the basins.

Forecast Assumptions and Comments

In the preparation of this forecast, known waste was addressed and estimates were calculated according to expected operations. Upcoming revisions to plant configuration were also considered including expected waste generation due to routine maintenance and housekeeping.

Other Forecast Data

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

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


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Spent Nuclear Fuel — 100-K K-Basin Fuel Retrieval

Forecasted waste volumes for 100-K K-Basin Fuel Retrieval are now included in the forecast submitted by 100-K K-Basin Fuel Operations.

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


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Spent Nuclear Fuel — 100-K K-Basin Operations

Because the 100-K K-Basin Operations is the only generator within the Spent Nuclear Fuel functional group, waste information for this generator is identical to that found on the functional group page.

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


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Spent Nuclear Fuel — K-Basin Fuel Sampling Project

Forecasted waste volumes for K-Basin Fuel Sampling Project are now included in the forecast submitted by 100-K K-Basin Fuel Operations.

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


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Transition Activities

Transition Activities Report Sections

» Highlights
» Waste Class Data
» Annual Waste Class Volumes
» Summary Table
» Comparison to Previous Baseline(s)

» Background
» Forecast Assumptions and Comments
» Other Transition Activities Forecast Data
»» Detailed Forecast Data

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

- The life cycle total of LLW, MLLW, and TRU(M) waste expected from Transition Activities is 15,810 m³, or 9% of the forecast total.

- The forecast life cycle for the Transition Activities functional group ends in 2038.

- LLW_I is the primary waste class forecast, representing 67% (10,600 m³) of the Transition Activities waste volume. Other waste classes are shown in the pie graph below.

- The Plutonium Finishing Plant is the major source of waste, forecasting 62% (9,750 m³) of the waste volume. The 300 Area Accelerated Closure Project accounts for 13% (2,030 m³). Other generators can be found in the waste generator chart below.

- The FY2001.0 forecast for Transition Activities shows a 68% decrease from the FY2000.0 forecast of 49,610 m³ primarily due to the adjusted estimates of LLW_I from the Plutonium Finishing Plant.
Waste Class Data

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

LLW is expected to be primarily debris waste that will be shipped in mostly in MB-V's.

MLLW is expected to be mostly debris waste as well as lab packs and inorganic solids that constitute a variety of hazardous characteristics. MLLW will be shipped mostly in 208 liter drums and distributes in a variety of LDR waste stream identification distributions.

TRU(M) waste is also expected to be mostly debris waste with a portion of the mixed TRU expected to constitute metals as the primary hazardous characteristic. TRU(M) waste is expected to be shipped primarily in 208 liter drums.

GTC_III waste is expected to be debris waste shipped in 208 liter drums.

LLW Data

Physical Waste Form Distribution

- Inorganic Solids: 2% (150 m3)
- Organic Solids: 12% (1,460 m3)
- Soil Gravel: <1% (70 m3)
- Debris Wastes: 86% (10,830 m3)

MLLW Data

Waste Class Distribution

<table>
<thead>
<tr>
<th>Waste Class</th>
<th>Distribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>LLW</td>
<td>11% (1,750 m3)</td>
</tr>
<tr>
<td>CH_MLLW</td>
<td>6% (590 m3)</td>
</tr>
<tr>
<td>CH_TRU(M)</td>
<td>18% (2,770 m3)</td>
</tr>
<tr>
<td>Other</td>
<td>&lt;1% (100 m3)</td>
</tr>
</tbody>
</table>

Generator Distributions

- Waste Encapsulation & Storage Facility: 6% (1,010 m3)
- 234 Building: 7% (1,130 m3)
- 300 Area Accelerated Closure Project: 13% (2,000 m3)
- Other: 12% (1,880 m3)

Waste Class Distribution

Transition Activities Functional Group

Total (excl. HAZ) = 15,810 m3

MLLW Data

- Debris Wastes: 86% (10,830 m3)
- Inorganic Solids: 2% (150 m3)
- Organic Solids: 12% (1,460 m3)
- Soil Gravel: <1% (70 m3)

Transition Activities Functional Group

Total (excl. HAZ) = 15,810 m3

MLLW Total = 12,350 m3
**Physical Waste Form Distribution**

- Special Wastes: 6% (40 m³)
- Inorganic Solids: 8% (50 m³)
- Lab Packs: 11% (60 m³)
- Other: 6% (40 m³)
- Debris Wastes: 68% (400 m³)

**Hazardous Characteristic Distribution**

- Metals + PCB: 50% (80 m³)
- Organic: 5% (50 m³)
- WA State Regulated: 12% (70 m³)
- Other: 61% (380 m³)

**Transition Activities Functional Group**

- MLLW Total = 590 m³

---

**Container Distribution**

- SWBs: 1% (1 m³)
- Medium Boxes: 19% (120 m³)
- 208 Liter Drums: 65% (350 m³)
- Other: 14% (80 m³)

**LDR Waste Stream Identification Distribution**

- MLLW-05 (Non-OC): 27% (160 m³)
- MLLW-04: 20% (120 m³)
- MLLW-03: 23% (140 m³)
- Other: 10% (60 m³)

**Transition Activities Functional Group**

- MLLW Total = 590 m³

---

**TRU(M) Waste Data**

**Physical Waste Form Distribution**

- Soil Gravel: 1% (8 m³)
- Organic Solids: 8% (230 m³)
- Inorganic Solids: 18% (510 m³)
- Other: 1% (3 m³)
- Debris Wastes: 74% (2,110 m³)

**Hazardous Characteristic Distribution**

- Ignitable + Reactive + Metals: 10% (70 m³)
- Metals: 39% (280 m³)
- Metals + PCB: 50% (40 m³)
- Other: 4% (30 m³)

**Transition Activities Functional Group**

- TRU(M) Total = 2,860 m³

**Total (TRU(M) only) = 680 m³**

---

3 of 7
Container Distribution

Transition Activities Functional Group
TRU(M) Total = 2,860 m3

GTC_III Data

Physical Waste Form Distribution

Facility Transitions (EM-68) Functional Group
GTCIII Total = 6 m3

Facility Transitions (EM-68) Functional Group
GTCIII Total = 6 m3

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

Annual Waste Class Volumes

Transition Activities waste is expected to be generated from 2001 to the end of life cycle in 2038. Most of the waste is expected from 2001 through 2011. These volumes correspond primarily to the schedule of the Plutonium Finishing Plant and the 300 Area Accelerated Closure Project.

Annual Minimum, Baseline, and Maximum Volumes
Annual Baseline by Waste Class

Annual LLW Baseline Volumes

Annual MLLW Baseline Volumes

Annual TRU(M) Waste Baseline Volumes

Annual GTC_III Waste Baseline Volumes
Summary Table (Volumes in m$^3$)

(in descending order by total volume)

<table>
<thead>
<tr>
<th>Transition Activities</th>
<th>Summary Volumes</th>
<th>FY 2001.0 Forecast (m$^3$)</th>
<th>% of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Generators</td>
<td>LLW-I</td>
<td>LLW-II</td>
<td>HLW_MLLW</td>
</tr>
<tr>
<td>234-5 Z Plutonium Finishing Plant</td>
<td>6,710</td>
<td>650</td>
<td>180</td>
</tr>
<tr>
<td>300 Area Accelerated Closure Project</td>
<td>910</td>
<td>130</td>
<td>--</td>
</tr>
<tr>
<td>324 Building</td>
<td>480</td>
<td>430</td>
<td>170</td>
</tr>
<tr>
<td>Waste Encapsulation &amp; Storage Facility</td>
<td>960</td>
<td>30</td>
<td>10</td>
</tr>
<tr>
<td>K-Basin Transition</td>
<td>630</td>
<td>--</td>
<td>30</td>
</tr>
<tr>
<td>327 Building</td>
<td>300</td>
<td>90</td>
<td>60</td>
</tr>
<tr>
<td>Fast Flux Test Facility</td>
<td>70</td>
<td>60</td>
<td>0.26</td>
</tr>
<tr>
<td>200 Area Accelerated Deactivation</td>
<td>110</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>303-K Fuels Fabrication Transition</td>
<td>120</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>T Plant Transition</td>
<td>80</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>309 PRTR Vault Waste</td>
<td>20</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Total</td>
<td>18,600</td>
<td>1,750</td>
<td>590</td>
</tr>
</tbody>
</table>

Percent: 67% 11% 4% <1% 18% <1% 100%

1) 6 m3 of RH-LLW_GTCLII are included in the volumes reported for RH-LLW_HII (128 m3 for each year reported by Waste Encapsulation & Storage Facility from 2017 to 2021).

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m$^3$ are rounded to the nearest 10 m$^3$, numbers less than 10 m$^3$ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m$^3$.

Comparison to Previous Baseline(s)

The FY2001.0 forecast for Transition Activities shows a 68% decrease from the FY2000.0 forecast of 49,610 m$^3$ primarily due to the adjusted estimates of LLW_I from the Plutonium Finishing Plant.

The FY2000.0 forecast shows a 72% increase over the FY99.0 forecast due to the increased waste forecast from the Plutonium Finishing Plant, resulting from a Tiger Team Audit.

Comparison to Previous Baseline(s) by Waste Class
Background

The Transition Activities mission is to manage the deactivation activities of those facilities that are no longer in the operational phase. As stored material and wastes are removed, the facilities will be deactivated and transferred to the EM-40 functional group. The forecast life cycle for waste generated by Transition Activities extends to 2038. The types of waste generated within this functional group can be operational/maintenance waste, deactivation waste, and surveillance & maintenance waste. Generation of surveillance & maintenance waste is expected to be minimal since the planning baseline for each facility assumes that upon completion of deactivation, the facility will be immediately transferred to the EM-40 contractor for D&D.

Forecast Assumptions and Comments

The Transition Activities waste volume forecast assumes no slip in the schedule for some sites to transition to surveillance and maintenance phase. Specifically, the Plutonium Finishing Plant will complete its cleanup projects by 2016.

Other Forecast Data

• Hazardous Waste
  • A life cycle total of 220 m³ of hazardous waste has been reported by generators in this functional group.

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


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Transition Activities — 200 Area Accelerated Deactivation

200 Area Accelerated Deactivation Report Sections

- Highlights
- Waste Class Data
- Annual Volumes
- Comparison to Previous Baseline(s)
- Background
- Forecast Assumptions and Comments
- Other 200 Area Accelerated Deactivation
  Forecast Data
- Detailed Forecast Data

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

- This generator contributes 120 m³, or 1% of Transition Activities' waste forecast.
- The forecast life cycle for the 200 Area Accelerated Deactivation generator ends in 2008.
- LLW_I is the primary waste class forecast with 110 m³ (93%).
- The FY2001.0 forecast shows a 87% decrease from the FY2000.0 forecast due to current revised estimates. Previous forecasts were based on the 1996 Baseline Environmental Management Report (BEMR).

Waste Class Distribution

```
LLW_II
3x (3 m³)

CH_MLLW
2x (2 m³)

CH_TRU(M)
3x (3 m³)

LLW_I
9x [110 m³]
```

200 Area Accelerated Deactivation
Total [excl. HAZ] = 128 m³

Waste Class Data

The following charts depict the physical waste forms, hazardous constituents, containers, and LDR
waste stream identification distribution expected for each waste class.

LLW Data

Physical Waste Form Distribution

Debris Wastes 100% (120 m³)

200 Area Accelerated Deactivation LLW Total = 120 m³

Container Distribution

208 Liter Drums 22% (30 m³)

MB-Ys 78% (90 m³)

200 Area Accelerated Deactivation LLW Total = 120 m³

MLLW Data

Physical Waste Form Distribution

Special Wastes 21% (0.42 m³)
Debris Wastes 79% (2 m³)

200 Area Accelerated Deactivation MLLW Total = 2 m³

Hazardous Characteristic Distribution

PCB > 50 ppm 18% (0.31 m³)
Ignitable 25% (0.41 m³)
Corrosive 60% (0.91 m³)

200 Area Accelerated Deactivation MLLW Total = 2 m³

Container Distribution

208 Liter Drums 100% (2 m³)

200 Area Accelerated Deactivation MLLW Total = 2 m³

LDR Waste Stream Identification Distribution

MLLW-84 (Non-D) 100% (2 m³)

200 Area Accelerated Deactivation MLLW Total = 2 m³

TRU(M) Waste Data
Physical Waste Form Distribution

- Debris Wastes 100% (3 m³)

Container Distribution

- 208 Liter Drums 100% (3 m³)

200 Area Accelerated Deactivation
TRU(M) Total = 3 m³

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

Annual Volumes

Annual Minimum, Baseline, and Maximum Volumes

Annual LLW Baseline Volumes

Annual MLLW Baseline Volumes
Comparison to Previous Baseline(s)

The FY2001.0 forecast shows a 87% decrease from the FY2000.0 forecast due to current revised estimates. Previous forecasts were based on the 1996 Baseline Environmental Management Report (BEMR). This is the first forecast developed based on the Multi-Year Work Plan.

The FY2000.0 forecast shows a 1% decrease from the FY99.0 forecast of 930 m³ due to the elimination of the year 1999 volumes.

Comparison to Previous Baseline(s) by Waste Class
### Background

This generator includes a number of facilities in the 200 Area and the 400 Area. In general, the facilities can be associated with a major facility within the Transition Activities program (e.g., PFP) but for various reasons are not included in the forecasts for those facilities. The facilities included in this forecast were previously reported as Non-Programmatic and include: 202-A PUREX Non-Transition, 225-B B Plant Non-Transition, 234-5 Z PFP Non-Transition, 400 Area Facilities Non-Transition, and Site Support Non-Transition. In general, this generator provides facility surveillance and maintenance, facility characterization and risk mitigation. Facilities will be transferred to EM-40 by 2008.

### Forecast Assumptions and Comments

This forecast for 200 Area Accelerated Deactivation was prepared based on the multi-year work plan baseline.

### Other Forecast Data

- **Hazardous Waste**
  
  - A life cycle total of 4 m³ of hazardous waste has been reported by 200 Area Accelerated Deactivation.

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

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Transition Activities — 234-5 Z Plutonium Finishing Plant

234-5 Z Plutonium Finishing Plant Report Sections

» Highlights
» Waste Class Data
» Annual Volumes
» Comparison to Previous Baseline(s)
» Background
» Forecast Assumptions and Comments
» Other 234-5 Z Plutonium Finishing Plant Forecast Data
» Detailed Forecast Data

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

- This generator contributes 9,750 m³, or 62% of Transition Activities' waste forecast.

- The forecast life cycle for the 234-5 Z Plutonium Finishing Plant has been extended from 2001 to 2015.

- LLW_I and CH_TRU(M) are the primary waste classes forecast, representing 69% (6,710 m³) and 23% (2,200 m³) of the Plutonium Finishing Plant waste volume. Additional waste classes are shown in the chart below.

- The FY2001.0 forecast shows a decrease of 77% over the FY2000.0 forecast of 41,490 m³ due to revised waste generation estimates based on process knowledge from a similar facility in Rocky Flats.

Waste Class Distribution

<table>
<thead>
<tr>
<th>Waste Class</th>
<th>Volume (m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LLW_I</td>
<td>7% (850)</td>
</tr>
<tr>
<td>CH_MLLW</td>
<td>2% (180)</td>
</tr>
<tr>
<td>CH_TRU(M)</td>
<td>23% (2,200)</td>
</tr>
<tr>
<td>LLW_I</td>
<td>68% (6,710)</td>
</tr>
</tbody>
</table>

2345-Z Plutonium Finishing Plant
Total (incl. HAZ) = 9,750 m³
Waste Class Data

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

LLW Data

**Physical Waste Form Distribution**

- Inorganic Solids: 2% (180 m³)
- Organic Solids: 20% (140 m³)
- Debris Wastes: 78% (5,730 m³)

- **Container Distribution**

  - 208 Liter Drums: 7% (550 m³)
  - MB-Ys: 93% (6,810 m³)

MLLW Data

**Physical Waste Form Distribution**

- Special Wastes: 11% (20 m³)
- Inorganic Solids: 26% (50 m³)
- Debris Wastes: 31% (60 m³)

- **Container Distribution**

  - 208 Liter Drums: 4% (40 m³)
  - MB-Ys: 6% (30 m³)
  - Metals - PCBs: 8% (10 m³)

**Hazardous Characteristic Distribution**

- Ignitible: 8% (10 m³)
- Corrosive: 31% (90 m³)

- **LDR Waste Stream Identification Distribution**

  - **MLLW-05**
    - Other: 3% (6 m³)
  - **MLLW-04**
    - MLLW-04 (DC): 2% (10 m³)
  - **MLLW-02**
    - Other: 2% (6 m³)
  - **MLLW-03**
    - MLLW-03: 4% (80 m³)

TRU(M) Waste Data
Physical Waste Form Distribution

- Organic Solids: 10% (230 m³)
- Lab Packs: <1% (3 m³)
- Inorganic Solids: 22% (500 m³)
- Debris Wastes: 67% (1,470 m³)

2345-Z Plutonium Finishing Plant
Total TRU(M) = 2,280 m³

Hazardous Characteristic Distribution

- Other: <1% (5 m³)
- Ignitable - Reactive - Metals: 12% (70 m³)
- Metals - Organic: 24% (140 m³)
- Metals - PCB > 50: 32% (180 m³)
- Metals: 31% (180 m³)

2345-Z Plutonium Finishing Plant
Total (TRU(M) only) = 670 m³

Container Distribution

- SVBs: 13% (280 m³)
- 208 Lke Drums: 87% (1,320 m³)

2345-Z Plutonium Finishing Plant
Total TRU(M) = 2,280 m³

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

Annual Volumes

Annual Minimum, Baseline, and Maximum Volumes

Annual LLW Baseline Volumes
Comparison to Previous Baseline(s)

The FY2001.0 forecast shows a decrease of 77% over the FY2000.0 forecast of 41,490 m³ due to revised waste generation estimates based on a process knowledge at a similar facility in Rocky Flats.

The FY2000.0 forecast shows an increase of 99% over the FY99.0 forecast of 20,880 m³. The increase is due to the lengthened lifecycle, and altered estimates of waste generation.
Comparison to Previous Baseline(s) by Waste Class

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Waste Class</td>
<td>(m³)</td>
<td>(m³)</td>
<td>(m³)</td>
</tr>
<tr>
<td>LLW_J</td>
<td>6,710</td>
<td>36,290</td>
<td>17,040</td>
</tr>
<tr>
<td>LLW_H</td>
<td>850</td>
<td>20</td>
<td>90</td>
</tr>
<tr>
<td>CH_MLLW</td>
<td>180</td>
<td>60</td>
<td>650</td>
</tr>
<tr>
<td>CH_TRU(M)</td>
<td>2,200</td>
<td>5,110</td>
<td>3,140</td>
</tr>
<tr>
<td>Total</td>
<td>9,750</td>
<td>41,450</td>
<td>26,890</td>
</tr>
</tbody>
</table>

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

Background

The Plutonium Finishing Plant's mission is to stabilize and store plutonium bearing products generated from the production of nuclear weapons. The waste is generated through surveillance and maintenance, decontamination, and stabilization activities. Projects included in the forecast are: residue, liquids and solids stabilization; Z-361 tank waste retrieval; facility construction projects; Z-361 tank waste retrieval and three proposed accelerated closure activities.

Forecast Assumptions and Comments

The forecast for FY2001 is based on the average quantities of the last three fiscal years and stabilization project waste projections. The out years include DNFSB 94-1 actions and terminal cleanout. Terminal cleanout includes removal of glove boxes and associated equipment starting in FY01. A total quantity of 3,000 cubic meters of Transuranic plus Transuranic mixed waste was projected in the Vision 2006 plan. The expected rates for terminal cleanout are based on Vision 2006 plan and deactivation knowledge from Rocky Flats. To project waste volumes (except hazardous) a baseline (B) was developed from the three previous FYs. The rates are as follows: 2001 - 1 x B; 2002 - 2 x B; 2004-2009- 7 x B; 2010 - 4 x B; 2011-3 x B; 2012 - 1 x B. Waste estimates in fiscal year 01 also include disposal of the Mg(OH)₂ filtrate stream from the solutions project. The wastes will be treated at ATG and returned for disposal in the LLW burial grounds.

Waste volumes in FY01-03 are elevated as a result of solids/liquids and residue project processing. FY01 includes debris generated in processing ash and SS&C residues. Waste volumes in FY01 also include implementing the solutions accelerated closure alternative. FY02 and 03 include debris waste generated as a subset from implementing the MOX and Pu alloy accelerated closure proposals.

This forecast is based on historical generation rates, major project schedules and facility closure planned for 2016. It includes proposed accelerated closure projects. Volumes for D&D activities have also changed due to knowledge gained from similar processes at Rocky Flats.

Other Forecast Data

5 of 6
Hazardous Waste

- A life cycle total of 40 m$^3$ of hazardous waste has been reported by 234-5 Z Plutonium Finishing Plant.

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


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Transition Activities — 300 Area Accelerated Closure Project

300 Area Accelerated Closure Project Report Sections

» Highlights
» Waste Class Data
» Annual Volumes
» Comparison to Previous Baseline(s)

» Background
» Forecast Assumptions and Comments
» Other 300 Area Accelerated Closure Forecast Data
» Detailed Forecast Data

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

- This generator contributes 2,030 m³, or 13% of Transition Activities' waste forecast.
- The forecast life cycle for the 300 Area Accelerated Closure Project generator ends in 2009.
- LLW I is the primary waste class forecast at 45% (910 m³) of the volume. As shown in the chart below, CH_TRU(M) waste (500 m³), LLW_III (460 m³), and CH_MLLW (130 m³) are also expected in significant quantities.
- The FY2001.0 forecast shows a 49% decrease from the FY2000.0 forecast of 4,010 m³ due to currently revised estimates. Previous forecasts were based on the 1996 Baseline Environmental Management Report (BEMR). This forecast is based on the 300 Area Accelerated Closure Plan (ACP).

Waste Class Distribution

300 Area Accelerated Closure Project
Total (excl. HAZ) = 2,030 m³
Waste Class Data

The expected physical waste forms, hazardous characteristics, container types, and LDR waste stream identification distribution of the 300 Area Accelerated Closure Project's forecasted wastes are described in the following charts.

**LLW Data**

**Physical Waste Form Distribution**

- Debris Wastes: 100% (1,380 m³)
- 300 Area Accelerated Closure Project
- LLW Total = 1,380 m³

**Container Distribution**

- 208 Liter Drums: 100% (1,380 m³)
- 300 Area Accelerated Closure Project
- LLW Total = 1,380 m³

**MLLW Data**

**Physical Waste Form Distribution**

- Lab Packs: 2\% (2 m³)
- Debris Wastes: 98\% (120 m³)
- 300 Area Accelerated Closure Project
- MLLW Total = 130 m³

**Hazardous Characteristic Distribution**

- WA State Regulated:
  - Corrosive + Metals: 1\% (0.15 m³)
  - Metals: 98\% (120 m³)
- 300 Area Accelerated Closure Project
- MLLW Total = 130 m³

**Container Distribution**

- 208 Liter Drums: 100\% (130 m³)
- 300 Area Accelerated Closure Project
- MLLW Total = 130 m³

**LDR Waste Stream Identification Distribution**

- MLLW-02
  - 2\% (3 m³)
- MLLW-04 (Non-OC)
  - 1\% (0.06 m³)
- 300 Area Accelerated Closure Project
- MLLW Total = 130 m³

**TRU(M) Waste Data**

2 of 5
Physical Waste Form Distribution

- Soil Gravel: 1% (4 m³)
- Inorganic Solids: 1% (4 m³)
- Debris Wastes: 98% (520 m³)

300 Area Accelerated Closure Project
TRU(M) Total = 530 m³

Hazardous Characteristic Distribution

- Metals: 100% (40 m³)

300 Area Accelerated Closure Project
Total (TRU(M) only) = 40 m³

Container Distribution

- 208 Liter Drums: 100% (530 m³)

300 Area Accelerated Closure Project
TRU(M) Total = 530 m³

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

Annual Volumes

Annual Minimum, Baseline, and Maximum Volumes

Annual LLW Baseline Volumes
Comparison to Previous Baseline(s)

The FY2001.0 forecast shows a 49% decrease from the FY2000.0 forecast of 4,010 m³ due to currently revised estimates. Previous forecasts were based on the 1996 Baseline Environmental Management Report (BEMR). This forecast is based on the 300 Area Accelerated Closure Plan (ACP).

The FY2000.0 forecast shows no change from the FY99.0 forecast.
Comparison to Previous Baseline(s) by Waste Class

<table>
<thead>
<tr>
<th>Waste Class</th>
<th>FY2001.0 Forecast (m³)</th>
<th>FY2000.0 Forecast (m³)</th>
<th>FY1999.0 Forecast (m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LLW_1</td>
<td>910</td>
<td>2,520</td>
<td>2,520</td>
</tr>
<tr>
<td>LLW_II</td>
<td>480</td>
<td>500</td>
<td>500</td>
</tr>
<tr>
<td>CH,ML,LW</td>
<td>130</td>
<td>220</td>
<td>220</td>
</tr>
<tr>
<td>RH,ML,LW</td>
<td>--</td>
<td>0.28</td>
<td>0.28</td>
</tr>
<tr>
<td>CH,TRU(M)</td>
<td>500</td>
<td>740</td>
<td>740</td>
</tr>
<tr>
<td>RH,TRU(M)</td>
<td>30</td>
<td>30</td>
<td>30</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>2,030</strong></td>
<td><strong>4,010</strong></td>
<td><strong>4,010</strong></td>
</tr>
</tbody>
</table>

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

Background

This waste generator was originally a grouping of 32 facilities in the 300 Area that are expected to require deactivation from 2000 through 2006. Four additional facilities, the 325, 326, 329, and 331 buildings, have been added in the FY99.0 forecast and are expected to undergo deactivation from 2030 to 2034. The deactivation of these facilities has only recently been included in the planning baseline of the Transition Activities functional group. The solid waste resulting from deactivation of these facilities had previously been included under "Non Programmatic".

Forecast Assumptions and Comments

Some compaction and size reduction will be performed prior to transfer to Fluor Hanford Waste Management Project, liquids will be absorbed.

Volumes and timing updated based on current information for the 300 Area Accelerated Closure Project (ACP) and based on HNF-6465 Rev 0.

Other Forecast Data

- Hazardous Waste
  - No hazardous waste has been reported by 300 Area Accelerated Closure Project.
Transition Activities — 303-K Fuels Fabrication Transition

303-K Fuels Fabrication Transition Report Sections

» Highlights
» Waste Class Data
» Annual Volumes
» Comparison to Previous Baseline(s)

» Background
» Forecast Assumptions and Comments
» Other 303-K Fuels Fabrication Transition Forecast Data

» Detailed Forecast Data

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

- This generator contributes 120 m³, or <1% of Transition Activities' waste forecast.

- The forecast life cycle for the Fuels Fabrication Transition generator ends in 2002.

- LLW_I is the only forecast waste.

- The FY2001.0 forecast shows a change in waste class from CH_MLLW to LLW_I and an increase of approximately 120 m³ because a portion of the product material that was expected to be sold will now be disposed as LLW.

Waste Class Distribution

Waste Class Data

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

**LLW Data**

**Physical Waste Form Distribution**

- **Debris Wastes** 
  - 100% [120 m³]

**Container Distribution**

- **Small Boxes** 
  - 100% [120 m³]

**303-K Fuels Fabrication Transition**

- LLW Total = 120 m³

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

**Annual Volumes**

**Annual Minimum, Baseline, and Maximum Volumes**

**Annual LLW Baseline Volumes**
Comparison to Previous Baseline(s)

The FY2001.0 forecast shows a change in waste class from CH_MLLW to LLW_I and an increase of approximately 120 m³ because a portion of the product material that was expected to be sold will now be disposed as LLW.

The FY2000.0 forecast shows a >99% decrease from the FY99.0 forecast of 250 m³ because LLW_I is no longer expected to be generated.

Comparison to Previous Baseline(s) by Waste Class

<table>
<thead>
<tr>
<th>Waste Class</th>
<th>FY2001.0 Forecast (m³)</th>
<th>FY2000.0 Forecast (m³)</th>
<th>FY1999.0 Forecast (m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LLW_I</td>
<td>120</td>
<td>--</td>
<td>250</td>
</tr>
<tr>
<td>CH_MLLW</td>
<td>--</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>120</td>
<td>1</td>
<td>250</td>
</tr>
</tbody>
</table>

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

Background

The mission for 303-K Fuels Fabrication Transition is to gain knowledge and provide training on the facility deactivation process.

Forecast Assumptions and Comments

The waste is generated from facility clean-up. The Phase II Waste Acid Treatment System (WATS) Resource Conservation and Recovery Act (RCRA) Closure Decontamination and Inspection Plan was used to identify the work scope activities included in the forecast. Process knowledge and lab analysis were also used to develop the forecast.
Other Forecast Data

- **Hazardous Waste**
  - No hazardous waste has been reported by 303-K Fuels Fabrication Transition.

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


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Transition Activities — 309 PRTR Vault Waste

309 PRTR Vault Waste Report Sections

- Highlights
- Waste Class Data
- Annual Volumes
- Comparison to Previous Baseline(s)
- Background
- Forecast Assumptions and Comments
- Other 309 PRTR Vault Waste Forecast Data
- Detailed Forecast Data

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

- This generator contributes 20 m³, or <1% of Transition Activities' waste forecast.
- The forecast life cycle for the PRTR Vault Waste generator ends in 2002.
- LLW_I and CH_MLLW are the waste classes forecast, representing 93% (20 m³) and 7% (2 m³) of the PRTR Vault Waste volume.
- The FY2001.0 forecast shows a 13% decrease from the FY2000.0 forecast of 30 m³ due to a change in work scope.

Waste Class Distribution

- CH_MLLW
  7x (2 m³)
- LLW_I
  93x (20 m³)

309 PRTR Vault Waste
Total (excl. HAZ) = 20 m³

Waste Class Data

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

**Physical Waste Form Distribution**

- Debris Waste: 100% (20 m³)

309 PRTR Vault Waste
LLW Total = 20 m³

**Container Distribution**

- 208 Liter Drums: 98% (0.51 m³)

309 PRTR Vault Waste
LLW Total = 20 m³

MLLW Data

**Physical Waste Form Distribution**

- Soil Gravel: 100% (2 m³)

309 PRTR Vault Waste
MLLW Total = 2 m³

**Hazardous Characteristic Distribution**

- Metals: 100% (2 m³)

309 PRTR Vault Waste
MLLW Total = 2 m³

**Container Distribution**

- 208 Liter Drums: 100% (2 m³)

309 PRTR Vault Waste
MLLW Total = 2 m³

**LDR Waste Stream Identification Distribution**

- MLLW-01: 100% (2 m³)

309 PRTR Vault Waste
MLLW Total = 2 m³

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

**Annual Volumes**

**Annual Minimum, Baseline, and Maximum Volumes**
Comparison to Previous Baseline(s)

The FY2001.0 forecast shows a 13% decrease from the FY2000.0 forecast of 30 m³ due to a change in work scope.

The FY2000.0 forecast shows a 28% increase from the FY99.0 forecast of 20 m³.

Comparison to Previous Baseline(s) by Waste Class
### Background

309 PRTR waste is generated in meeting turnover requirements during facility transition to EM-40. More specifically, waste is generated in meeting turnover requirements. Smearable contamination is removed and stabilized. Unattached items in the facility are removed and dispositioned.

### Forecast Assumptions and Comments

The assumptions for this forecast are based on the current planning and scheduling of the facility transition to EM-40 and the funding profile described in the MYWP.

### Other Forecast Data

- **Hazardous Waste**
  - No hazardous waste has been reported by 309 PRTR Vault Waste.

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


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Transition Activities — 324 Building

324 Building Report Sections

» Highlights
» Waste Class Data
» Annual Volumes
» Comparison to Previous Baseline(s)

» Background
» Forecast Assumptions and Comments
» Other 324 Building Forecast Data
» Detailed Forecast Data

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

- This generator contributes 1,130 m³, or 7% of Transition Activities' waste forecast.

- The forecast life cycle for the 324 Building ends in 2006.

- LLW_I, LLW_III and CH_MLLW are the primary waste classes forecast, representing 42% (480 m³), 38% (430 m³) and 15% (170 m³) of the 324 Building's waste volume, respectively. RH_TRU(M) and CH_TRU(M) waste are also forecast as shown in the chart below.

- The FY2001.0 forecast shows an increase of 88% from the FY2000.0 forecast of 600 m³ due to adjustments to priorities and projects.

Waste Class Distribution

- RH_TRU(M)
- CH_TRU(M)
- CH_MLLW
- LLW_I
- LLW_II

324 Building
Total (excl. HAZ) = 1,130 m³

Waste Class Data

The expected physical waste forms, hazardous characteristics, container types, and LDR waste stream identification distribution of the 324 Building's forecasted wastes are described in the following charts.
LLW Data

Physical Waste Form Distribution

Debris Wastes 100% (910 m3)

324 Building  
LLW Total = 910 m3

Container Distribution

Other Containers

208 Liter Drums 4% (30 m3)
14% (130 m3)
MB-Ys 17% (150 m3)

Medium Boxes 66% (600 m3)

324 Building  
LLW Total = 910 m3

MLLW Data

Physical Waste Form Distribution

Debris Wastes 98% (160 m3)

324 Building  
MLLV Total = 170 m3

Hazardous Characteristic Distribution

Ignitable

WA State Regulated < 1% (0.8 m3)
< 1% (0.77 m3)
Corrosive + Metals 2% (3 m3)

Metals 98% (160 m3)

324 Building  
MLLV Total = 170 m3

Container Distribution

SVBs 3% (4 m3)
208 Liter Drums 27% (40 m3)

Medium Boxes 66% (120 m3)

324 Building  
MLLV Total = 170 m3

LDR Waste Stream Identification Distribution

MLLV-04 (OC) 14% (20 m3)
MLLV-03 16% (20 m3)

MLLV-04 (Non-OC) 47% (80 m3)

324 Building  
MLLV Total = 170 m3

TRU(M) Waste Data

2 of 5
Physical Waste Form Distribution

- Soil Gravel: 8% (4 m³)
- Inorganic Solids: 6% (4 m³)
- Debris Wastes: 68% (50 m³)

324 Building
TRU(M) Total = 60 m³

Hazardous Characteristic Distribution

- Metals: 100% (20 m³)

324 Building
Total (TRU(M) only) = 20 m³

Container Distribution

- 208 Liter Drums: 21% (10 m³)
- SWBs: 24% (10 m³)
- Other Containers: 54% (30 m³)

324 Building
TRU(M) Total = 60 m³

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

Annual Volumes

Annual Minimum, Baseline, and Maximum Volumes

Annual LLW Baseline Volumes
Annual MLLW Baseline Volumes

Annual TRU(M) Waste Baseline Volumes

Comparison to Previous Baseline(s)

The FY2001.0 forecast shows an increase of 88% from the FY2000.0 forecast of 600 m$^3$ due to adjustments to priorities and projects.

The FY2000.0 forecast shows a 38% decrease from the FY99.0 forecast of 930 m$^3$ due to changes in priorities and projects.
Comparison to Previous Baseline(s) by Waste Class

<table>
<thead>
<tr>
<th>Waste Class</th>
<th>FY2001.0 Forecast (m³)</th>
<th>FY2000.0 Forecast (m³)</th>
<th>FY1999.0 Forecast (m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LLW_I</td>
<td>480</td>
<td>140</td>
<td>510</td>
</tr>
<tr>
<td>LLW_II</td>
<td>430</td>
<td>280</td>
<td>290</td>
</tr>
<tr>
<td>CH_MLLW</td>
<td>170</td>
<td>30</td>
<td>150</td>
</tr>
<tr>
<td>CH_TRU(M)</td>
<td>2</td>
<td>2</td>
<td>20</td>
</tr>
<tr>
<td>RH_TRU(M)</td>
<td>80</td>
<td>150</td>
<td>--</td>
</tr>
<tr>
<td>Total</td>
<td>1,130</td>
<td>690</td>
<td>980</td>
</tr>
</tbody>
</table>

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

Background

The 324 Building supported research operations and is now in transition. Wastes are generated from routine operations and maintenance as well as deactivation of the facility.

Forecast Assumptions and Comments

The 324 Building is in transition and deactivation. All wastes will be generated from routine operations and maintenance activities as well as deactivation of the facility's hot cells and laboratories.

The duration of this forecast is based on DOE-RL directive to complete transition to D&D by 2007.

Other Forecast Data

- Hazardous Waste
  - A life cycle total of 70 m³ of hazardous waste has been reported by 324 Building.
Transition Activities — 327 Building

327 Building Report Sections

» Highlights
» Waste Class Data
» Annual Volumes
» Comparison to Previous Baseline(s)

» Background
» Forecast Assumptions and Comments
» Other 327 Building Forecast Data
» Detailed Forecast Data

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

- This generator contributes 470 m³, or 3% of Transition Activities' waste forecast.

- The forecast life cycle for the 327 Building generator ends in 2007.

- LLW_I, LLW_III, and CH_MLLW are the primary waste classes forecast, representing 64% (300 m³), 19% (90 m³), and 14% (60 m³) of the 327 Building waste volume, respectively. Additional waste classes are shown in the chart below.

- The FY2001.0 forecast shows a 24% increase from the FY2000.0 forecast of 380 m³ due to an increase in project funding levels.

Waste Class Distribution

Waste Class Data

The expected physical waste forms, hazardous characteristics, container types, and LDR waste stream identification distribution of 327 Building's forecasted wastes are described in the following charts.
LLW Data

Physical Waste Form Distribution

Debris Wastes: 100% (390 m3)

327 Building
LLW Total = 390 m3

Container Distribution

MB-1s
5% (20 m3)

Medium Boxes
77% (300 m3)

327 Building
LLW Total = 390 m3

MLLW Data

Physical Waste Form Distribution

Organic Solids: 9% (6 m3)
Other: 1% (0.91 m3)
Inorganic Solids: 9% (6 m3)
Special Wastes: 22% (10 m3)

Debris Wastes: 58% (40 m3)

327 Building
MLLW Total = 68 m3

Hazardous Characteristic Distribution

WA State Regulated: 50% (30 m3)
Organic: 50% (30 m3)

327 Building
MLLW Total = 68 m3

Container Distribution

Small Boxes
5% (3 m3)

MB-1s
37% (20 m3)

208 Liter Drums
57% (40 m3)

327 Building
MLLW Total = 68 m3

LDR Waste Stream Identification Distribution

MLLW-03
6% (5 m3)

MLLW-05
13% (9 m3)

MLLW-02
22% (10 m3)

MLLW-04 (Non-CC)
58% (40 m3)

327 Building
MLLW Total = 68 m3

TRU(M) Waste Data
Physical Waste Form Distribution

- Lab Packs <1% (0.1 m³)
- Inorganic Solids <1% (0.05 m³)
- Organic Solids 5% (0.62 m³)
- Debris Vastes 94% (10 m³)

327 Building
TRU(M) Total = 10 m³

Container Distribution

- 208 Liter Drums 15% (2 m³)
- SwBuS 85% (10 m³)

327 Building
TRU(M) Total = 10 m³

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

Annual Volumes

Annual Minimum, Baseline, and Maximum Volumes

Annual LLW Baseline Volumes

Annual MLLW Baseline Volumes
Comparison to Previous Baseline(s)

The FY2001.0 forecast shows a 24% increase from the FY2000.0 forecast of 380 m³ due to an increase in project funding levels.

The FY2000.0 forecast shows a 12% increase from the FY99.0 forecast of 340 m³ due to current revised estimates.

Comparison to Previous Baseline(s) by Waste Class

<table>
<thead>
<tr>
<th>Waste Class</th>
<th>FY2001.0 Forecast (m³)</th>
<th>FY2000.0 Forecast (m³)</th>
<th>FY1999.0 Forecast (m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LLW_I</td>
<td>300</td>
<td>150</td>
<td>160</td>
</tr>
<tr>
<td>LLW_II</td>
<td>40</td>
<td>70</td>
<td>140</td>
</tr>
<tr>
<td>CH_MLLW</td>
<td>60</td>
<td>70</td>
<td>20</td>
</tr>
<tr>
<td>CH_TRU(M)</td>
<td>10</td>
<td>10</td>
<td>5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>476</strong></td>
<td><strong>380</strong></td>
<td><strong>340</strong></td>
</tr>
</tbody>
</table>

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

Background

The 327 Building supported research operations and is now in transition. 327 facility is being cleaned out in preparation for facility transition to EM-40 in 2008. Wastes generated are contaminated equipment and materials being removed, and those contamination control and PPE wastes generated during the work.

Forecast Assumptions and Comments

The great majority of LLW from 327 will be Category I, however some category III may be generated, so is included here at a nominal rate. This includes 1 55 gallon drum and 1 5X5X9 box containing 'legacy' waste that was generated by Pacific Northwest National Laboratory prior to facility transition. Note, at the time of this forecast, FY2001 budget forecasts didn't allow for work generating Category III waste.

TRU wastes issue from hot cell cleanout operations, LLW issues from operations outside the hot cells, and the occasional MLLW package is from chemicals that have been used and/or stored in the operating canyon.

This forecast is based on the current projected budget for FY01, and the basis of estimates (BOEs) for the out years projecting facility closure by 2008. The estimates and schedules used to develop this forecast are flexible, and may change.

Other Forecast Data

- Hazardous Waste

  A life cycle total of 9 m³ of hazardous waste has been reported by 327 Building.

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


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Transition Activities — Fast Flux Test Facility

Fast Flux Test Facility Report Sections

» Highlights
» Waste Class Data
» Annual Volumes
» Comparison to Previous Baseline(s)

» Background
» Forecast Assumptions and Comments
» Other Fast Flux Test Facility Forecast Data
» Detailed Forecast Data

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

- This generator contributes 150 m³, or <1% of Transition Activities' waste forecast.

- The forecast life cycle for the Fast Flux Test Facility generator ends in 2006.

- LLW _III_ and LLW _I_ are the primary waste classes forecast, representing 55% (80 m³) and 45% (70 m³) of the Fast Flux Test Facility waste volume. CH_MLLW (<1%) is also reported.

- The FY2001.0 forecast shows no change from the FY2000.0 forecast of 150 m³.

Waste Class Distribution

CH_MLLW
< 1% (0.26 m³)

LLW_I
45% (70 m³)

LLW_II
55% (80 m³)

Fast Flux Test Facility
Total (excl. HAZ) = 150 m³

Waste Class Data

The expected physical waste forms, hazardous characteristics, container types, and LDR waste stream identification distribution of the Fast Flux Test Facility's forecasted wastes are described in the following charts.
LLW Data

**Physical Waste Form Distribution**

- Soil Gravel: 2% (2 m³)
- Organic Solids: 1% (2 m³)
- Debris Wastes: 97% (140 m³)

*Fast Flux Test Facility*

**LLW Total = 140 m³**

**Container Distribution**

- Medium Boxes: 10% (10 m³)
- Other: 1% (2 m³)
- MB-Vs: 11% (20 m³)
- Large Boxes: 83% (80 m³)
- 208 Liter Drums: 2% (40 m³)

*Fast Flux Test Facility*

**LLW Total = 140 m³**

MLLW Data

**Physical Waste Form Distribution**

- Special Wastes: 100% (0.26 m³)

*Fast Flux Test Facility*

**MLLV Total = 0.26 m³**

**Hazardous Characteristic Distribution**

- Reactive: 100% (0.26 m³)

*Fast Flux Test Facility*

**MLLV Total = 0.26 m³**

**Container Distribution**

- 208 Liter Drums: 100% (0.26 m³)

*Fast Flux Test Facility*

**MLLV Total = 0.26 m³**

**LDR Waste Stream Identification Distribution**

- MLLV-02: 100% (0.26 m³)

*Fast Flux Test Facility*

**MLLV Total = 0.26 m³**

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

Annual Volumes

**Annual Minimum, Baseline, and Maximum Volumes**
SWIFT Report – Transition Activities – Fast Flux Test Facility

Annual LLW Baseline Volumes

Annual MLLW Baseline Volumes

Comparison to Previous Baseline(s)

The FY2001.0 forecast shows no change from the FY2000.0 forecast of 150 m³.

The FY2000.0 forecast shows a 15% decrease from the FY99.0 forecast of 180 m³ due the elimination of the year 1999 volumes.
Comparison to Previous Baseline(s) by Waste Class

<table>
<thead>
<tr>
<th>Fast Flux Test Facility</th>
<th>FY2001.0 Forecast</th>
<th>FY2005.0 Forecast</th>
<th>FY1999.0 Forecast</th>
</tr>
</thead>
<tbody>
<tr>
<td>Waste Class</td>
<td>m$^3$</td>
<td>m$^3$</td>
<td>m$^3$</td>
</tr>
<tr>
<td>LLW_I</td>
<td>70</td>
<td>70</td>
<td>60</td>
</tr>
<tr>
<td>LLW_II</td>
<td>80</td>
<td>80</td>
<td>110</td>
</tr>
<tr>
<td>CH ML LW</td>
<td>0.26</td>
<td>0.26</td>
<td>0.26</td>
</tr>
<tr>
<td>Total</td>
<td>150</td>
<td>150</td>
<td>180</td>
</tr>
</tbody>
</table>

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m$^3$ are rounded to the nearest 10 m$^3$, numbers less than 10 m$^3$ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m$^3$.

Background

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

Forecast Assumptions and Comments

The Fast Flux Test Facility will remain shut down and is using the assumption that it will continue on to S&M phase and that it would be reached in the year 2006. Since no decision was made on FFTF’s future during the past year the transition to the Surveillance and Maintenance Phase has been pushed out one more year to 2006. This results in an increase of one more year of normal maintenance waste.

Other Forecast Data

- Hazardous Waste
  - A life cycle total of 6 m$^3$ of hazardous waste has been reported by Fast Flux Test Facility. However, presently all of the FFTF hazardous waste is being shipped offsite. No change in this procedure is foreseen.

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


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Transition Activities — K Basin Transition

K Basin Transition Report Sections

» Highlights
» Waste Class Data
» Annual Volumes
» Comparison to Previous Baseline(s)

» Background
» Forecast Assumptions and Comments
» Other K Basin Transition Forecast Data
» Detailed Forecast Data

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

- This generator contributes 880 m³, or 6% of Transition Activities' waste forecast.
- The forecast life cycle for the K Basin Transition generator is from 2002 to 2006.
- LLW_1 is the primary waste class forecast, representing 95% (830 m³) of the K Basin Transition waste volume. Additional waste classes are shown in the chart below.
- The FY2001.0 forecast is the same as the FY2000.0 forecast of 880 m³.

Waste Class Distribution

- CH_TRU(M)
- FH_TRU(M)
- CH_MLLW
- LLW_1

K-Basin Transition
Total (excl. HAZ) = 880 m³

Waste Class Data

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

Physical Waste Form Distribution

Debris Waste 100% (830 m3)

K-Basin Transition
LLW Total = 830 m3

Container Distribution

208 Liter Drums 100% (830 m3)

K-Basin Transition
LLW Total = 830 m3

MLLW Data

Physical Waste Form Distribution

Organic Solids 100% (30 m3)

K-Basin Transition
MLLV Total = 30 m3

Hazardous Characteristic Distribution

Metals 10% (3 m3)

VA State Regulated
8% (1 m3)

Ignitable
20% (7 m3)

PCB < 50ppm
60% (20 m3)

K-Basin Transition
MLLV Total = 30 m3

Container Distribution

208 Liter Drums 100% (30 m3)

K-Basin Transition
MLLV Total = 30 m3

LDR Waste Stream Identification Distribution

MLLV-03 100% (30 m3)

K-Basin Transition
MLLV Total = 30 m3

TRU(M) Waste Data
Physical Waste Form Distribution

Debris Wastes 100% (20 m³)

K-Basin Transition
TRU[M] Total = 20 m³

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

Annual Volumes

Annual Minimum, Baseline, and Maximum Volumes

Annual LLW Baseline Volumes

Annual MLLW Baseline Volumes
Annual TRU(M) Waste Baseline Volumes

Comparison to Previous Baseline(s)

The FY2001.0 forecast is the same as the FY2000.0 and FY99.0 forecast of 880 m³.

Comparison to Previous Baseline(s) by Waste Class

<table>
<thead>
<tr>
<th>Waste Class</th>
<th>FY2001.0 Forecast (m³)</th>
<th>FY2000.0 Forecast (m³)</th>
<th>FY1999.0 Forecast (m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LLW_J</td>
<td>830</td>
<td>830</td>
<td>830</td>
</tr>
<tr>
<td>CH_MLLW</td>
<td>30</td>
<td>30</td>
<td>30</td>
</tr>
<tr>
<td>CH_TRU(M)</td>
<td>10</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>RH_TRU(M)</td>
<td>3</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>880</strong></td>
<td><strong>880</strong></td>
<td><strong>880</strong></td>
</tr>
</tbody>
</table>

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

Background
K Basin Transition represents only the deactivation of the K-Basins and ancillary facilities. The Spent Nuclear Fuel functional group forecasts the operational waste for K-Basins.

**Forecast Assumptions and Comments**

The volumes for K Basin Transition were originally developed for the FY96 BEMR using modeling tools to estimate volumes and waste forms. The program contact supplied the shipping schedule and container types. Waste handling, hazardous characteristics, and radionuclide concentrations were based on the K-Basin Operations forecast. Timing and volume distributions were developed from expected funding profiles.

TRU(M) waste volumes are based upon KE Basin wall and floor surface area and assumption that only 1/4" of the material will need to be stripped off the surface to lower the residual radiation level below DOE limits.

**Other Forecast Data**

- **Hazardous Waste**
  - No hazardous waste has been reported by K-Basin Transition.

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


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Transition Activities — T Plant Transition

T Plant Transition Report Sections

» Highlights
» Waste Class Data
» Annual Volumes
» Comparison to Previous Baseline(s)

» Background
» Forecast Assumptions and Comments
» Other T Plant Transition Forecast Data
» Detailed Forecast Data

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

- This generator contributes 120 m³, or <1% of Transition Activities' waste forecast.
- The forecast life cycle for the T Plant Transition starts in 2036 and ends in 2038.
- LLW_I and CH_TRU(M) are the only waste classes forecast, representing 67% (80 m³) and 33% (40 m³) of the T Plant Transition waste volume.
- The FY2001.0 forecast is the same as the FY2000.0 forecast of 120 m³.

Waste Class Distribution

Waste Class Data

The expected physical waste forms, hazardous characteristics, and container types of T Plant’s forecasted wastes are described in the following charts.

LLW Data
Physical Waste Form Distribution

- Soil Gravel: 4% (3 m³)
- Inorganic Solids: 1% (0.8 m³)
- Debris Wastes: 95% (88 m³)

T Plant Transition
LLV Total = 88 m³

Container Distribution

- 208 Liter Drums: 100% (88 m³)

TRU(M) Data

Physical Waste Form Distribution

- Debris Wastes: 100% (40 m³)

T Plant Transition
TRU(M) Total = 40 m³

Hazardous Characteristic Distribution

- Organic: 48% (20 m³)
- Metals: 52% (20 m³)

T Plant Transition
Total (TRU[M] only) = 40 m³

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

Annual Volumes

Annual Minimum, Baseline, and Maximum Volumes
Annual LLW Baseline Volumes

Comparison to Previous Baseline(s)

The FY2001.0 forecast is the same as the FY2000.0 and FY99.0 forecasts of 120 m³.

Comparison to Previous Baseline(s) by Waste Class
Background

This waste generator represents T Plant deactivation. The deactivation was previously included under "Non Programmatic", however, the Transition Activities program has since taken responsibility for this forecast.

Forecast Assumptions and Comments

The volumes reported for this generator are from BEMR estimates from FY96. In particular waste volumes and physical waste forms were estimated by BEMR through use of a modeling tool that projected future transitional waste volumes. In addition, hazardous characteristics and radionuclides information were assumed to be similar to that contained in the T Plant Operations forecast.

It should be noted that the T Plant Operations forecast extends beyond the T Plant Transition forecast. This is a result of uncertain closure dates for the T Plant and because the Operations forecast includes the 2706 T facility.

Other Forecast Data

- Hazardous Waste
  - A life cycle total of 80 m³ of hazardous waste has been reported by T Plant Transition.

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


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Transition Activities — Waste Encapsulation & Storage Facility

Waste Encapsulation & Storage Facility Report Sections

» Highlights
» Waste Class Data
» Annual Volumes
» Comparison to Previous Baseline(s)

» Background
» Forecast Assumptions and Comments
» Other Waste Encapsulation & Storage Facility Forecast Data

» Detailed Forecast Data

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

- This generator contributes 1,010 m³, or 6% of Transition Activities' waste forecast.
- The forecast life cycle for the Waste Encapsulation and Storage Facility (WESF) extends to 2021.
- LLW_I is the primary waste class forecast, representing 95%, or 960 m³, of the waste volume.
- The Waste Encapsulation and Storage Facility (WESF) is the only generator expecting to ship GTC_III waste (6 m³).
- The FY2001.0 forecast shows a 3% decrease from the FY2000.0 forecast of 1,040 m³ due to the elimination of the year 2000 volumes.

Waste Class Distribution

Waste Encapsulation & Storage Facility
Total (wet, HAZ) = 1,810 m³
The expected physical waste forms, hazardous characteristics, container types, and LDR waste stream identification distribution of the Waste Encapsulation and Storage Facility's forecasted wastes are described in the following charts.

**LLW Data**

**Physical Waste Form Distribution**

- Soil Gravel: 6% (80 m³)
- Inorganic Solids: 1% (10 m³)
- Debris Wastes: 93% (1240 m³)

Waste Encapsulation & Storage Facility
LLW Total = 1360 m³

**Container Distribution**

- Large Boxes: 7% (140 m³)
- MB-YS: 78% (1720 m³)

Waste Encapsulation & Storage Facility
LLW Total = 2820 m³

**MLLW Data**

**Physical Waste Form Distribution**

- Inorganic Solids: 1% (0.28 m³)
- Debris Wastes: 99% (20 m³)

Waste Encapsulation & Storage Facility
MLLW Total = 20 m³

**Hazardous Characteristic Distribution**

- VA State Regulated: 100% (20 m³)

Waste Encapsulation & Storage Facility
MLLW Total = 20 m³

**Container Distribution**

- 200 Liter Drums: 100% (20 m³)

Waste Encapsulation & Storage Facility
MLLW Total = 20 m³

**LDR Waste Stream Identification Distribution**

- MLLW-07: 32% (8 m³)
- MLLW-05: 68% (10 m³)

Waste Encapsulation & Storage Facility
MLLW Total = 20 m³

**GTC_III Data**
Annual Volumes

Annual Minimum, Baseline, and Maximum Volumes

Annual LLW Baseline Volumes

Annual MLLW Baseline Volumes
The FY2001.0 forecast shows a 3% decrease from the FY2000.0 forecast of 1,040 m$^3$ due to the elimination of the year 2000 volumes.

The FY2000.0 forecast shows a 494% increase from the FY99.0 forecast of 170 m$^3$ due to the extension of the life-cycle from 2017 to 2021 to include terminal cleanout and stabilization.

Comparison to Previous Baseline(s) by Waste Class

<table>
<thead>
<tr>
<th>Waste Class</th>
<th>FY2001.0 Forecast (m$^3$)</th>
<th>FY2000.0 Forecast (m$^3$)</th>
<th>FY1999.0 Forecast (m$^3$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LLW_J</td>
<td>950</td>
<td>990</td>
<td>130</td>
</tr>
<tr>
<td>LLW_III</td>
<td>30</td>
<td>30</td>
<td>30</td>
</tr>
<tr>
<td>CH_MLLW</td>
<td>10</td>
<td>10</td>
<td>20</td>
</tr>
<tr>
<td>RH_MLLW</td>
<td>6</td>
<td>6</td>
<td>--</td>
</tr>
<tr>
<td>GTC_III</td>
<td>6</td>
<td>6</td>
<td>--</td>
</tr>
</tbody>
</table>

Total 1,010 1,040 170

Note: Due to rounding, totals may not equal sum of individual values. Numbers over 10 m$^3$ are rounded to the
nearest 10 m³, numbers less than 10 m³ are rounded to integers, and numbers less than 1 are rounded to nearest 0.01 m³.

Background

The mission of the Waste Encapsulation and Storage Facility is the safe storage of cesium and strontium capsules. Capsules will be stored until 2013 when they will be cut up or shipped to vitrification. Current plans are not to cut up capsules at WESF but at vitrification. If capsules are shipped and not cut up, long range forecast will change. Ramp up for capsule shipment is scheduled for 2011.

Forecast Assumptions and Comments

Waste Encapsulation and Storage Facility will produce LLW, MLLW, and hazardous wastes from ongoing operations.

Plans are to operate at min-safe conditions until 2011 at which time preparations will begin for capsule cut up or shipment to vitrification beginning in 2013.

LLW will be compacted by ATG and then sent to Fluor Hanford Waste Management Project. MLLW will be stabilized prior to shipment.

Other Forecast Data

- Hazardous Waste
  - A life cycle total of 10 m³ of hazardous waste has been reported by the Waste Encapsulation & Storage Facility.

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

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FY2001.0 Forecast of LLW_I

LLW_I Report Sections

- Highlights
- Annual Volumes
- Summary Table

Highlights of LLW_I Forecast

- A total of 89,740 m³ of LLW_I is forecast for shipment to Fluor Hanford Waste Management Project by onsite and offsite generators.

- The LLW_I forecast life cycle is 2001-2046.

- This forecast shows a 5% decrease (4,940 m³) from the FY2000.0 forecast of 94,680 m³. The change largely results from a decrease in the forecast of the Transition Activities (30,920 m³) functional group offsetting the forecast increase of 23,540 m³ for the River Protection Program.

- LLW_I is generated by all functional groups, although River Protection Program and Offsite generate the largest quantities.

Functional Group Distribution

Waste Class Data

The physical waste forms and container distributions for LLW_I are shown in the charts below. The
majority of the waste (83% or 74,030 m³) is expected to be debris. LLW-I will be shipped in a number of different containers including medium boxes (34%), MB-V boxes (25%), small boxes (19%), and 208 liter drums (15%).

**Physical Waste Form Distribution**

- **Soil Gravel**: 2% (1,990 m³)
- **Organic Solids**: 2% (2,000 m³)
- **Inorganic Solids**: 13% (12,920 m³)
- **Debris Wastes**: 63% (74,030 m³)
- **Other**: <1% (120 m³)

*Total: 85,740 m³*

**Container Distribution**

- **Other**: 6% (5,480 m³)
- **208 Liter Drums**: 19% (13,260 m³)
- **Medium Boxes**: 34% (30,620 m³)
- **Small Boxes**: 19% (17,320 m³)
- **MB-Vs**: 25% (22,860 m³)

*Total: 85,740 m³*

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

**Annual LLW-I Volumes**

**LLW-I Annual Minimum, Baseline, and Maximum Volumes**

**Summary Table (volumes in m³)**

**Forecast by Functional Group Area**

*(in descending order by group volume)*
Comparison to Previous Baseline(s)

The FY2001.0 forecast shows a 5% decrease (4,940 m³) from the FY2000.0 forecast of 94,680 m³. The change largely results from a decrease in the forecast of the Transition Activities (30,920 m³) functional group offsetting the forecast increase of 23,540 m³ for the River Protection Program.

The FY2000.0 forecast shows a 4% decrease (4,100 m³) from the FY99.0 forecast of 98,780 m³. The change results from decreases in the forecasts from the River Protection Program and the Landlord (EM-60) functional group.

Comparison to Previous Baseline(s) by Functional Group

(in descending order by functional group volume)

<table>
<thead>
<tr>
<th>Functional Groups</th>
<th>FY 2001.0 Forecast (m³)</th>
<th>FY 2000.0 Forecast (m³)</th>
<th>FY 1999.0 Forecast (m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>River Protection Program (RPP)</td>
<td>34,240</td>
<td>10,700</td>
<td>30,930</td>
</tr>
<tr>
<td>Offsite</td>
<td>27,320</td>
<td>30,140</td>
<td>23,250</td>
</tr>
<tr>
<td>Transition Activities</td>
<td>10,600</td>
<td>41,620</td>
<td>22,050</td>
</tr>
<tr>
<td>Infrastructure</td>
<td>7,140</td>
<td>1,900</td>
<td>8,730</td>
</tr>
<tr>
<td>Liquid Waste</td>
<td>4,700</td>
<td>4,770</td>
<td>5,100</td>
</tr>
<tr>
<td>Analytical Services</td>
<td>2,450</td>
<td>2,720</td>
<td>3,220</td>
</tr>
<tr>
<td>Solid Waste</td>
<td>2,360</td>
<td>3,000</td>
<td>2,930</td>
</tr>
<tr>
<td>Spent Nuclear Fuel</td>
<td>500</td>
<td>30</td>
<td>90</td>
</tr>
<tr>
<td>Pacific Northwest National Laboratory (PNNL)</td>
<td>240</td>
<td>1,190</td>
<td>1,440</td>
</tr>
<tr>
<td>Environmental Restoration</td>
<td>180</td>
<td>430</td>
<td>40</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>99,740</strong></td>
<td><strong>94,680</strong></td>
<td><strong>98,780</strong></td>
</tr>
</tbody>
</table>

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

The reasons for the volume changes are explained in each of the functional group and waste generator pages.

Definition
LLW_I contains radioactivity not classified as high-level waste, spent nuclear fuel, or transuranic waste (concentrations of transuranic radionuclides less than or equal to 100 nCi/g of the waste matrix). The waste also meets the radionuclide limits for category I waste defined in the Hanford Site Solid Waste Acceptance Criteria.

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


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FY2001.0 Forecast of LLW_III

LLW_III Report Sections

» Highlights
» Annual Volumes
» Summary Table

Highlights of LLW_III Forecast

- A total of 7,870 m³ of LLW_III is forecast for shipment to Fluor Hanford Waste Management Project by onsite and offsite generators.

- The LLW_III forecast life cycle is 2001-2046.

- This forecast shows a 34% increase (1,980 m³) from the FY2000.0 forecast of 5,890 m³. The change results primarily from increases in the forecast from the Transition Activities functional group.

- The primary functional group generators of LLW_III are Offsite and Analytical Services. Other generators of LLW_III are shown in the chart below.

Program Distribution

Waste Class Data

The physical waste forms and container distributions for LLW_III are shown in the charts below.
Almost all of the waste is expected to be debris and the majority will be shipped in 208 liter drums and MB-V boxes.

### Physical Waste Form Distribution

- **Soil Gravel**
  - Final Form < 1% (70 m³)
  - 1% (90 m³)

- **Organic Solids**
  - 2% (170 m³)

- **Debris Wastes**
  - 95% (7,500 m³)

**Total** = 7,878 m³

### Container Distribution

- **Medium Boxes**
  - 8% (480 m³)

- **Small Boxes**
  - 21% (1,830 m³)

- **MB-Vs**
  - 2% (2,080 m³)

**Total** = 7,878 m³

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

### Annual LLW_III Volumes

#### LLW_III Annual Minimum, Baseline, and Maximum Volumes

![Graph showing annual minimum, baseline, and maximum volumes](image)

#### Summary Table (volumes in m³)

### Forecast by Programmatic Area

<table>
<thead>
<tr>
<th>Low-Level Waste Category III Summary Volumes</th>
<th>FY 2000.0 Forecast (m³)</th>
<th>% of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Functional Groups</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Offsite</td>
<td>2,700</td>
<td>34%</td>
</tr>
<tr>
<td>Analytical Services</td>
<td>2,110</td>
<td>27%</td>
</tr>
<tr>
<td>Transition Activities</td>
<td>1,250</td>
<td>22%</td>
</tr>
<tr>
<td>River Protection Program (RPP)</td>
<td>1,220</td>
<td>15%</td>
</tr>
<tr>
<td>Pacific Northwest National Laboratory (PNLL)</td>
<td>90</td>
<td>1%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>7,878</td>
<td>100%</td>
</tr>
</tbody>
</table>

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

The FY2001.0 forecast shows a 34% increase (1,980 m³) from the FY2000.0 forecast of 5,890 m³. The increase results primarily from increases in the forecast from the Transition Activities (650 m³) and Offsite (480 m³) functional groups.

The FY2000.0 forecast shows a 85% decrease (34,060 m³) from the FY99.0 forecast of 39,950 m³. The decrease results primarily from decreases in the forecast from the River Protection Program. More specifically, the primary decrease results from the discontinued forecasts of the High Level Vitrification Program (16,537 m³) and Low Level Vitrification Program (19,172 m³).

Comparison to Previous Baseline(s) by Program Area

(in descending order by program volume)

<table>
<thead>
<tr>
<th>Low-Level Waste Category III</th>
<th>FY2001.0 Forecast (m³)</th>
<th>FY2000.0 Forecast (m³)</th>
<th>FY1999.0 Forecast (m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Summary Volumes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Offsite</td>
<td>2,700</td>
<td>2,220</td>
<td>2,540</td>
</tr>
<tr>
<td>Analytical Services</td>
<td>2,110</td>
<td>2,240</td>
<td>110</td>
</tr>
<tr>
<td>Transition Activities</td>
<td>1,750</td>
<td>1,100</td>
<td>1,210</td>
</tr>
<tr>
<td>River Protection Program (RPP)</td>
<td>1,220</td>
<td>--</td>
<td>35,710</td>
</tr>
<tr>
<td>Pacific Northwest National Laboratory (PNNL)</td>
<td>90</td>
<td>330</td>
<td>340</td>
</tr>
<tr>
<td>Spent Nuclear Fuel</td>
<td>--</td>
<td>9</td>
<td>40</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>7,870</strong></td>
<td><strong>5,890</strong></td>
<td><strong>39,950</strong></td>
</tr>
</tbody>
</table>

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

The reasons for the volume changes are explained in each of the functional group and waste generator pages.

Definition

LLW_III contains radioactivity not classified as high-level waste, spent nuclear fuel, or transuranic waste (concentrations of transuranic radionuclides less than or equal to 100nCi/g of the waste matrix). The waste also exceeds the radionuclide limits for category I waste and meets the category III limits defined in the Hanford Site Solid Waste Acceptance Criteria.
FY2001.0 Forecast of CH_MLLW

CH_MLLW Report Sections

» Highlights
» Annual Volumes
» Summary Table

» Comparison to Previous Baseline(s)
» CH_MLLW Definition

Highlights of CH_MLLW Forecast

- A total of 29,690 m³ of CH_MLLW is forecast for shipment to Fluor Hanford Waste Management Project by onsite and offsite generators.

- The CH_MLLW forecast life cycle is 2001-2046.

- This forecast shows a 89% increase from the FY2000.0 forecast of 15,700 m³ due mainly to a major forecast increase by the River Protection Program.

- The River Protection Program is the main source of CH_MLLW, forecasting 81% or 23,970 m³ of the total waste volume.

- The maximum forecast estimate of 45,658 m³ for CH_MLLW is dramatically higher than the baseline volume. For MLLW, Rocky Flats (within the Offsite functional group) contributes 4,688 m³ to this estimate but does not currently have permission to send MLLW to Hanford. Therefore, Rocky Flats has included this waste only in the maximum estimate.

Functional Group Distribution

- Transition Activities
  - 2x (596 m³)
  - Liquid Waste (7%) (2,210 m³)
  - Analytical Services (8%) (2,386 m³)
- Other
  - 2x (540 m³)
- River Protection Program (RPP)
  - 81% (23,970 m³)

Contact Handled Mixed Low-Level Waste
Total = 29,690 m³
Waste Class Data

The physical waste forms, hazardous characteristics, container distributions and LDR waste stream identification distribution for CH-MLLW are shown in the charts below. The majority of the waste (88% or 26,140 m³) is expected to be debris. The primary hazardous characteristics are expected to be organics and metals combined with organics. Most of the CH-MLLW will be shipped in 208 liter drums and medium boxes while most of the waste is classified as labpacks.

Physical Waste Form Distribution

<table>
<thead>
<tr>
<th>Waste Form</th>
<th>Volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>Soil Gravel</td>
<td>3% (770 m³)</td>
</tr>
<tr>
<td>Inorganic Solids</td>
<td>6% (1,880 m³)</td>
</tr>
<tr>
<td>Lab Packs</td>
<td>1% (370 m³)</td>
</tr>
<tr>
<td>Other</td>
<td>2% (510 m³)</td>
</tr>
<tr>
<td>Debris Waste</td>
<td>88% (26,140 m³)</td>
</tr>
</tbody>
</table>

Hazardous Characteristic Distribution

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metals</td>
<td>3% (900 m³)</td>
</tr>
<tr>
<td>Ignitables + Corrosives + Metals + Organics + WA State Regulated</td>
<td>7% (2,080 m³)</td>
</tr>
<tr>
<td>Metals + Organics</td>
<td>33% (9,770 m³)</td>
</tr>
<tr>
<td>Other</td>
<td>52% (15,320 m³)</td>
</tr>
</tbody>
</table>

Container Distribution

<table>
<thead>
<tr>
<th>Container Type</th>
<th>Volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>Small Boxes</td>
<td>26% (7,860 m³)</td>
</tr>
<tr>
<td>Extra Large Boxes</td>
<td>10% (2,980 m³)</td>
</tr>
<tr>
<td>208 Liter Drums</td>
<td>30% (9,020 m³)</td>
</tr>
<tr>
<td>Medium Boxes</td>
<td>28% (8,860 m³)</td>
</tr>
<tr>
<td>Other</td>
<td>4% (1,230 m³)</td>
</tr>
</tbody>
</table>

LDR Waste Stream Identification Distribution

<table>
<thead>
<tr>
<th>Waste Stream</th>
<th>Volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>MLLW_01</td>
<td>8% (2,520 m³)</td>
</tr>
<tr>
<td>MLLW_02</td>
<td>4% (1,120 m³)</td>
</tr>
<tr>
<td>MLLW_04 (Non-OC)</td>
<td>46% (13,520 m³)</td>
</tr>
<tr>
<td>MLLW_04 (OC)</td>
<td>3% (1,130 m³)</td>
</tr>
<tr>
<td>Other</td>
<td>4% (1,130 m³)</td>
</tr>
</tbody>
</table>

Contact Handled Mixed Low-Level Waste
Total = 29,690 m³

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

Annual CH-MLLW Volumes

The annual volumes for CH-MLLW are fairly constant except for the maximum volumes in 2002 through 2005 due to the possible CH-MLLW shipments from Rocky Flats within the Offsite functional group. This generator expects to generate a volume of MLLW (4,688 m³) but does not currently have permission to send MLLW to Hanford.

CH-MLLW Annual Minimum, Baseline, and Maximum Volumes
Summary Table (volumes in m³)

Forecast by Functional Group Area

(in descending order by functional group volume)

<table>
<thead>
<tr>
<th>Functional Groups</th>
<th>FY2001.0 Forecast (m³)</th>
<th>% of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>River Protection Program (RPP)</td>
<td>23,970</td>
<td>81%</td>
</tr>
<tr>
<td>Analytical Services</td>
<td>2,380</td>
<td>8%</td>
</tr>
<tr>
<td>Liquid Waste</td>
<td>2,210</td>
<td>7%</td>
</tr>
<tr>
<td>Transition Activities</td>
<td>590</td>
<td>2%</td>
</tr>
<tr>
<td>Solid Waste</td>
<td>230</td>
<td>&lt;1%</td>
</tr>
<tr>
<td>Pacific Northwest National Laboratory (PNNL)</td>
<td>170</td>
<td>&lt;1%</td>
</tr>
<tr>
<td>Environmental Restoration</td>
<td>50</td>
<td>&lt;1%</td>
</tr>
<tr>
<td>Offsite</td>
<td>40</td>
<td>&lt;1%</td>
</tr>
<tr>
<td>Spent Nuclear Fuel</td>
<td>40</td>
<td>&lt;1%</td>
</tr>
<tr>
<td>Infrastructure</td>
<td>10</td>
<td>&lt;1%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>28,680</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

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

Comparison to Previous Baseline(s)

The FY2001.0 forecast shows a 89% increase from the FY2000.0 forecast. This change was due mainly to a major forecast increase by the BNFL Tank Waste Pretreatment and Vitrification project which reports 14,980 m³ of CH_MLLW waste needing treatment which is a net forecast increase 11,850 m³ by this generator.

The FY2000.0 forecast of 15,700 shows a 35% decrease from the FY99.0 forecast. This change was due mainly to a major forecast decrease by the River Protection Program and in particular the High Level Vitrification Project (5,220 m³) and the Low Level Vitrification Project (5,120 m³). These generator's forecast are now being considered by the BNFL Tank Waste Pretreatment and Vitrification project which reports 1,380 m³ of CH_MLLW waste needing treatment. Thus, a net forecast decrease of 8,960 m³ is realized by these generators.
<table>
<thead>
<tr>
<th>Functional Groups</th>
<th>FY 2001 Forecast (m³)</th>
<th>FY 2000 Forecast (m³)</th>
<th>FY 1999 Forecast (m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>River Protection Program (RPP)</td>
<td>23,970</td>
<td>9,250</td>
<td>17,930</td>
</tr>
<tr>
<td>Analytical Services</td>
<td>2,380</td>
<td>2,750</td>
<td>1,550</td>
</tr>
<tr>
<td>Liquid Waste</td>
<td>2,210</td>
<td>2,590</td>
<td>2,420</td>
</tr>
<tr>
<td>Transition Activities</td>
<td>590</td>
<td>550</td>
<td>1,170</td>
</tr>
<tr>
<td>Solid Waste</td>
<td>230</td>
<td>130</td>
<td>330</td>
</tr>
<tr>
<td>Pacific Northwest National Laboratory</td>
<td>170</td>
<td>330</td>
<td>380</td>
</tr>
<tr>
<td>Environmental Restoration</td>
<td>50</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td>Offsite</td>
<td>40</td>
<td>30</td>
<td>150</td>
</tr>
<tr>
<td>Spent Nuclear Fuel</td>
<td>40</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>Infrastructure</td>
<td>10</td>
<td>10</td>
<td>120</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>25,690</strong></td>
<td><strong>15,700</strong></td>
<td><strong>24,110</strong></td>
</tr>
</tbody>
</table>

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

The reasons for the volume changes are explained in each of the functional group and waste generator pages.

**Definition**

Contact-handled mixed-low-level waste (CH_MLLW) has a dose rate equal to or less than 200 mrem/h and contains radioactivity not classified as spent nuclear fuel or transuranic waste (concentrations of transuranic radionuclides less than or equal to 100nCi/g of the waste matrix.) The waste is also defined as dangerous (hazardous) waste in the Washington Administrative Code (WAC) 173-303.
FY2001.0 Forecast of RH_MLLW

RH_MLLW Report Sections

» Highlights
» Annual Volumes
» Summary Table

Highlights of RH_MLLW Forecast

- A total of 30,990 m³ of RH_MLLW is forecast for shipment to Fluor Hanford Waste Management Project by onsite generators.
- The RH_MLLW forecast life cycle is 2001-2032.
- This forecast shows a small decrease (350 m³) from the FY2000.0 forecast of 30,640 m³ due primarily to changes in the River Protection Program (RPP).
- Nearly all RH_MLLW is forecast by the River Protection Program.

Functional Group Distribution

![Diagram showing distribution of RH_MLLW](image)

Waste Class Data

The physical waste forms, hazardous characteristics, container distributions, and LDR waste stream identification for RH_MLLW are shown in the charts below. The majority of RH_MLLW is expected to be shielding (53% or 16,280 m³) and debris (40% or 12,500 m³). The primary hazardous
characteristics are expected to be metals combined with organics. Most of the RH_MLLW will be shipped in long equipment containers (LECs) and is MLLW_01 (LDR compliant).

Physical Waste Form Distribution

- Soil Gravel: <1% (10 m³)
- Organic Solids: 7% (2,200 m³)
- Debris Wastes: 40% (12,500 m³)
- Other: <1% (1 m³)
- Shielding: 53% (16,290 m³)

Remote Handled Mixed Low-Level Waste
Total = 30,900 m³

Hazardous Characteristic Distribution

- Metals: 9% (880 m³)
- Organics: 7% (2,240 m³)
- Metals + Organics: 90% (27,880 m³)
- WA State Regulated: <1% (5 m³)

Remote Handled Mixed Low-Level Waste
Total = 30,900 m³

Container Distribution

- Medium Boxes: 3% (920 m³)
- 208 Liter Drums: 1% (440 m³)
- LECs: 91% (28,130 m³)

Remote Handled Mixed Low-Level Waste
Total = 30,900 m³

LDR Waste Stream Identification Distribution

- MLLV_07: 8% (2,500 m³)
- MLLV_01: 92% (28,400 m³)

Remote Handled Mixed Low-Level Waste
Total = 30,900 m³

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

Annual RH_MLLW Volumes

RH_MLLW Annual Minimum, Baseline, and Maximum Volumes

Summary Table (volumes in m³)
Forecast by Functional Group Area
Comparison to Previous Baseline(s)

The FY2001.0 forecast shows a relatively small increase (350 m³) from the FY2000.0 forecast of 30,640 m³ due to changes in the River Protection Program (RPP).

Comparison to Previous Baseline(s) by Functional Group Area

The reasons for the volume changes are explained in each of the functional group and waste generator pages.

Definition

Remote-handled mixed low-level waste (RH_MLLW) has a dose rate greater than 200 mrem/h and contains radioactivity not classified as high-level waste, spent nuclear fuel, or transuranic waste (concentrations of transuranic radionuclides less than or equal to 100nCi/g of the waste matrix). The waste is also defined as dangerous (hazardous) waste in the Washington Administrative Code (WAC) 173-303.
FY2001.0 Forecast of CH_TRU(M) Waste

CH_TRU(M) Waste Report Sections

» Highlights
» Annual Volumes
» Comparison to Previous Baseline(s)
» CH_TRU(M) Waste Definition
» Summary Table

Highlights of CH_TRU(M) Waste Forecast

- A total of 15,900 m³ of CH_TRU(M) waste is forecast for shipment to Fluor Hanford Waste Management Project by onsite and offsite generators.

- The CH_TRU(M) waste forecast life cycle is 2001-2041.

- This forecast shows a 90% increase from the FY2000.0 forecast of 8,380 m³ due mainly to the 2345-Z Plutonium Finishing Plant within the Transition Activities functional group.

- The Environmental Restoration and Transition Activities functional groups forecast 71%, and 17% of the CH_TRU(M) waste, respectively.

Functional Group Distribution

Waste Class Data

The physical waste forms, hazardous characteristics, and container distributions for CH_TRU(M) waste are shown in the charts below. The majority of the waste (90% or 14,320 m³) is expected to be debris.
The primary hazardous characteristics are expected to be organics and metals combined with organics. Most of the CH_TRU(M) will be shipped in standard waste boxes (SWBs) and 208 liter drums.

### Physical Waste Form Distribution

- **Inorganic Solids**: 3% (500 m³)
- **Organic Solids**: 2% (270 m³)
- **Shielding**: 5% (610 m³)
- **Debris Wastes**: 80% (14,320 m³)

### Hazardous Characteristic Distribution

- **Metals + PCBs**: 9% (180 m³)
- **Organic**: 34% (710 m³)
- **Other**: <1% (4 m³)
- **Metals + Organic**: 31% (640 m³)

**Contact Handled Transuranic & Transuranic Mixed Waste**

- **Total**: 15,808 m³

### Container Distribution

- **LECs**: 9% (1,440 m³)
- **MB-Ys**: <1% (30 m³)
- **208 Liter Drums**: 28% (4,480 m³)
- **SWBs**: 63% (9,350 m³)

**Contact Handled Transuranic & Transuranic Mixed Waste**

- **Total**: 15,808 m³

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

### Annual CH_TRU(M) Waste Volumes

**CH_TRU(M) Waste Annual Minimum, Baseline, and Maximum Volumes**

### Summary Table (volumes in m³)

**Forecast by Functional Group Area**
Comparison to Previous Baseline(s)

The FY2001.0 forecast shows a 90% increase in volumes of CH_TRU(M) waste to be shipped when compared to that of FY2000.0. Environmental Restoration accounts for 9,930 m$^3$ of this increase which is a 704% increase for this functional group. Transition Activities shows a forecast decrease 3,480 m$^3$ (56%) and River Protection Program shows an increase of 990 m$^3$ (202%).

In contrast the FY2000.0 and FY99.0 forecasts showed a 15% increase from the previous years forecast due mainly to the 2345-Z Plutonium Finishing Plant within the Transition Activities functional group.

Comparison to Previous Baseline(s) by Functional Group

The reasons for the volume changes are explained in each of the functional group and waste generator pages.

Definition

Contact-handled transuranic and transuranic mixed (CH_TRU(M)) waste has a dose rate equal to or less than 200 mrem/h at contact with the waste container. At the time of assay, this waste contains more than 100nCi/g of alpha-emitting isotopes with atomic numbers...
greater than 92 and half-lives greater than 20 years. TRU(M) waste is TRU waste that is also dangerous (hazardous) waste as defined in the Washington Administrative Code (WAC) 173-303.

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

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FY2001.0 Forecast of RH_TRU(M) Waste

RH_TRU(M) Waste Report Sections

» Highlights
» Annual Volumes
» Summary Table
» Comparison to Previous Baseline(s)
» RH_TRU(M) Waste Definition

Highlights of RH_TRU(M) Waste Forecast

- A total of 890 m³ of RH_TRU(M) waste is forecast for shipment to Fluor Hanford Waste Management Project by onsite generators.

- Offsite generators forecast total shipments of 40 m³ of RH_TRU(M) waste to Fluor Hanford Waste Management Project.

- The RH_TRU(M) waste forecast life cycle is 2001-2042.

- This forecast shows a 40% decrease in forecast volumes for this waste type from the FY2000.0 forecast. The Spent Nuclear Fuel forecast decreased by 540 m³ while River Protection Program (RPP), Transitions Activities and Pacific Northwest National Laboratory decreased by 100 m³, 90 m³, and 40 m³, respectively.

- The River Protection Program and the Spent Nuclear Fuel functional group forecast the majority of the RH_TRU(M) waste.

Functional Group Distribution

Transition Activities
10% (90 m³)

Environmental Restoration
11% (100 m³)

Spent Nuclear Fuel
13% (120 m³)

River Protection Program (RPP)
61% (570 m³)

Remote Handled Transuranic & Transuranic Mixed Waste
Total = 920 m³
Waste Class Data

The physical waste forms, hazardous characteristics, and container distributions for RH_TRU(M) waste are shown in the charts below. The majority of the waste (59% or 550 m³) is expected to be debris waste and 29% (270 m³) is expected to be shielding. The primary hazardous characteristics are expected to be combinations of metals and organic. RH_TRU(M) waste will primarily be shipped in long equipment containers (LECs) and 208 liter drums.

<table>
<thead>
<tr>
<th>Physical Waste Form Distribution</th>
<th>Hazardous Characteristic Distribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organic Solids: 4% (40 m³)</td>
<td>Organic: 92% (540 m³)</td>
</tr>
<tr>
<td>Inorganic Solids: 8% (50 m³)</td>
<td>VA State Regulated: 1% (1 m³)</td>
</tr>
<tr>
<td>Shielding: 29% (270 m³)</td>
<td>Metals: 1% (0.36 m³)</td>
</tr>
<tr>
<td>Debris Wastes: 59% (550 m³)</td>
<td>Metals + Organic: 1% (0.34 m³)</td>
</tr>
</tbody>
</table>

Remote Handled Transuranic & Transuranic Mixed Waste
Total = 920 m³

<table>
<thead>
<tr>
<th>Container Distribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>SVBs: 12% (110 m³)</td>
</tr>
<tr>
<td>Small Boxes: 19% (120 m³)</td>
</tr>
<tr>
<td>208 Liter Drums: 19% (180 m³)</td>
</tr>
<tr>
<td>LECs: 53% (490 m³)</td>
</tr>
</tbody>
</table>

Remote Handled Transuranic & Transuranic Mixed Waste
Total = 920 m³

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

Annual RH_TRU(M) Waste Volumes

RH_TRU(M) Waste Annual Minimum, Baseline, and Maximum Volumes
Summary Table (volumes in m³)

Forecast by Functional Group Area

(in descending order by functional group volume)

<table>
<thead>
<tr>
<th>Remote Handled Transuranic &amp; Transuranic Mixed Waste Summary Volumes</th>
<th>FY 2001.0 Forecast (m³)</th>
<th>% of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Functional Groups</td>
<td></td>
<td></td>
</tr>
<tr>
<td>River Protection Program (RPP)</td>
<td>570</td>
<td>61%</td>
</tr>
<tr>
<td>Spent Nuclear Fuel</td>
<td>120</td>
<td>13%</td>
</tr>
<tr>
<td>Environmental Restoration</td>
<td>100</td>
<td>11%</td>
</tr>
<tr>
<td>Transition Activities</td>
<td>90</td>
<td>10%</td>
</tr>
<tr>
<td>Offsite</td>
<td>40</td>
<td>4%</td>
</tr>
<tr>
<td>Pacific Northwest National Laboratory (PNNL)</td>
<td>10</td>
<td>2%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>520</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

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

Comparison to Previous Baseline(s)

The FY2000.0 forecast shows a 40% decrease in forecast volumes for this waste type from the FY2001.0 forecast. The Spent Nuclear Fuel forecast decreased by 540 m³ while River Protection Program (RPP), Transitions Activities and Pacific Northwest National Laboratory decreased by 100 m³, 90 m³, and 40 m³, respectively.

The FY2000.0 forecast shows 7% decrease in forecast volumes for RH_TRU(M) waste from the FY99.0 forecast. The River Protection Program (RPP) forecasted 880 m³ less while the Spent Nuclear Fuel functional group and the Transition Activities functional group increased by 620 m³ and 150 m³, respectively.

Comparison to Previous Baseline(s) by Functional Group Area

(in descending order by functional group volume)
Remote Handled Transuranic and Transuranic Mixed Waste

Summary Volumes

<table>
<thead>
<tr>
<th>Functional Groups</th>
<th>FY 2001.0 Forecast (m³)</th>
<th>FY 2000.0 Forecast (m³)</th>
<th>FY 1999.0 Forecast (m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>River Protection Program (RPP)</td>
<td>570</td>
<td>670</td>
<td>1,550</td>
</tr>
<tr>
<td>Spent Nuclear Fuel</td>
<td>120</td>
<td>860</td>
<td>40</td>
</tr>
<tr>
<td>Environmental Restoration</td>
<td>100</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Transition Activities</td>
<td>80</td>
<td>180</td>
<td>30</td>
</tr>
<tr>
<td>Offsite</td>
<td>40</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Pacific Northwest National Laboratory (PNNL)</td>
<td>10</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td>Solid Waste</td>
<td>--</td>
<td>--</td>
<td>0.51</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>920</strong></td>
<td><strong>1,580</strong></td>
<td><strong>1,690</strong></td>
</tr>
</tbody>
</table>

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

The reasons for the volume changes are explained in each of the functional group and waste generator pages.

Definition

Remote-handled transuranic and transuranic mixed (RH_TRU(M)) waste has a dose rate greater than 200 mrem/h at contact with the waste container. At the time of assay, this waste contains more than 100nCi/g of alpha-emitting isotopes with atomic numbers greater than 92 half-lives greater than 20 years. TRU(M) waste is TRU waste that is also dangerous (hazardous) waste as defined in the Washington Administrative Code (WAC) 173-303.
FY2001.0 Forecast of GTC III Waste

GTC III Report Sections

» Highlights
» Comparison to Previous Baseline(s)
» Summary Table
» GTC III Definitions

Highlights of GTC III Waste Forecast

- A total of 6 m³ of GTC III waste is forecast for shipment to Fluor Hanford Waste Management Project by onsite and offsite generators.

- GTC III waste is forecasted from 2017 to 2021.

- The same volume of GTC III waste was forecast for FY2000.0.

- The Transition Activities program is the only functional group forecasting GTC III waste.

Functional Group Distribution

Waste Class Data

The physical waste forms, hazardous characteristics, and container distributions for GTC III are shown in the charts below. All of the waste is expected to be debris and will be shipped in 208 liter drums. None of the waste is expected to be mixed; therefore, hazardous characteristics are not applicable.
SWIFT Report – FY2000.0 Forecast of GTC III Waste

Physical Waste Form Distribution

Debris Wastes
100% (6 m³)

Greater-than-Category III Waste
Total = 6 m³

Hazardous Characteristic Distribution

None of the GTC III waste is forecast as mixed waste; therefore hazardous characteristics are not applicable.

Container Distribution

208 Liter Drums
100% (6 m³)

Greater-than-Category III Waste
Total = 6 m³

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

Annual GTC III Waste Volumes

GTC III waste is only forecast from 2017 to 2021 corresponding to the terminal cleanout and stabilization of the Waste Encapsulation and Storage Facility.

GTC III Waste Annual Minimum, Baseline, and Maximum Volumes

Summary Table (volumes in m³)

Forecast by Functional Group Area
SWIFT Report – FY2000.0 Forecast of GTC III Waste

(in descending order by functional group volume)

<table>
<thead>
<tr>
<th>Functional Groups</th>
<th>FY 2001.0 Forecast (m³)</th>
<th>% of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transition Activities</td>
<td>6</td>
<td>100%</td>
</tr>
<tr>
<td>Total</td>
<td>6</td>
<td>100%</td>
</tr>
</tbody>
</table>

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

Comparison to Previous Baseline(s)

No changes in the forecast volumes occurred for GTC III between the FY2001.0 and FY2000.0 forecasts.

The forecast of GTC III waste was first projected in FY2000.0, that is, none was forecast in the FY99.0 forecasts. The GTC III waste in the FY2000.0 forecast results from the inclusion of terminal cleanout and stabilization wastes by the Waste Encapsulation and Storage Facility.

Comparison to Previous Baseline(s) by Functional Group Area

(in descending order by functional group volume)

<table>
<thead>
<tr>
<th>Functional Groups</th>
<th>FY 2001.0 Forecast (m³)</th>
<th>FY 2000.0 Forecast (m³)</th>
<th>FY 1999.0 Forecast (m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transition Activities</td>
<td>6</td>
<td>6</td>
<td>–</td>
</tr>
<tr>
<td>Total</td>
<td>6</td>
<td>6</td>
<td>–</td>
</tr>
</tbody>
</table>

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

The reasons for the volume changes are explained in each of the functional group and waste generator pages.

Definition

LLW greater-than-class III (GTCIII) meets the definition for LLW and is determined to be GTCIII when the sum of the fractions of the radionuclides' Class III concentration limits are greater than one, as defined in the Hanford Site Solid Waste Acceptance Criteria, WHC-EP-0063 Rev. 5, June 1998.

MLLW greater-than-class III (GTCIII) has radiation levels as defined for LLW greater-than-class-III, and is also defined as dangerous (hazardous) waste in WAC 173-303.
FY2001.0 Forecast of Hazardous Waste

Hazardous Waste Report Sections

» Highlights
» Annual Volumes
» Comparison to Previous Baseline(s)
» Hazardous Waste Definition
» Summary Table

Highlights of Hazardous Waste Forecast

- A total of 1,760 m³ of Hazardous waste is forecast to be generated at the Hanford site.
- The Hazardous waste forecast life cycle is 2001-2046.
- This forecast shows a 17% decrease from the FY2000.0 forecast of 2,110 m³. The decrease can largely be accounted for by the decrease of volume forecast by Transition Activities (570 m³).
- The Analytical Services functional group and River Protection Program forecast the majority of the Hazardous waste.

Program Distribution

Liquid Waste
10% (170 m³)

Transition Activities
13% (220 m³)

River Protection Program (RPP)
22% (440 m³)

Other
9% (160 m³)

Analytical Services
51% (880 m³)

Hazardous Waste
Total = 1,760 m³

Waste Class Data

The physical waste forms, hazardous characteristics, and container distributions for Hazardous waste are shown in the charts below. The majority of the waste is expected to be debris (47%) and lab packs (30%). The primary hazardous characteristics are expected to be organics, metals, ignitables, and
corrosive combined with state regulated. Hazardous waste will be shipped primarily in 208 liter drums.

**Physical Waste Form Distribution**

- Inorganic Solids: 7% (120 m³)
- Organic Solids: 11% (190 m³)
- Debris: 47% (820 m³)
- Lab Packs: 30% (520 m³)

**Hazardous Waste Total** = 1,780 m³

**Hazardous Characteristic Distribution**

- Other: 5% (100 m³)
- Corrosive - WA State Regulated: 7% (120 m³)
- Ignitable: 8% (130 m³)
- Organic: 47% (820 m³)
- Metals: 8% (150 m³)

**Hazardous Waste Total** = 1,780 m³

**Container Distribution**

- Other Drums: 3% (50 m³)
- Other: <1% (1 m³)
- 322 Liter Drums: 8% (140 m³)
- 208 Liter Drums: 85% (1,500 m³)

**Hazardous Waste Total** = 1,780 m³

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

**Annual Hazardous Volumes**

**Hazardous Waste Annual Minimum, Baseline, and Maximum Volumes**

**Summary Table (volumes in m³)**

Forecast by Functional Group Area
Comparison to Previous Baseline(s)

The FY2001.0 forecast shows a 17% decrease from the FY2000.0 forecast of 2,110 m³. The decrease can largely be accounted for by the decrease of volume forecast by Transition Activities (570 m³).

The FY2000.0 forecast shows a 41% decrease from the FY99.0 forecast of 3,570 m³. The decrease can largely be accounted for by the discontinued forecasting of the High Level Vitrification Project (872 m³) and Low Level Vitrification Project (1,280 m³) within the River Protection Program.

Comparison to Previous Baseline(s) by Functional Group Area

(in descending order by functional group volume)

<table>
<thead>
<tr>
<th>Functional Groups</th>
<th>FY 2001.0 (m³)</th>
<th>FY 2000.0 (m³)</th>
<th>FY 1999.0 (m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Analytical Services</td>
<td>900</td>
<td>910</td>
<td>150</td>
</tr>
<tr>
<td>River Protection Program (RPP)</td>
<td>440</td>
<td>230</td>
<td>2,370</td>
</tr>
<tr>
<td>Transition Activities</td>
<td>220</td>
<td>790</td>
<td>750</td>
</tr>
<tr>
<td>Liquid Waste</td>
<td>170</td>
<td>140</td>
<td>140</td>
</tr>
<tr>
<td>Solid Waste</td>
<td>30</td>
<td>20</td>
<td>10</td>
</tr>
<tr>
<td>Spent Nuclear Fuel</td>
<td>-</td>
<td>20</td>
<td>30</td>
</tr>
<tr>
<td>Environmental Restoration</td>
<td>-</td>
<td>-</td>
<td>110</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>5,780</strong></td>
<td><strong>2,710</strong></td>
<td><strong>3,570</strong></td>
</tr>
</tbody>
</table>

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

Definition

Hazardous waste is dangerous (hazardous) waste as defined in the Washington Administrative Code (WAC) 173-303.
Navigation Options in SWIFT FY2001

This website is built with two styles of navigation. The first is the "tree" style. The second we'll call the "Table of Contents" style. The "tree" style actually displays two frames each of which displays a separate web page. The left frame is the "tree" navigation tool that behaves much like the left frame of the Window 95 Explorer window. You simply expand and contract the tree (by mouse clicking folder icons) to display or hide a hierarchy of links to document pages. Actual pages that you can link to are identified by a document icon or an associated arrow icon. Selecting either of these will display a separate web page of information in the right frame. If you want to print, save, or bookmark the document displayed in the right frame then it is important to first mouse click anywhere on the right frame before printing, saving, or bookmarking. An alternative to this style of navigation is available by going to the bottom of any page displayed in the right frame and selecting the "Table of Contents" button. This will display a single web page with the fully expanded list of links to all report pages. All links are to a single page per Netscape window so you can ignore dealing with frames.

You know you are in the "tree" style of navigation if you see a vertical divider bar on your page and to the left of it you see a box at the top with the text "SWIFT FY2001 Report Contents". If you want to see more/less of the "tree" you can increase/decrease the width of the "tree" by centering your mouse over the divider bar and dragging it either direction.

Bookmarking

If working in the "tree" style of navigating you find yourself someplace where you think you'll want to return, again click in the right frame, then click on Bookmarks in the Menu bar. Click on Add Bookmark. In most browsers you can also right mouse click in the frame you want bookmarked then click on Add Bookmark. Now to return to that site later, just go to Bookmarks, and click on the bookmark you want. If you want to get back to the SWIFT FY2001 homepage and navigate using the "tree" style then go to the bottom of any page and select "SWIFT FY2001 home page". Or alternatively, select the "Table of Contents" link button to navigate without concern for frames and "tree" style navigation.
The authors gratefully acknowledge the assistance of the many individuals within the generating community who provided forecast data and other information to support this report. Their dedication to quality forecasts and their willingness to support the forecast process is much appreciated.

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


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SWIFT Report -- Special Data Request Form

Please use this form to request special-purpose solid waste forecast data reports.

Part A. Requestor Data

Please provide all requested information so we may properly process your request.

<table>
<thead>
<tr>
<th>Your name:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Your E-mail address:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Your Company/Facility:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Your phone number:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

Date needed: [ ]

Purpose:
Optional - use this space to provide any additional information which might help us ensure that you are sent the correct data

Part B. Data Boundaries

Please define the data boundaries for the data you are seeking
# SWIFT Report - Data Request Form

<table>
<thead>
<tr>
<th>Forecast Period: Specify the years you are requesting data for.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specify individual fiscal years (e.g. FY2002, FY2003) or the entire forecast range (FY2001-FY2046).</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Handling Type: Choose all that apply.</th>
</tr>
</thead>
<tbody>
<tr>
<td>□ Remote-handled (RH)</td>
</tr>
<tr>
<td>□ Contact-handled (CH)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Waste Class: Choose all that apply.</th>
</tr>
</thead>
<tbody>
<tr>
<td>□ Transuranic waste</td>
</tr>
<tr>
<td>□ Transuranic mixed waste</td>
</tr>
<tr>
<td>□ Low-level waste</td>
</tr>
<tr>
<td>□ Mixed low-level waste</td>
</tr>
<tr>
<td>□ Hazardous waste</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Waste Category: Choose all that apply.</th>
</tr>
</thead>
<tbody>
<tr>
<td>□ Category I</td>
</tr>
<tr>
<td>□ Category III</td>
</tr>
<tr>
<td>□ Greater than Category III</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Data Needed: Choose all that apply.</th>
</tr>
</thead>
<tbody>
<tr>
<td>□ Summary</td>
</tr>
<tr>
<td>□ Detailed data (includes narrative)</td>
</tr>
<tr>
<td>□ Both</td>
</tr>
</tbody>
</table>

## Part C. Waste Sources (Functional Groups/Generators)

*Please specify the waste sources to be included, by functional group. Note that the default is "all functional groups/all generators."

<table>
<thead>
<tr>
<th>All Functional Groups/All Generators</th>
</tr>
</thead>
<tbody>
<tr>
<td>Analytical Services</td>
</tr>
<tr>
<td>Analytical Services</td>
</tr>
<tr>
<td>Analytical Services</td>
</tr>
<tr>
<td>Environmental Restoration-Surplus Facilities</td>
</tr>
<tr>
<td>Transition Activities</td>
</tr>
<tr>
<td>Transition Activities</td>
</tr>
<tr>
<td>Transition Activities</td>
</tr>
<tr>
<td>Transition Activities</td>
</tr>
<tr>
<td>Transition Activities</td>
</tr>
</tbody>
</table>

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


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2 of 2
SWIFT Report — Feedback form

The purpose of the SWIFT Report Web Site is to provide staff and contractors with up-to-date and easy-to-use information on the LLW, MLLW, and Transuranic(Mixed) solid waste expected to be managed by Fluor Hanford from onsite and offsite generators.

We would like to know how well the site currently meets your needs and what we could do to improve it to better meet your needs.

User Data

<table>
<thead>
<tr>
<th>Your name:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Your e-mail address:</td>
</tr>
<tr>
<td>Your company/facility:</td>
</tr>
<tr>
<td>Your phone number:</td>
</tr>
</tbody>
</table>

- How detailed are your SWIFT Report data requests?
  □ (1=not detailed · 7=extremely detailed)

- In the past, how much time have you spent using these data?
  □ (1=A great deal · 7=Very little)

- How has the availability of this web site changed the amount of time you need to spend accessing forecast information for your job?
  □ (1=Substantially decreased time · 7=Substantially increased time · 8=No change)

- In general, how well does this web site meet your needs for forecast information?
  □ (1=Meets all needs · 7=Does not meet all needs)

- May we contact you to discuss your comments?
  □ Yes □ No

Knowing How to Use the SWIFT Report Web Site
How well does the information explaining how to use this web site meet your needs?
☐ (1=Meets all needs · 7=Does not meet all needs · 8=NA)

Comments? ____________________________________________

Finding Your Way on the SWIFT Report Web Site

How easy is it to determine what information is available in the report?
☐ (1=Very easy · 7=Very difficult)

How easy is it for you find the information you need?
☐ (1=Very easy · 7=Very difficult)

How do you get to the page you want to view?

(Check all that apply)
☐ The links on the Home Page
☐ The links at the "treeview" frame
☐ The links on the Table of Contents
☐ The links on the Site Map

Comments? ____________________________________________

Understanding the Material in the SWIFT Report Web Site

Do any of the following present a problem for you in reading and understanding the charts/tables?

(Check all that apply)
☐ Chart headings
☐ Chart labels and indices
☐ Type of chart (pie chart versus bar chart)
☐ Colors and coding of chart information

Comments? ____________________________________________

Using the Information Provided in the SWIFT Report Web Site

General Information

How would you rate the timeliness of the forecast data for meeting your job needs?
☐ (1=Meets all needs · 7=Does not meet all needs)

In general, how well do the following sections in the forecast pages meet your needs?
(1=Meets all needs · 7=Does not meet all needs)
Thanks for your feedback!

Thank you for taking the time to complete our user survey! Your completed evaluation has been sent to the web site development team for their review. Your comments will be used to assist in the continual improvement of this site.

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


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Glossary

» Abbreviations
» Waste Class Naming Conventions
» LDR Waste Stream IDs

Abbreviations

A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z |

- B -
BEMR Baseline Environmental Management Report
BHI Bechtel Hanford, Inc.
BNFL British Nuclear Fuels Limited, Inc.
BWHC Babcock & Wilcox Hanford Company

- C -
CERCLA Comprehensive Environmental Response, Compensation, and Liability Act
CDR Conceptual Design Report
CH Contact-Handled
CHG CH2M HILL Hanford Group, Inc.
CTT Commercial Thermal Treatment
CWC Central Waste Complex

- D -
D&D Decontamination and Decommissioning
DOE U.S. Department of Energy
DOE-ORP DOE Office of River Protection
DOE-RL DOE Richland Office
DST Double-Shell Tank

- E -
EM DOE Office of Environmental Management
EM-40 Environmental Restoration Program
ER  Environmental Restoration (also refers to the Environmental Restoration program)
ERD  Environmental Restoration Contractor
ERDF  Environmental Restoration Disposal Facility
ETEC  Energy Technology Engineering Center
ETF  Effluent Treatment Facility

-F-
FFTF  Fast Flux Test Facility
FH  Fluor Hanford
FMEF  Fuels Material and Examination Facility
FY  Fiscal Year

-G-
GTCIII  Greater than Category III

-H-
HAZ  Hazardous Waste
HC  Hazardous Characteristic
HELD  Waste forecasted to be shipped to Hanford Waste Management for which a shipping schedule cannot be estimated
HEPA  High Efficiency Particulate Air (filter)
Hg  Mercury
HLVP  High-Level Vitrification Project
HLW  High-Level Waste

-I-
IX  Ion Exchange

-L-
LBL  Lawrence Berkeley Laboratory
LEC  Long-Length Equipment Container
LEHR  Laboratory for Energy-Related Health Research
LERF  Liquid Effluent Retention Facility
LLBG  Low-Level Burial Ground
LLE  Long-Length Contaminated Equipment
LLVP  Low-Level Vitrification Project
LLW  Low-Level Waste
LWPF  Liquid Waste Processing Facilities

-M-
M&I  Management and Integration
MB-  Metal Box
MLLW  Mixed Low-Level Waste
mrem  Millirem
MUSTs  Miscellaneous Underground Storage Tanks
MYPP  Multi-Year Program Plan
MYWP  Multi-Year Work Plan
- **N** -
nCi         Nanocurie
NA          Not Available

- **P** -
PCB         Polychlorinated Biphenyl
PFP         Plutonium Finishing Plant
PHMC        Project Hanford Management Contract
PNNL        Pacific Northwest National Laboratory
PPE         Personal Protective Equipment
PRTR        Plutonium Recycle Test Reactor
PUREX       Plutonium Uranium Extraction Facility
PWF         Physical Waste Form

- **R** -
R&D         Research and Development
RCRA        Resource Conservation and Recovery Act
RH          Remote-Handled
RPP         River Protection Program

- **S** -
SNF         Spent Nuclear Fuel (also refers to the Spent Nuclear Fuel program)
SST         Single-Shell Tank
STP         Site Treatment Plan; Stabilization Treatment Program
SWB         Standard Waste Box
SWF         Solid Waste Forecast
SWIFT       Solid Waste Integrated Forecast Technical Report
SWITS       Solid Waste Inventory Tracking System

- **T** -
TC&S        Terminal Cleanout and Stabilization
TEDF        Treated Effluent Disposal Facility
TFTR        Tokamak Fusion Test Reactor
TRU(M)      Transuranic Waste (both non-mixed and mixed)
TRUSAFAF    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
**Waste Class Naming Conventions**

For this report, solid waste has been divided into seven classes excluding HAZ. These classes are briefly described in the following table. These definitions are applicable specifically to forecast waste and are based on WHC-EP-0063 rev. 5.

### Table 1 Waste Category Definitions

<table>
<thead>
<tr>
<th></th>
<th>LLW_I</th>
<th>LLW_III</th>
<th>CH_MLLW</th>
<th>RH_MLLW</th>
<th>CH_TRU(M)</th>
<th>RH_TRU(M)</th>
<th>GTCIII</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dose rate</td>
<td>Varies</td>
<td>Varies</td>
<td>&lt;= 200 mrem/h</td>
<td>&gt; 200 mrem/h</td>
<td>&lt;= 200 mrem/h</td>
<td>&gt; 200 mrem/h</td>
<td>Varies</td>
</tr>
<tr>
<td>Dangerous per WAC 173-303</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes (TRU(M))</td>
<td>Yes (TRU(M))</td>
<td>No (MLLW)</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>

(< ... less than > ... greater than = ... equal)

**Low-level waste category I (LLW_I)**

This waste may be comprised of either contact- or remote-handled waste considered low-activity waste with very low concentrations of long-lived radionuclides and is not considered dangerous (hazardous) waste as defined in WAC 173-303.

**Low-level waste category III (LLW_III)**

This waste may be comprised of either contact- or remote-handled waste considered moderate- to high-activity waste with low to moderate concentrations of long-lived radionuclides, in stabilized form that minimizes subsistence for a period of 1000 years and is not considered dangerous (hazardous) waste as defined in WAC 173-303.

**Contact-handled mixed low-level waste (CH_MLLW)**

This waste has a dose rate equal to or less than 200 mrem/h and contains radioactivity not classified as spent nuclear fuel or transuranic waste (concentrations of transuranic radionuclides less than or equal to 100 nCi/g of the waste matrix). The waste is also defined as dangerous (hazardous) waste in the Washington Administrative Code (WAC) 173-303.
Remote-handled mixed low-level waste (RH_MLLW)

This waste has a dose rate greater than 200 mrem/h and meets the definition for LLW. This waste is also defined as dangerous (hazardous) waste in WAC 173-303.

Contact-handled transuranic or transuranic mixed waste (CH_TRU(M))

This radioactive waste has a dose rate equal to or less than 200 mrem/h at contact with the waste container. At the time of assay, this waste contains more than 100 nCi/g of alpha-emitting isotopes with atomic numbers greater than 92 and half-lives greater than 20 years. TRUM waste is TRU waste that is also dangerous (hazardous) waste as defined in WAC 173-303.

Remote-handled transuranic or transuranic mixed waste (RH_TRU(M))

This waste has a dose rate greater than 200 mrem/h at contact with the waste container. At the time of assay, this waste contains more than 100 nCi/g of alpha-emitting isotopes with atomic numbers greater than 92 and half-lives greater than 20 years. TRUM waste is TRU waste that is also dangerous (hazardous) waste as defined in WAC 173-303.

Greater-than-Class III (GTCIII)

This waste meets the definition for LLW and may also be defined as dangerous (hazardous) waste in WAC 173-303. Greater-than-Class III (GTCIII) designation is determined when the sum of the fractions of the radionuclides' Class III concentration limits are greater than one, as defined in the Hanford Site Solid Waste Acceptance Criteria WHC-EP-0063 Rev. 5.

Hazardous waste (HAZ)

Waste defined under the Washington Administrative Code 173-303.

Contact-handled (CH) and remote-handled (RH) waste are considered distinct categories, based on the inherent characteristics of the waste. However, in a few instances, generators have reported RH waste that is shielded to CH levels as CH waste.

In addition to the above waste categories, another key definition concerns Held waste. Held waste is waste forecasted to be shipped to Hanford Waste Management for which a shipping schedule cannot be estimated.

Characteristics Definitions

Physical Waste Forms (PWFs)

The primary physical waste forms of most waste volumes can be delineated in the following categories, based on the DOE Waste Treatability Group Guidance Document (DOE/LLW-217 Revision 0):

Debris Wastes: Wastes that meet the U.S. Environmental Protection Agency (EPA) criteria for "debris." Debris materials are divided into four groups as either metal (inorganic), inorganic non-metal, combustible (organic), or mixtures of materials (heterogeneous). If the waste is dominated by one type of material it should be classified as that material; otherwise it is classified as heterogeneous.

Inorganic Solids: Material that has an inorganic matrix or content and does not meet the
criteria for debris.

**Organic Solids**: Material that has an organic matrix or content (i.e. material that includes chemical compounds based on carbon, hydrogen, and oxygen), and does not meet the criteria for debris.

**Shielding**: Three types of shielding include steel, lead, and concrete. It is assumed that, if shielding is required, the shielding material is handled as solid waste. A fourth type of shielding is also included: void space, which is space within a container that is not occupied by waste.

**Soils/Gravel**: Soil or gravel contaminated with hazardous and/or radioactive materials.

**Labpacks**: Various quantities of compatible waste within the same Department of Transportation hazard class, packaged in vessels such as cans or bottles.

**Special Wastes**: waste containing one or more of the following: elemental mercury, elemental lead, beryllium waste, batteries, reactive metals, explosives/propellants, and aerosols/compressed gases.

**Final Form**: waste that has been treated and/or stabilized for direct disposal.

**Hazardous Characteristics (HCs)**

Hazardous characteristics as defined by the Resource Conservation and Recovery Act (RCRA) are an important characteristic of the waste that will be generated. These hazardous characteristics can be grouped into eight main categories that may be individual or mixed. Several hazardous characteristics might be present in a particular waste form and require definition by waste volume percentages as mixed hazardous characteristics (e.g., if a 208 liter drum contains both ignitables and corrosives then the package is 100% ignitables and corrosives). The relevant hazardous characteristics groups are:

**Ignitables (RCRA code: D001)**: Waste that can cause a fire through friction, absorption of moisture, or spontaneous chemical action.

**Corrosives (RCRA code: D002)**: Any liquid or solid that causes destruction of human skin tissue or that has a severe corrosion rate on steel.

**Reactive (RCRA code: D003)**: Typically sodium metal or alkali metal alloys, but can also be particulate fines of aluminum, uranium, zirconium, or other pyrophoric materials, and may be mixed with stabilizing materials.

**Toxic Metals (RCRA codes: D004-D011)**: Toxic metals that exceed RCRA concentrations.

**Mercury (RCRA codes: D009, P065, P092, and U151)**: Mercury contamination in excess of 260 parts per million.

**Toxic Organics (RCRA codes: D018-D043)**: Toxic organic compounds.

**WA State regulated (Washington State codes: WT, WP, WSC2)**: Waste that is defined as hazardous only under Washington State regulations.

**PCBs**: Polychlorinated biphenyl-contaminated materials (designated in 40 CFR 761 or WAC 173-303-071) where PCB concentration is further divided into two categories: less than 50 parts per million (ppm), and greater than or equal to 50 ppm.
Container Group Definitions

For the 2001 forecast, 11 different container types have been reported for solid waste shipment to Waste Management during its life cycle. Note that these differ slightly from previous years' forecasts. The following is a brief description of these containers:

**Drums**

114 liter drum: This is a small standard drum equivalent to 30 U.S. gallons with external volumes ranging from 0.137 m³ to 0.145 m³ (4.8-5.1 ft³).

208 liter drum: This is a standard-size drum equal to 55 U.S. gallons with external volumes ranging from 0.242 m³ to 0.257 m³ (8.5-9.1 ft³).

322 liter drum: Often used as an overpack for 208 liter drums this is a large standard-size drum equivalent to 85 U.S. gallons. It has an external volume of 0.382 m³ (13.5 ft³).

Other drums: This category represents various container sizes used less often than the standard drums. Examples are 57 liter drums, 76 liter drums, and 416 liter drums.

**Boxes**

Extra-large box: This shipping container is defined by an external volume greater than or equal to 28.3 m³ (1,000 ft³). Boxes of this size are too big to be accepted under the Site Treatment Plan (STP) or Commercial Thermal Treatment (CTT) contracts.

Large box: The size of this container is defined as greater or equal to 15 m³ and less than 28.3 m³ in external volume (530-1,000 ft³). This size is too large to be accepted under the Site Treatment Plan (STP) or Commercial Thermal Treatment (CTT) contracts.

MB-V: Made of either metal or plywood, this box is also referred to as a 4x4x8. Its external dimensions are 1.22 m wide by 1.33 m high by 2.43 m long (4 x 4 x 8 ft).

Medium box: Any size box with an external volume greater than or equal to 3.95 m³ and less than 15 m³ (139-530 ft³) classifies as a medium box. All medium boxes can be handled under the Site Treatment Plan (STP) or Commercial Thermal Treatment (CTT) contracts.

Small box: A small box has an external volume less than 3.95 m³ (128 ft³). This group now includes MB-IV boxes.

Standard waste box (SWB): This container is used only for TRU(M) waste and is constructed of carbon steel for the Waste Isolation Pilot Plant (WIPP).

**Miscellaneous**

Long-length equipment container (LEC): These containers vary in size but are used only for equipment retrieved from the Hanford Tank Farms. The waste in these containers will be almost all RH_MLLW.

**LDR Waste Stream IDs**

LDR Waste Stream IDs can generally be thought of as groupings of Waste Specification Records (WSRds) which are used to specify the treatment and disposition path forward for a given container of waste. Although WSRds can be assigned for all wastes, they are most useful in regards to MLLW. For this report, the individual WSRds have been grouped into the following LDR Waste Stream IDs.
MLLW-01: waste that complies with all land disposal restrictions of 40 CFR 268 and WAC 173-303-140. This waste is expected to be received ready for direct disposal.

MLLW-02: inorganic solids requiring non-thermal treatment prior to disposal.

MLLW-03: organic solids requiring thermal treatment prior to disposal.

MLLW-04 (Non-OC): debris waste that is primarily inorganic or non-carbonaceous and will require non-thermal treatment.

MLLW-04 (OC): debris waste that contains combined concentrations of greater than 10 weight percent organic/carbonaceous constituents as defined by WAC 173-303-140. that will require thermal treatment. This waste will require thermal treatment prior to disposal.

MLLW-05: elemental lead wastes requiring non-thermal treatment.

MLLW-06: wastes requiring treatment for mercury. This may be elemental mercury or concentrations of mercury over 260 parts per million

MLLW-07: remote-handled waste requiring treatment prior to disposal.

The table below provides a crosswalk between the LDR Waste Stream IDs and the individual WSRds. The LDR Waste Stream titles are also identified in this table.

<table>
<thead>
<tr>
<th>LDR Waste Stream ID</th>
<th>LDR Waste Stream Title</th>
<th>Corresponding WSRds</th>
</tr>
</thead>
<tbody>
<tr>
<td>MLLW-01</td>
<td>LDR Compliant MLLW</td>
<td>930-03 Federal and State LDR compliant waste that does not require stabilization</td>
</tr>
<tr>
<td></td>
<td></td>
<td>931-01 Federal and State LDR compliant waste that requires stabilization</td>
</tr>
<tr>
<td></td>
<td></td>
<td>405-01 Oxidizer liquids (thermal treatment)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>420-01 Acidic liquids (non-thermal treatment)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>421-01 Caustic liquids (non-thermal treatment)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>422-01 Other liquids (non-thermal treatment)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>428-01 Oxidizer liquids (non-thermal treatment)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>521-00 Oxidizer solids (non-thermal treatment)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>523-02 Acidic solids (non-thermal treatment)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>524-01 Caustic solids (non-thermal treatment)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>525-00 Other solids (non-thermal treatment)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>802-02 Lead acid batteries LDR subcategory</td>
</tr>
<tr>
<td></td>
<td></td>
<td>812-01 Mercury compounds</td>
</tr>
<tr>
<td></td>
<td></td>
<td>820-01 Water reactive metals and compounds</td>
</tr>
<tr>
<td></td>
<td></td>
<td>821-00 Beryllium powder</td>
</tr>
<tr>
<td></td>
<td></td>
<td>822-00 Other water reactive compounds</td>
</tr>
<tr>
<td></td>
<td></td>
<td>830-03 Cadmium containing batteries LDR subcategory</td>
</tr>
<tr>
<td></td>
<td></td>
<td>900-03 Inorganic EHW State only waste</td>
</tr>
<tr>
<td></td>
<td></td>
<td>902-03 State only inorganic solid acid waste</td>
</tr>
<tr>
<td>MLLW-03</td>
<td>Organic Solids</td>
<td>400-03 Flammable liquids</td>
</tr>
<tr>
<td></td>
<td></td>
<td>401-01 Combustible liquids</td>
</tr>
<tr>
<td></td>
<td></td>
<td>402-01 Acidic liquids (thermal treatment)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>403-01 Caustic liquids (thermal treatment)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>404-01 Other liquids (thermal treatment)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>500-01 Flammable solids</td>
</tr>
<tr>
<td></td>
<td></td>
<td>501-02 Oxidizer solids (thermal treatment)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>503-02 Acidic solids (thermal treatment)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>504-01 Caustic solids (thermal treatment)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>503-03 Other solids (thermal treatment)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>921-02 State only organic solid acid waste</td>
</tr>
<tr>
<td></td>
<td></td>
<td>922-02 State only organic solid caustic waste</td>
</tr>
<tr>
<td></td>
<td></td>
<td>923-00 State only organic solid waste</td>
</tr>
<tr>
<td>MLLW-04 (Non-OC)</td>
<td>Debris Waste (Non-Organic/Carbonaceous)</td>
<td>645-01 Acidic inorganic debris</td>
</tr>
<tr>
<td>MLLW-04 (OC)</td>
<td>Debris Waste (Organic/Carbonaceous)</td>
<td>625-01 Acidic organic debris</td>
</tr>
<tr>
<td>MLLW-05</td>
<td>Elemental Lead</td>
<td>626-01 Caustic organic debris</td>
</tr>
<tr>
<td>MLLW-06</td>
<td>Elemental Mercury</td>
<td>627-02 Other organic debris</td>
</tr>
<tr>
<td>MLLW-07</td>
<td>RH_MLLW Requiring Treatment</td>
<td>810-01 Elemental mercury LDR subcategory</td>
</tr>
</tbody>
</table>

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


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Help Contents

This section provides some general information about how the site is organized and how to use Netscape, as well as important details about how some calculations were performed.

Overview

- SWIFT Report Web Site Overview
- Forecasting Process

How to ...

- Using Netscape
- Netscape Bookmarks

Data issues

- Increase/Decrease Percentages
- Rounding
- Min/max Ranges
- Waste Class Naming Conventions
- Waste Categories
- Container Specifications
- Waste Specification Records
- Physical Waste Forms
- Generator Life Cycle Phases
- Hazardous Constituents

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SWIFT Report Web Site Overview

This site has 3 levels of information about forecast LLW, MLLW and TRU(M) solid waste to be managed at the Central Waste Complex (CWC). The first level addresses data from a program and generator perspective, the second level addresses data from the perspective of the different waste classes represented, the third level provides generalized report options.

The Site Map shows more details about this organization.

The general format for each section is:

- Header (Logo and time stamp)
- Contents
- Highlights
- Comparison to previous baseline(s)
- Background
- Forecast assumptions and comments
- Other forecast
- Tool bars
- Footer

The Header has three pieces of useful information:

- SWIFT logo
- Time stamp-a display of the currency of the site, the version of the data included in the site, and the date of the data collection and analysis

The Report contents section provides 1) an overview of what's at the current location and 2) links to specific information in the location. Items with one 'fletch' symbol ( » ) are jumps within the current page; items with two 'fletch' symbols ( »» ) load other SWIFT Report pages.

The Highlights section is a brief, bulleted, overview of key LLW, MLLW and TRU(M) waste issues and typically includes the forecast life cycle, current forecast volumes, and comparison to previous baseline.

The Comparison to previous baseline(s) section provides expanded discussion of changes from previous forecasts of LLW, MLLW and TRU(M) waste.

The Background section describes the mission of the program or generator and may also provide details about how that mission is being met.
The Forecast assumptions and comments section describes the key programmatic assumptions on which the forecast is based. These may include the life cycle end date, assumptions about budgets, treatment, or other issues that affect the amount and types of expected wastes.

The Other forecast data section discusses HAZ waste in the current forecast.

Program areas include a Summary Table of the totals for LLW, MLLW and TRU(M) waste reported by each of the generators in their program, and bar chart showing Annual Waste Class Volume for each forecast year.

Generator areas have a link to Detailed Forecast Data in the Contents section at the top of the page. A word-to-the-wise: Tables with data for long life cycles can take quite a while to load (as much as a minute or two).

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


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Help: The Forecasting Process

The forecasting process can be partitioned into the following steps:

- **Determine programmatic assumptions** – The waste generator needs to understand budgetary, regulatory, and technical factors that affect current and future waste generation trends at their facility. Developing clear assumptions based on this information will ensure consistent accurate forecasts.

- **Collect forecast data** – Once the assumptions are clear, the waste generator collects data using those assumptions.

- **Set up a forecast file** – At this step, the waste generator begins to enter information into SWIFT FY2001, the electronic collection tool. Basic information on the generator(s) are reported, such as specifying the life cycle, specifying the waste classes, and defining any nonstandard containers or "combined" hazardous characteristics that will be forecast.

- **Enter data** – Once the generator(s) and waste classes have been specified, the waste generator specifies:
  
  1. the containers in which the waste will be stored and the projected volume of waste,
  2. the waste specification records of the waste class / container combinations,
  3. the physical form of the waste,
  4. the hazardous characteristics in the waste (if applicable), and
  4. the radionuclides in the waste (if applicable).

Notes for the waste generator to document information necessary to understand the forecast data are available.
Help: Using Netscape

This page will help you navigate your way through this website and through the World Wide Web in general.

Navigating around a website or around the Web is very simple. At the top of the screen is the familiar Menu bar, some buttons, a Location bar, and then more buttons. Let's start in the middle, with Location: Web site addresses start with http, followed by colons, slashes, double slashes, and periods (or "dot"). If you want to go to a particular site, you simply highlight the location address (by clicking and dragging over it with the cursor), then type in the new site (or paste it in if you've copied it from somewhere), and "Enter". Sometimes when you're trying to get to a new website you'll get a terse message saying it can't be found, or it's too busy for you. Try again. If it still says the same thing wait a while before retrying. If it's still down, perhaps the site you're aiming at is having server problems. In that case, there's nothing you can do but try again later.

When you see text in some other color (often blue), that means that text is a link to another, related site. If you slide your mouse cursor arrow over that text, it will turn into a hand. Just click once. In this web site you'll find a set of buttons at the bottom of every "page" you visit with links to the homepage, an alternative table of contents and the Hanford homepage. Just position your cursor over the name of one you want to visit, and--when the cursor turns into the hand--click. [Linked text is often underlined as a Netscape default. If you wish to get rid of the underline, you can go to Options General Preferences, and click on Appearance. At the bottom of this dialog box you'll see Link Styles. You can deselect underline (or select it if it's off).]

This website is built with two styles of navigation. The first is the "tree" style. The second we'll call the "table of contents" style. The "tree" style actually displays two frames in a single web page. The left frame is the "tree" that behaves much like the left frame in the Window 95 Explorer window. You simply expand and contract the tree by mouse clicking folders to display or hide a hierarchy of links to document pages. Actual pages that you can link to are identified by a document icon or an associated arrow icon. Selecting either of these will display a separate web page of information in the right frame. If you want to print or save the document you see in the right frame then first mouse click anywhere on the right frame before printing or saving. If you don't like this style of navigation then you can go to the bottom of any page displayed in the right frame and select the "Table of Contents" button. It will allow you to navigate and display only one page per browser window and you can ignore any dealings with frames.

What If I Get Lost?

Sometimes as you surf the Web, you click on links until you have no idea where you are. If
you just want to get back home, there's a **Home** button above the Locations bar. If you pass a spot, and want to get back to it, click on **Back**. To then return in a forward direction click on **Forward**.

**How Can I Save and Print?**

If you want to make a copy of a page select **File**, and **Save As** and do it as you would in the Windows operating system. Alternatively, click the right mouse button and choose **Save As**.

If you want to print, you should take note of the type of page you're looking at. Many web pages are made up of two or more frames that display separate pages of a website. Unfortunately, this isn't always obvious to the viewer so the easiest thing to do is to always mouse click in the general area that you want printed. Doing this will ensure that the page(s) you want to print "have the focus". Then you can go to **File** and **Print**, and it will print the whole "frame set" for you. But what if you just want to print one page? While viewing in Netscape you can't tell where one page ends and another begins. Here's the best way I've found to print a specific page in a long Netscape document:

1. Mouse click in the general area (or, if its obvious, the frame you're interested in)
2. Go to **File**
3. Go to **Print Preview**
4. After the document loads, click on **Next Page** to scroll through and find which pages you wish to print.
5. Click on **Print**
6. Deselect **All** and select **Pages**
7. Type in numbers at **From:** and **To:** (for instance, **From:** 3 **To:** 3)
8. Make any Setup changes you need to
9. Click on **Print**

**Bookmarking**

When you find yourself someplace where you think you'll want to return, again click in the frame of interest, then click on **Bookmarks** in the Menu bar. Click on **Add Bookmark**. In most instances you can also right mouse click in the frame you want bookmarked then click on **Add Bookmark**. Now to return to that site later, just go to **Bookmarks**, and click on the one you want. In this site, if you want to get back to the homepage and navigate using the "tree" style than go to the bottom of any page and select "SWIFT FY2001 home page". Select the "Table of Contents" link button to navigate without concern for frames and "tree" styles. To read more about bookmarks click here.
Help: Netscape — Bookmarks

What's a Bookmark?

When you're in Netscape, one of the menu items at the top of the screen is Bookmarks. When you're visiting the World Wide Web (WWW), and come to a site you know you'll want to visit again, making a bookmark is how you can do so.

Frames and Bookmarks

This website is built with two styles of navigation. The first is the "tree" style. The second we'll call the "table of contents" style. The "tree" style actually displays two frames in a single web page. The left frame is the "tree" that behaves just like the left frame in the Window 95 Explorer window. You simply expand and contract the tree (by mouse clicking folders or +/- symbols) to display or hide a hierarchy of links to document pages. Actual pages that you can link to are identified by a document icon or an associated arrow icon. Selecting either of these will display a separate web page of information in the right frame. If you want to print, save, or bookmark the document you see in the right frame then first mouse click anywhere on the right frame before printing, saving, or bookmarking. This will ensure the document of interest has "the focus" when you print, save, or bookmark.

How To

When you get to a site you like, click on Bookmarks. Then click on Add Bookmark. Then at any other time, you can click on Bookmarks, click on the name of the site, and it will take you there! For any SWIFT FY2001 page, if you want to get back to the homepage and navigate using the "tree" style then go to the bottom of any page and select "SWIFT FY2001 home page". Select the "Table of Contents" link button to navigate without concern for frames and "tree" styles.

If you establish very many bookmarks you may want to organize or catalogue them into categories, with headers. To do so, click on Window, and Bookmarks. Click on one of your bookmarks. Now click on Item, and select New Folder This is actually a folder for a group of bookmarks. In the dialog box, where it says "Name", it says New Folder. Type in the name you want. Click OK. You can now click on it and drag it up or down. Now click on the bookmarks you want to be in this folder, and drag them "into" it. Close the
Bookmarks Window.

Now when you want to find a bookmark, click on **Bookmarks**, and you'll just see a list of the folders. Click on the proper one, and a list of that folder's bookmarks appear.

*Handy Tip:* When you make a bookmark, Netscape uses whatever is on the title bar for the name it gives the bookmark. Sometimes these titles are quite long and can be unwieldy when you click on Bookmark to find one to open. To rename the assigned name to something more concise and meaningful, go to **Window**, then **Bookmarks**. Click once on the offending bookmark title, click on **Item**, and click on **Properties...** In the **Name** section, just delete part of the name, or give it a whole new descriptive name. Be sure not to accidently do this in the location section!
Help: Increase/Decrease Percentages

The magnitude of changes in forecast data are described in terms of their percentage increase or decrease from the baseline. In this instance, the baseline is the FY2000 Forecast. The formula is:

\[
\text{Change} = 100 \times \frac{\text{FY2001 volume} - \text{Baseline volume}}{\text{Baseline volume}}
\]

A positive (\( > 0 \)) reflects an increase in the particular waste class forecast; a negative change reflects a decrease.

For example:

Baseline forecast of MLLW: 340 m³
FY2001 forecast of MLLW: 500 m³
\[
\text{Change} = 100 \times \frac{500 - 340}{340} \approx +47\% \quad \text{a 47\% increase, which seems reasonable.}
\]

If the FY2001 forecast of MLLW is 200 m³, the change is:
\[
\text{Change} = 100 \times \frac{200 - 340}{340} \approx -41.1\% \quad \text{a 41\% decrease.}
\]

If the FY2000 forecast of MLLW is 20 m³, the change is:
\[
\text{Change} = 100 \times \frac{20 - 340}{340} \approx -94.1\% \quad \text{a 94\% decrease.}
\]

This can be disconcerting if the changes are major:

Baseline forecast of MLLW: 2 m³
FY2001 forecast of MLLW: 4,000 m³
\[
\text{Change} = 100 \times \frac{4000 - 2}{2} = +199,900 \quad \text{a 199,900\% increase.}
\]

But switching the situation doesn't yield what most of us expect:

Baseline forecast of MLLW: 4,000 m³
FY2001 forecast of MLLW: 2 m³
\[
\text{Change} = 100 \times \frac{2 - 4000}{4000} \approx -99.95\% \quad \text{or nearly 100\% decrease}
\]
Help: Rounding

Generators provide a great deal of highly detailed data, which are then rolled into summary data that can be meaningful for planning and performing comparisons. The following formula was used for rounding:

**Detailed Data / Annual Totals**

- **Data > 1 m³** Detailed generator data are rounded to the nearest cubic meter of waste, except where data <1 m³ was forecast.
- **Data > 0 and < 1 m³** Data between 0 and 1 are shown as <1 m³; totals are calculated by summing the actual values and then rounding.

**Summary Generator and Program Data**

Summary data are always calculated by summing the detailed values and then rounding. Comparison numbers (i.e., percent increases, percent decreases, minimum ranges, maximum ranges) are always made on the unrounded numbers. Summary values between 0 and 1 are shown to the nearest 0.01 m³; summary values between 1 and 9 are shown rounded to the nearest integer; and summary values greater than 10 m³ are rounded to the nearest 10 m³.

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


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Help: Min/Max Ranges

Because of the uncertainties inherent in long-term forecasts, SWIFT FY2001 requires the waste generator to specify a range for the volume estimate by providing minimum and maximum percents. The table below shows how these percents are calculated. Ranges apply only to the total volume for a forecast year and are entered in the minimum and maximum rows without the percent sign.

<table>
<thead>
<tr>
<th>Range calculation examples</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>If you think you will ship...</strong></td>
</tr>
<tr>
<td>min</td>
</tr>
<tr>
<td>best estimate</td>
</tr>
<tr>
<td>max</td>
</tr>
<tr>
<td>min</td>
</tr>
<tr>
<td>best estimate</td>
</tr>
<tr>
<td>max</td>
</tr>
</tbody>
</table>

The use of waste reduction techniques prior to shipping waste to Hanford's Treatment, Storage, and Disposal (TSD) Facility is highly recommended. The volumes reported in the SWIFT FY2001 forecast should reflect the projected shipment volumes after these reduction techniques are used.

Many generators provided different minimum and maximum ranges for each waste class in the forecast. The minimum and maximum ranges reported in this forecast are actually weighted averages for LLW, MLLW and TRU(M) waste, using the following formulas:

Minimum % = 100 * (Sum of minimum LLW, MLLW and TRU(M) volumes) / (Sum of LLW, MLLW and TRU(M) volumes)

Maximum % = 100 * (Sum of maximum LLW, MLLW and TRU(M) volumes) / (Sum of LLW, MLLW and TRU(M) volumes)
Help: Waste Class Naming Conventions

Solid waste can be characterized into seven classes excluding HAZ. These classes are briefly described in the following Table. These definitions are applicable specifically to forecast waste and are based on WHC-EP-0063.4.

Table 1.1: Waste Category Definitions

<table>
<thead>
<tr>
<th></th>
<th>CH_MLLW</th>
<th>RH_MLLW</th>
<th>CH_TRU(M)</th>
<th>RH_TRU(M)</th>
<th>MLLW_GTICIII</th>
<th>LLW_I</th>
<th>LLW_I</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dose rate</td>
<td>&lt;= 200 mrem/h</td>
<td>&gt; 200 mrem/h</td>
<td>&lt;= 200 mrem/h</td>
<td>&gt; 200 mrem/h</td>
<td>Varies</td>
<td>Varies</td>
<td>Varies</td>
</tr>
<tr>
<td>Dangerous per WAC 173-303</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes (TRU(M))</td>
<td>Yes (TRU(M))</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>(&gt; 100 nCi/g(b) alpha-emitting isotopes (atomic numbers &gt; 92 &amp; half-lives &gt; 20 years))</td>
<td>(&lt; ... less than   &gt; ... greater than   = ... equal)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Contact-handled mixed low-level waste (CH_MLLW)

This waste has a dose rate equal to or less than 200 mrem/h and contains radioactivity not classified as spent nuclear fuel or transuranic waste (concentrations of transuranic radionuclides less than or equal to 100 nCi/g of the waste matrix). The waste is also defined as dangerous (hazardous) waste in the Washington Administrative Code (WAC) 173-303.

Remote-handled mixed low-level waste (RH_MLLW)

This waste has a dose rate greater than 200 mrem/h and meets the definition for LLW. This waste is also defined as dangerous (hazardous) waste in WAC
Contact-handled transuranic or transuranic mixed waste (CH_TRU(M))

This radioactive waste has a dose rate equal to or less than 200 mrem/h at contact with the waste container. At the time of assay, this waste contains more than 100 nCi/g of alpha-emitting isotopes with atomic numbers greater than 92 and half-lives greater than 20 years. TRUM waste is TRU waste that is also dangerous (hazardous) waste as defined in WAC 173-303.

Remote-handled transuranic or transuranic mixed waste (RH_TRU(M))

This waste has a dose rate greater than 200 mrem/h at contact with the waste container. At the time of assay, this waste contains more than 100 nCi/g of alpha-emitting isotopes with atomic numbers greater than 92 and half-lives greater than 20 years. TRUM waste is TRU waste that is also dangerous (hazardous) waste as defined in WAC 173-303.

Mixed low-level waste greater than Class III (MLLW_GTCIII)

This waste meets the definition for LLW and is also defined as dangerous (hazardous) waste in WAC 173-303. Greater-than-Class III (GTCIII) designation is determined when the sum of the fractions of the radionuclides' Class III concentration limits are greater than one, as defined in the Hanford Site Solid Waste Acceptance Criteria, WHC-EP-0063 Rev. 4, November 1993.

Contact-handled (CH) and remote-handled (RH) waste are considered distinct categories, based on the inherent characteristics of the waste. However, in a few instances, generators have reported RH waste that is shielded to CH levels as CH waste.

Low-level waste category I (LLW_I)

This waste may be comprised of either contact- or remote-handled waste considered low-activity waste with very low concentrations of long-lived radionuclides.

Low-level waste category III (LLW_III)

This waste may be comprised of either contact- or remote-handled waste considered moderate- to high-activity waste with low to moderate concentrations of long-lived radionuclides, in stabilized form that minimizes subsistence for a period of 1000 years.

In addition to the above waste categories, another key definition concerns Held waste. Held waste is existing generated waste with no current shipping schedule.
For questions or comments, please contact Roberta Barcot
(e-mail: Roberta_A_Barcot@rl.gov, voice: (509) 373-4752).


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Help: Determining the Waste Category

As shown in the table, LLW and MLLW can be categorized as Category I, Category III, or greater-than-Category III, depending on the radionuclides it contains.

1. If the waste includes only one radionuclide, then use Table 2 to determine its category.

2. If the waste contains a mixture of radionuclides, then use the sum of fractions rule to determine the category:
   - Divide each radionuclide's concentration by the Category I limits.
   - Add the resulting values.
   - Divide each radionuclide's concentration by the Category III limits.
   - Add the resulting values.
   - Use the following table to determine the category:

*Table 1:*

<table>
<thead>
<tr>
<th>Category I sum</th>
<th>Category III sum</th>
<th>waste category</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;1</td>
<td>—</td>
<td>Category I</td>
</tr>
<tr>
<td>&gt;1</td>
<td>&lt;1</td>
<td>Category III</td>
</tr>
<tr>
<td>—</td>
<td>&gt;1</td>
<td>greater-than-Category III</td>
</tr>
</tbody>
</table>

*Table 2:*
## Radionuclide concentration limits

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Radionuclide</th>
<th>Category I limit Cl/m³</th>
<th>Category III limit Cl/m³</th>
</tr>
</thead>
<tbody>
<tr>
<td>H</td>
<td>TRITIUM</td>
<td>5.0 E-6</td>
<td>n/a</td>
</tr>
<tr>
<td>C</td>
<td>CARBON14</td>
<td>4.0 E-2</td>
<td>9.1 E0</td>
</tr>
<tr>
<td>C</td>
<td>CARBON14 (activated metal)</td>
<td>4.0 E-1</td>
<td>9.1 E1</td>
</tr>
<tr>
<td>P</td>
<td>PHOSPHORUS32</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>S</td>
<td>SULFUR35</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>Cl</td>
<td>CHLORINE36</td>
<td>4.0 E-4</td>
<td>8.3 E-2</td>
</tr>
<tr>
<td>Co</td>
<td>COBALT60</td>
<td>7.7 E1</td>
<td>n/a</td>
</tr>
<tr>
<td>Se</td>
<td>SELENIUM79</td>
<td>3.8 E-1</td>
<td>8.3 E1</td>
</tr>
<tr>
<td>Sr</td>
<td>STRONTIUM90</td>
<td>4.3 E-3</td>
<td>1.5 E4</td>
</tr>
<tr>
<td>Tc</td>
<td>TECHNETIUM99</td>
<td>5.6 E-3</td>
<td>1.2 E0</td>
</tr>
<tr>
<td>I</td>
<td>IODINE129</td>
<td>2.9 E-3</td>
<td>5.9 E-1</td>
</tr>
<tr>
<td>I</td>
<td>IODINE131</td>
<td>n/a</td>
<td>n/a</td>
</tr>
<tr>
<td>Cs</td>
<td>CESIUM137</td>
<td>6.3 E-3</td>
<td>1.3 E4</td>
</tr>
<tr>
<td>Pb</td>
<td>LEAD210</td>
<td>1.0 E-2</td>
<td>5.6 E5</td>
</tr>
<tr>
<td>Ra</td>
<td>RADIUM226</td>
<td>1.4 E-4</td>
<td>3.6 E-2</td>
</tr>
<tr>
<td>U</td>
<td>URANIUM233</td>
<td>7.7 E-3</td>
<td>lower of 1.1 E0 or 100 nCl/gm</td>
</tr>
<tr>
<td>U</td>
<td>URANIUM234</td>
<td>9.1 E-3</td>
<td>2.1 E0</td>
</tr>
<tr>
<td>U</td>
<td>URANIUM235</td>
<td>3.2 E-3</td>
<td>5.9 E-1</td>
</tr>
<tr>
<td>Np</td>
<td>NEPTUNIUM237</td>
<td>1.9 E-4</td>
<td>lower of 4.0 E-2 or 100 nCl/gm</td>
</tr>
<tr>
<td>Pu</td>
<td>PLUTONIUM238</td>
<td>9.1 E-3</td>
<td>lower of 4.5 E1 or 100 nCl/gm</td>
</tr>
<tr>
<td>Pu</td>
<td>URANIUM238</td>
<td>6.3 E-3</td>
<td>1.4 E0</td>
</tr>
<tr>
<td>Pu</td>
<td>PLUTONIUM239</td>
<td>3.8 E-3</td>
<td>lower of 7.7 E-1 or 100 nCl/gm</td>
</tr>
<tr>
<td>Pu</td>
<td>PLUTONIUM240</td>
<td>3.8 E-3</td>
<td>lower of 7.7 E-1 or 100 nCl/gm</td>
</tr>
<tr>
<td>Pu</td>
<td>PLUTONIUM241</td>
<td>7.7 E-2</td>
<td>3.1 E1</td>
</tr>
<tr>
<td>Am</td>
<td>AMERICIUM241</td>
<td>2.6 E-3</td>
<td>lower of 1.1 E0 or 100 nCl/gm</td>
</tr>
<tr>
<td>Am</td>
<td>AMERICIUM243</td>
<td>1.3 E-3</td>
<td>lower of 2.6 E1 or 100 nCl/gm</td>
</tr>
</tbody>
</table>

*a* half-life is less than 5 years

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


SWIFT Report Home Page URL: http://www.hanford.gov/docs/cp0918/sw_nav1.htm

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SWIFT FY2001 Home Page  Table of Contents  Hanford Home Page
Help: Container Specifications

The following tables were provided to the waste generator for calculating external volumes of waste.

<table>
<thead>
<tr>
<th>Standard drums</th>
<th>diameter (m)</th>
<th>external height (m)</th>
<th>volume (m³)</th>
<th>internal volume (m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>30 Liter 1A2</td>
<td>0.378</td>
<td>0.378</td>
<td>0.042</td>
<td>0.036</td>
</tr>
<tr>
<td>61 Liter 1A2</td>
<td>0.378</td>
<td>0.683</td>
<td>0.077</td>
<td>0.063</td>
</tr>
<tr>
<td>114 Liter 1A1</td>
<td>0.487</td>
<td>0.733</td>
<td>0.137</td>
<td>0.121</td>
</tr>
<tr>
<td>114 Liter 1A2</td>
<td>0.500</td>
<td>0.740</td>
<td>0.145</td>
<td>0.120</td>
</tr>
<tr>
<td>208 Liter 1A1</td>
<td>0.595</td>
<td>0.873</td>
<td>0.242</td>
<td>0.220</td>
</tr>
<tr>
<td>208 Liter 1A2</td>
<td>0.608</td>
<td>0.886</td>
<td>0.257</td>
<td>0.220</td>
</tr>
<tr>
<td>322 Liter 1A2</td>
<td>0.701</td>
<td>0.991</td>
<td>0.362</td>
<td>0.329</td>
</tr>
<tr>
<td>416 Liter 1A2</td>
<td>0.807</td>
<td>1.080</td>
<td>0.552</td>
<td>0.472</td>
</tr>
<tr>
<td>208 Liter lead-lined</td>
<td>0.608</td>
<td>0.866</td>
<td>0.257</td>
<td>0.021</td>
</tr>
<tr>
<td>208 Liter concrete-lined</td>
<td>0.608</td>
<td>0.866</td>
<td>0.257</td>
<td>0.058</td>
</tr>
</tbody>
</table>

* 1A1 is tight head; 1A2 is standard open head
### Standard boxes

<table>
<thead>
<tr>
<th>Name</th>
<th>External</th>
<th>Internal</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>length (m)</td>
<td>width (m)</td>
</tr>
<tr>
<td>MB-I*</td>
<td>2 x 2 x 6</td>
<td>1.82</td>
</tr>
<tr>
<td>MB-II*</td>
<td>3 x 3 x 6</td>
<td>1.82</td>
</tr>
<tr>
<td>MB-III*</td>
<td>2 x 4 x 6</td>
<td>1.82</td>
</tr>
<tr>
<td>MB-IV*</td>
<td>3.3 x 4.3 x 6.3</td>
<td>1.95</td>
</tr>
<tr>
<td>MB-V*</td>
<td>4 x 4 x 6</td>
<td>2.43</td>
</tr>
<tr>
<td>MB-VI*</td>
<td>5 x 5 x 9</td>
<td>2.83</td>
</tr>
<tr>
<td>H-2-42701</td>
<td>4 x 4 x 8</td>
<td>2.44</td>
</tr>
<tr>
<td>CPC's B-25</td>
<td>4 x 4 x 6</td>
<td>1.85</td>
</tr>
<tr>
<td>SWB</td>
<td>4 x 4 x 6</td>
<td>1.80</td>
</tr>
<tr>
<td>Sea Land*</td>
<td>4 x 8 x 20</td>
<td>6.10</td>
</tr>
</tbody>
</table>

*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

<table>
<thead>
<tr>
<th>Designation</th>
<th>Alias</th>
<th>Diameter (m)</th>
<th>External</th>
<th>Volume (m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LEC-1</td>
<td>26&quot; D X 52' LG</td>
<td>0.66</td>
<td>15.85</td>
<td>5.43</td>
</tr>
<tr>
<td>LEC-2</td>
<td>26&quot; D X 70' LG</td>
<td>0.66</td>
<td>21.34</td>
<td>7.31</td>
</tr>
<tr>
<td>LEC-3</td>
<td>36&quot; D X 52' LG</td>
<td>0.91</td>
<td>15.85</td>
<td>10.41</td>
</tr>
<tr>
<td>LEC-4</td>
<td>36&quot; D X 70' LG</td>
<td>0.91</td>
<td>21.34</td>
<td>14.01</td>
</tr>
<tr>
<td>LEC-5</td>
<td>54&quot; D X 70' LG</td>
<td>1.37</td>
<td>21.34</td>
<td>31.53</td>
</tr>
<tr>
<td>LEC-6</td>
<td>63&quot; D X 52' LG</td>
<td>1.60</td>
<td>15.85</td>
<td>31.88</td>
</tr>
<tr>
<td>LEC-7</td>
<td>63&quot; D X 70' LG</td>
<td>1.60</td>
<td>21.34</td>
<td>42.91</td>
</tr>
<tr>
<td>LEC-8</td>
<td>67&quot; D X 70' LG</td>
<td>1.70</td>
<td>21.34</td>
<td>48.53</td>
</tr>
<tr>
<td>LEC-9</td>
<td>83&quot; D X 48' LG</td>
<td>2.11</td>
<td>14.63</td>
<td>51.07</td>
</tr>
</tbody>
</table>

### Square LECs

<table>
<thead>
<tr>
<th>Designation</th>
<th>Alias</th>
<th>Length (m)</th>
<th>Width &amp; Height (m)</th>
<th>Volume (m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LEC-10</td>
<td>26&quot; SQ X 52'</td>
<td>15.85</td>
<td>0.86</td>
<td>6.91</td>
</tr>
<tr>
<td>LEC-11</td>
<td>26&quot; SQ X 70'</td>
<td>21.34</td>
<td>0.86</td>
<td>9.31</td>
</tr>
<tr>
<td>LEC-12</td>
<td>36&quot; SQ X 52'</td>
<td>15.85</td>
<td>0.91</td>
<td>13.25</td>
</tr>
<tr>
<td>LEC-13</td>
<td>36&quot; SQ X 70'</td>
<td>21.34</td>
<td>0.91</td>
<td>17.64</td>
</tr>
<tr>
<td>LEC-14</td>
<td>54&quot; SQ X 70'</td>
<td>21.34</td>
<td>1.37</td>
<td>40.14</td>
</tr>
<tr>
<td>LEC-15</td>
<td>63&quot; SQ X 52'</td>
<td>15.85</td>
<td>1.60</td>
<td>40.59</td>
</tr>
<tr>
<td>LEC-16</td>
<td>63&quot; SQ X 70'</td>
<td>21.34</td>
<td>1.60</td>
<td>54.83</td>
</tr>
<tr>
<td>LEC-17</td>
<td>67&quot; SQ X 70'</td>
<td>21.34</td>
<td>1.70</td>
<td>61.79</td>
</tr>
<tr>
<td>LEC-18</td>
<td>83&quot; SQ X 48'</td>
<td>14.63</td>
<td>2.11</td>
<td>85.02</td>
</tr>
<tr>
<td>Other containers</td>
<td>diameter (m)</td>
<td>length (m)</td>
<td>width (m)</td>
<td>height (m)</td>
</tr>
<tr>
<td>------------------</td>
<td>--------------</td>
<td>------------</td>
<td>-----------</td>
<td>------------</td>
</tr>
<tr>
<td>Ion exchange module</td>
<td>2.18</td>
<td>1.77</td>
<td>2.27</td>
<td>8.76</td>
</tr>
<tr>
<td>Ion exchange column</td>
<td>0.46</td>
<td>1.76</td>
<td>0.29</td>
<td>0.21</td>
</tr>
<tr>
<td>Cartridge</td>
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</table>

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


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Help: Waste Specification Record

The following categories and definitions were provided to the waste generators for determining the proper assignments of waste specification records (WSRds) to waste class/container combinations. The primary use of WSRds is in assigning treatment pathways for MLLW. Therefore, WSRd information is included only for MLLW in this report. In addition, the specific WSRds specified by the generators were grouped into LDR Waste Stream IDs. For more information on the LDR Waste Stream IDs and a cross walk between them and the WSRds see the LDR Waste Stream IDs section of the Glossary.

100 Series - Low-level waste disposal (not hazardous, dangerous or TSCA PCB waste). This series is used for low-level waste that can be disposed in the unlined portions of the Low-Level Burial Grounds. The distinguishing factor between the WSRds in this series is whether the waste requires additional stabilization to meet the Category 3 and/or mobile radionuclide requirements of HNF-EP-0063 Section 3.4.1.

- 100-02 Direct disposable low-level waste
- 120-02 Low-level waste requiring stabilization

200 Series - Transuranic and transuranic mixed waste. This series is used for transuranic waste that will be certified for and disposed at the Waste Isolation Pilot Plant.

- 200-06 Non-mixed transuranic waste
- 201-03 Mixed transuranic waste
- 202-03 Mixed transuranic waste, TRUCON Code 112
- 203-02 Caustic solid transuranic waste
- 204-02 Acidic solid transuranic waste
- 205-02 Acidic solid transuranic waste, TRUCON Codes 113 and 121
- 206-02 Mixed transuranic waste, TRUCON Codes 113 and 121
- 207-01 Mixed transuranic waste, TRUCON Code 117

400 Series - Mixed waste overpacked and lab packed liquids. This series is used for liquid mixed waste packaged as overpacked liquids or in lab pack form.

- 400-03 Flammable liquids
- 401-01 Combustible liquids
- 402-01 Acidic liquids (thermal treatment)
- 403-01 Caustic liquids (thermal treatment)
- 404-01 Other liquids (thermal treatment)
- 405-01 Oxidizer liquids (thermal treatment)
- 420-01 Acidic liquids (non-thermal treatment)
- 421-01 Caustic liquids (non-thermal treatment)
• 422-01 Other liquids (non-thermal treatment)
• 428-01 Oxidizer liquids (non-thermal treatment)

500 Series - Mixed waste solids, sorbed liquids and soils. This series is used for non-debris solid mixed waste, including sorbed liquids and soil.

• 500-01 Flammable solids
• 501-02 Oxidizer solids (thermal treatment)
• 503-02 Acidic solids (thermal treatment)
• 504-01 Caustic solids (thermal treatment)
• 505-03 Other solids (thermal treatment)
• 521-00 Oxidizer solids (non-thermal treatment)
• 523-02 Acidic solids (non-thermal treatment)
• 524-01 Caustic solids (non-thermal treatment)
• 525-00 Other solids (non-thermal treatment)

600 Series - Mixed debris waste. This series is used for hazardous debris as defined in 40 CFR Part 268.

• 625-01 Acidic organic debris
• 626-01 Caustic organic debris
• 627-02 Other organic debris
• 645-01 Acidic inorganic debris
• 646-01 Caustic inorganic debris
• 647-01 Other inorganic debris

800 Series - Mixed waste with specific treatment standards. This series identifies mixed waste streams that have specified technology requirements for treatment under 40 CFR 268.40.

• 800-01 Radioactive lead solids LDR subcategory
• 802-02 Lead acid batteries LDR subcategory
• 810-01 Elemental mercury LDR subcategory
• 812-01 Mercury compounds
• 820-01 Water reactive metals and compounds
• 821-00 Beryllium powder
• 822-00 Other water reactive compounds
• 830-03 Cadmium containing batteries LDR subcategory

900 Series - Washington State only mixed waste and mixed waste that meets applicable treatment standards. This series identifies mixed waste streams that do not require treatment to meet the LDR treatment standards of 40 CFR 268. These WSRds include Washington State-only mixed wastes that could require treatment to meet WAC 173-303-140 and mixed waste that meets all applicable treatment standards of 40 CFR 268 and/or WAC 173-303-140.

• 900-03 Inorganic EHW State only waste
• 902-03 State only inorganic solid acid waste
• 921-02 State only organic solid acid waste
• 922-02 State only organic solid caustic waste
• 923-00 State only organic solid waste
• 930-03 Federal and State LDR compliant waste that does not require stabilization
• 931-01 Federal and State LDR compliant waste that requires stabilization

The following terms define the meaning of principal decision points in the WSRd
Assignment Matrix. Where a regulation is cited, the regulation itself identifies the precise criteria used for making the decision.

**Acid:** an aqueous liquid that is designated with waste code D002 because it has a pH less than or equal to 2 (WAC-173-303-090(6)); and a non-aqueous liquid that has strong acid properties.

**Aerosol:** small, household type compressed gas container containing unused chemical products (e.g. spray paints, oven cleaners etc.)

**Beryllium dust:** waste that is assigned waste code P015 as specified by WAC 173-303-081.

**Cadmium battery:** waste that meets the definition of the "cadmium containing batteries subcategory" of 40 CFR 268.40.

**Caustic:** an aqueous liquid that is designated with waste code D002 because it has a pH greater than or equal to 12.5 (WAC-173-303-090(6)); and a non-aqueous liquid that has strong caustic (basic) properties.

**Contact handled:** waste that has a package surface dose rate that does not exceed 200 millirem per hour and a 30 cm dose rate that does not exceed 100 millirem per hour.

**Combustible liquid:** a liquid that has a flash point between 38 degrees C and 60 degrees C when tested as specified by WAC 173-303-090(5).

**Elemental mercury:** waste that meets the definition of the "elemental mercury contaminated with radioactive materials subcategory" of 40 CFR 268.40.

**Extremely hazardous waste:** extremely hazardous waste as defined by WAC 173-303-040.

**Flammable liquid:** a liquid that has a flash point less than 38 degrees C when tested as specified by WAC 173-303-090 (5).

**Hazardous debris:** waste that meets the definition of debris of 40 CFR 268.2(g).

**Ignitable non-liquid:** non-liquid waste that is designated with waste code D001 in accordance with WAC 173-303-090(5)(a)(ii).

**Ignitable oxidizer:** waste that is designated with waste code D001 because it is an oxidizer as defined in WAC 173-303-090(5).

**LDR compliant:** waste that complies with all land disposal restrictions of 40 CFR 268 and WAC 173-303-140.

**Lead acid battery:** waste that meets the definition of the "lead acid batteries subcategory" of 40 CFR 268.40.

**Mercury greater than 260 ppm:** waste designated with waste codes P065, P092, U151 and D009 waste that meets the definition of "high mercury - organic subcategory" or "high mercury - inorganic subcategory" of 40 CFR 268.40.

**Organic/carbonaceous:** waste that contains combined concentrations of
greater than 10 weight percent organic/carbonaceous constituents as defined by WAC 173-303-140(3)(c).

**Radioactive lead solids:** waste that meets the definition of the "radioactive lead solids subcategory" of 40 CFR 268.40.

**Reactive (cyanide and sulfide):** waste that is designated with waste code D003 because of cyanide or sulfide content (WAC 173-303-090(7)).

**Regulated:** any of the following:

- waste that is designated as a dangerous or extremely hazardous waste (WAC 173-303-070 through 100;

- waste that has been treated to remove waste codes D001 through D043 but requires additional treatment for underlying hazardous constituents; and

- waste that contains PCBs regulated by 40 CFR 761.

**Solid acid:** a solid that is designated with waste code WSC2 due to a pH less than or equal to 2 when tested as specified in WAC 173-303-090(6).

**Solid caustic:** a solid that is designated with waste code WSC2 due to a pH greater than or equal to 12.5 when tested as specified in WAC 173-303-090(6).

**Stabilization required:** waste that must be placed in a high integrity container or processed to a stable waste form to meet the Category 3 waste and mobile radionuclide requirements of HNF-EP-0063, Section 3.4.1.

**Thermal treatment required:** waste that must be treated by a thermal treatment process. This includes the following: waste designated with a P or U waste code (organic U and P constituents only), F waste code (WAC 173-303-081 and 082); waste that is designated with waste codes D012 through D043 (WAC 173-303-090); waste that must be treated for organic underlying hazardous constituents (40 CFR 268.48); PCB waste that is regulated under 40 CFR 761 or WAC-173-303; liquid waste that contains greater than 1% total organic carbon; and waste that contains combined concentrations of greater than 10 weight percent organic/carbonaceous constituents as defined by WAC 173-303-140(3)(c).

**Toxicity characteristic (TC):** waste that is designated with waste codes D004 through D043 (WAC 173-303-090).

**TRU:** waste that exceeds 100 nCi/g TRU radionuclides (HNF-EP-0063 definitions).

**Water reactive:** waste that is designated with waste code D003 because it reacts violently with water (WAC 173-303-090(7)).

For additional information go to the Solid Waste Acceptance Program website: URL: http://www.hanford.gov/wastemgt/wac/wsrdlist.htm
Help: Physical Waste Forms

The following categories and definitions were provided to the waste generator for determining the proper assignments of physical waste forms to waste class/container combinations.

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<td>Shld: Lead</td>
<td>Shielding: Lead</td>
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<tr>
<td></td>
<td>Shld: Steel</td>
<td>Shielding: Steel</td>
</tr>
<tr>
<td></td>
<td>Shld: Void</td>
<td>Void Space</td>
</tr>
<tr>
<td>Inorganic</td>
<td>In Particulate</td>
<td>Inorganic Particulates</td>
</tr>
<tr>
<td>Homogeneous</td>
<td>In Abs Liq/Slg</td>
<td>Inorganic Absorbed Liq/Sludge</td>
</tr>
<tr>
<td>Solids</td>
<td>In Paint Waste</td>
<td>Inorganic Paint Waste</td>
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<td></td>
<td>In Salt Waste</td>
<td>Inorganic Salt Waste</td>
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<tr>
<td>Organic</td>
<td>Org Particulate</td>
<td>Organic Particulates</td>
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<td>Org Abs Liq/Sl</td>
<td>Organic Absorbed Liq/Sludge</td>
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<td>Soil Soil/Gravel</td>
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<td>D: Metal-Activ</td>
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<td>D: Concrete</td>
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<td>D: Metal-Cont</td>
<td>Debris: Metal Contaminated</td>
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<tr>
<td>D: Inorg N-Mtl</td>
<td>Debris: Inorganic NonMetal</td>
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<td>D: Organic</td>
<td>Debris: Organic</td>
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<td>D: Plastic/Rub</td>
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<td>D: Heterogen</td>
<td>Debris: Heterogeneous</td>
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<td>(Disposal Ready)</td>
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Help: Generator Life Cycles

Most waste generators within the major Hanford programs undergo four life-cycle phases.

As illustrated in Figure 1.1, the four life cycle phases are important in that each phase may determine the program that is responsible for the waste generator. For example, if a facility within Liquid Effluent transitions into a deactivation mode, then responsibility for the facility would generally be transferred from Liquid Effluent to the Transition Activities program.

**Operational**

This phase is defined as that period of time in which a waste generator's activities are targeted toward a certain plan, project, end-product, or service. Often the type of operational activity can allow a waste generator to be categorized into a specific program area.

**Transition (deactivation)**

This phase is distinguished by specific deactivation activities to eventually turn over the facility to the D&D program. Facilities in the deactivation phase are generally the responsibility of the Transition Activities functional group.

**Surveillance & Maintenance**

This phase is defined as that period of time between the completion of transition
(deactivation) and the commencement of D&D. Programmatic responsibility for waste generated in this phase is currently the responsibility of the Environmental Restoration program.

**Decontamination and decommissioning (D&D)**

This phase is defined as that period in which the facility and affected environment is completely remediated after deactivation has occurred. Facilities in this phase are the responsibility of the Environmental Restoration (ER) program.
Standard hazardous characteristic types

<table>
<thead>
<tr>
<th>Initial</th>
<th>Name</th>
<th>Definition</th>
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</thead>
<tbody>
<tr>
<td>A:</td>
<td>Ignitable</td>
<td>causes fire through friction, absorption of moisture, or spontaneous chemical reaction</td>
</tr>
<tr>
<td>B:</td>
<td>Corrosive</td>
<td>causes destruction of human skin or has a severe corrosive rate on steel</td>
</tr>
<tr>
<td>C:</td>
<td>Reactive</td>
<td>typically a sodium or alkali metal alloy, but can also be particulate fines of aluminum, uranium, zirconium, or other pyrophoric metals; may be mixed with stabilizing metals</td>
</tr>
<tr>
<td>D:</td>
<td>Metals</td>
<td>toxic metals that are not contaminated with mercury</td>
</tr>
<tr>
<td>E:</td>
<td>Mercury &gt;= 260ppm</td>
<td>toxic metals that are specifically contaminated with mercury</td>
</tr>
<tr>
<td>F:</td>
<td>Organic</td>
<td>toxic organic compounds</td>
</tr>
<tr>
<td>G:</td>
<td>WT, WP, WSC2</td>
<td>state regulated toxic, persistent, and corrosive compounds, respectively.</td>
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<tr>
<td>H:</td>
<td>PCB &lt; 50 ppm</td>
<td>polychlorinated biphenyl-contaminated compounds (as designated in 40 CFR 761 or WAC 173-303-071) with a PCB concentration of less than 50 parts per million</td>
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<tr>
<td>J:</td>
<td>PCB ≥ 50 ppm</td>
<td>polychlorinated biphenyl-contaminated materials (as designated in 40 CFR 761 or WAC 173-303-071) with a PCB concentration of greater than or equal to 50 parts per million</td>
</tr>
</tbody>
</table>

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


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Reports

- Forecast Comparison, FY2001.0 to FY2000.0 Forecast
- Solid Waste Generators by Program and Total Volume
- Solid Waste Generators by Total Volume

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


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# Report - Forecast Comparison, FY2000.1 to FY2000.0 Forecast

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## Forecast Comparison, FY2000.0 to FY2001.0 Forecast (FY2000.0 - FY2000.0)

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<th>CR- MELV</th>
<th>RA- MELV</th>
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<th>CR- TRU Total</th>
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Report - Solid Waste Generators by Total Volume

For best results, print this report Landscape (11x8.5)

Sum of totals may not add due to rounding: numbers over 10 m³ are rounded to the nearest 10 m³, numbers less than 10 m³ are rounded to integers, non-zero numbers less than 1 are rounded to 1.
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<th>LLV III</th>
<th>CIL</th>
<th>REL</th>
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## SWIFT Report – Report - Solid Waste Generators by Total Volume

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


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**SWIFT FY2001 Home Page**  **Table of Contents**  **Hanford Home Page**
**Report - Solid Waste Generators by Functional Group and Total Volume**

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

<p>| Functional Group | LEV Total | LEV Subtotal | LEV_V | LEV_HV | LEV_THRU(M) | LEV_TOTAL | LEV_MLLV | MILV_Total | MILV_MLLV | MILV_THRU(M) | MILV_THRU | THRU_Total | THRU_MLLV | THRU_THRU | THRU_MLLV | THRU_THRU |
|------------------|-----------|--------------|-------|--------|-------------|-----------|---------|------------|------------|--------------|-----------|-----------|-----------|-----------|-----------|
| 222-6 Analytical Laboratory | 6,449 | 4,289 | 2,159 | 2,109 | 2,189 | 2,189 | 2,189 | 2,189 | 2,189 | 2,189 | 2,189 | 2,189 | 2,189 | 2,189 | 2,189 |
| 2228 Waste Sampling &amp; Characterization Facility | 486 | 230 | 256 | 189 | 189 | 189 | 189 | 189 | 189 | 189 | 189 | 189 | 189 | 189 | 189 |
| Surplus Facilities | 11,674 | 182 | 180 | 11,491 | 51 | 11,339 | 102 | 11,449 |
| Dwy Corp | 7,154 | 7,143 | 7,143 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 | 12 |
| 300 Area Liquid Effluent Facilities | 4,638 | 4,552 | 4,552 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 | 48 |
| Ames Laboratory: Ames, Iowa | 117 | 117 | 117 | | | | | | | | | | | | |
| Argonne National Laboratory: East | 10,262 | 10,262 | 9,421 | 861 | | | | | | | | | | | | |
| Bates Accelerator: Massachusetts | 11 | 11 | 11 | | | | | | | | | | | | |
| Battelle Columbus Laboratories | 1,167 | 1,086 | 412 | 673 | 22 | 5 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 | 17 |
| Bettis Atomic Power: Laboratory | 1,014 | 1,013 | 1,013 | | | | | | | | | | | | |
| Bettis Atomic Power: Shipyards | 1 | 1 | 1 | | | | | | | | | | | | |
| Brookhaven National Laboratory | 8,586 | 8,586 | 8,586 | | | | | | | | | | | | |
| Energy Technology Engineering Center | 1,427 | 1,412 | 1,412 | | | | | | | | | | | | |
| Fermi National Accelerator Laboratory | 1,781 | 1,781 | 1,781 | | | | | | | | | | | | |
| Knolls Atomic Power: Laboratory | 16 | 16 | 16 | | | | | | | | | | | | |</p>
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