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Solid Waste 30-Year Volume Summary

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EXECUTIVE SUMMARY

A 30-year forecast of the solid waste volumes to be generated or received at the U.S. Department of Energy Hanford Site is described in this report. The volumes described are low-level mixed waste (LLMW) and transuranic/transuranic mixed (TRU/TRUM) waste that will require treatment, storage, and disposal at Hanford's Solid Waste Operations Complex (SWOC) during the 30-year period from FY 1994 through FY 2023. The data used to complete this document were collected from onsite and offsite waste generators who currently, or are planning to, ship solid wastes to the Hanford Site.

An analysis of the data suggests that over 300,000 m³ of LLMW and TRU/TRUM waste will be managed at Hanford's SWOC over the next 30 years. An extensive effort was made this year to collect this information. The 1993 solid waste forecast was used as a starting point, which identified approximately 100,000 m³ of LLMW and TRU/TRUM waste to be sent to the SWOC. After analyzing the forecast waste volume, it was determined that additional waste was expected from the tank waste remediation system (TWRS), onsite decontamination and decommissioning (D&D) activities, and onsite remedial action (RA) activities. Special studies and interviews were conducted to obtain these volumes, causing the total 30-year volume to increase by approximately 200%.

TWRS is expected to generate a large portion (46%) of the overall waste volume. (Over 100,000 m³ of this waste will be generated from the retrieval of long-length equipment). The D&D of Hanford's onsite facilities is a second major contributor (19%) of this waste. Onsite RA activities will generate an additional 18% of the waste.

Data presented in this report establish a starting point for solid waste management planning. It is recognized that forecast estimates will vary (typically increasing) as facility planning and missions continue to change and become better defined, but the information presented still provides useful insight into Hanford's future solid waste management requirements. Solid waste management facilities will continue to provide adequate treatment, storage and disposal through existing and planned solid waste facilities. The new volumes presented within this document will be appropriately incorporated into the solid waste technical baseline.

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CONTENTS

EXECUTIVE SUMMARY	iii
1.0 INTRODUCTION	1-1
2.0 OVERVIEW OF 30-YEAR WASTE VOLUMES	2-1
2.1 WASTE GENERATOR GROUPS	2-1
2.2 WASTE CATEGORIES	2-2
2.3 FORECASTED WASTE VOLUMES	2-2
2.3.1 Waste Volumes by Waste Generator Group	2-3
2.3.2 Waste Volumes by Waste Category	2-4
2.4 DATA OBSERVATIONS	2-6
3.0 ONSITE MISSION SUPPORT WASTE	3-1
3.1 BACKGROUND	3-1
3.2 WASTE GENERATORS	3-1
3.3 FORECASTED VOLUMES	3-3
3.3.1 Forecasted Volumes for Onsite Mission Support Waste Generator Group	3-3
3.3.2 Forecasted Volumes by Waste Generator	3-4
3.4 DATA OBSERVATIONS	3-6
4.0 TANK WASTE REMEDIATION SYSTEM WASTE	4-1
4.1 BACKGROUND	4-1
4.2 WASTE GENERATORS	4-2
4.3 FORECASTED VOLUMES	4-4
4.3.1 Forecasted Volumes for TWRS Waste Generator Group	4-4
4.3.2 Forecasted Volumes by Waste Generator	4-5
4.4 DATA OBSERVATIONS	4-5
5.0 DECONTAMINATION AND DECOMMISSIONING WASTE	5-1
5.1 BACKGROUND	5-1

5.2	WASTE GENERATORS	5-1
5.3	FORECASTED VOLUMES	5-2
5.3.1	Forecasted Volumes for D&D Waste Generator Group . .	5-2
5.3.2	Forecasted Volumes by Waste Generator	5-3
5.4	DATA OBSERVATIONS	5-4
6.0	REMEDIAL ACTION WASTE	6-1
6.1	BACKGROUND	6-1
6.2	WASTE GENERATORS	6-1
6.3	FORECASTED VOLUMES	6-2
6.3.1	Forecasted Volumes for RA Waste Generator Group . .	6-2
6.3.2	Forecasted Volumes by Waste Generator	6-2
6.4	DATA OBSERVATIONS	6-3
7.0	OFFSITE WASTE	7-1
7.1	BACKGROUND	7-1
7.2	WASTE GENERATORS	7-1
7.3	FORECASTED VOLUMES	7-3
7.3.1	Forecasted Volumes for Offsite Waste Generator Group	7-3
7.3.2	Forecasted Volumes by Waste Generator	7-4
7.4	DATA OBSERVATIONS	7-4
8.0	REFERENCES	8-1
	APPENDIX A - LOW-LEVEL WASTE VOLUMES	A-1
	APPENDIX B - 1992 & 1993 FORECAST VOLUME COMPARISON	B-1
	APPENDIX C - QUESTIONS FOR MAJOR FORECASTERS	C-1
	APPENDIX D - PROPOSED PLAN FOR SINGLE-SHELL TANKS/DOUBLE-SHELL TANKS LONG-LENGTH EQUIPMENT VOLUMES	D-1
	APPENDIX E - D&D REFERENCES	E-1
	APPENDIX F - ANNUAL WASTE GENERATOR VOLUMES BY WASTE CLASS	F-1

APPENDIX G - ANNUAL WASTE CLASS VOLUMES BY WASTE GENERATOR G-1

APPENDIX H - FY-1993 WASTE GENERATOR LIST BY WASTE GENERATOR GROUP . . H-1

LIST OF FIGURES

2-1	Total 30-Year Solid Waste Volumes by Waste Generator Group . . .	2-3
2-2	Annual Solid Waste Volumes by Waste Generator Group	2-4
2-3	Total 30-Year Solid Waste Volumes by Waste Category	2-5
2-4	Annual Solid Waste Volumes by Waste Category	2-6
3-1	Onsite Mission Support Waste Generators	3-1
3-2	Total 30-Year Solid Waste Volumes by Waste Category for Onsite Mission Support	3-3
3-3	Annual Solid Waste Volumes by Waste Category for Onsite Mission Support	3-4
4-1	TWRS Waste Generators	4-2
4-2	Total Solid Waste Volumes by Waste Category for TWRS Facilities	4-4
4-3	Annual Solid Waste Volumes by Waste Category for TWRS Facilities	4-5
5-1	D&D Waste Generators	5-2
5-2	Total 30-Year Solid Waste Volumes by Waste Category for D&D Facilities	5-3
5-3	Annual Solid Waste Volumes by Waste Category for D&D Facilities	5-4
6-1	Remedial Action Waste Generators	6-2
6-2	Total 30-Year Solid Waste Volumes by Waste Category for Remedial Action Waste	6-3
6-3	Annual Solid Waste Volumes by Waste Category for Remedial Action Waste	6-4
7-1	Major Offsite Waste Generators	7-1
7-2	Total 30-Year Solid Waste Volumes by Waste Category for Offsite Facilities	7-3
7-3	Annual Solid Waste Volumes by Waste Category for Offsite Facilities	7-4

LIST OF TABLES

3-1	Onsite Mission Support Waste Generator Volumes	3-5
4-1	TWRS Waste Generators Volumes	4-6
5-1	D&D Waste Generator Volumes	5-5
6-1	RA Waste Generator Volumes	6-4
7-1	Offsite Waste Generator Volumes	7-5

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SOLID WASTE 30-YEAR VOLUME SUMMARY

1.0 INTRODUCTION

This document, prepared by Pacific Northwest Laboratory (PNL) under the direction of Westinghouse Hanford Company (WHC), provides a description of the annual low-level mixed waste (LLMW) and transuranic/transuranic mixed (TRU/TRUM) solid waste volumes expected to be managed by Hanford's Solid Waste Operations Complex (SWOC) over the next 30 years. The sources of the waste and the waste categories will also be described.

This document is intended to be used as a reference for short- and long-term planning of the Hanford treatment, storage, and disposal (TSD) activities over the next several decades. By estimating the waste volumes that will be generated in the future, facility planners can determine the timing of key waste management activities, evaluate alternative treatment strategies, and plan storage and disposal capacities. In addition, this document can be used by other U.S. Department of Energy (DOE) sites and the general public to gain a better understanding of the types and volumes of waste that will be managed at Hanford.

For the past 4 years, the annual solid waste volume forecast (for the next 30 years) has been collected from all onsite and offsite generators that are planning to ship waste to the Hanford Site. The waste is generated from ongoing operations, maintenance activities, facility deactivation, decontamination and decommissioning (D&D) of facilities, and environmental restoration (ER) activities. The generators provide details about the amount of waste to be generated each year, the containers that will be used to ship the waste, and the specific waste characteristics that help determine the proper TSD requirements. This document, which is based upon the 1993 Solid Waste Forecast, only provides information on the annual LLMW and TRU/TRUM waste volumes; a summary of the expected low-level waste (LLW) volumes has been provided in Appendix A. Additional reports will follow that describe the waste characteristics and container types associated with each waste category. Appendix B provides a detailed comparison of the 1992 and 1993 Solid Waste Forecasts.

As described in the following, an additional effort was made this year to enhance the forecast information:

- **Waste Generator Contact and Data Assessment:** Each waste generator was surveyed to confirm and clarify forecast projections (e.g., waste categories, volumes, units, and scheduling). Adjustments in the forecasts were made to reflect these conversations. In addition, major waste generators were contacted to answer specific questions about their confidence in volumes, possible changes in shipping schedules, potential volume fluctuations, and assumptions used in preparing the forecasts. The questionnaires are included in Appendix C.

- **Data Collection Improvements:** The data collection methods in 1993 have been improved from previous years. Sites were visited and personal contacts were made to assist generators in completing the forecast forms. Onsite training seminars and one-on-one consultations were used to clarify concerns. The seminars also provided an avenue for explaining the importance and use of the data being collected.
- **Additional References:** Several additional references have been used to supplement the forecast information and complete this document. Two internal memos from Ralph Kelley at WHC were used to provide more information on the tank farm equipment. The memos have been provided in Appendix D. Two sources, which are summarized in Appendix E, were used to further define the potential D&D volumes, and an interface control document (Casbon 1993) was used to enhance the remedial action (RA) volumes.

Because this document must serve several audiences, the information will be described at various levels of detail. Section 2.0 of this report provides an overview of the LLMW and TRU/TRUM waste volumes. The information is described by waste group and waste category:

- The five waste groups, which have been established to arrange generators with similar missions and operating characteristics, consist of Onsite Mission Support, Tank Waste Remediation System (TWRS), D&D, RA, and Offsite Facilities.
- The waste categories, which have been used to describe the waste, are Contact Handled (CH) LLMW, Remote Handled (RH) LLMW, CH_TRU/TRUM, and RH_TRU/TRUM waste.

Sections 3 through 7 provide more detailed descriptions of the five waste generator groups: Onsite Mission Support, TWRS, D&D, RA and Offsite Facilities, respectively. Each Section provides background information regarding the source of data, profiles of the primary waste generators, forecasted total and annual volumes by waste type, forecasted total volume by generator, and a discussion of the confidence in the data.

Appendix F contains a report summarizing the annual waste generator volumes by waste class. Appendix G contains a report of the annual waste class volumes by waste generator. Appendix H provides a listing of each waste generator included in the five waste generator groups.

2.0 OVERVIEW OF 30-YEAR WASTE VOLUMES

This section provides an overview of the solid waste volumes expected to be generated by onsite and offsite waste generators and shipped to the Hanford Site over the next 30 years. These waste volumes are being sent to Hanford for TSD, and they range from LLMW that can be treated and sent to the Hanford burial grounds to TRU/TRUM waste that will require repackaging and certification prior to being shipped offsite to the Waste Isolation Pilot Plant. The purpose of the information presented here is to provide a basis for short- and long-term planning of Hanford's solid waste management facilities.

2.1 WASTE GENERATOR GROUPS

The waste volumes being described in this document are subdivided into five waste generator groups. See Sections 3.0 through 7.0 for specific information for each group, (e.g., primary waste generators, assumptions).

- Onsite Mission Support. This waste is generated from ongoing operations and maintenance activities. Several facilities exist and are planned onsite that are or will be operating or are producing waste while maintaining the facility until a decision has been reached to shutdown the facility or to introduce a new mission. These waste volumes are estimated by the generators and submitted in the 30-Year Forecasts.
- TWRS. This waste results from current tank farm operations, retrieval of existing tank farm long-length equipment, retrieval pumps and miscellaneous equipment that will be used for retrieval of tank waste, and future tank waste treatment projects. These waste volumes were obtained from the 30-Year Forecast and two memos provided in Appendix D. Projected waste volumes from tank waste characterization, tank waste pretreatment prior to vitrification, tank closure, and facility closure have not been included in the reported volumes.
- D&D Facilities. Several facilities on the Hanford Site will eventually be closed and will require D&D prior to disposal or release of "cleaned" material. The facilities currently listed on the surplus facilities list have been included in this report, as well as several facilities that exist onsite that will eventually require D&D. The surplus facility waste was obtained from the 30-Year Forecast, and the other D&D volumes were derived from two primary sources described in Appendix E.RA. This waste is generated during ER activities that are completed to remediate the Hanford Site. The waste consists primarily of soils excavated during cleanup activities. The volumes are based upon the 30-Year Forecast and remediated waste projects identified in Casbon (1993).

- Offsite Facilities. Several offsite facilities have been certified to ship waste to the Hanford Site. Most offsite waste generators are national laboratories, universities, or DOE-owned facilities conducting such activities as ER, D&D, and operations/maintenance. The waste volumes for these generating were obtained from the 30-Year Forecast.

2.2 WASTE CATEGORIES

The waste can be arranged into four broad categories based upon concentrations of radionuclides and surface dose rates of the waste package. These categories, which will be used to define the waste volumes throughout the document, are briefly described below:

- Contact-handled Low-Level Mixed Waste(CH LLMW): This waste has a dose rate less than 200 mrem/h at contact with the waste container that contains radioactivity not classified as TRU waste, spent nuclear fuel, or high-level waste (concentrations of TRU radionuclides are less than or equal to 100 nCi/g of the waste matrix) and is also defined as dangerous waste in the Washington Administrative Code (WAC) 173-303.
- Remote-handled Low-Level Mixed Waste(RH LLMW): This waste has a dose rate greater than or equal to 200 mrem/h at contact with the waste container that contains radioactivity not classified as TRU waste, spent nuclear fuel, or high-level waste and is also defined as dangerous waste in WAC 173-303.
- Contact-handled Transuranic/Transuranic Mixed Waste (CH TRU/CH TRUM): This radioactive waste has a dose rate 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 waste as defined in WAC 173-303.
- Remote-handled Transuranic/Transuranic Mixed Waste(RH TRU/RH TRUM): Waste with a dose rate greater than or equal to 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 waste as defined in WAC 173-303.

2.3 FORECASTED WASTE VOLUMES

The total volume of waste expected at the Hanford Site is approximately 307,000 m³. This is a 210% increase compared to the 99,200 m³ of waste forecast in 1992. The main reason for this increase is the addition of several waste sources. In 1992, only the solid waste forecasts were used to estimate the 30-year volumes; however, additional waste sources were identified this year. These sources include long-length equipment waste from the tank farms,

waste from onsite past practice remediation projects, and volumes from D&D of onsite facilities that are not currently identified on the surplus facilities list. The long-length equipment waste resulted in an increase of 100% (100,000 m³) from the 1992 volumes, the waste from past practice remediation projects was a 56% increase (56,000 m³), and the volumes from the D&D studies increased the estimates by 50% (50,000 m³). The actual increase due to the forecasts was only 3%. Appendix B provides a detailed comparison of the 1992 and 1993 Solid Waste Forecasts. This appendix discusses changes in volumes for all waste categories and for the primary generators in each waste category. The volume information by waste generator group and by the four waste categories is provided in the following sections.

2.3.1 Waste Volumes by Waste Generator Group

Figure 2-1 shows the cumulative waste volumes that are expected to be generated by the five waste generator groups. Of the total 307,000 m³ meters expected at the Site, approximately 46% of the waste is from the TWRS program. The onsite operations and maintenance waste makes up 7% of the total volume, D&D makes up 19%, remedial action contributes 18%, and the offsite waste generators contribute the final 10%.

Figure 2.2 illustrates the expected timing of these waste volumes. The years shown are from 1994 through 2023 with a special designation for "Held"

Figure 2-1. Total 30-Year Solid Waste Volumes by Waste Generator Group.

Figure 2-2. Annual Solid Waste Volumes by Waste Generator Group.

waste. (Held waste is waste that has not been scheduled to be shipped to the SWOC over the next 30 years.) Each stacked bar shown in Figure 2.2 represents the volume contributed by a waste generator group.

The graph shows two time frames in which the volumes peak:

- From 2004 through 2006, the volumes peak at approximately 17,000 per year. This volume is generated primarily by a double shell tank (DST) project scheduled during this time period. This is a pilot-scale project being conducted to evaluate the pretreatment requirements of DST waste. The project was originally scheduled to start in 1995, but due to the delay in the tank waste treatment plants (low-level vetrification and high-level vitrification plants), an assumption was made that this waste would be delayed as well.

2.3.2 Waste Volumes by Waste Category

Figure 2-3 has been provided to illustrate the overall waste category volumes expected to be managed at the SWOC. The largest portion of the waste will be CH_LLMW, which is expected to exceed 120,000 m³ over the next 30 years.

Figure 2-3. Total 30-Year Solid Waste Volumes by Waste Category.

Figure 2-4 illustrates the annual volumes for each waste category. A summary of the waste volumes as well as the primary contributors is described below:

- The CH_LLMW waste volumes are fairly constant from 1994 through 2023, peaking at approximately 6200 m³ from 2004 through 2009. The waste volumes increase during this time period due to RA and D&D activities.
- The RH_LLMW volumes show a gradual increase from 1994 through 2012, peaking at 7600 m³ from 2013 through 2017. The volumes from 2013 to 2017 result primarily from the retrieval of long-length equipment from the Hanford underground storage tanks.
- The CH_TRU/TRUM waste volumes are extremely small until the year 2013, at which time the volumes increase to approximately 3,000 m³ per year for 10 years. This volume is forecast for D&D of facilities not currently identified on the surplus facilities list.
- The RH_TRU/TRUM waste volumes peak from 2004 through 2006, corresponding to process tests for pretreatment of DST waste. The waste volumes increase again from 2013 through 2022 due to the long-length equipment shipments.

Figure 2-4. Annual Solid Waste Volumes by Waste Category.

2.4 DATA OBSERVATIONS

Data presented in this report establish a starting point from which solid waste management plans can be developed, alternative planning scenarios can be evaluated, and design can be initiated for specific TSD facilities. The volumes in this report provide a low estimate of the waste that will be managed at the SWOC, and although missions and programs will continue to change, analysis of the primary waste sources indicates that the volumes have a strong potential to continue to increase over time. A brief explanation of the factors that could cause significant volume increases are summarized below:

- TWRS Waste generators - Due to limited information, waste volumes from tank and facility closure and tank waste sampling and pre-treatment have not been estimated. Also, scenarios that may increase waste volumes, such as the increase in processing capacity of HWVP, have not been included in the forecasts. Lastly, many special projects (e.g., the mitigation pump recently installed in Tank 101-SY) that will occasionally generate long-length equipment have not been addressed.

- D&D Waste Generators - Only those facilities currently identified on the surplus facilities list and 18 other Hanford waste generators have been included in these estimates. As additional facilities are identified for D&D, it is expected that this waste volume will increase. (The Fuel Fabrication Facilities Transition Project and the Fast Flux Test Facility [FFTF] have not provided D&D waste information.)
- Onsite Mission Support Waste Generators - Additional onsite support projects are also expected to increase the waste volume estimates. For example, the Plutonium Finishing Plant (PFP) is planning on some additional projects which would increase the waste volume shipments.
- Offsite Waste Generators - Several offsite waste generators are expected to generate additional ER waste that is not currently reported in the forecasts (e.g., Portsmouth, Paducah Energy Systems, and Argonne). If this waste is sent to Hanford, the volumes could increase substantially.

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3.0 ONSITE MISSION SUPPORT WASTE

This section provides waste volumes and waste generator profiles for Onsite Mission Support generators. Onsite Mission Support consists of Hanford facilities with a mission statement reflecting an operational, future operational, and/or a maintenance status.

3.1 BACKGROUND

The volumes presented in this section are from the 1993 Solid Waste Forecasts and were developed based upon the assumption that the Site missions and appropriated funding will continue as forecasted.

3.2 WASTE GENERATORS

The 1993 Solid Waste Forecast reports 21,650 m³ of Onsite Mission Support waste to be generated in the next 30 years. This volume is approximately 7% of the total waste volume expected at the Site over the next 30 years. As shown in Figure 3-1, 93% of the LLMW and TRU/TRUM will be generated by five waste generators. The following information briefly describes each of these major waste generators. The waste generator's mission, assumptions, and possible waste volume fluctuations are included.

- **Buried Equipment (WHC-BQUIP):** This generator was identified as Fleet Site Support in 1992; however, it has been renamed to more accurately reflect its mission. It disposes of general-purpose coded equipment, such as vehicles and mobile construction units used in the tank farms. A 1993 Solid Waste Forecast was not submitted for this generator because of funding issues; therefore, the

Figure 3-1. Onsite Mission Support Waste Generators.

1992 forecast was used. The volumes forecasted are based on past experience and existing waste that has not been shipped since 1992 due to lack of funding. The existing waste is located with the respective waste generators. The schedule for this generator is not stable, but the volumes are solid since they are based on past practice and existing waste volumes.

- **Building 2025 E, 200 Area Effluent Treatment Facility (WHC PX C018H):** This facility is a water treatment facility that removes impurities from tank water. These impurities are concentrated and dried to a powder. All other wastes are generated from the process by either contact with the water, waste, or air venting system. Building 2025 E is currently being constructed with an expected start date of December 1994; however, with the new Tri-Party Agreement revisions, the start up of this facility is not expected until June 1995. The new start date has not been included with this year's forecast, so revisions are expected in next year's forecast volumes.
- **Plutonium Finishing Plant (PFP) (WHC 2345Z):** The PFP has not been operational since 1989, but continues to store plutonium material and plutonium residues in the plant within vaults and hoods. This waste generator is currently in standby mode pending an Environmental Impact Statement (EIS) analysis. The forecasted solid waste streams for the next 30 years are based on maintenance operations only; thus, a high confidence is assigned. The PFP has indicated a slight increase in volumes with additional projects in the future which have not been forecasted due to uncertainties in the exact nature and timing of such projects. The forecast does not assume any waste generation associated with facility cleanout and transition to D&D.
- **222-S Laboratory (WHC 222S):** The Process and Analytical Laboratory, or 222-S Laboratory, performs analysis of tank farm core samples at Hanford. The majority of LLMW comes directly from this process while secondary waste accounts for a small fraction of the LLMW in the form of gloves, paper, and pipettes. The forecasted volumes are based on past shipments and inventory sheets that estimate the percentage of different wastes in a drum; therefore, high confidence is placed on these volumes. It is assumed by this waste generator that more LLMW may be generated through 1998 with an increase in tank sampling; however, this assumption is not reflected in the forecast.
- **T-Plant Building (WHC 221T):** Wastes from this facility will be generated from decontamination of equipment from onsite facilities, sorting and repackaging of waste from other generators, and routine plant operation and maintenance activities. D&D of the T-Plant facility is addressed in Section 5.0. Waste on the canyon floor from other generators is not in this forecast because T-Plant does not have adequate characterization to classify and package the waste. Once characterization is complete, it is expected that forecasted waste volumes will increase. The RH TRU/TRUM volumes forecasted are sludges from the tank waste handling system in

T-Plant. These sludges are currently settled out in the tanks in the facility and will be removed when an upgraded secondary containment system is installed in the facility. It is assumed by this waste generator that D&D of other facility's equipment will begin in FY 1994 and continue through the forecasted period; therefore, the shipping schedule may be subject to change if the D&D date is altered.

3.3 FORECASTED VOLUMES

A description of the waste category volumes for the Onsite Mission Support group and for the specific Onsite Mission Support waste generators is provided in the following sections.

3.3.1 Forecasted Volumes for Onsite Mission Support Waste Generator Group

Figure 3-2 shows the overall volumes for this waste generator group. Seventy-seven percent of the waste is CH_LLMW and 20% is CH_TRU/TRUM. The remaining 3% consists of RH_LLMW and RH_TRU/TRUM.

Figure 3-3 shows the annual volumes by waste category. Generally, the graph appears to have a cycle for CH_LLMW. This is due to buried equipment which generally forecasts high waste volumes for a 3- to 4-year time period, followed by 3 to 4 years of low waste volumes.

Figure 3-2. Total 30-Year Solid Waste Volumes by Waste Category for Onsite Mission Support.

Figure 3-3. Annual Solid Waste Volumes by Waste Category for Onsite Mission Support.

The CH_TRU/TRUM waste volumes stay fairly constant, with peaks occurring in 1995 and 2000. In 1995 the volumes increase because of a scheduled PUREX project. In the year 2000, the increased waste volumes are based upon the start up of a solid waste support project (Project W221).

The 350 m³ of RH_TRU/TRUM volumes that appear in FY 1995 are mainly from the K-Basins Operations. During this year, K-Basins are planning encapsulation activities, which accounts for the slight increase in FY 1995. The RH_LLMW and RH_TRU/TRUM waste volumes are extremely small for the remaining years.

3.3.2 Forecasted Volumes by Waste Generator

The 1993 Solid Waste Forecasts are submitted by 25 Onsite Mission Support waste generators; however, only 21 generate LLMW and TRU/TRUM waste. Table 3-1 shows the waste volumes by waste category generated by the Onsite Mission Support waste generators. The main drivers for the CH_LLMW are buried equipment and the 2025 E Building, which account for 81% of the total forecasted CH_LLMW for this waste generator group. The main driver for the CH_TRU/TRUM volume of 4,410 m³ is the PFP which accounts for 86% of the total CH_TRU/TRUM waste.

Table 3-1. Onsite Mission Support Waste Generator Volumes.

Waste Generator	CH LLM W(m ³)	RH LLMW (m ³)	CH_TRU/TRUM (m ³)	RH_TRU/TRUM (m ³)	TOTAL (m ³)
Buried Equipment	7,663	0	0	0	7,663
Building 2025E, 200 Area Effluent Treatment Facility	5,762	0	0	0	5,762
Plutonium Finishing Plant	219	0	3,780	0	3,999
222-S Laboratory	1,787	122	0	0	1,909
T-Plant Building	594	312	0	28	934
Pacific Northwest Laboratory	433	14	113	1	561
K-Basins Operations	9	0	133	136	278
Solid Waste Retrieval Facility - Phase I	0	0	183	0	183
CP PUREX & UO3-224U Facilities	14	0	117	0	131
DRD 100 Area	60	0	0	0	3
Solid Waste Retrieval Facility - Phase II	0	0	46	0	46
Solid Waste Radioactive Mixed Waste Storage Facility	0	0	38	0	38
Defense Waste Management Low-Level Burial Grounds	34	0	0	0	34
Liquid Waste Handling Facility	24	0	0	0	24
Fuels Operations	17	0	0	0	17
Defense Waste Management B-Plant and WESF	4	0	0	0	4
Geo. Tech. Engineering Laboratory	3	0	0	0	3

Table 3-1. (contd)

Waste Generator	CH LLM W(m ³)	RH LLMW (m ³)	CH_TRU/TRUM (m ³)	RH_TRU/TRUM (m ³)	TOTAL (m ³)
Defense Waste Management Solid Waste Operations	3	0	0	0	3
ARD Fuel Fabrication Building	0.2	0	0.6	0	0.8
ARD Large Sodium Fire Facility	0.6	0	0	0	0.6
T-Plant Head End Cleanup	0.2	0	0	0	0.2
TOTAL	16,627	448	4,411	165	21,651

3.4 DATA OBSERVATIONS

The forecasted volumes are a best estimate of the waste volumes that will be generated over the next 30 years. The volumes for this waste generator group are mostly existing waste or future waste volumes based on historical generation rates. T-Plant is the exception, however, because the future mission of T-Plant does not have a historical basis to estimate the forecasted volumes. In addition, T-Plant has not identified all the onsite facilities that will send equipment to T-Plant for D&D; thus, the forecasted volumes do not represent these unknown projects. See Section 5.0 for information regarding the actual D&D of the T-Plant building.

The Onsite Mission Support waste generator group forecasted volumes that are expected to reflect actual waste generation rates; however, unreported additional waste volumes are indicated by some waste generators. Additional projects are expected for the PFP, and the 222-S Laboratory has the potential to increase its waste volumes due to an accelerated tank sampling schedule. These possible scenarios have not been forecasted in the current data.

4.0 TANK WASTE REMEDIATION SYSTEM WASTE

This section provides waste volumes and waste generator profiles for LLMW and TRU/TRUM solid waste expected from TWRS. The waste results from current tank farm operations, retrieval of existing tank farm long-length equipment, retrieval pumps and miscellaneous waste that will be generated during retrieval of tank waste, and future tank waste treatment projects. The estimates do not include waste from pretreatment activities or tank and facility closure. Estimates will be added to these activities as information becomes available.

4.1 BACKGROUND

The volumes presented in this section were obtained from the 1993 Solid Waste Forecasts submitted by the tank farm waste generators and from memos (see Appendix D) describing long-length equipment in the tanks and the secondary wastes associated with the retrieval of this equipment. Several of the DST and single-shell tank (SST) waste generators included long-length equipment in their forecasts; however, these estimates were only about half of the total identified by an engineering study for the retrieval of long-length equipment (Titzler 1993). The estimates contained in the study are believed to be more representative of the actual amount of waste that will be handled by the SWOC because the forecasts were prepared before the revisions to the Tri-Party Agreement (TPA) were completed. The TPA is an agreement between the DOE, U.S. Environmental Protection Agency (EPA), and the Washington State Department of Ecology that sets the time table for cleanup of the Hanford Site. The forecasts also did not include any estimates of additional long-length equipment that will be required for the retrieval of tank waste. For these reasons, estimates, based on the engineering study and the TPA, were prepared for long-length equipment and secondary wastes. These estimates, summarized in the memos contained in Appendix D, were then used to determine the volumes of long-length equipment and secondary wastes. A 90:10 RH LLMW to RH TRU/TRUM ratio was assumed for the long-length equipment. The volumes and waste classes for the secondary wastes were based upon the forecast from SST retrieval. This generator forecasts wastes that are believed to be similar to the secondary wastes generated during retrieval of long-length equipment. The volumes in the forecasts corresponding to long-length equipment were excluded to avoid double counting.

The new TPA also changed the schedule and technologies for treatment of the tank waste. As new forecasts that include these changes are not available, several of the current forecasts were adjusted in order to more closely reflect the TPA milestones. These adjustments resulted in the volume estimates being delayed 8 years for the Hanford Waste Vitrification Plant (HWVP), the Hanford Grout Facility, and DST Neutralized Current Acid Waste (NCAW) Process Tests. The 8-year delay is an assumed "best guess" of when the waste will be received. Although the grout and HWVP projects have been replaced under the new agreement, the estimates for these generators have been included because the facilities that will replace them have not yet submitted forecasts. It is assumed that the new facilities will produce solid waste and that the volumes will be similar to those from the grout facility and HWVP.

4.2 WASTE GENERATORS

The total volume of LLMW and TRU/TRUM solid waste from the TWRS group is expected to be 140,930 m³ or 46% of the solid waste at the Hanford Site. Figure 4-1 shows that the top five generators account for 95% of this waste. The following information briefly describes these major waste generators. The waste generator's mission, assumptions, and possible waste volume fluctuations are included.

- Long-Length Equipment (LL EQUIP):** During tank farm cleanup, current planning is to remove the long-length pieces of equipment from the tanks and send this equipment to the SWOC for treatment, storage, and disposal. The long-length equipment is equipment that has been installed in the tanks and is greater than 12 feet in length with some pieces in excess of 60 feet. Because of the unusual configuration of these wastes, special storage and handling requirements will be necessary. In addition to the equipment currently in the tanks, estimates have been included for pumps and other miscellaneous equipment that will be used for retrieval of tank waste. The retrieval pumps and equipment are also expected to be sent to the SWOC for processing and will have many of the same storage and handling requirements as the long-length equipment currently in the tanks.
- DST NCAW Process Tests (WHC DST PRT):** This waste generator's forecast volumes are based on a proposed project to pretreat tank waste supernatant for the grout facility. The waste projected in the forecast is the zeolite used for ion exchange to remove cesium from tank supernatant. Although the grout facility is no longer in the current tank waste treatment strategy, it is assumed that some type of pretreatment will be required prior to final waste stabilization. Therefore, the volumes estimated for the NCAW Process Tests have been included in this study, but the original 1993 forecast has been delayed by 8 years to correspond to the delay in the forecast for the grout facility.

Figure 4-1. TWRS Waste Generators.

This generator is forecasting for a single project demonstration. If the tests are successful, it is possible that the process could become a full-scale operation. If this were to be the case, a large increase in waste volumes would be expected.

This generator has forecasted RH TRU/TRUM as its only waste category. The basis for this classification is as a worst-case scenario. Therefore, it is possible that the waste will be reclassified. Furthermore, the actual waste volume is only 12% of the external container volume due to the large amount of concrete shielding necessary for this waste. If the waste requires less shielding and thus could be packaged in smaller containers, the actual volume could be significantly less than the forecasted volume.

- **Tank Farm Restoration (WHC TWP W314):** This Major System Acquisition (MSA) project includes the following sub-projects: DST Ventilation Upgrades, Tank Farm Integrated Instrumentation Upgrades, Waste Transfer System Upgrade, Radiation Zone Lighting Upgrades, Tank Farm Electrical Upgrades, SST Ventilation Upgrades, and Tank Farm Centralized Control and Maintenance Facilities. Solid waste generated from these sub-projects will include miscellaneous construction debris, contaminated soils, and demolished tank farm equipment. The scope of the activities involved within each sub-project is in the planning stage. Furthermore, schedules for demolition/construction have been estimated; thus, the forecast shipping schedule is a "best-guess" estimate. It is likely that forecasted volumes, characterization, and schedules will be updated with future analysis and planning resulting in an accelerated volume schedule since the TPA revisions were made after this forecast was submitted.
- **Hanford Waste Vitrification Project (WHC HWVP):** HWVP is a treatment/processing facility for tank waste. Secondary waste generated from this process will result in solid waste streams such as jumper changeouts, master slave manipulator changeouts, and failed equipment. After receipt of the forecast, however, the TPA milestones were revised which delayed this project. Therefore, an 8-year delay has been assumed with waste receipt beginning in 2009. Furthermore, the scope of this project has been expanded to include SST waste and an increase in capacity is planned. This will likely increase the generation of solid waste; however, the increase is not reflected in the forecast.
- **Hanford Grout Facility (WHC GROUT):** Waste generated at this facility will occur during module entry and will include filters, protective gear, tools, failed equipment, ignitable rags, and miscellaneous toxic materials. The TPA has revised milestones that have cancelled this project; however, these secondary wastes will still be produced but by a facility not yet defined. Therefore, it is assumed that the shipping schedule will be delayed by 8 years with receipt of the volumes commencing in 2004.

4.3 FORECASTED VOLUMES

A description of the waste category volumes for the TWRS group and for the specific TWRS waste generators is provided in the following sections.

4.3.1 Forecasted Volumes for TWRS Waste Generator Group

Figure 4-2 shows graphically the distribution of the waste between waste categories. As shown in the figure, the majority of the waste is assumed to be remote handled. This is expected since much of the solid waste will be contaminated as a result of contact with high-activity tank waste.

Figure 4-3 shows the annual volumes by waste category. It is evident that there will be a steady increase in the volume of waste generated from 2008 to 2017. This increase corresponds to the time period when the majority of the underground storage tanks (USTs) are to be retrieved. The large decrease in 2018 indicates that most of the tanks will have been retrieved; however, some residual wastes generated during retrieval will continue to be sent to the SWOC for TSD purposes. As shown in Figure 4-3, a large volume of RH_TRU/TRUM waste is forecast from 2004-2006. The majority of this waste is projected by DST NCAW Process Tests. This generator only forecasts wastes from 2004-2006.

Figure 4-2. Total Solid Waste Volumes by Waste Category for TWRS Facilities.

Figure 4-3. Annual Solid Waste Volumes by Waste Category for TWRS Facilities.

4.3.2 Forecasted Volumes by Waste Generator

There are 18 waste generators in the TWRS group, 10 of which forecast LLMW or TRU/TRUM solid waste. Table 4-1 shows the waste volumes by waste category generated by the TWRS waste generators, and that long-length equipment will account for 97,500 m³, well over half the total volume expected from this group.

A majority of the waste is RH LLMW (65%) which is primarily generated by long-length equipment. The table also shows that all of the CH TRU/TRUM waste in the TWRS group is generated by HWVP. The RH TRU/TRUM is generated primarily by the DST NCAW Process Tests and long-length equipment. The largest contributors to the CH LLMW are tank farm restoration and DWM tank farms.

4.4 DATA OBSERVATIONS

Many of the generators in the TWRS group forecast waste for projects that are currently in the planning stages and could potentially undergo changes in scope or be cancelled. It is expected that cancelled projects would be replaced by other projects because the tank waste does exist and will need to be treated in some manner. Also, much of the long-length equipment, which accounts for 70% of the waste, already exists and is currently in the tanks. For these reasons, it is believed that the volume estimates presented

Table 4-1. TWRS Waste Generators Volumes.

Waste Generator	CH LLMW (m ³)	RH LLMW (m ³)	CH_TRU/TRUM (m ³)	RH_TRU/TRUM (m ³)	TOTAL (m ³)
Long-Length Equipment	0	87,733	0	9,748	97,480
DST NCAW Process Tests	0	0	0	18,414	18,414
Tank Farm Restoration	6,197	0	0	0	6,197
HWVP	1,030	0	2,001	2,854	5,885
Hanford Grout Facility	1,277	4,298	0	0	5,575
DWM Tank Farms	4,095	0	0	0	4,095
Long-Length Equipment Secondary Waste	1,634	0	0	0	1,634
Tank Farms Backlog Waste	931	0	0	0	931
W320 Tank 241 Sluicing	140	283	0	0	422
SST Retrieval	293	0	0	0	293
TOTAL	15,596	92,314	2,001	31,016	140,926

in this section provide a reasonable estimate of the volumes that will be sent to the SWOC for TSD purposes. In addition, it is anticipated that the actual volumes could increase. The estimates are believed to be low for the following reasons:

- Due to limited information, waste volumes from tank and facility closure and tank waste sampling and pretreatment have not been estimated.
- Scenarios that may increase waste volumes, such as the increase in processing capacity of HWVP, have not been included in the forecasts.
- Also, many special projects that will occasionally generate long-length equipment (e.g., the mitigation pump recently installed in tank 101-SY) have not been addressed.

Attempts are currently being made to resolve these issues and revised estimates will be included as information becomes available.

On the other hand, program decisions could cause a dramatic decrease in the total waste volumes. For example, the possibility exists that closure of the SST farms would allow for leaving much of the long-length equipment in place, significantly reducing waste volumes.

5.0 DECONTAMINATION AND DECOMMISSIONING WASTE

This section summarizes the D&D waste from onsite facilities. At the end of its useful life, a facility is shutdown, cleansed of radioactivity to the extent possible, and dismantled or entombed. D&D will be required to some level for all existing and future facilities on the Hanford Site. This section includes estimates for facilities currently on the Surplus Facilities List and 18 additional Hanford waste generators.

5.1 BACKGROUND

D&D data were taken from three references:

- Fiscal year (FY) 1993 Solid Waste Forecast database - Includes solid waste volumes and characteristics for D&D waste of the facilities listed on the surplus facilities list.
- *Draft Report: Waste Stream Evaluation for Long-Term Decontamination Study* - Includes data on the potential D&D waste from 26 of the unlisted Hanford facilities.
- *Estimation of PUREX Equipment and Materials that are Candidates for Removal and Waste Processing During PUREX Plant Closure* (Valero et al. 1994). Includes detailed volume and characteristic information of PUREX D&D waste.

A detailed description of information included in these references and the assumptions made when using these references are found in Appendix E.

5.2 WASTE GENERATORS

The total volume of D&D solid waste is 58,080 m³. The D&D waste accounts for approximately 19% of the total solid waste to be shipped to the SWOC at Hanford. Although the D&D waste is generated by several facilities, 87% of the waste is reported by four facilities. Figure 5-1 shows the four primary generators of the D&D waste volumes. As shown in Figure 5-1, about 40% of the waste is reported by the PFP.

A brief description of the four primary generators (those which generate 87% of the waste volume) follows. A brief explanation of the facilities missions and assumptions has also been included.

- **Plutonium Finishing Plant (PFP) (TWHC 2345Z):** The D&D volume estimate includes the 236Z Building and its associated buildings 241Z, 242Z, and 2345Z. Contaminated materials included in the volume estimate are gloveboxes, pedestal storage, ventilation systems, pencil tanks, and ventilation fans.

Figure 5-1. D&D Waste Generators.

- **T-Plant Building (TWHC 221T):** T-Plant, a canyon building, is used to decontaminate equipment from other facilities and sort and package other's waste. The volume estimate in this section includes the waste resulting from the D&D of the T-Plant Building only. Contaminated equipment includes pumps, tanks, jumpers, and silver reactors.
- **Surplus Facilities (SURPLUS FAC):** Surplus facilities includes surplus listed facilities and projects. The current forecast does not address waste minimization, recycling, or reduction technologies that could reduce forecasted volumes by 30%.
- **Hanford Waste Vitrification Plant (TWHC HWVP):** The HWVP is a future treatment/processing facility for tank waste that will require D&D. Contaminated equipment includes cooling coils, pumps, and condensers.

5.3 FORECASTED VOLUMES

A description of the waste category volumes for the D&D waste generator group and for the specific D&D waste generators is provided in the following sections.

5.3.1 Forecasted Volumes for D&D Waste Generator Group

Figure 5-2 shows the 30-year cumulative D&D waste volume by waste category. As shown, over 40% of D&D waste is CH_TRU/TRUM and about 30% is RH_TRU/TRUM.

Figure 5-2. Total 30-Year Solid Waste Volumes by Waste Category for D&D Facilities.

Figure 5-3 displays the annual D&D waste volumes by waste category. The volumes estimated in the years 1994-2013 are forecasted by the facilities on the Surplus Facilities List. As shown in Figure 5-3, uniform volumes are generated in the years 2013-2022. This volume is based upon constant waste generation for 10 years from the facilities not on the Surplus Facilities List. It is assumed that D&D of these facilities will occur after the D&D of the facilities on the Surplus Facilities List. This assumption will need to be refined as the timing of these waste volumes becomes better defined.

5.3.2 Forecasted Volumes by Waste Generator

There are 18 waste generators for the D&D group, 17 of which generate LLMW and TRU/TRUM. A waste generator for the D&D group may include several facilities. For example, the surplus facilities generator includes all of the facilities on the Surplus Facilities List and PNL includes eight different PNL buildings.

Table 5-1 shows the waste volumes by waste category for each D&D waste generator. As shown, PFP forecasts no LLMW and a majority of its TRU/TRUM waste is CH. The two generators that forecast a majority of the D&D LLMW (72%) are T-Plant and surplus facilities.

Figure 5-3. Annual Solid Waste Volumes by Waste Category for D&D Facilities.

5.4 DATA OBSERVATIONS

The D&D forecasts, which involve rough estimates, are just now being developed; therefore, not much information has been documented on D&D waste. One potential source for additional information is the WHC inventory list. The inventory list would indicate what equipment is within each of the facilities; however, it would not provide waste categories and size.

The D&D volumes in this document are forecasted by the facilities on the surplus facilities list and 18 additional generators. The volumes reported here provide a reasonable basis for a D&D volume estimate, but it should be noted that other potentially large volumes may not be included. Specifically, the Fuel Fabrication Facilities Transition Project and the FFTF have not provided D&D waste information.

Table 5-1. D&D Waste Generator Volumes.

Waste Generator	CH LLMW (m ³)	CH TRU/TRUM (m ³)	RH LLMW (m ³)	RH TRU/TRUM (m ³)	TOTAL (m ³)
Plutonium Finishing Plant	0	18,704	0	4,676	23,381
T-Plant	5,438	3,570	1,360	892	11,260
Surplus Facilities**	2,848	1,827	2,770	711	8,155
Hanford Waste Vittrification Plant	368	0	0	7,215	7,583
Plutonium Uranium Extraction Facility-242A Liquid Effluent Treatment Facility	1,599	0	0	0	1,599
Pacific Northwest Laboratory*	21	61	431	1,023	1,535
N-Reactor	0	0	0	1,186	1,186
Plutonium Uranium Extraction Facility & UO ₃	236	604	59	151	1,050
Plutonium Uranium Extraction Facility Tunnels	0	0	242	697	939
A-Evaporator	326	0	22	0	348
S-Evaporator	326	0	22	0	348
B-Plant	277	0	69	0	346
222-S Laboratory	41	0	107	0	149
Fuel Development Laboratory	0	90	0	0	90
T-Evaporator	64	0	12	0	76
Retention Facility	0	0	0	23	23
Solid Waste Operations	13	0	0	0	13
TOTAL	11,559	24,855	5,094	16,573	58,081

* Pacific Northwest Laboratory (PNL) includes eight buildings (231Z, 242B/BL, 306W, 314, 324, 326, 327, and 331).

** Surplus Facilities includes all buildings found in *Surplus Facilities Program Plan, Fiscal Year 1993*, WHC-RP-0231-5 (WHC 1992).

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6.0 REMEDIAL ACTION WASTE

This section summarizes the LLMW and TRU/TRUM solid waste expected from RA activities. RA involves a wide array of treatments and operations geared toward the mitigation of risk, the remediation of contaminated sites, and the achievement of regulatory compliance.

6.1 BACKGROUND

The RA waste is forecasted by two waste generators, an environmental well drilling project and past practice remediation projects. The volumes for the well drilling project were taken from the 1993 forecasts while the volumes for the past practice remediation projects were taken from *Remediated Waste Projects*, WHC-SD-ER-EE-002, Rev.0 (Casbon 1993).

The Solid Waste Disposal (SWD) and the Environmental Restoration Division (ERD) programs have separate responsibilities in the remediation of Hanford's past practice sites. The ERD's responsibilities include planning, field operations, ER, and site cleanup of unplanned release sites, inactive waste sites, and other areas contaminated with radioactive or chemical hazards. The SWD is responsible for the management of centralized facilities for the receipt, containment, and TSD of solid waste at Hanford. The SWD Program will manage storage of LLMW and TRU/TRUM waste; burial of LLW; treatment and disposal of LLW and LLMW; and characterization, size reduction, packaging, and shipment of TRU waste to the Waste Isolation Pilot Program. Only those volumes that will be the responsibility of the SWD Program are described in this section.

At this time, TRU waste will not be handled by ERD; therefore, the SWD Program will expect to receive this waste. Any waste that the SWD Program has treatment capacity and technology for may also be sent to this program rather than ERD.

6.2 WASTE GENERATORS

The total waste volume of RA waste is expected to be 55,780 m³. The RA total waste accounts for about 18% of the total waste to be shipped to the SWOC at Hanford. Figure 6-1 shows the percent of RA waste generated by each generator. Although the RA waste is generated by the two generators, almost 100% of the waste is reported by the past practice projects.

A summary of the waste included for each generator is included in this section. Included are generator missions and assumptions.

- **Past Practice Remediation Projects (WHC PAST PRAC REM):** It is assumed that the SWD Program may be responsible for the TRU/TRUM waste generated from past practice sites. In addition, it is assumed that the SWD Program will have capacity to treat a fraction of the LLMW from this generator. The ERD is responsible for other remediation wastes. The wastes included for this generator are 10% of the total LLMW, 100% of the TRU/TRUM waste, and 100% of the

Figure 6-1. Remedial Action Waste Generators.

greater than Category 3 waste. The greater than Category 3 waste had no distinction whether or not it was mixed waste; therefore, for the purpose of this document, this waste is assumed to be LLMW.

- **Well Drilling Environmental Project (WHC WELL DRL):** The wastes projected by this environmental project are primarily soils and slurries generated during drilling of investigation boreholes. The forecast also takes into account support activities that generate waste. Incidental wastes included are rags, trash, pumps and piping, contaminated casing, and other materials. The volumes forecasted are based on a 6-year schedule of activities.

6.3 FORECASTED VOLUMES

This section describes the RA waste volumes. The volumes are described by waste categories for the RA group and for the waste generators.

6.3.1 Forecasted Volumes for RA Waste Generator Group

Figure 6-2 shows the 30-year cumulative RA waste volume by waste category. As shown, a majority of the waste is CH_LLMW, and there is no RH waste forecasted for the RA group.

Figure 6-3 shows the 1993 forecasted annual volumes by waste category. As shown, the volumes follow a curve with remediation activities peaking in the years 2005 through 2009. The waste volumes are fairly constant in the years 2012 through 2018 and then drop off in the year 2019.

6.3.2 Forecasted Volumes by Waste Generator

The RA waste generators are identified in Table 6-1. This table provides the RA volumes reported for each generator by waste category.

Figure 6-2. Total 30-Year Solid Waste Volumes by Waste Category for Remedial Action Waste.

6.4 DATA OBSERVATIONS

If a majority of the waste generated from past practice sites remains the responsibility of the ERD Program, significant increases in the RA waste volumes are not anticipated. It is assumed that 10% of the LLMW generated from past practice remediation will be accepted for treatment at the SWOC. If these responsibilities change and the SWD Program becomes responsible for more of the ERD Program's waste, these volumes could increase.

The Well Drilling Environmental Project is such a small generator that even an order of magnitude increase would not significantly impact planning.

Figure 6-3. Annual Solid Waste Volumes by Waste Category for Remedial Action Waste

Table 6-1. RA Waste Generator Volumes.

Waste Generator	CH LLMW (m³)	CH TRU/TRUM (m³)	TOTAL (m³)
Past Practice Remediation Projects	49,793	5,935	55,729
Well Drilling Environmental Project	28	21	49
TOTAL	49,821	5,956	55,777

7.0 OFFSITE WASTE

This section provides waste volumes and waste generator profiles for offsite facilities certified to ship waste to the Hanford Site. In general most offsite waste generators are national laboratories, universities, or DOE-owned contractor-operated facilities. Offsite missions include activities such as ER, D&D, research and development (R&D) and operations/maintenance.

7.1 BACKGROUND

The forecasted volumes presented in this section are from the 1993 Solid Waste Forecasts submitted by each offsite waste generator. The solid waste forecasts are submitted yearly and provide useful information on the waste volumes, shipping containers, and specific waste characteristics for a 30-year period. Two general assumptions were made during analysis of the forecasts: 1) offsite waste will continue to be accepted by Hanford and 2) funding will be available to continue offsite missions.

7.2 WASTE GENERATORS

The 1993 Solid Waste Forecasts report 30,710 m³ of offsite waste to be generated in the next 30 years. This volume is approximately 10% of the total waste volume expected at the Site over the next 30 years. As shown in Figure 7-1, 94% of the total offsite LLMW and TRU/TRUM waste will be generated by four waste generators. The following information briefly describes each major offsite waste generator of LLMW and TRU/TRUM waste. The waste generator's mission, assumptions, and possible waste volume fluctuations are included.

- **Portsmouth Gaseous Diffusion Plant (PORTSMOUTH):** This waste generator takes a product from either Paducah or Oak Ridge and continues ²³⁵U enrichment to the final desired enrichment. The plant was constructed in 1956 and is expected to operate until the year 2005,

Figure 7-1. Major Offsite Waste Generators.

with D&D commencing in 2021. The waste volume projections used in the 1993 Portsmouth Solid Waste Forecast include existing waste and some waste from ER closure projects. ER waste volumes could increase with additional projects. The existing waste is from operations prior to July 1, 1993. On this date, the United States Enrichment Corporation (USEC) assumed responsibility for waste further generated during operation; therefore, under DOE direction, the operational waste generated after July 1, 1993, will not be sent to the Hanford Site. However, if Hanford was determined to receive this waste, forecasted volumes would increase. It should also be noted that Hanford has not accepted waste from Portsmouth for 3 years. If this trend is continued, waste volumes may never be received by Hanford.

- **Argonne National Laboratory-East (ANL-E):** This waste generator, operated and managed by the University of Chicago, is a DOE energy R&D laboratory with several principal objectives. Argonne's main objective is to perform basic and applied research that supports the development of energy-related technologies. The large waste volumes projected for FY 1994 are due to Site remediation projects and D&D activities. Some waste will also be generated from laboratory bench-scale projects. The waste volumes for FY 1995 through FY 2023 are forecasted to decrease dramatically as current remediation sites are cleaned up. Currently, Argonne is negotiating with a commercial facility for disposal of LLMW generated from ER and D&D activities that account for about 85% of the total LLMW volume forecasted by this generator. The TRU/TRUM waste will not be affected by the outcome of these negotiations. In addition, Argonne has assumed that only 80% of possible ER waste has been included in the forecast; thus, the unaccounted 20% may also be shipped to Hanford.
- **Paducah Energy Systems (PADUCAH-ES):** Forecasted waste volumes for this waste generator include ER and D&D projects only. The waste to be shipped in FY 1994 through FY 1999 has already been generated; however, shipments have not been approved or funded at this time. Paducah has not yet determined a shipping schedule; thus, the forecasted schedule is an estimation. It should also be noted that USEC has assumed responsibility for operational waste after July 1, 1993, and this waste is not included in the forecast. However, if Hanford receives USEC operational waste generated after July 1, 1993, forecasted volumes would increase.
- **Lawrence Livermore National Laboratory (LLNL):** This waste generator is a R&D facility operated by the University of California under contract with DOE. The forecasted waste will be generated from various operations at LLNL and does not include any D&D waste. LLNL has been reinstated just recently (January 1993) as an authorized Hanford Site generator; therefore, the forecasted volumes are a rough approximation of the types and volumes of waste to be shipped to Hanford.

7.3 FORECASTED VOLUMES

The following sections describe the overall waste category volumes for the offsite waste generator group and for the specific offsite waste generators.

7.3.1 Forecasted Volumes for Offsite Waste Generator Group

As shown in Figure 7-2, the waste for the offsite generator group has been further defined into the waste categories CH_LLMW, CH_TRU/TRUM, and RH_TRU/TRUM. CH_LLMW makes up 96% of the total waste forecasted by the offsite waste generator. The remaining 4% is the TRU/TRUM waste. Currently, there are no offsite waste generators forecasting RH_LLMW, which explains the absence of this waste category in Figure 7-2.

Figure 7-3 shows the 1993 forecasted annual volumes by waste category. Throughout the 30 years, there is a general decrease due to gradual completion of ER activities with the volumes leveling off in FY 2011 through 2023. The main driver for the large FY 1994 LLMW volume is Argonne National Laboratory-East. In this year, the majority of their ER waste is planned to be shipped to Hanford. The RH_TRU/TRUM waste volumes that appear from FY 1998 to FY 2000 are from Argonne National Laboratory-East and Battelle Columbus.

Figure 7-2. Total 30-Year Solid Waste Volumes by Waste Category for Offsite Facilities.

Figure 7-3. Annual Solid Waste Volumes by Waste Category for Offsite Facilities

7.3.2 Forecasted Volumes by Waste Generator

The 1993 Solid Waste Forecasts are submitted by 24 offsite waste generators; however, only 18 generate LLMW and TRU/TRUM waste. Table 7-1 shows the waste volumes by waste category generated by the offsite waste generator group. As seen in the table, the majority of the CH LLMW is generated by Portsmouth. In fact, Portsmouth generates approximately 72% of the CH LLMW. The CH TRU/TRUM volume is mostly from LLNL, which comprises 81% of the total CH_TRU/TRUM.

7.4 DATA OBSERVATIONS

The forecasted volumes are a best estimate of the waste volumes that will be generated over the next 30 years. The volumes for this waste generator group are mostly existing waste or future waste volumes based on historical generation rates. LLNL is the exception, however, due to their recent acceptance as a waste generator, their historical experience in reporting accurate waste volumes for Hanford is relatively low.

The offsite waste generator group forecasted volumes that are expected to reflect actual waste generation rates, however, additional ER activities may generate volumes currently not in the forecasts. Portsmouth, Paducah Energy Systems, and Argonne National Laboratory-East have all indicated that

Table 7-1. Offsite Waste Generator Volumes.

Waste Generator	CH LLMW (m ³)	RH LLMW (m ³)	CH_TRU/TRUM (m ³)	RH_TRU/TRUM (m ³)	TOTAL (m ³)
Portsmouth	21,433	0	0	0	21,433
Argonne National Laboratory-East	2,960	0	185	51	3,196
Paducah Energy Systems	2,928	0	0	0	2,928
Lawrence Livermore National Laboratory	629	0	807	0	1,436
Knolls Atomic Power Shipyards	657	0	0	0	657
Lawrence Berkeley Laboratory	287	0	3	0	290
Ames Laboratory	237	0	0	0	237
Brookhaven	136	0	0	0	136
Battelle Columbus Laboratory	47	0	0	71	118
Paducah Utility Services	84	0	0	0	84
FERMI National Accelerator Laboratory	63	0	0	0	63
Princeton Plasma Physics Laboratory	57	0	0	0	57
Bettis Atomic Power Laboratory	38	0	0	0	38
Stanford Linear Accelerator Center	11	0	0	0	11
General Atomics	9	0	0	0	9
University of Utah	6	0	0	0	6
University of California, Davis	5	0	0	0	5
Rockwell Canoga Park	0	0	3	0	3
TOTAL	29,587	0	998	122	30,707

additional ER activities could increase their forecasted volumes. However, these additional activities as well as the current forecasted volumes may not be shipped to Hanford. In fact, several offsite waste generators are investigating sending their waste to alternative disposal facilities. If this proves to be feasible and no offsite waste is shipped to the Hanford Site, the overall expected waste volumes would only decrease by approximately 10%.

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8.0 REFERENCES

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APPENDIX A
LOW-LEVEL WASTE VOLUMES

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APPENDIX A

LOW-LEVEL WASTE VOLUMES

In addition to the low-level mixed waste (LLMW) and transuranic and transuranic mixed (TRU/TRUM) waste presented in this document, a large amount of low-level waste (LLW) will also be sent to the Solid Waste Operations Complex (SWOC) for disposal. Because this waste will require little or no treatment before burial or disposal, it has not been included in this document. The LLW volumes are provided here, however, as a source of reference. This information, combined with the information in Sections 2 through 7, represents the total radioactive and mixed solid waste currently forecast for treatment, storage, and disposal (TSD) at the SWOC.

BACKGROUND

The LLW volumes were obtained from the same sources as the LLMW and TRU/TRUM volumes (i.e., the 1993 Solid Waste Forecasts, a decontamination and decommissioning [D&D] survey of non-surplus facilities, PUREX study, and memos by RS Kelley for tank farms long-length equipment). The same adjustments were applied to the LLW data from these sources that were used for the LLMW and TRU/TRUM waste (e.g., delay of waste volumes from the Hanford Waste Vitri-fication Plant [HWVP] for 8 years to coincide with the Tri-Party Agreement [TPA]). Refer to Sections 2 through 7 for more detailed descriptions of both the sources of information and any adjustments that may have been made to the data.

WASTE VOLUMES

The total volume of LLW forecast is 1,496,600 m³. This is a tremendous increase, 360%, from the 324, 500 reported in 1992. Although the additional waste sources contributed to this increase (the D&D studies added an additional 29% of waste from last year), the largest increase resulted from increases in the forecasts. The increased forecast volumes are due entirely to the Surplus Facilities generator, which increased 330%. In fact, excluding the volumes from this generator, the forecast estimates actually decreased slightly (4%) over the past year. (Appendix B compares the 1992 and 1993 volume estimates in detail.) The LLW volumes, with the exception of Surplus Facilities and additional sources of waste, therefore, are expected to remain relatively constant. Additional waste sources, however, do have the potential to dramatically increase these volumes. One of these sources, Past Practice Remediation Projects, expects to generate over 21,000,000 m³ of LLW. This waste is currently not expected to be sent to the SWOC, however, for disposal. The LLW is defined in Figure A-1 as contact-handled (CH) and remote-handled (RH). As can be seen from this figure, the vast majority (96%) of LLW is expected to be contact-handled. A significant volume of waste (65,300 m³), however, will require remote-handling.

Figure A-1. Total 30-Year Low Level Solid Waste Volumes.

Figure A-2 shows the annual LLW volumes by waste category. The generation rates for the first 6 years are relatively constant, as are the generation rates for the last 14 years. Starting in 2000, the projected volumes

Figure A-2. Annual Low-Level Waste Volumes.

increase drastically until 2007. Over the next 3 years, the volumes decrease linearly to approximately the same generation rates as the first 6 years. This trend is due primarily to the D&D waste group, which expects to perform the majority of D&D activities during this time period.

SOURCES

The single largest generating group for both CH LLW and RH LLW is the D&D waste group. The percent of LLW generated by each group is shown in Figures A-3 and A-4. As can be seen from Figures A-3 and A-4, the D&D waste group is expected to generate more LLW than all other groups combined. Table A-1 provides the actual volumes contributed by each group. For detailed discussions of the waste generator groups, see the corresponding sections of the document.

A listing of the waste generators in order of largest projected LLW volume can be found in Table A-2.

Table A.2 also shows the group for each generator and the percent of the total LLW volume the generator forecasts.

Many of the major waste generators of LLW are also major generators of LLMW and TRU/TRUM waste. One notable exception to this is the Formerly Utilized Sites Remedial Action Plan (FUSRAP). This generator forecasts a large amount of LLW but will not be shipping any LLMW or TRU/TRUM waste. Other generators that forecast significant amounts of LLW but not LLMW or TRU/TRUM waste include: D&D of B Plant, Brookhaven National Laboratory, D&D of 222S Laboratory, and Lawrence Berkeley Laboratory. Each of these generators

Figure A-3. Contact-Handled Low Level Waste Volumes by Waste Generator Group.

Figure A-4. Remote-Handled Low Level Waste Volumes by Waste Generator Group.

Table A-1. LLW Waste Generator Group Volumes

Waste Generator Group	CH LLW (m³)	RH LLW (m³)	TOTAL (m³)	PERCENT OF TOTAL
D&D	1,149,231	59,489	1,208,719	80.77%
Offsite	171,606	43.4	171,649	11.47%
Onsite Mission Support	56,020	2,781	58,801	3.93%
TWRS	54,189	2,999	57,188	3.82%
Remedial Action	191	13	205	0.01%
TOTAL	1,431,237	65,325	1,496,562	100.00%

forecast at least 10,000 m³ of LLW and less than 500 m³ of LLMW and TRU/TRUM. Major generators of LLW that were not major generators of LLMW and TRU/TRUM waste are discussed below.

FUSRAP: FUSRAP is one of several U.S. Department of Energy (DOE) programs created to address radiological contamination in excess of guidelines at a number of sites throughout the United States. Generally, these sites, which became contaminated through uranium and thorium operations, were decontaminated and released for use under the regulations in effect at the time. Since radiological guidelines were not as strict then as today, trace amounts of radioactive materials remained at some of the sites. Erosion, building demolition, and construction resulted in some of the radioactive residues mixing with large volumes of soil and rubble, thereby spreading the contamination. If FUSRAP becomes responsible for restoring more sites, their waste volumes could increase.

Table A-2. LLW Volumes by Waste Generator and Waste Generator Group.

Waste Generator Abbreviation	Waste Generator Group	CH LLW (m ³)	RH LLW (m ³)	TOTAL (m ³)	PERCENT OF TOTAL
SURPLUS FAC	D&D	1,073,448	39,943	1,113,391	74.40%
FUSRAP	Offsite	57,450	0	57,450	3.84%
PADUCAH ES	Offsite	44,919	0	44,919	3.00%
WHC 225B T	D&D	34,267	8,567	42,834	2.86%
WHC HWVP	TWRS	29,753	2,999	32,752	2.19%
WHC 222S	Onsite Mission Support	19,371	0	19,371	1.29%
WHC 2ETF	TWRS	15,240	0	15,240	1.02%
BRKHVN	Offsite	14,115	11	14,126	0.94%
PNL	Onsite Mission Support	12,412	919	13,331	0.89%
WHC 222S T	D&D	12,803	0	12,803	0.86%
LBL	Offsite	10,680	0	10,680	0.71%
ANL E	Offsite	9,032	33	9,064	0.61%
WHC 221T T	D&D	7,144	1,786	8,930	0.60%
WHC 100N T	D&D	8,326	0	8,326	0.56%
PORTSMOUTH	Offsite	8,273	0	8,273	0.55%
WHC HWVP T	D&D	1,105	6,626	7,731	0.52%
WHC 2345Z	Onsite Mission Support	7,470	0	7,470	0.50%
PNL T	D&D	6,762	344	7,106	0.47%
LLNL	Offsite	6,900	0	6,900	0.46%
WHC L045H	Onsite Mission Support	6,261	0	6,261	0.42%
PRINCETON	Offsite	6,006	0	6,006	0.40%
WHC 202A T	D&D	4,768	1,192	5,960	0.40%
PADUCAH U	Offsite	4,827	0	4,827	0.32%
WHC GROUT	TWRS	3,657	0	3,657	0.24%
WHC 2724W	Onsite Mission Support	3,480	0	3,480	0.23%
LL EQUIP SEC	TWRS	3,293	0	3,293	0.22%
WHC 100K	Onsite Mission Support	2,473	429	2,902	0.19%
BAT CLBS LAB	Offsite	1,772	0	1,772	0.12%
WHC 100	Onsite Mission Support	1,527	136	1,663	0.11%
RKW CANOGA	Offsite	1,629	0	1,629	0.11%
WHC 221T	Onsite Mission Support	1,147	227	1,374	0.09%
STANFORD	Offsite	1,346	0	1,346	0.09%
WHC FFTF MAINT	Onsite Mission Support	261	1,065	1,326	0.09%
FERMI	Offsite	1,191	0	1,191	0.08%
WHC 202A TW T	D&D	0	1,022	1,022	0.07%
B LEHR DAV	Offsite	1,017	0	1,017	0.07%

Table A-2. (contd)

Waste Generator Abbreviation	Waste Generator Group	CH LLW (m ³)	RH LLW (m ³)	TOTAL (m ³)	PERCENT OF TOTAL
WHC DST RET	TWRS	673	0	673	0.04%
KAPL SHIPYDS	Offsite	633	0	633	0.04%
WHC SSTRET	TWRS	591	0	591	0.04%
GEN ATOM	Offsite	523	0	523	0.03%
AMES	Offsite	515	0	515	0.03%
WHC TWP W211	TWRS	462	0	462	0.03%
WHC 202A	Onsite Mission Support	443	0	443	0.03%
WHC 340	Onsite Mission Support	438	0	438	0.03%
BAPL	Offsite	355	0	355	0.02%
EG&G	Offsite	286	0	286	0.02%
WHC GROUT T	D&D	276	8	284	0.02%
WHC BKLOG	TWRS	269	0	269	0.02%
WHC 303K	Onsite Mission Support	229	0	229	0.02%
WHC 225B	Onsite Mission Support	215	5	220	0.01%
WHC WELL DRL	Remedial Action	191	13	205	0.01%
WHC 340 T	D&D	198	0	198	0.01%
WHC LLBG	Onsite Mission Support	189	0	189	0.01%
WHC 308 T	D&D Waste	129	0	129	0.01%
BAPL SHIPYDS	Offsite	126	0	126	0.01%
WHC TWP W058	TWRS	109	0	109	0.01%
WHC TWP W030	TWRS	75	0	75	0.01%
KEH 100	Onsite Mission Support	61	0	61	0.00%
WHC TWP W028	TWRS	58	0	58	0.00%
WHC 377	Onsite Mission Support	26	0	26	0.00%
WHC TRUSAF	Onsite Mission Support	12	0	12	0.00%
U U	Offsite	6	0	6	0.00%
WHC 306 T	D&D	5	0	5	0.00%
WHC 308	Onsite Mission Support	5	0	5	0.00%
MIT BATES	Offsite	4	0	4	0.00%
WHC TWP W151	TWRS	4	0	4	0.00%
WHC TWP W062	TWRS	4	0	4	0.00%
WHC DSTPSRET	TWRS	1	0	1	0.00%
TOTAL		1,431,237	65,325	1,496,562	100.00%

B Plant D&D: The volume estimates for B Plant were determined by obtaining a building volume from the dimensions of the building. An assumption was made that 1/2 of the building volume was contaminated material. In addition, one-third of the Waste Encapsulation and Storage Facility (WESF) was assumed contaminated. Contaminated materials include tanks, jumpers, concentrators, ion exchange columns, filters, ducting, piping, and condensers.

Brookhaven National Laboratory (BNL): Brookhaven is a research laboratory that will generate miscellaneous solid laboratory, reactor, and accelerator wastes. Some waste is also forecasted from a large environmental restoration project. No significant deviations from forecast volumes are anticipated.

222S Laboratory D&D: The volume estimates for D&D of the 222S Laboratory were based on the following assumptions: 1) 1/3 of the first floor's volume is CH_LLW, 2) 1/3 of the hot tunnel is RH_LLMW, and 3) the stainless steel piping in the cold tunnels is CH_LLW. The estimates also include four underground storage tanks and two retention basins. Contaminated materials include process piping, ductwork, and hoods.

Lawrence Berkeley Laboratory (LBL): Wastes are generated primarily from laboratory experiments. Some waste will be generated from clearing the existing Hazardous Waste Handling Facility (HWHF) and storage yards through FY 1995. D&D of the Bevatron, a ring accelerator, will occur from FY 1998-FY 2003. LBL does not expect any significant changes to their forecasts.

DATA OBSERVATIONS

As was indicated for LLMW and TRU/TRUM waste, the LLW volumes for all of the groups have the potential to increase. The Offsite generator group also has the potential to decrease dramatically due to uncertainties in the approval of waste shipments. The effects of any variations from the forecast volumes, however, are expected to result in a net increase in the actual receipts.

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APPENDIX B

1992 AND 1993 SOLID WASTE FORECAST COMPARISON

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APPENDIX B

1992 AND 1993 SOLID WASTE FORECAST COMPARISON

This appendix provides a comparison of the 30-year volume estimates from the 1992 and 1993 Solid Waste Forecasts. As shown in Figure B.1, the overall 1993 estimates were obtained from several sources while only the forecast information was used in 1992. Although the volumes from the additional sources increased the total volume significantly, they cannot be compared because these sources were not included in the 1992 estimates. The forecasts, however, were collected in both years and a short discussion of each waste category has been provided in the following sections. The total volume from the forecasts increased over 1 million m³ over the last year. As explained in the following sections, however, almost all of the increase was due to the LLW volumes.

Low-Level Waste (LLW)

The LLW forecast volumes increased from roughly 325,000 m³ in 1992 to almost 1.4 million m³ in 1993, a 330% increase. The vast majority of the increase is due to increases in the forecast from Surplus Facilities. Changes in the forecasts from the primary 1992 and 1993 waste generators for contact-handled (CH) and remote-handled (RH) LLW are summarized in the following sections.

CH_LLW

The CH waste has increased by over one million m³ or 333% from 1992 to 1993. Table B.1.1 shows 30-year LLW volumes for the primary waste generators in 1992 and 1993 of this waste and explains any changes in the volumes.

As shown in Table B.2, the majority of the increase of CH_LLW is due to Surplus Facilities. The major increase in volumes from this generator resulted from changes in the generator's assumptions about the amount of waste

Table B.1. 30-Year Solid Waste Data Sources and Volumes (m³)

1993		1992	
Data Source	Volume	Data Source	Volume
Forecasts	1,500,311	Forecasts	423,676
Long-Length Equipment Wastes	102,408		
Past Practice Remediation Projects	55,729		
D&D Studies	145,253		
TOTAL	1,803,701	TOTAL	423,676

Table B.2 Primary CH LLW Generators

Waste Generator	1993 Forecast Volume (m ³)	1992 Forecast Volume (m ³)	Percent Change from 1992	Reason for Difference
Surplus Facilities	1,113,391	28,730	3775%	Assumption changes and additional facilities added in 1993
FUSRAP	57,450	17,971	220%	Additional sites added in 1993
Paducah Energy Systems	44,919	NA	NA	Environmental restoration projects were previously unreported
Hanford Waste Vitrification Plant	32,752	21,503	52%	External rather than internal container volumes used in 1993
222S Laboratory	19,371	22,904	-15%	NA
SST Retrieval	591	97,789	-99%	1992 included wastes that will not be sent to SWOC (e.g., soils)
CH LLW Total	1,352,159	311,997	333%	

generated during D&D of certain facilities and the addition of facilities to the Surplus Facilities List. Large increases also occurred in the forecasts from Formerly Utilized Sites Remedial Action Plan (FUSRAP), Paducah Energy Systems (ES), and Hanford Waste Vitrification Plant (HWVP). These increases occurred because FUSRAP forecasted waste from additional clean-up sites, Paducah ES included environmental restoration waste in their forecast, and HWVP previously reported internal waste volumes instead of external container volumes. A large decrease occurred in the forecast from SST Retrieval because soils generated during retrieval that are not expected to be sent to the SWOC were included in 1992 but were not in 1993.

RH LLW

The RH waste has increased 33,300 m³ or 267% from 1992. Table B.3 lists the primary generators of RH LLW, the volumes forecast in 1992 and 1993, and briefly explains any variations in the volumes.

As with CH LLW, the majority of the increase of RH LLW is due to Surplus Facilities. The changes in the generator's assumptions about the amount of waste generated during D&D of certain facilities and the addition of facilities to the Surplus Facilities List also caused a significant increase in RH LLW. HWVP's forecast also increased because external rather than internal container volumes were reported this year. The forecast from B-Plant and WESF decreased because they can no longer provide estimates beyond the next year. A forecast was not available from the B-Plant Ventilation Upgrade because the project is being rescope and no estimates could be made.

Table B.3. Primary RH LLW Generators

Waste Generator	1993 Forecast Volume (m ³)	1992 Forecast Volume (m ³)	Percent Change from 1992	Reason for Difference
Surplus Facilities	39,943	881	4436%	Assumption changes and additional facilities added in 1993
Hanford Waste Vitrification Plant	2,999	1,955	53%	External rather than internal container volumes reported in 1993
FFTF Maintenance*	1,065	1,049	2%	NA
B-Plant and WESF	5	1,853	-100%	1993 includes estimates for only one year
B-Plant Ventilation Upgrade	NA	1,016	NA	Project is being rescoped
Total RH LLW	45,780	12,484	267%	

* Previously the Maintenance and Storage Facility.

Low-Level Mixed Waste (LLMW)

The LLMW forecast in 1993 for shipment to the SWOC was 70,850 m³. This is a decrease of 14% from the 82,010 m³ forecast in 1992. The largest contributors to the decrease were SST Retrieval and PUREX 242A Condensate Treatment. Discussions of CH and RH wastes are contained in the following sections.

CH_LLMW

The CH LLMW decreased 21% over the last year from approximately 80,000 m³ to roughly 63,000 m³. As shown in Table B.4, this decrease resulted largely from the elimination of soils from the SST Retrieval forecast, and the PUREX 242A Condensate Treatment generator decreasing its estimates due to the closure of PUREX.

Other generators expecting substantial decreases in CH_LLMW volumes include the Hanford Grout Facility which expects a higher percentage of its LLMW to be RH and the 300 Area Water Treatment Projects which now expects its waste to be LLW rather than LLMW.

Several changes have also resulted in increases of LLMW from 1992. Portsmouth Gaseous Diffusion Plant and Argonne National Laboratory-East increased their estimates to account for environmental restoration projects. Tank Farm Restoration and Paducah ES are new generators this year. The Surplus Facilities has changed its assumptions for the amount of waste generated during D&D of certain facilities and has added additional facilities to its scope.

RH_LLMW

In contrast to the CH_LLMW estimates, the RH_LLMW estimates have increased nearly 6,000 m³ (319%) from 1992. Table B.5 lists the primary generators of RH_LLMW.

Table B.4. Primary CH LLMW Generators

Waste Generator	1993 Forecast Volume (m ³)	1992 Forecast Volume (m ³)	Percent Change from 1992	Reason for Difference
Portsmouth Gaseous Diffusion Plant	21,433	6,157	248%	Major ER projects added in 1993
Buried Equipment*	7,663	7,807	-2%	NA
Tank Farm Restoration	6,197	NA	NA	New generator for 1993
PUREX 242A Condensate Treatment	5,762	16,743	-66%	Volumes decrease due to closure of PUREX
Single-Shell Tank Farms	4,095	1,803	127%	Some LLW reclassified as LLMW
Argonne National Laboratory-East	2,960	625	374%	1993 forecast includes waste from soil remediation
Paducah Energy Systems	2,928	NA	NA	New generator for 1993
Surplus Facilities	2,848	412	592%	Assumption changes and additional facilities added in 1993
222S Laboratory	1,787	1,686	6%	NA
Hanford Grout Facility	1,277	6,507	-80%	Some CH waste now expected to be RH
SST Retrieval	293	29,357	-99%	1992 included wastes that will not be sent to SWOC (e.g., soils)
300 Area Water Treatment Project	0	6,431	-100%	Waste reclassified as LLW
Total CH LLMW	63,051	80,150	-21%	

* Previously the Fleet Site Support generator.

Table B.5. Primary RH LLMW Generators

Waste Generator	1993 Forecast Volume (m ³)	1992 Forecast Volume (m ³)	Percent Change from 1992	Reason for Difference
Hanford Grout Facility	4,298	334	1186%	Some CH waste now expected to be RH
Surplus Facilities	2,770	138	1903%	Assumption changes and additional facilities in 1993
DST Retrieval	0	1,264	-100%	No forecast available in 1992, 1990 forecast used
TOTAL RH LLMW	7,798	1,860	319%	

The Hanford Grout Facility has increased its estimates of RH LLMW because it now expects much of the CH LLMW reported last year to be RH. The Surplus Facilities generator has changed the assumptions it uses to determine volumes from D&D of facilities and has also added facilities since 1992. The DST Retrieval forecast no longer includes RH LLMW. Prior to 1993, no forecasts had been received from this generator since 1990 and a significant change was expected.

Transuranic/Transuranic Mixed (TRU/TRUM) Waste

The total TRU/TRUM waste volumes increased 83% from 17,185 m³ in 1992 to 31,520 m³ in 1993. This increase was caused mainly by the DST Neutralized Current Acid Waste (NCAW) Process Tests. Significant changes in the estimates for CH_TRU/TRUM and RH_TRU/TRUM wastes are explained in the following sections.

CH_TRU/TRUM Waste

Although the total TRU/TRUM estimates increased from last year, the CH TRU/TRUM volumes actually decreased 32% from roughly 12,000 m³ to about 9,300 m³. Table B.6 shows the primary generators of CH_TRU/TRUM waste in 1992 and 1993.

As shown in this table, the Surplus Facilities generator changed its assumptions in 1993, resulting in a decrease in waste estimates. The other major CH TRU/TRUM generators have forecast increases in their solid waste volumes. The Plutonium Finishing Plant (PFP) has increased its estimates based upon actual waste shipments in previous years. The estimates from HWVP have increased because external rather than internal container volumes are now being reported. The Lawrence Livermore National Laboratory (LLNL) has only recently been authorized to ship waste to Hanford. Therefore, no forecast was available in 1992.

RH_TRU/TRUM Waste

The RH TRU/TRUM estimates increased well over 300% from about 5,000 m³ in 1992 to over 22,000 m³ in 1993. The largest contributors to the RH_TRU/TRUM volumes are listed in Table B.7 below.

The largest changes were in the forecasts from three DST generators: DST NCAW Process Tests, DST Retrieval, and DST Pilot-Scale Retrieval. The estimates provided in 1990 were used in 1992 for these generators because no

Table B.6. Primary CH TRU/TRUM Generators

Waste Generator	1993 Forecast Volume (m ³)	1992 Forecast Volume (m ³)	Percent Change from 1992	Reason for Difference
Plutonium Finishing Plant	3,780	2,819	34%	Increase based upon actual shipments in previous years
Hanford Waste Vittrification Plant	2,002	1,445	39%	External rather than internal container volumes reported in 1993
Surplus Facilities	1,827	6,900	-74%	Assumption changes in 1993
Lawrence Livermore Nat. Lab.	807	NA	NA	Newly authorized generator
TOTAL CH TRU/TRUM	9,256	12,080	-23%	

Table B.7. Primary RH TRU/TRUM Generators

Waste Generator	1993 Forecast Volume (m ³)	1992 Forecast Volume (m ³)	Percent Change from 1992	Reason for Difference
DST NCAW Process Tests	18,414	56	32781%	No forecast available in 1992, 1990 forecast used
Hanford Waste Vitrification Plant	2,855	1,672	71%	External rather than internal container volumes reported in 1993
Surplus Facilities	711	647	10%	NA
DST Retrieval	0	979	-100%	No forecast available in 1992, 1990 forecast used
DST Pilot Scale Retrieval	0	918	-100%	No forecast available in 1992, 1990 forecast used
TOTAL RH TRU/TRUM	22,266	5,105	336%	

updates had been sent since then. Because there was a 3-year gap in the forecasts used in 1992 versus those used in 1993, it was expected that the estimates from these generators would change significantly. The estimates from HWVP have changed due to the reporting of external rather than internal container volumes.

APPENDIX C

QUESTIONS FOR MAJOR FORECASTERS

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FORM-1 QUESTIONS FOR MAJOR FORECASTERS

Date:

WG:

Analyst:

Contact:

1. What does your waste generator do? That is what is its mission and how is the waste generated, e.g., D&D of facilities, ER of site, production/operations, lab experiments?
2. What is the range of waste volumes and associated schedules?
 - 2a. What were your assumptions, i.e., what are the volumes and waste categories/classes based upon?
 - 2b. What assumption(s) are driving the large waste/TRU volume forecasted?
 - 2c. Are the assumptions likely to change?
 - 2d. Is it likely your assumptions might change so that your waste estimates would be reduced (closure of facilities, reclassification of waste, change of mission)?
 - 2e. If yes, what might change and how much would waste be reduced (1/2, 1/4)?
 - 2f. Is it likely your assumptions might change with a resulting increase in expected waste (additional facilities to D&D, new projects, change of mission, alternate TSD possibilities)?
 - 2g. If yes, what might change and how much would waste be increased (double, triple)?
 - 2h. Would the schedule change with the assumption changes above, i.e., in what years will waste be shipped?

- 2i. Do you have/will have anything else that may be declared waste at some future time? What? And, what is volume, waste class, and probable timing?
- 2j. Would the HAZ constituents change with the assumption changes?
- 3. What is general kind of waste produced? Would it change with assumption changes?
- 4. How much of the CH forecasted is actually shielded RH (RH at the source)?
- 5a. How much of the RH forecasted will actually be shielded to CH and was shielding material included in your forecast?
- 5b. What is the radiation reading at the container for your RH waste (e.g., 200 mrem/hr)?

FORM 2-QUESTIONS FOR 30-YEAR FORECAST REPORT

Prepared by _____
Waste Generator _____

Date _____

1. What percentage of the waste forecasted in 1994-1999 is existing waste?
is waste that will be generated in the future? (i.e. operational waste)

- a) Of your existing waste, how confident are you in the current shipping schedule?

- b) Of your future generated waste, how confident are you in the volumes and shipping schedule? Can you quantify this uncertainty? (i.e. strong possibility that the waste volume could double)

2. What percentage of the waste forecasted in 2000-2023 is existing waste?
is waste to be generated in the future? Confidence level in these percentages?

3. Indicate confidence level for the following waste characterization data for the time period 1994 through 1999.

Physical Characterization (waste form)

Hazardous Characterization (hazardous constituents/EPA codes)

Radiation Information (radiation type and radionuclide concentrations)

4. Indicate confidence level for the following waste characterization data for the time period 2000 through 2023.

Physical Characterization (waste form)

Hazardous Characterization (hazardous constituents/EPA codes)

Radiation Information (radiation type and radionuclide concentrations)

5. If the generator is offsite, is ER included in forecast? What are the volumes included in the ER waste (i.e. is it D&D only, or soils, etc). When is this waste scheduled for shipment to Hanford? Indicate confidence level for this waste.

APPENDIX D

**PROPOSED PLAN FOR SINGLE-SHELL TANKS/DOUBLE-SHELL TANKS
LONG-LENGTH EQUIPMENT VOLUMES**

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Westinghouse Hanford Company

Internal Memo

From: Solid Waste Systems Engineering 87320-94-RSK-021
 Phone: 372-1263 H5-33
 Date: February 15, 1994
 Subject: PROPOSED PLAN FOR SINGLE-SHELL TANKS/DOUBLE-SHELL TANKS
 LONG-EQUIPMENT VOLUMES

To: K. L. Hladek H5-33

cc: D. M. Caum H5-33 M. M. McCarthy N3-13
 A. B. Carlson H5-33 R. J. Roberts N3-13
 M. R. Ibatuan N3-13 A. O. Vance H5-33
 RSK:KLH File/LB

As has become apparent, there is a major void in our knowledge of the most probable retrieval scenario of the Single-Shell Tanks (SST), Double-Shell Tanks (DST), and related equipment. This study documents a proposal that could be used as a replacement for the official 1993 DST and SST forecasts. Adoption of this proposal would result in Solid Waste Disposal (SWD) planning to a better overall estimate of the entire TWRS retrieval program than presently exists, allowing SWD to better document a request for both near- and long-term storage and treatment capabilities. As will be shown in this proposal, substantial capacities will be required for storage and treatment.

It is further proposed that this estimate be submitted to the TWRS staff now chartered with providing the estimates (Ms. C. J. Geier) to obtain any refinements that they might provide in the immediate future (say one week), and then the new estimate would then be incorporated into the official forecast database.

Note that this data does not address the six additional DST tanks now being planned for construction. It is assumed that these would remain in use during the clean out of the existing 177 target tanks and serve any out-year liquid storage needs (e.g., decontamination activities by T Plant on the target equipment). Nor does it address any piping systems related to tank farms that would be addressed in a manner similar to the long-equipment. The proposal is restricted to long-equipment from the existing 177 tanks.

Please see the attached narrative, tables, and graphics for the details of the proposal.

 R. S. Kelley
 Engineer

mra

Attachment

bcc (information only):
 PNL - L. L. Armacost

Hanford Operations and Engineering Contractor for the US Department of Energy

Attachment 1 to 87320-94-RSK-021

PROPOSED PLAN
FOR SINGLE-SHELL/DOUBLE-SHELL TANKS
LONG-EQUIPMENT VOLUMES

Page 1 of 22

PROPOSED PLAN FOR SST/DST LONG-EQUIPMENT VOLUMES

TRI-PARTY AGREEMENT CONSIDERATIONS

Table 1 provides a summary of the data in the latest Tri-Party Agreements (TPA) with respect to the tank retrieval activities. It does not cover any work related to the tanks, such as removal of piping systems related to the tanks; it is limited to tanks per se.

The TPA administrators/negotiators concentrated on the SSTs in the most recent revision of the TPA as can be determined by details included on the SSTs and absence of similar specific data on the DSTs. Also note that there are two key dates - 2018 for retrieval of all SSTs and 2028 for completion of all vitrification activities. This suggests, as does the specifics on the SSTs, that all initial equipment removal should be complete by 2017 and tank waste retrieval efforts should be completed by 2027, including any equipment used in the retrieval process, so as to have all the waste through the vitrification plants by 2028.

RETPROC5.XLS

TRI PARTY AGREEMENT MILESTONES THAT INFLUENCE TANK RETREIVAL OPERATIONS				
YEAR	OST TANKS	SST TANKS	TPA	TPA MILESTONE/GOAL
1993				
1994				
1995				
1996				
1997		1	M-45-03A	Initiate sluicing retrieval of C-106
1998			M-50-03	Complete sludge washing evaluation using tank waste from a range of representative tanks
1999				
2000				
2001				
2002			M-45-03-T02	Start final retrieval demo. of C-106
2003			M-45-03-T02	Complete full scale demo. of SST retrieval.
2003			M-45-04-T01	Provide one full SST tank farm retrieval equipment set
2004		1	M-45-05-T01	Initiate 1 SST retrieval
2004			M-50-02	Start LLW pretreatment operations
2004		2	M-45-05-T02	Initiate 2 additional SST retrievals
2005		3	M-45-05-T03	Initiate 3 additional SST retrievals
2005			M-60-05	Initiate hot operations of LLW Vitrification plant
2006		4	M-45-05-T04	Initiate 4 additional SST retrievals
2007		5	M-45-05-T05	Initiate 5 additional SST retrievals
2008		5	M-45-05-T06	Initiate 3 additional SST retrievals
2008			M-50-04	Start hot operations of HGW pretreatment
2009		7	M-45-05-T07	Initiate 3 additional SST retrievals
2009			M-51-03	Initiate hot operations of HLW Vitrification plant
2010		8	M-45-05-T08	Initiate 3 additional SST retrievals
2011		10	M-45-05-T09	Initiate 3 additional SST retrievals
2012		12	M-45-05-T10	Initiate 3 additional SST retrievals
2013		14	M-45-05-T11	Initiate 3 additional SST retrievals
2014		17	M-45-05-T12	Initiate 3 additional SST retrievals
2015		20	M-45-05-T13	Initiate 3 additional SST retrievals
2016		20	M-45-05-T14	Initiate 3 additional SST retrievals
2017		20	M-45-05-T15	Initiate 3 additional SST retrievals
2018			M-45-05	Retrieve waste from all SST tanks - TBD date
2019				
2020				
2021				
2022				
2023				
2024			M-45-06	Complete closure of all SST tank farms
2025				
2026				
2027				
2028			M-50-00	Complete pretreatment of all tank waste
2028			M-51-00	Complete vitrification of HLW
2028			M-60-00	Complete vitrification of LLW
2029				
2030				
TOTAL	0	149		

TABLE 1

DISCUSSION OF TWRS OPERATIONS

There are four basic phases in the tank operations that result in the long equipment under consideration as follows:

- operations prior to start of retrieval
- initial retrieval of necessary equipment
- waste retrieval
- waste retrieval equipment removal

The initial phase addresses normal operations. While the "long-equipment" normally addressed in retrieval discussions are not in this phase, there is equivalent long-equipment removed as components fail and need to be replaced. This long-equipment will use, insofar as possible, the same equipment, transporters, storage and treatment capability as the long-equipment in the retrieval program. They must be considered in both TWRS and SWD planning.

The second phase addresses the removal of all the long-equipment required to gain access to the waste in the tanks for clean out purposes. Depending on which staff one discusses this phase with, either all the equipment must be removed to obtain full access, or a lesser number of pieces need to be removed. The conservative assumption would be to assume all equipment must be removed, and this is the option used in this analysis.

The third and fourth phases deal with the operations dealing with waste removal per se and finally removing the pumps and mechanical removal equipment used in waste removal.

OFFICIAL 1993 FORECAST INPUT

Table 2 lists the data submitted in response to the annual 30-year forecast. This forecast was requested in the spring of 1993 and most of the data was obtained in early summer of 1993. The last response (the final 17 DSTs) was received in December 1993, completing the full data submittal for both single- and double-shell retrieval operations planning.

This data is also provided as a graph in Figure 1, with the total accumulation plotted in Figure 2. As can be observed, the official 1993 forecast data shows very little retrieval activity - about 20 components per year.

Note that the data shows two phases of DST operation but steady operations in SST tank farms. Note also that the total number of long components is 728, substantially under the 1,278 quantity provided in WHC-SD-WM-ES-265, which is the study addressing generic equipment required for both DST and SST cleanout (but which does not include the waste pumps and normal replacements). This delta might be because the staff responsible for the estimates do not believe all the equipment will be removed, and/or that the retrieval process exceeds the time of the forecast (out to and including CY 2023), or the identification of the equipment in the tanks differs.

Note also that the forecasts do not include any normal operation replacement activities. This is probably because the forecasts were submitted by project staffs oriented to specific official projects, not normal operations.

While the forecasts stop at CY 2023, for the purposes of this analysis it was assumed that the retrieval of SST tanks would proceed at the 16 per year rate for long-equipment.

Study of the forecast input data suggest that some respondents might have included the final pumps and equipment required for waste removal; other respondents do not appear to have addressed this long-equipment. The data is not clear in this regard.

This review of input data suggests: 1) the retrieval planning is not in accord with the current TPA agreements, 2) normal operational replacements are not included, and 3) consideration of the final pumps required for waste removal does not appear to be included.

OFFICIAL 1993 FORECAST DATA				
Components/year				
YEAR	SST	DST	TOTAL	CUM
1993	0	0	0	0
1994	2	0	2	2
1995	8	13	21	23
1996	16	15	31	54
1997	16	4	20	74
1998	16	6	22	96
1999	16	4	20	116
2000	16	0	16	132
2001	16	3	19	151
2002	16	0	16	167
2003	16	0	16	183
2004	16	0	16	199
2005	16	0	16	215
2006	16	0	16	231
2007	16	0	16	247
2008	16	4	20	267
2009	16	4	20	287
2010	16	32	48	335
2011	16	4	20	355
2012	16	53	69	424
2013	16	4	20	444
2014	16	4	20	464
2015	16	4	20	484
2016	16	4	20	504
2017	16	0	16	520
2018	16	0	16	536
2019	16	0	16	552
2020	16	0	16	568
2021	16	0	16	584
2022	16	0	16	600
2023	16	0	16	616
2024				616
2025				616
2026				616
2027				616
2028				616
2029				616
2030				616
TOT.	458	158	616	

TABLE 2

OFFICIAL 1993 FORECAST DATA ON RETRIEVED LONG EQUIPMENT

Does not include the proposed six DST tanks

CUMULATIVE TOTAL OF OFFICIAL 1993 FORECAST DATA ON RETRIEVED LONG DST/SST EQUIPMENT

D-9

FIGURE 2

WMC-EP-0768

One final point. Neither this forecast nor the 1992 forecast data includes the three air lances that have been actually received in the Central Waste Complex in early 1993, nor the three items that are due to be retrieved from 106-C in the summer of 1993, nor replacements of waste pumps that will result from start-up of the evaporator. In the latter case, these pumps are reported to have received no preventative maintenance while inactive. Accordingly, a high rate of failure is expected. Additionally, the new replacement pumps are reported not to have received any preventative maintenance during the storage period. If this is true, they too will have a higher than normal failure rate.

Likewise, the special pump put into tank 101-SY, expected to have a short life, is not apparent in the forecast information, nor are any replacements for this pump.

What this composite picture shows is that the integration of all TWRS operations with respect to long-equipment has been lacking. In a recent reorganization, the TWRS has recently chartered a staff with providing this integrated oversight should address these problems. Out-year forecasts should be better, more complete.

In the interim, one can expect a number of near term shipments of long-equipment that is not now in any forecast. In this regard, the proposed retrieval plan does include some near term long-equipment retrievals, representing the 106-C and evaporator related shipments.

PROPOSED LONG-EQUIPMENT RETRIEVAL PLANS

A retrieval plan was generated as an attempt to address the overall long-equipment forecasts for use in the near term until the updated forecasts are available from TWRS.

Table 3 provides the proposed retrieval plan; it was based on the data in the other tables and the text in the TPA milestones. The retrieval data included in this table would replace the long-equipment estimates in the official 1993 forecast.

The following discussion is provided to assist in evaluation of the proposal.

Assumed Retrieval Plan

In the "Assumed Retrieval" column group, please find a listing of the number of DST and SST tanks that are assumed to commence retrieval operations in the years indicated. It is important to note the words "commence operations" since the retrieval is multi-phased. Initially, the long-equipment must be removed, followed by the new pumps being installed, followed by the pumps being retrieved after retrieval of the actual waste is completed. DSTs, SSTs, and the total of both types is listed. This schedule was based on, but is not identical, to the information provided in Tables 1 and 2. It is in agreement with the TPA milestones.

The table retained the overall DST retrieval plan suggested by the 1993 forecasts in which the DST retrieval phase was broken down into two main phases, but the proposal has the retrieval effort spread out over a couple more years. The SST retrieval plan followed that in the latest TPA agreements, with a slow start-up, followed by a major high production period. Both DST and SST retrieval proposals match with the need to provide feedstock to the low-level waste and high-level waste vitrification plants, both for start-up considerations and for final operations by 2028.

The tabular data in Table 3 on the proposed retrieval plans, in terms of tanks, is presented graphically as Figure 3.

Equipment Retrieval Rates

The next group of columns provide the annual data on long-equipment, broken down by groups. The first group, "Miscellaneous Equipment," covers a wide range of existing equipment replacements (e.g., pumps), some retrieval equipment failures (e.g., pumps, the SPAR arm). This group would include any pump replacements such as being discussed with respect to likely problems that are forecasted to occur with the evaporator start-up. It would also include special equipment such as the pump in tank 101-SY used to mitigate hydrogen build-up problems.

ASSUMED DST/SST RETRIEVAL AND PROCESSING RATES												
ASSUM. RETRIEVAL			LONG EQUIP. RETRIEVAL RATES				PROCESSING CAPABILITY			E.O.Y		
TANKS			MISC.	EQUIP.	PUMP	YEAR	CAPABILITY (3)		NUMBER	INCOM.	STOR.	
YEAR	DST	SST	TOTAL	EQUIP. (4)	RATE (1)	RATE (2)	TOTAL	T PLANT	WRAP 28	PROC'ED	STOR.	REQ.
1993			0	3	0	0	3				3	3
1994			0	6	0	0	6				6	9
1995	1		1	6	14	0	20				20	29
1996	1		1	6	14	0	20	5		5	20	44
1997	1	1	2	8	20	0	28	10		10	28	62
1998	1		1	10	14	0	24	20		20	24	66
1999	1		1	12	14	0	26	30		30	26	62
2000	1		1	14	14	0	28	40		40	28	50
2001	1		1	18	14	0	32	50		50	32	32
2002	1		1	20	14	3	37	60		60	37	9
2003	1		1	21	14	3	38	60		47	38	0
2004	1	3	4	22	32	6	60	60		60	60	0
2005	1	3	4	22	32	3	57	60		57	57	0
2006		4	4	23	24	3	50	60		50	50	0
2007		5	5	23	30	3	56	60		56	56	0
2008		5	5	20	30	3	53	60		53	53	0
2009		7	7	20	41	3	64	60		60	64	4
2010	1	8	9	17	61	3	81	60	10	70	81	15
2011	1	10	11	15	73	12	100	60	20	80	100	35
2012	2	12	14	12	99	12	123	60	40	100	123	58
2013	2	14	16	10	111	12	133	60	60	120	133	71
2014	2	17	19	10	128	15	153	60	80	140	153	84
2015	2	20	22	8	146	15	169	60	100	160	169	93
2016	2	20	22	7	146	21	174	60	125	185	174	82
2017	2	20	22	6	146	27	179	30	150	180	179	81
2018	2		2	5	28	33	66		150	147	66	0
2019	1		1	4	14	42	60		150	60	60	0
2020				3	0	48	51		150	51	51	0
2021				2	0	57	59		150	59	59	0
2022				1	0	66	67		150	67	67	0
2023					0	66	66		150	66	66	0
2024					0	66	66		150	66	66	0
2025					0	6	6		150	6	6	0
2026					0	3	3		150	3	3	0
2027					0	0	0		150	0	0	0
2028					0	0	0		150	0	0	0
2029					0	0	0		150	0	0	0
2030					0	0	0		150	0	0	0
TOTAL	28	149	177	354	1273	531	2158					889
(1) - Equipment now in tank. Based on 7.2 units/tank.												
(2) - Equipment required during tank cleanout that becomes waste												
Assumed avg. of 3 pumps/tank required for completion of cleanout.												
Assumed pumps removed 7 years after initial equipment removed												
(3) - Assumed treatment capacity												
(4) - Assumed misc. equipment - replacements, instruments, mech. ams, etc. Based on 2/tank, or min. of 3/yr												
(5) - Rate is adapted from general plan indicated in official 30 year forecast												
(6) - Rate is adapted from TPA milestone guidelines												

TABLE 3

RETPROC5.XLS Chart 17

PROPOSED ASSUMPTION ON TANK RETRIEVAL OPERATIONS Does not include the proposed six DST tanks

FIGURE 3

It was assumed that over the next 30 years or so, a total of two items per tank would be fit this category of retrieved long-equipment. Given this assumption, the total number was spread out over the retrieval years with consideration given to the number of tanks yet in service and the number of tanks in various stages of retrieval. Both the total number and the yearly rate are very subjective estimates.

The next group, "Equipment Rate," is based on the number of long-components per tank. WHC-SD-WM-ES-265 provides data on the number of long-components in both DSTs and SSTs. The DSTs have an average of 14 components per tank, the SSTs have an average of 5.9 components. These values were used to calculate the number of long-equipment items that would be retrieved as part of the initial retrieval process (rounded to the nearest whole number).

The next group, "Pump Rate," reflects an assumption that an overall average of three pumps (or some other mechanical system) will be used to clean out each tank. Additionally, the timing of the pumps coming into the Treatment, Storage, and Disposal (TSD) system assumes that they are withdrawn from the tanks seven years after initial tank equipment removal. The delay reflects data suggested in the DST forecast submittals and a planning document on retrieval operations (WHC-SD-WM-ER-193).

The table is also based on the assumption that, after many years in operation within a tank, the "pumps" would be considered waste, as opposed to refurbishment in some "to be determined" facility (e.g., T Plant). Neither option has any impact on retrieval, transportation, buffer storage requirements or the need for some treatment, the principal subject of this analysis, so the specifics with respect to waste or repair have no impact on this analysis.

Please note that the forecasts, using these assumptions, suggest that almost 2,200 long-components will be sent to the SWD TSD system between CY 1993 and CY 2030. While this is substantially above the nominal value of 1,278 components used in the generic equipment planning (documented by WHC-SD-WM-ES-265), the larger value does address waste that is not now identified in the forecast, but which must be addressed. The degree of conservatism included in these plans has not been estimated.

The proposed rate of retrieval is provided graphically in Figure 4. A comparison of the proposed long-equipment assumption and that provided in the official 1993 forecast is provided in Figure 5 by year, and Figure 6, over time.

PROPOSED ASSUMPTION ON DST & SST LONG EQUIPMENT RETRIEVAL

Does not include the proposed six DST tanks

Includes all equipment, not just that currently in tanks

FIGURE 4

D-15

WMC-EP-0768

COMPARISON BETWEEN PROPOSED AND OFFICIAL FORECAST FOR LONG EQUIPMENT

Does not include the proposed six DST tanks

D-16

FIGURE 5

WMC-EP-0768

COMPARISON BETWEEN OFFICIAL 1993 FORECAST AND PROPOSED ESTIMATE

D-17

FIGURE 6

Processing Capability

Processing, per se, is not directly related to the question of establishing the long-component retrieval rate. It was easy, however, to provide management with an initial estimate of the impact of the retrieval plans on treatment and storage requirements.

The next set of columns addresses treatment capacity. The T Plant value of a nominal 60 components per year processing capability is the value most recently discussed at the WestIP Meeting (February 1-3, 1994). The table reflects a ramp-up of capability that was also discussed. The start-up date of 1996 is that date in the current T Plant planning.

The WRAP 2B capacity was set based on an estimate of the results of likely trade-offs between storage needs and treatment capability. Because of the equipment retrieval schedules (shown in the earlier columns, and principally due to SST operations), there is a substantial demand for treatment capacity in the 2010 and beyond years. The value of 150 components per year is about one per working day, a rate that is not likely to be exceeded because of a variety of reasons, including likely limitations on capital expenditures. The WRAP 2B start-up date matches current earliest start-up plans for this facility, now expected to be a FY 1998 Line Item.

It is not possible to overstate the interactions of retrieval rates and treatment rates on storage demands. Given that the T Plant would have a target processing rate of 60 per year, the WRAP 2B capacity was set at 150 per year, a value that resulted in a balance of minimizing the total storage demands (expensive if inside storage is required) and a high treatment capacity (also expensive). It was also assumed that when WRAP 2B come on line, it would be desirable to convert to operations in the new plant, with presumably better operating efficiency, lower personnel exposures, greater facility fissile content limits, etc., as soon as practical, than to continue to operate the (then quite old) T Plant in the waste treatment and disposal preparation mode.

Note that no optimization of treatment rates versus the resulting storage rates have been conducted. This will require an in-depth study of the trade-offs required. This data is limited to providing an initial estimate at the requirements, thereby providing management with an initial appraisal of the impacts of addressing the long-equipment from TWRS.

Figure 7 provides a graphic of the two proposed treatment capacities and Figure 8 shows the summation of both plants, which for almost a decade, are assumed to operate concurrently (and thereby reduce the need for buffer storage).

PROPOSED ASSUMPTION ON T PLANT AND WRAP 2B TREATMENT CAPABILITY

D-19

WMC-EP-0768

PROPOSED ASSUMPTION ON T PLANT AND WRAP 2B TREATMENT CAPABILITY

AIM

Association for Information and Image Management

1100 Wayne Avenue, Suite 1100
Silver Spring, Maryland 20910
301/587-8202

Centimeter

Inches

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BY APPLIED IMAGE, INC.

2

o

t

2

Buffer Storage Requirements

The last column group provides the resulting buffer storage capacity required to support the assumed retrieval and treatment capability.

Two columns are provided. The first column provides guidance on the amount of incoming buffer storage required to support treatment operations. This column reflects the total number of components entering the SWD TSD system in each year. Given that some processing will be going on during the year, the full amount shown will be not required. With the assumption, as taken in WHC-SD-WM-ES-265, that the tank farm operations will be down for the four winter months, buffer storage for about 50 percent of this incoming value should be provided. (This fraction will address the interactions of various downtimes and retrieval-transportation-treatment interactions.)

The second column in this group shows the amount of storage resulting from the assumptions in the earlier columns but on an end-of-year storage requirement basis. Two major storage periods are indicated, the first one starting in 1993, out to 2002 and the second starting in 2009 and extending to 2017 (the final date for SST retrieval).

To properly assess the overall buffer storage needs, one needs to combine the incoming buffer demands with the material in inventory that is carried over to the next year (because of a shortfall in treatment capability). This analysis assumed that 50 percent of the incoming volume plus the carry-over is a good initial estimate of the overall buffer needs. (The Solid Waste Projection Model simulation tool will provide better estimates, once the long-equipment forecasts are included in the feedstock database.)

With the assumptions included in this plan, and assuming that 50 percent of the incoming buffer storage should be provided to address operational considerations, the data suggests that there are two phases of major DST/SST long-equipment storage demands. The first occurs now, starting in 1993, peaking in the CY 1998-1999 time frame, falling to about one-third the peak in the CY 2003 time period. The near term peak requirement is shown to be about 80 components, falling to about 30 components for the next several years.

The second buildup starts in the CY 2010 time period, about the time the SST operations ramp-up sharply, and concurrently, when the WRAP 2B plant starts to process waste. The peak storage needs, in the CY 2014-2017 time period, are shown to be about 180 components.

This interaction is depicted in Figure 9, with Figure 10 providing the same data with a different presentation of the same data.

BUFFER STORAGE REQUIREMENTS

RETPROC5.XLS Chart 35

BUFFER STORAGE REQUIREMENTS

FIGURE 10

**Westinghouse
Hanford Company****Internal
Memo**

From: Solid Waste Systems Engineering 87320-94-RSK-026
Phone: 372-1263
Date: March 15, 1994
Subject: CORRECTED DATA FOR SOLID WASTE PROJECTION MODEL BASELINE INPUT,
TANK WASTE REMEDIATION SYSTEM

To: K. L. Hladek

cc: O. J. Valero H5-33
RSK File/LB

As has been determined, the 1993 forecast from Tank Waste Remediation System (TWRS) is missing a potentially large amount of solid waste. In particular, the long-equipment that will be retrieved from the tanks is not properly reported; a separate estimate has been prepared to upgrade this data for use in the 1993 Solid Waste Projection Model waste database pending a new input from TWRS.

Review of the data also suggests that there is almost no solid waste related to TWRS operations in the 1993 forecast. Pending an updated input from TWRS I suggest the following for use in the interim:

1. Calculate a "per-unit" volume of waste from TWRS operations that is based on the data in 1993 input "SSTRET", the input on retrieval "other" wastes. Use the long-component numbers in the time period from 2009-2023 (16/year).

Justification: The data included in SSTRET covers the 2009-2023 period and provides an estimate of the "other" wastes related to retrieval operations, not the same period covered by "SSTLLE", the long-equipment retrieval plans. Take the number of units retrieved in that period (16 long-equipment items per year) and develop unit "other" waste volumes so that the unit volumes are based on comparable time periods.

2. Apply this per unit volume to both the Single-Shell Tank (SST) and Double-Shell Tank (DST) retrieval operations.

Justification: There is no other data available from DST planning. This is the best information available at this time.

3. Use the unit volumes developed above for the upgraded total number of DST and SST long equipment planned for retrieval. The yearly quantity is provided in the attached table, column 8, titled "Long-Equipment Retrieval Rates, Year Total". Apply these unit volumes to the unit quantities in the years indicated.

Justification: The data in the table is the current best estimate of the incoming long equipment. The estimate includes other waste being

K. L. Hladek
Page 2
March 15, 1994

87320-94-RKS-026

generated by TWRS in routine operations, not just tank retrieval operations. Accordingly, this estimate provides a measure of the overall TWRS operations. It is likely to be understated, rather than overstated, since the basis for the table is only long-equipment and there are a lot of other TWRS operations that will generate waste other than long-equipment.

This data revision would apply to the SWPM database and be used in all the SWPM future runs.

R. S. Kelley, Engineer
Solid Waste Systems Engineering

mra

Attachment

ASSUMED DST/SST RETRIEVAL AND PROCESSING RATES												
ASSUM. RETRIEVAL			LONG EQUIP. RETRIEVAL RATES					PROCESSING CAPABILITY			E.O.Y	
TANKS			MISC.	EQUIP.	PUMP	YEAR	CAPABILITY (3)			NUMBER	INCOM.	STOR.
YEAR	DST	SST	TOTAL	EQUIP. (4)	RATE (1)	RATE (2)	TOTAL	T PLANT	WRAP 2B	PROC'D	STOR.	REQ.
1993			0	3	0	0	3				3	3
1994			0	6	0	0	6				6	6
1995	1		1	6	14	0	20				20	29
1996	1		1	6	14	0	20	5		5	20	44
1997	1	1	2	8	20	0	28	10		10	29	62
1998	1		1	10	14	0	24	20		20	24	66
1999	1		1	12	14	0	26	30		30	26	62
2000	1		1	14	14	0	28	40		40	28	50
2001	1		1	18	14	0	32	60		60	32	22
2002	1		1	20	14	3	37	60		59	37	C
2003	1		1	21	14	3	38	60		38	38	C
2004	1	3	4	22	32	6	60	60		60	60	C
2005	1	3	4	22	32	3	57	60		57	57	C
2006		4	4	23	24	3	50	60		50	50	C
2007		5	5	23	30	3	56	60		56	56	C
2008		5	5	20	30	3	53	60		53	53	C
2009		7	7	20	41	3	64	60		60	64	4
2010	1	8	9	17	61	3	81	60	10	70	81	15
2011	1	10	11	15	73	12	100	60	20	80	100	35
2012	2	12	14	12	99	12	123	60	40	100	123	58
2013	2	14	16	10	111	12	133	60	80	140	133	51
2014	2	17	19	10	129	15	153	60	80	140	153	64
2015	2	20	22	8	145	15	169	60	80	140	169	93
2016	2	20	22	7	146	21	174	60	50	140	174	127
2017	2	20	22	6	146	27	179	60	80	140	179	166
2018	2		2	5	29	33	66	60	80	110	66	122
2019	1		1	4	14	42	60		80	80	60	102
2020				3	0	48	51		80	80	51	73
2021				2	0	57	59		80	80	59	53
2022				1	0	66	67		80	80	67	39
2023					0	66	66		80	80	66	25
2024					0	66	66		80	80	66	11
2025					0	6	6		80	17	6	C
2026					0	3	3		80	3	3	C
2027					0	0	C		80	C	0	C
2028					0	0	C		80	C	0	C
2029					0	0	C		80	C	0	C
2030					0	0	C		80	C	0	C
TOTAL	28	149	177	354	1273	531	2158					1384
(1) - Equipment now in tank. Based on 5.9 units/SST and 14 units/DST												
(2) - Equipment required during tank cleanout that becomes waste												
Assumed avg. of 3 pumps/tank required for completion of cleanout.												
Assumed pumps removed 7 years after initial equipment removed												
(3) - Assumed treatment capacity												
(4) - Assumed misc. equipment - replacements, instruments, mech. arms, etc. Based on 2/tank, or min. of 3/yr												
(5) - Rate is adapted from general plan indicated in official 30 year forecast												
(6) - Rate is adapted from TPA milestone guidelines												

APPENDIX E

D&D REFERENCES

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APPENDIX E D&D REFERENCES

This appendix briefly describes the references used to obtain generator and volume information for the D&D waste generator group (described in Section 5.0) and any assumptions made in using this information.

THE FISCAL YEAR (FY) 1993 SOLID WASTE FORECAST DATABASE:

The forecast database contains only one generator of D&D wastes, which is the Surplus Facilities (WHC_SURPLS_FAC). These wastes have been estimated from projects and facilities currently under the D&D program. These facilities are identified in the *Surplus Facilities Program Plan Fiscal Year 1993* and the *Accelerated D&D Schedule*. The 1993 forecast for this generator only reported wastes for the years 1994-2013. It is expected that additional facilities will be identified and added to the surplus facility list after 2013.

DRAFT REPORT: WASTE STREAM EVALUATION FOR LONG-TERM DECONTAMINATION STUDY:

This special study investigated potential D&D waste generators that are not on the Surplus Facilities List. Hundreds of facilities exist on the Hanford Site that will require D&D. To limit the study, two sources were used to identify 26 facilities with potentially large D&D volumes: the 1992 solid waste forecast database and the programmatic environmental impact statement database. Waste information was gathered primarily through interviews with operational and waste personnel. Some estimates were developed by briefly touring the building and estimating the amount of equipment or contaminated material. Data include rough estimates of the waste volumes by waste class, physical characteristics, and possible container types. The schedule for receiving this waste was assumed to occur from 2013 through 2022.

For the purpose of completing the 30-Year Summary Report, the following assumptions and data revisions were made:

- Only the volume and waste category data will be used.
- Building demolition and soil excavation activities will not be addressed; therefore, the physical waste category *construction material* and the waste generator *Secondary Environmental Restoration* were not used.
- Volumes for PUREX and the PUREX Tunnels were deleted for reasons stated in the next reference summary.
- Volumes for the canyon buildings, B-Plant, T-Plant, and the Plutonium Finishing Plant were used but a ratio of 80% contact-handled to 20% remote-handled was based upon personal conversation with Ken Hladek.

ESTIMATION OF PUREX EQUIPMENT AND MATERIALS THAT ARE CANDIDATES FOR REMOVAL AND WASTE PROCESSING DURING PUREX PLANT CLOSURE, WHC-IP-0977 (VALERO, 1994)

The study is a detailed investigation of potential waste from PUREX and the PUREX Tunnels, two facilities not identified on the surplus facilities list that will eventually require D&D.

For the purpose of completing the 30-Year Summary Report, assumptions were made and the following revisions were made:

- Because this study has no waste category separation of remote-handled versus contact-handled, a ratio of 80% contact-handled to 20% remote-handled was assumed based upon personal conversation with Ken Hladek.

APPENDIX F

ANNUAL WASTE GENERATOR VOLUMES BY WASTE CLASS

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4/20/94

Waste Generator Volumes (m³)
by Waste Class

Page 1a

Waste Class	Waste Generator	HELD	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
CH_LIHM_GTCIII	PAST_PRAC_REM	0	0	0	0	31	31	92	46	15	107	138	92	61	61	61	76	76
	PNL	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	PORTSMOUTH	34	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	THIC_221T	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	THIC_222S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	THIC_242T	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	MHC_222S	0	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	MHC_ENV_RES	0	0	0	0	0	0	0	0	20	20	20	85	85	142	142	142	142
	Total for CH_LIHM_GTCIII	48	2	2	2	33	33	94	48	46	138	168	179	148	205	205	220	220
CH_LIHM_I	AMES	0	0	234	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	ANL_E	0	1918	329	329	14	14	14	14	14	14	14	14	14	14	14	14	14
	BAPL	0	14	12	1	1	1	1	1	0	0	0	0	0	0	0	0	0
	BAT_CLBS_LAB	0	9	9	9	9	9	0	0	0	0	0	0	0	0	0	0	0
	BRKJIVN	0	3	3	3	3	3	3	3	3	3	3	4	4	4	4	4	4
	B_LEHR_DAV	0	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	FERMI	0	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	GEN_ATOM	0	9	0	0	0	0	0	0	0	0	0	0	0	9	0	0	0
	LBL	0	30	7	7	7	7	8	8	8	8	8	8	8	8	8	8	8
	LLNL	0	0	31	31	21	21	21	21	21	21	21	21	21	21	21	21	21
	LL_EQUIP_SEC	17	1	4	4	6	5	6	6	7	8	8	13	13	11	12	12	14
	PADUCAH_ES	832	57	195	49	35	35	57	57	57	57	57	57	57	57	57	57	57
	PADUCAH_U	0	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
	PAST_PRAC_REM	0	0	0	0	2256	1790	2126	2042	2096	2165	2669	2975	3320	3480	3480	3480	3320
	PNL	5	8	8	8	8	8	8	8	7	7	7	7	7	7	7	7	7
	PORTSMOUTH	0	482	992	907	1133	1133	1133	1133	963	963	963	963	850	850	850	850	850
	PRINCETON	0	0	0	8	8	0	0	0	0	0	0	0	0	8	8	0	0
	STANFORD	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TPNL_324	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

F-1

MHC-EP-0768

4/20/94

Waste Generator Volumes (m³)
by Waste Class

Page 2a

Waste Class	Waste Generator	HELD	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
CII_LLMH_I	TPNL_326	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TWMC_202A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TWMC_222S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TWMC_242A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TWMC_242S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TWMC_IMVP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TWMC_PX_C010H	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TWMC_TRUSAF	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	U_U	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	WMC_100	0	3	11	11	11	11	11	0	0	0	0	0	0	0	0	0	0
	WMC_100K	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	WMC_105DR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	WMC_202A	0	7	3	2	1	1	0	0	0	0	0	0	0	0	0	0	0
	WMC_221HE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	WMC_221T	0	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20
	WMC_222S	0	41	41	51	57	57	57	57	57	57	54	54	54	54	54	54	54
	WMC_225B	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	WMC_2345Z	0	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
	WMC_2ETF	0	57	113	113	113	113	113	113	113	113	113	113	113	113	113	113	113
	WMC_303K	0	3	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	WMC_340	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	WMC_377	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	WMC_BKLOG	0	854	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	WMC_BQUIP	0	260	326	368	170	170	353	353	353	353	227	227	227	340	340	340	170
	WMC_ENV_RES	0	1	30	6	6	0	28	1	28	28	28	85	85	142	142	142	142
	WMC_GROUT	37	0	0	0	0	0	0	0	0	0	0	5	5	5	5	5	5
	WMC_IMVP	146	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18
	WMC_LLBG	0	3	0	0	3	0	6	3	0	0	3	0	0	3	0	0	3
	WMC_PX_C010H	0	0	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34
	WMC_SSTRET	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	WMC_TRUSAF	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0

F-2

WMC-EP-0768

4/20/94

Waste Generator Volumes (m³)
by Waste Class

Page 3a

Waste Class	Waste Generator	HELD	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
CH_LIHM_I	WHC_TWP_106C	0	17	43	19	43	19	0	0	0	0	0	0	0	0	0	0	0
	WHC_TWP_M314	0	0	0	0	243	243	410	1250	1250	1080	424	424	424	424	0	0	0
	WHC_WELL_DRL	0	4	3	2	1	1	1	1	1	1	1	1	1	1	1	1	1
	Total for CH_LIHM_I	1036	3035	2479	1997	4220	3710	4417	5147	5054	4954	4669	5039	5269	5609	5182	5175	4869
CH_LIHM_III	KAPL_SHIPYDS	0	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22
	LBL	0	6	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	LL_EQUIP_SEC	40	3	11	11	15	13	14	15	17	20	20	32	31	27	30	28	34
	PADUCAH_ES	0	62	62	62	62	62	0	0	0	0	0	0	0	0	0	0	0
	PAST_FRAC_REM	0	0	0	0	23	15	23	23	23	23	31	31	31	38	38	38	31
	PNL	0	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
	PORTSMOUTH	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TWIC_221T	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TWIC_225B	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TWIC_242A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TWIC_242S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TWIC_242T	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TWIC_HMVP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TWIC_PX_C010H	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	WIC_202A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	WIC_222S	0	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	WIC_26TF	0	13	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26
	WIC_308	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	WIC_BKLOG	0	77	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	WIC_ENV_RES	0	0	0	0	0	0	6	0	20	20	20	85	85	142	142	142	142
	WIC_GROUT	352	0	0	0	0	0	0	0	0	0	0	31	14	56	35	43	34
	WIC_HMVP	213	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	25
	WIC_PX_C010H	0	0	165	165	165	165	165	165	165	165	165	165	165	165	165	165	165
	WIC_SSTRET	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3

F-3

WIC-EP-0768

4/20/94

Waste Generator Volumes (m³)
by Waste Class

Page 4a

Waste Class	Waste Generator	HELD	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Total for CH_LIHM_III		616	192	294	294	322	312	265	260	290	293	301	400	302	405	466	473	490
CH_LLM_GTCIII	TWIC_202A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	WIC_ENV_RES	0	0	0	0	0	0	0	0	203	050	1416	2550	3399	5302	7365	7002	6516
Total for CH_LLM_GTCIII		0	0	0	0	0	0	0	0	203	050	1416	2550	3399	5302	7365	7002	6516
CH_LLM_I	AMES	0	4	471	3	3	3	3	3	2	2	2	2	2	2	2	2	2
	ANL_E	0	2163	465	465	213	213	213	213	213	213	213	213	213	213	213	213	213
	BAFL_SHIPYDS	0	124	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	BAT_CLBS_LAB	0	250	210	210	230	206	203	255	0	0	0	0	0	0	0	0	0
	BRKHVN	0	213	223	234	246	250	271	205	290	314	330	346	363	302	401	421	442
	B_LEIR_DAV	0	320	320	164	164	33	0	0	0	0	0	0	0	0	0	0	0
	EGAG	0	199	44	44	0	0	0	0	0	0	0	0	0	0	0	0	0
	FERMI	0	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40
	FUSRAP	0	0	0	0	0	0	0	210	1904	1904	1904	4351	2440	0	0	0	0
	GEN_ATOM	0	523	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	KEH_100	0	61	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	LBL	0	10	110	41	41	1334	2342	1017	1575	1063	425	41	41	41	41	41	41
	LLNL	306	310	193	215	215	215	215	215	215	215	215	215	215	215	215	215	215
	LL_EQUIP_SEC	115	9	31	31	43	37	40	43	49	57	50	92	07	76	06	01	90
	MIT_BATES	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	PADUCAH_ES	3531	157	157	71	70	69	2015	2076	0571	0000	3070	2015	2015	2550	2210	1416	700
	PADUCAH_U	0	34	34	170	170	170	170	170	170	170	170	170	170	170	170	170	170
	PNL	49	404	404	404	404	404	404	404	404	404	404	404	404	404	404	404	404
	PORTSMOUTH	0	203	567	567	567	567	567	567	567	567	567	567	567	567	203	57	57
	PRINCETON	0	71	194	740	600	60	34	24	24	24	34	71	194	740	600	60	34
	RKW_CANOGA	0	11	074	207	300	60	0	0	0	0	0	0	0	0	0	0	0
	STANFORD	0	123	123	123	123	123	123	25	25	25	25	25	25	25	25	25	25
	TPNL_231Z	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

F-4

WMC-EP-0768

4/20/94

Waste Generator Volumes (m³)
by Waste Class

Page 5a

Waste Class	Waste Generator	HELD	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
CH_LLM_1	TPNL_242B/BL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TPNL_306W	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TPNL_314	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TPNL_324	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TPNL_326	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TPNL_327	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TPNL_331	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TMHC_100N	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TMHC_221T	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TMHC_222S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TMHC_225B	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TMHC_306	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TMHC_308	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TMHC_340	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TMHC_GROUT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TMHC_IMVP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	U_U	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	MHC_100	0	148	318	318	318	233	191	0	0	0	0	0	0	0	0	0	0
	MHC_100K	0	168	167	84	108	108	108	108	108	108	108	108	108	108	108	108	108
	MHC_202A	0	198	113	85	28	16	0	0	0	0	0	0	0	0	0	0	0
	MHC_221T	0	269	269	213	0	0	0	213	184	0	0	0	0	0	0	0	0
	MHC_222S	0	428	456	552	595	595	595	595	595	636	636	636	636	636	636	636	636
	MHC_225B	0	170	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	MHC_2345Z	0	245	245	245	245	245	245	245	245	245	245	245	245	245	245	245	245
	MHC_2724W	0	116	116	116	116	116	116	116	116	116	116	116	116	116	116	116	116
	MHC_2ETP	0	453	510	510	510	510	510	510	510	510	510	510	510	510	510	510	510
	MHC_303K	4	82	41	41	20	20	20	0	0	0	0	0	0	0	0	0	0
	MHC_308	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	MHC_340	0	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14
	MHC_377	0	9	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	MHC_BKLOG	0	266	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

F-5

MHC-EP-0768

4/20/94

Waste Generator Volumes (m³)
by Waste Class

Page 6a

Waste Class	Waste Generator	HELD	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
CH_LLM_I	WMC_DSTPSRET	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
	WMC_DST_RET	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	73	75
	WMC_ENV_RES	0	428	2040	1603	3608	416	1247	8215	15368	60618	80179	107516	153760	165411	179887	188442	38074
	WMC_FFTF_MAINT	0	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
	WMC_GROUT	1073	0	0	0	0	0	0	0	0	0	0	125	53	125	125	125	125
	WMC_HMVP	3601	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	450
	WMC_LO45H	0	0	216	216	216	216	216	216	216	216	216	216	216	216	216	216	216
	WMC_LLAG	0	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
	WMC_SSTRET	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
	WMC_TRUSAF	0	1	1	3	7	0	0	0	0	0	0	0	0	0	0	0	0
	WMC_TWP_M020	0	0	29	29	0	0	0	0	0	0	0	0	0	0	0	0	0
	WMC_TWP_M050	0	0	54	54	0	0	0	0	0	0	0	0	0	0	0	0	0
	WMC_TWP_M062	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	WMC_TWP_M151	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	WMC_TWP_M211	0	0	28	37	113	170	113	0	0	0	0	0	0	0	0	0	0
	WMC_WELL_DRL	0	25	16	15	8	5	5	4	4	4	4	4	4	4	4	4	4
Total for CH_LLM_I		8760	8576	9148	7988	9527	6569	10915	17405	31433	76326	89506	118857	163269	172833	186573	113658	43044
CH_LLM_III	BAPL	0	87	84	65	65	27	14	14	0	0	0	0	0	0	0	0	0
	FUSRAP	0	0	3620	3620	3620	0	0	0	0	0	0	0	0	0	0	0	0
	KAPL_SHIPYDS	0	86	54	54	109	165	55	55	55	0	0	0	0	0	0	0	0
	LBL	0	2	13	4	4	149	261	218	174	120	45	4	4	4	4	4	4
	PNL	0	18	13	13	13	13	7	7	6	6	6	6	6	6	6	6	6
	PRINCETON	0	53	9	17	34	17	9	9	9	9	9	53	9	17	34	17	9
	TPNL_324	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TWMC_202A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TWMC_225B	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TWMC_HMVP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	WMC_202A	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
	WMC_222S	0	12	13	14	15	15	15	15	15	15	17	17	17	17	17	17	17

F-6

WMC-EP-0768

4/20/94

Waste Generator Volumes (m³)
by Waste Class

Page 7a

Waste Class	Waste Generator	HELD	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
CH_LLM_III	WMC_225B	0	45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	WMC_2345Z	0	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
	WMC_308	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	WMC_340	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	WMC_BKLOG	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	WMC_ENV_RES	0	0	0	6	6	0	11	1218	1133	2833	4249	8244	8782	12748	16997	12748	11048
	WMC_GROUT	44	0	0	0	0	0	0	0	0	0	0	5	5	5	5	5	5
	WMC_HMVP	6748	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	844
	WMC_TWP_W030	0	25	27	23	0	0	0	0	0	0	0	0	0	0	0	0	0
	WMC_WELL_DRL	0	3	2	2	1	1	1	0	0	0	0	0	0	0	0	0	0
Total for CH_LLM_III		6791	339	3839	3822	3871	390	376	1540	1397	2987	4331	8334	8828	12803	17049	12803	11938
CH_TRU	AMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	ANL_E	0	13	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
	LBL	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	LJNL	63	0	23	46	46	23	23	23	23	23	23	23	23	23	23	23	23
	PAST_PRAC_REM	0	0	0	0	122	122	367	184	61	428	551	367	245	245	245	306	306
	PNL	95	4	2	2	1	1	1	1	1	1	1	1	1	0	0	0	0
	RKM_CANOGA	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TPNL_231Z	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TPNL_327	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TWMC_202A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TWMC_221T	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TWMC_2345Z	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TWMC_308	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	WMC_100K	0	0	71	63	0	0	0	0	0	0	0	0	0	0	0	0	0
	WMC_202A	0	18	69	13	0	0	0	0	0	0	0	0	0	0	0	0	0
	WMC_2345Z	0	124	124	124	124	124	124	124	124	124	124	124	124	124	124	124	124
	WMC_308	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	WMC_EA_W112	0	0	38	0	0	0	0	0	0	0	0	0	0	0	0	0	0

F-7

WMC-EP-0768

4/20/94

Waste Generator Volumes (m³)
by Waste Class

Page 8a

Waste Class	Waste Generator	HELD	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
CH_TRU	WMC_EA_W113	0	0	28	18	0	0	0	0	0	0	0	0	0	0	0	0	0
	WMC_EA_W221	0	0	0	0	0	0	0	183	0	0	0	0	0	0	0	0	0
	WMC_ENV_RES	0	0	9	298	0	0	0	142	3	6	6	11	113	113	113	113	113
	WMC_HMVP	471	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	WMC_WELL_DRL	0	2	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0
Total for CH_TRU		628	163	371	569	300	277	521	662	218	588	711	533	512	511	511	572	572
CH_TRUM	ANL_E	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	LLNL	2	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	PNL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	RKM_CANOGA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TPNL_231Z	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TWMC_202A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TWMC_221T	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TWMC_234SZ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	WMC_202A	0	1	13	5	0	0	0	0	0	0	0	0	0	0	0	0	0
	WMC_234SZ	0	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	WMC_308	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	WMC_ENV_RES	0	0	0	3	0	0	0	57	3	3	3	11	28	113	113	113	113
	WMC_HMVP	471	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	WMC_WELL_DRL	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Total for CH_TRUM		473	6	17	12	4	4	4	60	6	6	6	15	32	117	117	117	117
RH_LLWM_GTC111	PNL	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TWMC_221T	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TWMC_222S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TWMC_242A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TWMC_242S	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TWMC_242T	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

F-8

WMC-EP-0763

4/20/94

Waste Generator Volumes (m³)
by Waste Class

Page 9a

Waste Class	Waste Generator	HELD	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
RH_LLMW_GTCIII	MHC_ENV_RES	0	0	0	0	0	0	0	0	28	28	28	85	85	142	142	142	142
Total for RH_LLMW_GTCIII		14	0	0	0	0	0	0	0	28	28	28	85	85	142	142	142	142
RH_LLMW_I	TPNL_324	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TPNL_326	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TMHC_202A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TMHC_202A_TM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	MHC_221T	0	28	57	57	57	57	57	0	0	0	0	0	0	0	0	0	0
	MHC_222S	0	3	3	5	5	5	4	4	4	4	4	4	4	4	4	4	4
	MHC_ENV_RES	0	0	0	0	0	0	0	0	28	28	28	85	85	142	142	142	142
Total for RH_LLMW_I		0	31	59	61	61	61	61	4	32	32	32	89	89	146	146	146	146
RH_LLMW_III	LL_EQUIP	3053	244	814	814	1140	977	1058	1140	1303	1506	1547	2443	2321	2036	2280	2158	2606
	TPNL_324	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TMHC_221T	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TMHC_225B	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	MHC_ENV_RES	0	0	0	0	0	0	0	0	28	28	28	85	85	142	142	142	142
	MHC_GROUT	1250	0	0	0	0	0	0	0	0	0	0	180	136	136	136	192	136
	MHC_TNP_106C	0	11	44	29	181	18	0	0	0	0	0	0	0	0	0	0	0
Total for RH_LLMW_III		4303	255	858	843	1321	995	1058	1140	1331	1535	1575	2708	2542	2313	2558	2492	2883
RH_LLMW_GTCIII	PNL	24	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TPNL_324	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TMHC_202A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	MHC_ENV_RES	0	0	0	0	0	0	0	0	283	850	1416	2550	3399	5382	7365	7082	6516
Total for RH_LLMW_GTCIII		24	1	0	0	0	0	0	0	284	850	1417	2550	3400	5383	7366	7083	6516

F-9

MHC-EP-0768

4/20/94

Waste Generator Volumes (m³)
by Waste Class

Page 10a

Waste Class	Waste Generator	HELD	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
RH_LLM_I	ANL_E	0	16	17	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	BRKHM	0	4	4	4	0	0	0	0	0	0	0	0	0	0	0	0	0
	PNL	0	7	7	7	6	6	6	6	1	1	1	1	1	1	1	1	1
	TPNL_324	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TPNL_327	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TWMC_202A_TW	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TWMC_221T	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TWMC_225B	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TWMC_GROUT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	WMC_100	0	77	59	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	WMC_100K	0	12	7	7	28	28	20	20	20	20	20	20	20	20	20	20	20
	WMC_221T	0	57	85	0	0	0	0	85	0	0	0	0	0	0	0	0	0
	WMC_WELL_DRL	0	2	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0
Total for RH_LLM_I			0	174	180	20	35	35	27	112	22	22	22	22	22	22	22	22
RH_LLM_III	PNL	0	70	70	61	61	50	50	27	27	27	18	18	18	18	18	18	18
	TPNL_324	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TWMC_202A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TWMC_225B	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TWMC_IMVP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	WMC_225B	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	WMC_FFTF_MAINT	0	16	16	111	95	32	32	32	32	32	32	32	32	32	32	32	32
	WMC_IMVP	1044	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	130
Total for RH_LLM_III			1044	92	86	172	156	82	82	59	59	50	50	50	50	50	50	179
RH_TRU	ANL_E	0	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	BAT_CLBS_LAB	0	0	0	0	0	25	23	23	0	0	0	0	0	0	0	0	0
	PNL	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TPNL_327	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

F-10

MHC-EP-0768

4/20/94

Waste Generator Volumes (m³)
by Waste Class

Page 11a

Waste Class	Waste Generator	HELD	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
RH_TRU	TMHC_100H	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TMHC_202A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TMHC_202A_TM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TMHC_221T	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TMHC_2345Z	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TMHC_HMVP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	MHC_100K	0	0	102	34	0	0	0	0	0	0	0	0	0	0	0	0	0
	MHC_ENV_RES	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0
	MHC_HMVP	385	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total for RH_TRU		386	2	103	39	2	27	25	25	2	2	2	2	2	2	2	2	2
RH_TRUM	LL_EQUIP	339	27	90	90	127	109	118	127	145	167	172	271	258	226	253	240	299
	TPNL_327	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TMHC_202A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TMHC_221T	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TMHC_2345Z	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TMHC_340	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TMHC_221T	0	0	0	0	7	7	7	7	0	0	0	0	0	0	0	0	0
	MHC_DST_PAT	0	0	0	0	0	0	0	0	0	0	0	3683	7365	7365	0	0	0
	MHC_ENV_RES	0	0	0	0	0	0	0	0	0	0	0	113	113	113	113	85	57
	MHC_HMVP	387	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total for RH_TRUM		727	27	90	90	134	116	125	134	145	167	172	4067	7737	7705	367	325	346
Grand Total		24050	13694	17527	15909	19985	12609	17970	26596	40631	88838	104406	145478	195764	213706	228140	150359	78001

F-11

WMC-EP-0768

Waste Generator Volumes (m³)
by Waste Class

Waste Class	Waste Generator	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total
CH_LIHM_GTCIII	PAST_PRAC_REM	76	76	61	61	61	61	46	46	31	31	15	15	15	0	1484
	PNL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14
	PORTSMOUTH	0	0	0	0	0	0	0	0	0	0	0	0	0	0	34
	TWMC_221T	0	0	0	101	101	101	101	101	101	101	101	101	101	0	1013
	TWMC_222S	0	0	0	1	1	1	1	1	1	1	1	1	1	0	5
	TWMC_242T	0	0	0	3	3	3	3	3	3	3	3	3	3	0	34
	NHC_222S	2	2	2	2	2	2	2	2	2	2	2	2	2	2	69
	NHC_ENV_RES	57	20	14	3	0	0	0	0	0	0	0	0	0	0	923
Total for CH_LIHM_GTCIII		135	107	78	251	249	249	233	233	218	218	203	203	203	2	4376
CH_LIHM_I	AMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	237
	ANL_E	14	14	14	14	14	14	14	14	14	14	14	14	14	14	2960
	BAPL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	38
	BAT_CLBS_LAB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	47
	BRKIVN	5	5	5	5	5	5	6	6	6	6	7	7	7	8	136
	B_LEHR_DAV	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
	FERMI	2	2	2	2	2	2	2	2	2	2	2	2	2	2	63
	GEN_ATOM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
	LBL	8	8	8	8	8	8	8	8	8	8	8	8	8	8	257
	LLNL	21	21	21	21	21	21	21	21	21	21	21	21	21	21	629
	LL_EQUIP_SEC	18	22	27	29	34	37	38	40	15	13	11	13	15	15	476
	PADUCAH_ES	57	57	57	57	57	57	57	57	57	57	57	57	57	57	2620
	PADUCAH_U	3	3	3	3	3	3	3	3	3	3	3	3	3	3	84
	PAST_PRAC_REM	2669	1036	1155	1155	1155	1155	1155	1155	1155	0	0	0	0	0	47789
	PNL	7	7	7	7	7	7	7	7	7	7	7	7	7	7	221
	PORTSMOUTH	850	425	425	425	425	425	425	425	425	425	425	425	425	425	21380
	PRINCETON	0	0	0	0	0	0	0	0	0	0	0	0	0	0	57
	STANFORD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11
	TPNL_324	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3

4/20/94

Waste Generator Volumes (m³)
by Waste Class

Page 2b

Waste Class	Waste Generator	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total
CII_LLMW_I	TPNL_326	0	0	0	2	2	2	2	2	2	2	2	2	2	0	18
	TMHC_202A	0	0	0	24	24	24	24	24	24	24	24	24	24	0	236
	TMHC_222S	0	0	0	4	4	4	4	4	4	4	4	4	4	0	36
	TMHC_242A	0	0	0	20	20	20	20	20	20	20	20	20	20	0	204
	TMHC_242S	0	0	0	20	20	20	20	20	20	20	20	20	20	0	204
	TMHC_HMVP	0	0	0	15	15	15	15	15	15	15	15	15	15	0	147
	TMHC_PX_C010H	0	0	0	150	150	150	150	150	150	150	150	150	150	0	1501
	TMHC_TRUSAF	0	0	0	1	1	1	1	1	1	1	1	1	1	0	13
	U_U	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
	MHC_100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	60
	MHC_100K	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
	MHC_105DR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	MHC_202A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14
	MHC_221HE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	MHC_221T	20	20	20	20	20	20	20	20	20	20	20	20	20	20	594
	MHC_222S	54	54	54	54	59	59	59	59	59	59	59	59	59	59	1651
	MHC_225B	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
	MHC_2345Z	7	7	7	7	7	7	7	7	7	7	7	7	7	7	219
	MHC_2ETF	113	113	113	113	113	113	113	113	113	113	113	113	113	113	3342
	MHC_303K	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17
	MHC_340	1	1	1	1	1	1	1	1	1	1	1	1	1	1	24
	MHC_377	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
	MHC_BKLOG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	854
	MHC_BQUIP	170	170	227	227	255	283	340	198	198	227	283	340	178	0	7663
	MHC_ENV_RES	57	28	14	3	0	0	0	0	0	0	0	0	0	0	996
	MHC_GROUT	5	5	5	5	5	5	5	5	5	5	5	5	5	5	129
	MHC_HMVP	18	18	18	18	18	18	18	18	18	18	18	18	18	18	420
	MHC_LLBQ	0	0	3	0	0	3	0	0	3	0	0	3	0	0	34
	MHC_PX_C010H	34	34	34	34	34	34	34	34	34	34	34	34	34	34	980
	MHC_SSTRET	1	1	1	7	7	7	7	7	7	7	7	7	7	7	85
	MHC_TRUSAF	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3

F-13

MHC-EP-0768

4/20/94

Waste Generator Volumes (m³)
by Waste Class

Page 3b

Waste Class	Waste Generator	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total
CH_LIHM_I	MHC_TWP_106C	0	0	0	0	0	0	0	0	0	0	0	0	0	0	140
	MHC_TWP_W114	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6196
	MHC_WELL_DRL	1	1	1	1	1	1	1	1	1	1	1	1	1	1	28
Total for CH_LIHM_I		4135	2852	2223	2452	2488	2523	2585	2445	2416	1285	1340	1402	1231	824	102861
CH_LIHM_III	KAPL_SHIPYDS	22	22	22	22	22	22	22	22	22	22	22	22	22	22	657
	LBL	1	1	1	1	1	1	1	1	1	1	1	1	1	1	30
	LI_EQUIP_SEC	44	54	66	71	82	91	93	96	35	32	27	32	36	35	1158
	PADUCAH_ES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	308
	PAST_PRAC_REM	31	15	15	15	15	15	15	15	15	0	0	0	0	0	520
	PNL	7	7	7	7	7	7	7	7	7	7	7	7	7	7	198
	PORTSMOUTH	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11
	TWMC_221T	0	0	0	363	363	363	363	363	363	363	363	363	363	0	1626
	TWMC_225B	0	0	0	28	28	28	28	28	28	28	28	28	28	0	277
	TWMC_242A	0	0	0	12	12	12	12	12	12	12	12	12	12	0	122
	TWMC_242S	0	0	0	12	12	12	12	12	12	12	12	12	12	0	122
	TWMC_242T	0	0	0	3	3	3	3	3	3	3	3	3	3	0	30
	TWMC_HMVP	0	0	0	22	22	22	22	22	22	22	22	22	22	0	221
	TWMC_PX_C010H	0	0	0	10	10	10	10	10	10	10	10	10	10	0	98
	MHC_202A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	MHC_222S	2	2	2	2	3	3	3	3	3	3	3	3	3	3	68
	MHC_2ETF	26	26	26	26	26	26	26	26	26	26	26	26	26	26	752
	MHC_308	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	MHC_BKLOG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	77
	MHC_ENV_RES	57	28	14	3	0	0	0	0	0	0	0	0	0	0	929
	MHC_GROUT	73	14	43	35	75	14	60	14	56	55	43	14	73	14	1148
	MHC_HMVP	28	25	28	25	28	25	28	25	28	25	28	25	28	25	610
	MHC_PX_C010H	165	165	165	165	165	165	165	165	165	165	165	165	165	165	4782
	MHC_SSTRET	3	3	3	18	18	18	18	18	18	18	18	18	18	18	208

F-14

MHC-EP-0768

4/20/94

Waste Generator Volumes (m³)
by Waste Class

Page 4b

Waste Class	Waste Generator	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total
Total for CH_LLMW_III		457	361	391	838	891	835	887	840	825	802	789	760	827	315	15953
CH_LLM_GTCIII	TWMC_202A	0	0	0	238	238	238	238	238	238	238	238	238	238	0	2384
	WMC_ENV_RES	2266	1416	708	708	0	0	0	0	0	0	0	0	0	0	39943
Total for CH_LLM_GTCIII		2266	1416	708	947	238	238	238	238	238	238	238	238	238	0	42327
CH_LLM_I	AMES	2	2	2	1	1	1	1	1	1	1	1	1	1	1	515
	ANL_E	213	213	213	213	213	213	213	213	213	213	213	213	213	213	9032
	BAPL_SHIPYDS	0	0	3	0	0	0	0	0	0	0	0	0	0	0	126
	BAT_CLBS_LAB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1772
	BRKHMV	464	487	511	537	564	592	622	653	685	720	756	793	833	875	14115
	B_LEHR_DAV	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1817
	EG&G	0	0	0	0	0	0	0	0	0	0	0	0	0	0	286
	FERMI	40	40	40	40	40	40	40	40	40	40	40	40	40	40	1191
	FUSRAP	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12728
	GEN_ATOM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	523
	KEH_100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	61
	LBL	41	41	41	41	41	41	41	41	41	41	41	41	41	41	9682
	LLNL	215	215	215	215	215	215	215	215	215	215	215	215	215	215	6900
	LL_EQUIP_SEC	124	153	188	203	234	258	266	274	101	92	78	90	102	101	3293
	MIT_BATES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
	PADUCAH_ES	283	142	142	142	142	142	142	142	142	142	142	142	142	142	44919
	PADUCAH_U	170	170	170	170	170	170	170	170	170	170	170	170	170	170	4827
	PNL	404	404	404	404	404	404	404	404	404	404	404	404	404	404	12181
	PORTSMOUTH	57	57	57	57	57	57	57	57	57	57	57	57	57	57	8273
	PRINCETON	24	24	24	34	71	194	748	608	68	34	24	24	24	34	5491
	RKM_CANOGA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1629
	STANFORD	25	25	25	25	25	25	25	25	25	25	25	25	25	25	1346
	TPNL_231Z	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4

F-15

WMC-EP-0768

4/20/94

Waste Generator Volumes (m³)
by Waste Class

Page 5b

Waste Class	Waste Generator	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total
CH_LLM_I	TPNL_242B/BL	0	0	0	10	10	10	10	10	10	10	10	10	10	0	96
	TPNL_306W	0	0	0	5	5	5	5	5	5	5	5	5	5	0	51
	TPNL_314	0	0	0	318	318	318	318	318	318	318	318	318	318	0	3178
	TPNL_324	0	0	0	35	35	35	35	35	35	35	35	35	35	0	350
	TPNL_326	0	0	0	2	2	2	2	2	2	2	2	2	2	0	16
	TPNL_327	0	0	0	115	115	115	115	115	115	115	115	115	115	0	1149
	TPNL_331	0	0	0	191	191	191	191	191	191	191	191	191	191	0	1908
	TMHC_100H	0	0	0	833	833	833	833	833	833	833	833	833	833	0	8326
	TMHC_221T	0	0	0	714	714	714	714	714	714	714	714	714	714	0	7144
	TMHC_222S	0	0	0	1280	1280	1280	1280	1280	1280	1280	1280	1280	1280	0	12803
	TMHC_225B	0	0	0	688	688	688	688	688	688	688	688	688	688	0	6880
	TMHC_306	0	0	0	1	1	1	1	1	1	1	1	1	1	0	5
	TMHC_308	0	0	0	13	13	13	13	13	13	13	13	13	13	0	129
	TMHC_340	0	0	0	20	20	20	20	20	20	20	20	20	20	0	198
	TMHC_GROUT	0	0	0	28	28	28	28	28	28	28	28	28	28	0	276
	TMHC_HMVP	0	0	0	37	37	37	37	37	37	37	37	37	37	0	368
	U_U	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
	MHC_100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1527
	MHC_100K	108	108	108	108	108	108	0	0	0	0	0	0	0	0	2473
	MHC_202A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	441
	MHC_221T	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1147
	MHC_222S	636	636	636	680	680	680	680	680	680	680	680	680	680	680	18841
	MHC_225B	0	0	0	0	0	0	0	0	0	0	0	0	0	0	170
	MHC_2345Z	245	245	245	245	245	245	245	245	245	245	245	245	245	245	7356
	MHC_2724N	116	116	116	116	116	116	116	116	116	116	116	116	116	116	3480
	MHC_2ETF	510	510	510	510	510	510	510	510	510	510	510	510	510	510	15240
	MHC_303K	0	0	0	0	0	0	0	0	0	0	0	0	0	0	229
	MHC_308	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
	MHC_340	14	14	14	14	14	14	14	14	14	14	14	14	14	14	426
	MHC_377	1	1	1	1	1	1	1	1	1	1	1	1	1	1	26
	MHC_BKLOG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	266

F-16

MHC-EP-0768

4/20/94

Waste Generator Volumes (m³)
by Waste Class

Page 6b

Waste Class	Waste Generator	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total
CH_LLM_I	WMC_DSTPSRET	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
	WMC_DST_RET	126	52	84	73	73	73	42	0	0	0	0	0	0	0	673
	WMC_ENV_RES	12578	2210	1048	1116	0	0	0	0	0	0	0	0	0	0	943850
	WMC_FFTF_MAINT	9	9	9	9	9	9	9	9	9	9	9	9	9	9	261
	WMC_GROUT	198	53	125	125	198	53	198	53	125	198	125	53	198	53	3503
	WMC_HMVP	450	450	450	450	450	450	450	450	450	450	450	450	450	450	10352
	WMC_L045H	216	216	216	216	216	216	216	216	216	216	216	216	216	216	6261
	WMC_L1BG	6	6	6	6	6	6	6	6	6	6	6	6	6	6	189
	WMC_SSTRET	7	7	7	51	51	51	51	51	51	51	51	51	51	51	591
	WMC_TRUSAF	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12
	WMC_TMP_W028	0	0	0	0	0	0	0	0	0	0	0	0	0	0	58
	WMC_TMP_W058	0	0	0	0	0	0	0	0	0	0	0	0	0	0	109
	WMC_TMP_W062	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
	WMC_TMP_W151	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
	WMC_TMP_W211	0	0	0	0	0	0	0	0	0	0	0	0	0	0	462
	WMC_WELL_DRL	4	4	4	4	4	4	4	4	4	4	4	4	4	4	174
Total for CH_LLM_I		17285	6609	5614	10095	9145	9176	9773	9484	8877	8941	8880	8858	9055	4672	1200849
CH_LLM_III	BAPL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	355
	FUSRAP	0	3163	3163	0	13768	13768	0	0	0	0	0	0	0	0	44722
	KAPL_SHIPYDS	0	0	0	0	0	0	0	0	0	0	0	0	0	0	633
	LBL	4	4	4	4	4	4	4	4	4	4	4	4	4	4	1078
	PNL	6	6	6	6	6	6	6	6	6	6	6	6	6	6	231
	PRINCETON	9	9	9	9	53	9	17	34	17	9	9	9	9	9	515
	TPNL_324	0	0	0	1	1	1	1	1	1	1	1	1	1	1	10
	TWMC_202A	0	0	0	238	238	238	238	238	238	238	238	238	238	0	2384
	TWMC_225B	0	0	0	2739	2739	2739	2739	2739	2739	2739	2739	2739	2739	0	27387
	TWMC_HMVP	0	0	0	74	74	74	74	74	74	74	74	74	74	0	736
	WMC_202A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
	WMC_222S	17	17	17	21	21	21	21	21	21	21	21	21	21	21	530

F-17

MHC-EP-0768

4/20/94

Waste Generator Volumes (m³)
by Waste Class

Page 7b

Waste Class	Waste Generator	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total
CH_LLM_III	MHC_225B	0	0	0	0	0	0	0	0	0	0	0	0	0	0	45
	MHC_2345Z	4	4	4	4	4	4	4	4	4	4	4	4	4	4	114
	MHC_308	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	MHC_340	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12
	MHC_BKLOG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
	MHC_ENV_RES	3966	2033	1416	1416	0	0	0	0	0	0	0	0	0	0	89654
	MHC_GROUT	5	5	5	5	5	5	5	5	5	5	5	5	5	5	152
	MHC_HMVP	844	844	844	844	844	844	844	844	844	844	844	844	844	844	19400
	MHC_TWP_W030	0	0	0	0	0	0	0	0	0	0	0	0	0	0	75
	MHC_WELL_DRL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17
	Total for CH_LLM_III	4856	6885	5469	5362	17758	17713	3954	3971	3954	3946	3946	3946	3946	894	100058
CH_TRU	AMES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	ANL_E	6	6	6	6	6	6	6	6	6	6	6	6	6	6	178
	LBL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
	LLNL	23	23	23	23	23	23	23	23	23	23	23	23	23	23	776
	PAST_PRAC_REM	306	306	245	245	245	245	184	184	122	122	61	61	61	0	5935
	PNL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	111
	RKM_CANOGA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
	TPNL_2312	0	0	0	3	3	3	3	3	3	3	3	3	3	0	32
	TPNL_327	0	0	0	3	3	3	3	3	3	3	3	3	3	0	27
	TMHC_202A	0	0	0	59	59	59	59	59	59	59	59	59	59	0	595
	TMHC_221T	0	0	0	85	85	85	85	85	85	85	85	85	85	0	850
	TMHC_2345Z	0	0	0	866	866	866	866	866	866	866	866	866	866	0	8663
	TMHC_308	0	0	0	9	9	9	9	9	9	9	9	9	9	0	90
	MHC_100K	0	0	0	0	0	0	0	0	0	0	0	0	0	0	133
	MHC_202A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	99
	MHC_2345Z	124	124	124	124	124	124	124	124	124	124	124	124	124	124	3723
	MHC_308	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	MHC_EA_M112	0	0	0	0	0	0	0	0	0	0	0	0	0	0	38

F-18

MHC-EP-0768

4/20/94

Waste Generator Volumes (m³)
by Waste Class

Page 8b

Waste Class	Waste Generator	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total
CH_TRU	WMC_EA_M113	0	0	0	0	0	0	0	0	0	0	0	0	0	0	46
	WMC_EA_M221	0	0	0	0	0	0	0	0	0	0	0	0	0	0	183
	WMC_ENV_RES	28	28	28	28	0	0	0	0	0	0	0	0	0	0	1153
	WMC_HMVP	0	0	0	0	0	58	59	61	59	58	59	58	59	61	1002
	WMC_WELL_DRL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12
Total for CH_TRU		488	487	426	1452	1423	1482	1421	1423	1360	1360	1298	1298	1299	214	23651
CH_TRUM	ANL_E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
	LLNL	1	1	1	1	1	1	1	1	1	1	1	1	1	1	31
	PNL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	RKM_CANOGA	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	TPNL_2312	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
	TWMC_202A	0	0	0	1	1	1	1	1	1	1	1	1	1	1	9
	TWMC_221T	0	0	0	272	272	272	272	272	272	272	272	272	272	0	2720
	TWMC_2345Z	0	0	0	1004	1004	1004	1004	1004	1004	1004	1004	1004	1004	0	10041
	WMC_202A	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18
	WMC_2345Z	2	2	2	2	2	2	2	2	2	2	2	2	2	2	57
	WMC_308	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	WMC_ENV_RES	28	28	28	28	0	0	0	0	0	0	0	0	0	0	674
	WMC_HMVP	0	0	0	0	0	59	58	59	58	59	61	59	58	59	1000
	WMC_WELL_DRL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
Total for CH_TRUM		32	32	32	1309	1281	1339	1339	1339	1339	1339	1341	1339	1339	62	14570
RH_LLHM_GTCIII	PNL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14
	TWMC_221T	0	0	0	45	45	45	45	45	45	45	45	45	45	0	453
	TWMC_222S	0	0	0	11	11	11	11	11	11	11	11	11	11	0	107
	TWMC_242A	0	0	0	2	2	2	2	2	2	2	2	2	2	0	22
	TWMC_242S	0	0	0	2	2	2	2	2	2	2	2	2	2	0	22
	TWMC_242T	0	0	0	1	1	1	1	1	1	1	1	1	1	0	12

F-19

WMC-EP-0768

4/20/94

Waste Generator Volumes (m³)
by Waste Class

Page 9b

Waste Class	Waste Generator	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total
RH_LIWM_GTCIII	MHC_ENV_RES	57	28	14	3	0	0	0	0	0	0	0	0	0	0	923
Total for RH_LIWM_GTCIII		57	28	14	64	62	62	62	62	62	62	62	62	62	0	1554
RH_LIWM_I	TPNL_324	0	0	0	21	21	21	21	21	21	21	21	21	21	0	212
	TPNL_326	0	0	0	1	1	1	1	1	1	1	1	1	1	0	7
	TMHC_202A	0	0	0	6	6	6	6	6	6	6	6	6	6	0	59
	TMHC_202A_TM	0	0	0	0	0	0	0	0	0	0	0	0	0	242	242
	MHC_221T	0	0	0	0	0	0	0	0	0	0	0	0	0	0	312
	MHC_222S	4	4	4	4	4	4	4	4	4	4	4	4	4	4	122
	MHC_ENV_RES	57	28	14	3	0	0	0	0	0	0	0	0	0	0	923
Total for RH_LIWM_I		61	32	18	35	32	32	32	32	32	32	32	32	32	246	1877
RH_LIWM_III	LL_EQUIP	3298	4071	5008	5415	6229	6880	7084	7287	2687	2443	2076	2482	2728	2687	87733
	TPNL_324	0	0	0	21	21	21	21	21	21	21	21	21	21	0	212
	TMHC_221T	0	0	0	91	91	91	91	91	91	91	91	91	91	0	906
	TMHC_225B	0	0	0	7	7	7	7	7	7	7	7	7	7	0	63
	MHC_ENV_RES	57	28	14	3	0	0	0	0	0	0	0	0	0	0	923
	MHC_GROUT	140	136	192	136	180	136	196	136	136	136	192	136	148	136	4298
	MHC_TWP_106C	0	0	0	0	0	0	0	0	0	0	0	0	0	0	283
Total for RH_LIWM_III		3494	4236	5214	5672	6528	7135	7398	7542	2942	2698	2387	2657	2986	2823	94425
RH_LIWM_GTCIII	PNL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	33
	TPNL_324	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
	TMHC_202A	0	0	0	106	106	106	106	106	106	106	106	106	106	0	1055
	MHC_ENV_RES	2266	1416	708	708	0	0	0	0	0	0	0	0	0	0	39943
Total for RH_LIWM_GTCIII		2267	1417	709	814	106	106	106	106	106	106	106	106	106	0	41836

F-20

MHC-EP-0768

4/20/94

Waste Generator Volumes (m³)
by Waste Class

Page 10b

Waste Class	Waste Generator	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total
RH_LLM_I	ANL_E	0	0	0	0	0	0	0	0	0	0	0	0	0	0	33
	BRKHVM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11
	PNL	1	1	1	1	1	1	1	1	1	1	1	1	1	1	71
	TPNL_324	0	0	0	1	1	1	1	1	1	1	1	1	1	0	12
	TPNL_327	0	0	0	31	31	31	31	31	31	31	31	31	31	0	314
	TWMC_202A_TW	0	0	0	0	0	0	0	0	0	0	0	0	0	1022	1022
	TWMC_221T	0	0	0	179	179	179	179	179	179	179	179	179	179	0	1706
	TWMC_225B	0	0	0	172	172	172	172	172	172	172	172	172	172	0	1720
	TWMC_GROUT	0	0	0	1	1	1	1	1	1	1	1	1	1	0	8
	MHC_100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	136
	MHC_100K	20	20	20	20	20	20	0	0	0	0	0	0	0	0	429
	MHC_221T	0	0	0	0	0	0	0	0	0	0	0	0	0	0	227
	MHC_WELL_DRL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13
Total for RH_LLM_I		22	22	22	406	406	406	385	385	385	385	385	385	385	1024	5701
RH_LLM_III	PNL	18	18	18	18	18	18	18	18	18	18	18	18	18	18	816
	TPNL_324	0	0	0	1	1	1	1	1	1	1	1	1	1	0	14
	TWMC_202A	0	0	0	14	14	14	14	14	14	14	14	14	14	0	137
	TWMC_225B	0	0	0	685	685	685	685	685	685	685	685	685	685	0	6847
	TWMC_HMVP	0	0	0	663	663	663	663	663	663	663	663	663	663	0	6626
	MHC_225B	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
	MHC_FFTF_MAINT	32	32	32	32	32	32	32	32	32	32	32	32	32	32	1065
	MHC_HMVP	130	130	133	130	130	130	133	130	130	130	133	130	130	130	2999
Total for RH_LLM_III		179	179	183	1541	1541	1541	1545	1541	1541	1541	1545	1541	1541	179	10500
RH_TRU	ANL_E	2	2	2	2	2	2	2	2	2	2	2	2	2	2	51
	BAT_CLBS_LAB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	71
	PNL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	TPNL_327	0	0	0	101	101	101	101	101	101	101	101	101	101	0	1015

F-21

MHC-EP-0768

4/20/94

Waste Generator Volumes (m³)
by Waste Class

Page 11b

Waste Class	Waste Generator	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total
RH_TRU	TMHC_100N	0	0	0	119	119	119	119	119	119	119	119	119	119	0	1106
	TMHC_202A	0	0	0	12	12	12	12	12	12	12	12	12	12	0	119
	TMHC_202A_TW	0	0	0	0	0	0	0	0	0	0	0	0	0	697	697
	TMHC_221T	0	0	0	21	21	21	21	21	21	21	21	21	21	0	212
	TMHC_2345Z	0	0	0	217	217	217	217	217	217	217	217	217	217	0	2166
	TMHC_HMVP	0	0	0	721	721	721	721	721	721	721	721	721	721	0	7215
	WMC_100K	0	0	0	0	0	0	0	0	0	0	0	0	0	0	136
	WMC_ENV_RES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
	WMC_HMVP	47	50	49	47	49	169	172	169	47	49	47	49	47	49	1426
Total for RH_TRU		49	51	51	1240	1242	1362	1365	1362	1240	1242	1240	1242	1240	740	14297
RH_TRUM	LL_EQUIP	366	452	556	602	692	764	787	810	299	271	231	267	303	299	9740
	TPNL_327	0	0	0	1	1	1	1	1	1	1	1	1	1	0	8
	TMHC_202A	0	0	0	3	3	3	3	3	3	3	3	3	3	0	32
	TMHC_221T	0	0	0	68	68	68	68	68	68	68	68	68	68	0	680
	TMHC_2345Z	0	0	0	251	251	251	251	251	251	251	251	251	251	0	2510
	TMHC_340	0	0	0	2	2	2	2	2	2	2	2	2	2	0	23
	WMC_221T	0	0	0	0	0	0	0	0	0	0	0	0	0	0	28
	WMC_DST_PRT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10414
	WMC_ENV_RES	28	28	28	28	0	0	0	0	0	0	0	0	0	0	700
	WMC_HMVP	50	47	50	49	47	169	169	169	49	47	49	49	47	49	1429
Total for RH_TRUM		444	528	634	1005	1064	1259	1282	1304	673	644	605	641	675	348	33500
Grand Total		36225	25242	21705	33484	44454	45459	32606	32310	26209	24038	24399	24712	25165	12350	1803701

F-22

WMC-EP-0768

APPENDIX G

ANNUAL WASTE CLASS VOLUMES BY WASTE GENERATOR

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4/20/94

Waste Class Volumes (m³)
by Waste Generator

Page 1a

Waste Generator	Waste Class	Weld	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
AMES	CH_LLMW_I	0	0	236	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	CH_LLM_I	0	4	471	3	3	3	3	3	2	2	2	2	2	2	2	2	2
	CH_TRU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total for AMES	0	4	706	3	3	3	3	3	2	2	2	2	2	2	2	2	2
ANL_E	CH_LLMW_I	0	1918	329	329	14	14	14	14	14	14	14	14	14	14	14	14	14
	CH_LLM_I	0	2363	465	465	213	213	213	213	213	213	213	213	213	213	213	213	213
	CH_TRU	0	13	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
	CH_TRUM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	RH_LLM_I	0	16	17	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	RH_TRU	0	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Total for ANL_E		0	4312	819	802	234	234	234	234	234	234	234	234	234	234	234	234	234
BAPL	CH_LLMW_I	0	14	12	1	1	1	1	1	0	0	0	0	0	0	0	0	0
	CH_LLM_III	0	87	84	65	65	27	14	14	0	0	0	0	0	0	0	0	0
Total for BAPL		0	101	95	65	65	27	15	15	0	0	0	0	0	0	0	0	0
BAPL_SHIPYDS	CH_LLM_I	0	124	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total for BAPL_SHIPYDS		0	124	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BAT_CLBS_LAB	CH_LLMW_I	0	9	9	9	9	9	0	0	0	0	0	0	0	0	0	0	0
	CH_LLM_I	0	258	230	230	230	286	283	255	0	0	0	0	0	0	0	0	0
	RH_TRU	0	0	0	0	0	25	23	23	0	0	0	0	0	0	0	0	0
Total for BAT_CLBS_LAB		0	268	239	239	239	321	306	278	0	0	0	0	0	0	0	0	0

G-1

MHC-EP-0768

4/20/94

Waste Class Volume (m³)
by Waste Generator

Page 2a

Waste Generator	Waste Class	Held	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
BRKHVN	CH_LLMW_I	0	3	3	3	3	3	3	3	3	3	3	4	4	4	4	4	4
	CH_LLM_I	0	213	223	234	246	258	271	285	298	314	330	346	363	382	401	421	442
	RH_LLM_I	0	4	4	4	0	0	0	0	0	0	0	0	0	0	0	0	0
Total for BRKHVN		0	219	230	241	249	261	274	288	302	317	333	350	367	385	405	425	446
B_LEHR_DAV	CH_LLMW_I	0	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	CH_LLM_I	0	328	328	164	164	33	0	0	0	0	0	0	0	0	0	0	0
Total for B_LEHR_DAV		0	331	330	164	164	33	0	0	0	0	0	0	0	0	0	0	0
EG&G	CH_LLM_I	0	199	44	44	0	0	0	0	0	0	0	0	0	0	0	0	0
Total for EG&G		0	199	44	44	0	0	0	0	0	0	0	0	0	0	0	0	0
FERMI	CH_LLMW_I	0	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	CH_LLM_I	0	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40
Total for FERMI		0	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42
FUSRAP	CH_LLM_I	0	0	0	0	0	0	0	218	1904	1904	1904	4351	2448	9	0	0	0
	CH_LLM_III	0	0	3620	3620	3620	0	0	0	0	0	0	0	0	0	0	0	0
Total for FUSRAP		0	0	3620	3620	3620	0	0	218	1904	1904	1904	4351	2448	9	0	0	0
GEN_ATOM	CH_LLMW_I	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	CH_LLM_I	0	523	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total for GEN_ATOM		0	531	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
KAPL_SHIPYDS	CH_LLMW_III	0	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22	22

G-2

MHC-EP-0768

4/20/94

Waste Class Volumes (m³)
by Waste Generator

Page 3a

Waste Generator	Waste Class	Held	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
KAPL_SHIPYDS	CH_LLM_III	0	86	54	54	109	165	55	55	55	0	0	0	0	0	0	0	0
Total for KAPL_SHIPYDS		0	100	76	76	131	187	77	77	77	22	22	22	22	22	22	22	22
KEH_100	CH_LLM_I	0	61	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total for KEH_100		0	61	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
LBL	CH_LLM_I	0	38	7	7	7	7	8	8	8	8	8	8	8	8	8	8	8
	CH_LLM_III	0	6	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	CH_LLM_I	0	18	118	41	41	1334	2342	1817	1575	1063	425	41	41	41	41	41	41
	CH_LLM_III	0	2	13	4	4	149	261	218	174	120	45	4	4	4	4	4	4
	CH_TRU	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total for LBL		0	65	139	54	54	1491	2611	2043	1750	1191	478	54	54	54	54	54	54
LLNL	CH_LLM_I	0	0	31	31	21	21	21	21	21	21	21	21	21	21	21	21	21
	CH_LLM_I	386	310	193	215	215	215	215	215	215	215	215	215	215	215	215	215	215
	CH_TRU	63	0	23	46	46	23	23	23	23	23	23	23	23	23	23	23	23
	CH_TRUM	2	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Total for LLNL		451	310	248	293	283	260	260	260	260	260	260	260	260	260	260	260	260
LL_EQUIP	RH_LLM_III	3053	244	814	814	1140	977	1058	1140	1303	1506	1547	2443	2321	2036	2280	2158	2606
	RH_TRUM	339	27	90	90	127	109	118	127	145	167	172	271	258	226	253	240	290
Total for LL_EQUIP		3393	271	905	905	1267	1086	1176	1267	1448	1674	1719	2714	2578	2262	2533	2397	2895
LL_EQUIP_SEC	CH_LLM_I	17	1	4	4	6	5	6	6	7	8	8	13	13	11	12	12	14
	CH_LLM_III	40	3	11	11	15	13	14	15	17	20	20	32	31	27	30	28	34
	CH_LLM_I	115	9	31	31	43	37	40	43	49	57	58	92	87	76	86	81	98

G-3

WMC-EP-0768

4/20/94

Waste Class Volumes (m³);
by Waste Generator

Page 4a

Waste Generator	Waste Class	Held	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Total for LL_EQUIP_SEC		171	14	46	46	64	55	59	64	73	85	87	137	130	114	120	121	146
MIT_BATES	CH_LLM_I	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total for MIT_BATES		1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PADUCAH_ES	CH_LIHM_I	832	57	195	49	35	35	57	57	57	57	57	57	57	57	57	57	57
	CH_LIHM_III	0	62	62	62	62	62	0	0	0	0	0	0	0	0	0	0	0
	CH_LLM_I	3531	157	157	71	70	69	2815	2876	8571	8888	3078	2815	2815	2558	2210	1416	708
Total for PADUCAH_ES		4362	276	414	182	166	166	2872	2932	8628	8945	3135	2872	2872	2606	2266	1473	765
PADUCAH_U	CH_LIHM_I	0	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
	CH_LLM_I	0	34	34	170	170	170	170	170	170	170	170	170	170	170	170	170	170
Total for PADUCAH_U		0	36	36	173	173	173	173	173	173	173	173	173	173	173	173	173	173
PAST_PRAC_REM	CH_LIHM_GTCIII	0	0	0	0	31	31	92	46	15	107	138	92	61	61	61	76	76
	CH_LIHM_I	0	0	0	0	2256	1790	2126	2042	2096	2165	2669	2975	3320	3488	3488	3488	3320
	CH_LIHM_III	0	0	0	0	23	15	23	23	23	23	31	31	31	38	38	38	31
	CH_TRU	0	0	0	0	122	122	367	184	61	428	551	367	245	245	245	306	306
Total for PAST_PRAC_REM		0	0	0	0	2432	1958	2608	2295	2195	2723	3388	3465	3656	3824	3824	3901	3733
PNL	CH_LIHM_GTCIII	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	CH_LIHM_I	5	8	8	8	8	8	8	8	7	7	7	7	7	7	7	7	7
	CH_LIHM_III	0	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
	CH_LLM_I	49	404	404	404	404	404	404	404	404	404	404	404	404	404	404	404	404
	CH_LLM_III	0	18	13	13	13	13	7	7	6	6	6	6	6	6	6	6	6
	CH_TRU	95	4	2	2	1	1	1	1	1	1	1	1	1	0	0	0	0

G-4

WMC-EP-0768

4/20/94

Waste Class Volumes (m³)
by Waste Generator

Page 5a

Waste Generator	Waste Class	Held	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
PNL	CH_TRUM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	RH_LIWM_GTCIII	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	RH_LLM_GTCIII	24	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	RH_LLM_I	0	7	7	7	6	6	6	6	1	1	1	1	1	1	1	1	1
	RH_LLM_III	0	70	70	61	61	50	50	27	27	27	18	18	18	18	18	18	18
	RH_TRU	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total for PNL		202	520	512	501	500	489	484	461	454	454	445	445	444	444	444	444	443
PORTSMOUTH	CH_LIWM_GTCIII	34	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	CH_LIWM_I	0	482	992	907	1133	1133	1133	1133	963	963	963	963	850	850	850	850	850
	CH_LIWM_III	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	CH_LLM_I	0	283	567	567	567	567	567	567	567	567	567	567	567	567	283	57	57
Total for PORTSMOUTH		45	765	1558	1473	1700	1700	1700	1700	1530	1530	1530	1530	1417	1417	1133	907	907
PRINCETON	CH_LIWM_I	0	0	0	8	8	0	0	0	0	0	0	0	0	8	8	0	0
	CH_LLM_I	0	71	194	748	608	68	34	24	24	24	34	71	194	748	608	68	34
	CH_LLM_III	0	53	9	17	34	17	9	9	9	9	9	53	9	17	34	17	9
Total for PRINCETON		0	124	202	773	650	86	43	33	33	33	43	124	202	773	650	86	43
RKM_CANOGA	CH_LLM_I	0	11	874	287	388	68	0	0	0	0	0	0	0	0	0	0	0
	CH_TRU	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	CH_TRUM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total for RKM_CANOGA		0	14	874	287	388	68	0	0	0	0	0	0	0	0	0	0	0
STANFORD	CH_LIWM_I	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	CH_LLM_I	0	123	123	123	123	123	123	25	25	25	25	25	25	25	25	25	25

G-5

MHC-EP-0768

4/20/94

Waste Class Volumes (m³)
by Waste Generator

Page 6a

Waste Generator	Waste Class	Held	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Total for STANFORD			0	129	123	124	123	124	123	26	25	26	25	26	25	26	25	26
TPNL_2312	CH_LLM_I	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	CH_TRU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	CH_TRUM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total for TPNL_2312			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TPNL_242B/BL	CH_LLM_I	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total for TPNL_242B/BL			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TPNL_306W	CH_LLM_I	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total for TPNL_306W			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TPNL_314	CH_LLM_I	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total for TPNL_314			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TPNL_324	CH_LLMW_I	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	CH_LLM_I	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	CH_LLM_III	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	RH_LLMW_I	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	RH_LLMW_III	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	RH_LLM_GTCIII	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	RH_LLM_I	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	RH_LLM_III	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

G-6

WMC-EP-0768

4/20/94

Waste Class Volumes (m³)
by Waste Generator

Page 7a

Waste Generator	Waste Class	Held	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Total for TPNL_324		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TPNL_326	CH_LLM_I	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	CH_LLM_I	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	RH_LLM_I	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total for TPNL_326		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TPNL_327	CH_LLM_I	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	CH_TRU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	RH_LLM_I	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	RH_TRU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	RH_TRUM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total for TPNL_327		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TPNL_331	CH_LLM_I	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total for TPNL_331	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TWHC_100N	CH_LLM_I	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	RH_TRU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total for TWHC_100N		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TWHC_202A	CH_LLM_I	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	CH_LLM_GTCIII	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	CH_LLM_III	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	CH_TRU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	CH_TRUM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

G-7

WHC-EP-0768

4/20/94

Waste Class Volumes (m³)
by Waste Generator

Page 8a

Waste Generator	Waste Class	Held	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
TWHC_202A	RH_LLMW_I	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	RH_LLMW_GTCIII	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	RH_LLMW_III	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	RH_TRU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	RH_TRUM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total for TWHC_202A		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TWHC_202A_TW	RH_LLMW_I	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	RH_LLMW_I	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	RH_TRU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total for TWHC_202A_TW		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TWHC_221T	CH_LLMW_GTCIII	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	CH_LLMW_III	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	CH_LLMW_I	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	CH_TRU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	CH_TRUM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	RH_LLMW_GTCIII	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	RH_LLMW_III	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	RH_LLMW_I	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	RH_TRU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	RH_TRUM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total for TWHC_221T		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TWHC_222S	CH_LLMW_GTCIII	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	CH_LLMW_I	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	CH_LLMW_I	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	RH_LLMW_GTCIII	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

G-8

WHC-EP-0768

4/20/94

Waste Class Volumes (m³)
by Waste Generator

Page 9a

Waste Generator	Waste Class	Held	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Total for TWHC_222S			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TWHC_225B	CH_LLMW_III	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	CH_LLMW_I	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	CH_LLMW_III	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	RH_LLMW_III	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	RH_LLMW_I	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	RH_LLMW_III	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total for TWHC_225B			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TWHC_2345Z	CH_TRU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	CH_TRUM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	RH_TRU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	RH_TRUM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total for TWHC_2345Z			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TWHC_242A	CH_LLMW_I	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	CH_LLMW_III	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	RH_LLMW_GTCIII	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total for TWHC_242A			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TWHC_242S	CH_LLMW_I	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	CH_LLMW_III	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	RH_LLMW_GTCIII	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total for TWHC_242S			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

G-9

WMC-EP-0768

4/20/94

Waste Class Volumes (m³)
by Waste Generator

Page 10a

Waste Generator	Waste Class	Held	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
TWHC_242T	CH_LLMW_GTCIII	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	CH_LLMW_III	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	RH_LLMW_GTCIII	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total for TWHC_242T		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TWHC_306	CH_LLM_I	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total for TWHC_306		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TWHC_308	CH_LLM_I	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	CH_TRU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total for TWHC_308		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TWHC_340	CH_LLM_I	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	RH_TRUM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total for TWHC_340		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TWHC_GROUT	CH_LLM_I	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	RH_LLM_I	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total for TWHC_GROUT		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TWHC_HMVP	CH_LLMW_I	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	CH_LLMW_III	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	CH_LLM_I	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	CH_LLM_III	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	RH_LLM_III	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	RH_TRU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

G-10

MHC-EP-0768

4/20/94

Waste Class Volumes (m³)
by Waste Generator

Page 11a

Waste Generator	Waste Class	Held	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Total for TMHC_HMVP		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TMHC_PX_C010H	CH_LLMW_I	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	CH_LLMW_III	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total for TMHC_PX_C010H		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TMHC_TRUSAF	CH_LLMW_I	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total for TMHC_TRUSAF		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
U_U	CH_LLMW_I	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	CH_LLMW_I	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total for U_U		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WMC_100	CH_LLMW_I	0	3	11	11	11	11	11	0	0	0	0	0	0	0	0	0	0
	CH_LLMW_I	0	140	310	310	310	233	191	0	0	0	0	0	0	0	0	0	0
	RH_LLMW_I	0	77	59	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total for WMC_100		0	220	300	330	330	245	202	0	0	0	0	0	0	0	0	0	0
WMC_100K	CH_LLMW_I	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	CH_LLMW_I	0	160	167	84	108	108	108	108	108	108	108	108	108	108	108	108	108
	CH_TRU	0	0	71	63	0	0	0	0	0	0	0	0	0	0	0	0	0
	RH_LLMW_I	0	12	7	7	20	20	20	20	20	20	20	20	20	20	20	20	20
	RH_TRU	0	0	102	34	0	0	0	0	0	0	0	0	0	0	0	0	0
Total for WMC_100K		0	180	347	180	136	136	129	129	129	129	129	129	129	129	129	129	129

G-11

WMC-EP-0768

4/20/94

Waste Class Volumes (m³)
by Waste Generator

Page 12a

Waste Generator	Waste Class	Held	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
MHC_105DR	CH_LLMM_I	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total for MHC_105DR		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MHC_202A	CH_LLMM_I	0	7	3	2	1	1	0	0	0	0	0	0	0	0	0	0	0
	CH_LLMM_III	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	CH_LLM_I	0	198	113	85	28	16	0	0	0	0	0	0	0	0	0	0	0
	CH_LLM_III	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
	CH_TRU	0	18	69	13	0	0	0	0	0	0	0	0	0	0	0	0	0
	CH_TRUM	0	1	13	5	0	0	0	0	0	0	0	0	0	0	0	0	0
Total for MHC_202A		0	224	199	105	29	17	0	0	0	0	0	0	0	0	0	0	0
MHC_221HE	CH_LLMM_I	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total for MHC_221HE		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MHC_221T	CH_LLMM_I	0	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20
	CH_LLM_I	0	269	269	213	0	0	0	213	184	0	0	0	0	0	0	0	0
	RH_LLMM_I	0	28	57	57	57	57	57	0	0	0	0	0	0	0	0	0	0
	RH_LLM_I	0	57	85	0	0	0	0	85	0	0	0	0	0	0	0	0	0
	RH_TRUM	0	0	0	0	7	7	7	7	0	0	0	0	0	0	0	0	0
Total for MHC_221T		0	374	431	289	84	84	84	324	204	20	20	20	20	20	20	20	20
MHC_222S	CH_LLMM_GTCIII	0	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	CH_LLMM_I	0	41	41	51	57	57	57	57	57	57	54	54	54	54	54	54	54
	CH_LLMM_III	0	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	CH_LLM_I	0	428	456	552	595	595	595	595	595	595	636	636	636	636	636	636	636
	CH_LLM_III	0	12	13	14	15	15	15	15	15	15	17	17	17	17	17	17	17
	RH_LLMM_I	0	3	3	5	5	5	4	4	4	4	4	4	4	4	4	4	4

G-12

MHC-EP-0768

4/20/94

Waste Class Volumes (m³)
by Waste Generator

Page 13a

Waste Generator	Waste Class	Held	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Total for WMC_222S		0	487	517	626	676	676	675	675	675	675	715	715	715	715	715	715	715
WMC_225B	CH_LLM_I	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	CH_LLM_I	0	170	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	CH_LLM_III	0	45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	RH_LLM_III	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total for WMC_225B		0	224	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WMC_2345Z	CH_LLM_I	0	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
	CH_LLM_I	0	245	245	245	245	245	245	245	245	245	245	245	245	245	245	245	245
	CH_LLM_III	0	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
	CH_TRU	0	124	124	124	124	124	124	124	124	124	124	124	124	124	124	124	124
	CH_TRUM	0	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Total for WMC_2345Z		0	382	382	382	382	382	382	382	382	382	382	382	382	382	382	382	382
WMC_2724W	CH_LLM_I	0	116	116	116	116	116	116	116	116	116	116	116	116	116	116	116	116
		0	116	116	116	116	116	116	116	116	116	116	116	116	116	116	116	116
Total for WMC_2724W		0	116	116	116	116	116	116	116	116	116	116	116	116	116	116	116	116
WMC_26TF	CH_LLM_I	0	57	113	113	113	113	113	113	113	113	113	113	113	113	113	113	113
	CH_LLM_III	0	13	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26
	CH_LLM_I	0	453	510	510	510	510	510	510	510	510	510	510	510	510	510	510	510
Total for WMC_26TF		0	523	649	649	649	649	649	649	649	649	649	649	649	649	649	649	649
WMC_303K	CH_LLM_I	0	3	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	CH_LLM_I	4	82	41	41	20	20	20	0	0	0	0	0	0	0	0	0	0

G-13

WMC-EP-0768

4/20/94

Waste Class Volumes (m³)
by Waste Generator

Page 14a

Waste Generator	Waste Class	Held	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Total for MHC_303K		4	84	53	41	21	21	21	0	0	0	0	0	0	0	0	0	0
MHC_308	CH_LLMW_III	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	CH_LLMW_I	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	CH_LLMW_III	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	CH_TRU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	CH_TRUM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total for MHC_308		0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MHC_340	CH_LLMW_I	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	CH_LLMW_I	0	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14
	CH_LLMW_III	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total for MHC_340		0	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15
MHC_377	CH_LLMW_I	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	CH_LLMW_I	0	9	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Total for MHC_377		0	9	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
MHC_BKLOG	CH_LLMW_I	0	854	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	CH_LLMW_III	0	77	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	CH_LLMW_I	0	266	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	CH_LLMW_III	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total for MHC_BKLOG		0	1201	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MHC_EQUIP	CH_LLMW_I	0	260	326	368	170	170	353	353	353	353	227	227	227	340	340	340	170

G-14

WHC-EP-0768

4/20/94

Waste Class Volumes (m³)
by Waste Generator

Page 15a

Waste Generator	Waste Class	Weld	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Total for MHC_BQUIP		0	260	326	368	170	170	353	353	353	353	227	227	227	340	340	340	170
MHC_DSTPSRET	CH_LLM_I	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
Total for MHC_DSTPSRET		0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
MHC_DST_PRT	RH_TRUM	0	0	0	0	0	0	0	0	0	0	0	3683	7365	7365	0	0	0
Total for MHC_DST_PRT		0	0	0	0	0	0	0	0	0	0	0	3683	7365	7365	0	0	0
MHC_DST_RET	CH_LLM_I	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	73	75
Total for MHC_DST_RET		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	73	75
MHC_EA_W112	CH_TRU	0	0	38	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total for MHC_EA_W112		0	0	38	0	0	0	0	0	0	0	0	0	0	0	0	0	0
MHC_EA_W113	CH_TRU	0	0	28	18	0	0	0	0	0	0	0	0	0	0	0	0	0
Total for MHC_EA_W113		0	0	28	18	0	0	0	0	0	0	0	0	0	0	0	0	0
MHC_EA_W221	CH_TRU	0	0	0	0	0	0	0	183	0	0	0	0	0	0	0	0	0
Total for MHC_EA_W221		0	0	0	0	0	0	0	183	0	0	0	0	0	0	0	0	0
MHC_ENV_RES	CH_LLMW_GTCIII	0	0	0	0	0	0	0	0	28	28	28	85	85	142	142	142	142
	CH_LLMW_I	0	1	30	6	6	0	20	1	20	20	20	85	85	142	142	142	142
	CH_LLMW_III	0	0	0	0	0	0	6	0	28	28	28	85	85	142	142	142	142
	CH_LLMW_GTCIII	0	0	0	0	0	0	0	0	283	850	1416	2550	3399	5302	7365	7882	6516

G-15

MHC-EP-0768

4/20/94

Waste Class Volumes (m³)
by Waste Generator

Page 16a

Waste Generator	Waste Class	Held	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
MHC_ENV_RES	CH_LLM_I	0	428	2040	1603	3688	416	1247	8215	15368	60618	80179	107516	153768	165411	179887	188442	38874
	CH_LLM_III	0	0	0	6	6	0	11	1218	1133	2833	4249	8244	8782	12748	16997	12748	11048
	CH_TRU	0	0	9	298	0	0	0	142	3	6	6	11	113	113	113	113	113
	CH_TRUM	0	0	0	3	0	0	0	57	3	3	3	11	28	113	113	113	113
	RH_LLMW_GTCIII	0	0	0	0	0	0	0	0	28	28	28	85	85	142	142	142	142
	RH_LLMW_I	0	0	0	0	0	0	0	0	28	28	28	85	85	142	142	142	142
	RH_LLMW_III	0	0	0	0	0	0	0	0	28	28	28	85	85	142	142	142	142
	RH_LLM_GTCIII	0	0	0	0	0	0	0	0	283	850	1416	2550	3399	5382	7365	7082	6516
	RH_TRU	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0
	RH_TRUM	0	0	0	0	0	0	0	0	0	0	0	113	113	113	113	85	57
Total for MHC_ENV_RES		0	429	2078	1918	3700	416	1292	9633	17243	65329	87439	121504	178113	198113	212884	136515	63286
MHC_FTFE_MAINT	CH_LLM_I	0	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
	RH_LLM_III	0	16	16	111	95	32	32	32	32	32	32	32	32	32	32	32	32
Total for MHC_FTFE_MAINT		0	25	25	120	104	41	41	41	41	41	41	41	41	41	41	41	41
MHC_GROUT	CH_LLMW_I	37	0	0	0	0	0	0	0	0	0	0	5	5	5	5	5	5
	CH_LLMW_III	352	0	0	0	0	0	0	0	0	0	0	31	14	56	35	43	34
	CH_LLM_I	1073	0	0	0	0	0	0	0	0	0	0	125	53	125	125	125	125
	CH_LLM_III	44	0	0	0	0	0	0	0	0	0	0	5	5	5	5	5	5
	RH_LLMW_III	1250	0	0	0	0	0	0	0	0	0	0	180	136	136	136	192	136
Total for MHC_GROUT		2755	0	0	0	0	0	0	0	0	0	0	346	213	328	386	370	386
MHC_IMVP	CH_LLMW_I	146	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18
	CH_LLMW_III	213	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	25
	CH_LLM_I	3601	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	458
	CH_LLM_III	6748	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	844
	CH_TRU	471	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

G-16

MHC-EP-0768

4/20/94

Waste Class Volumes (m³)
by Waste Generator

Page 17a

Waste Generator	Waste Class	Held	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
MHC_HMVP	CH_TRUM	471	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	RH_LLM_III	1044	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	130
	RH_TRU	385	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	RH_TRUM	367	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total for MHC_HMVP		13465	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1466
MHC_L045H	CH_LLM_I	0	0	216	216	216	216	216	216	216	216	216	216	216	216	216	216	216
Total for MHC_L045H		0	0	216	216	216	216	216	216	216	216	216	216	216	216	216	216	216
MHC_LLBG	CH_LLMW_I	0	3	0	0	3	0	0	3	0	0	3	0	0	3	0	0	3
	CH_LLM_I	0	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
Total for MHC_LLBG		0	10	6	6	10	6	6	10	6	6	10	6	6	10	6	6	10
MHC_PX_C010H	CH_LLMW_I	0	0	34	34	34	34	34	34	34	34	34	34	34	34	34	34	34
	CH_LLMW_III	0	0	165	165	165	165	165	165	165	165	165	165	165	165	165	165	165
Total for MHC_PX_C010H		0	0	199	199	199	199	199	199	199	199	199	199	199	199	199	199	199
MHC_SSTRET	CH_LLMW_I	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	CH_LLMW_III	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
	CH_LLM_I	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
Total for MHC_SSTRET		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11
MHC_TRUSAF	CH_LLMW_I	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0
	CH_LLM_I	0	1	1	3	7	0	0	0	0	0	0	0	0	0	0	0	0

G-17

MHC-EP-0768

4/20/94

Waste Class Volumes (m³)
by Waste Generator

Page 18a

Waste Generator	Waste Class	Held	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Total for WMC_TRUSAF		0	1	1	3	10	0	0	0	0	0	0	0	0	0	0	0	0
WMC_TWP_106C	CH_LLM_I	0	17	43	19	43	19	0	0	0	0	0	0	0	0	0	0	0
	RH_LLM_III	0	11	44	29	101	10	0	0	0	0	0	0	0	0	0	0	0
Total for WMC_TWP_106C		0	28	86	48	224	37	0	0	0	0	0	0	0	0	0	0	0
WMC_TWP_W020	CH_LLM_I	0	0	29	29	0	0	0	0	0	0	0	0	0	0	0	0	0
Total for WMC_TWP_W020		0	0	29	29	0	0	0	0	0	0	0	0	0	0	0	0	0
WMC_TWP_W030	CH_LLM_III	0	25	27	23	0	0	0	0	0	0	0	0	0	0	0	0	0
Total for WMC_TWP_W030		0	25	27	23	0	0	0	0	0	0	0	0	0	0	0	0	0
WMC_TWP_W050	CH_LLM_I	0	0	54	54	0	0	0	0	0	0	0	0	0	0	0	0	0
Total for WMC_TWP_W050		0	0	54	54	0	0	0	0	0	0	0	0	0	0	0	0	0
WMC_TWP_W062	CH_LLM_I	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total for WMC_TWP_W062		0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WMC_TWP_W151	CH_LLM_I	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total for WMC_TWP_W151		0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
WMC_TWP_W211	CH_LLM_I	0	0	20	37	113	170	113	0	0	0	0	0	0	0	0	0	0

G-18

WMC-EP-0768

4/20/94

Waste Class Volumes (m³)
by Waste Generator

Page 19a

Waste Generator	Waste Class	Held	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Total for MHC_TWP_M211		0	0	20	37	113	170	113	0	0	0	0	0	0	0	0	0	0
MHC_TWP_M314	CH_LIHW_I	0	0	0	0	243	243	410	1250	1250	1000	424	424	424	424	0	0	0
Total for MHC_TWP_M314		0	0	0	0	243	243	410	1250	1250	1000	424	424	424	424	0	0	0
MHC_WELL_DRL	CH_LIHW_I	0	4	3	2	1	1	1	1	1	1	1	1	1	1	1	1	1
	CH_LLM_I	0	25	16	15	0	5	5	4	4	4	4	4	4	4	4	4	4
	CH_LLM_III	0	3	2	2	1	1	1	0	0	0	0	0	0	0	0	0	0
	CH_TRU	0	2	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0
	CH_TRUM	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
	RM_LLM_I	0	2	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0
Total for MHC_WELL_DRL		0	36	24	21	11	7	7	6	6	6	6	6	6	6	6	6	6
Grand Total		24050	13694	17527	15909	19905	12609	17970	26596	40631	88030	104406	145478	195764	213706	228140	150359	78001

G-19

MHC-EP-0768

4/20/94

Waste Class Volumes (m³)
by Waste Generator

Page 1b

Waste Generator	Waste Class	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total
AMES	CH_LLMW_I	0	0	0	0	0	0	0	0	0	0	0	0	0	0	237
	CH_LLM_I	2	2	2	1	1	1	1	1	1	1	1	1	1	1	515
	CH_TRU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total for AMES		2	2	2	1	1	1	1	1	1	1	1	1	1	1	752
ANL_E	CH_LLMW_I	14	14	14	14	14	14	14	14	14	14	14	14	14	14	2960
	CH_LLM_I	213	213	213	213	213	213	213	213	213	213	213	213	213	213	9032
	CH_TRU	6	6	6	6	6	6	6	6	6	6	6	6	6	6	178
	CH_TRUM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
	RH_LLM_I	0	0	0	0	0	0	0	0	0	0	0	0	0	0	33
	RH_TRU	2	2	2	2	2	2	2	2	2	2	2	2	2	2	51
Total for ANL_E		234	234	234	234	234	234	234	234	234	234	234	234	234	234	12260
BAPL	CH_LLMW_I	0	0	0	0	0	0	0	0	0	0	0	0	0	0	30
	CH_LLM_III	0	0	0	0	0	0	0	0	0	0	0	0	0	0	355
Total for BAPL		0	0	0	0	0	0	0	0	0	0	0	0	0	0	394
BAPL_SHIPPYDS	CH_LLM_I	0	0	3	0	0	0	0	0	0	0	0	0	0	0	126
Total for BAPL_SHIPPYDS		0	0	3	0	0	0	0	0	0	0	0	0	0	0	126
BAT_CLBS_LAB	CH_LLMW_I	0	0	0	0	0	0	0	0	0	0	0	0	0	0	47
	CH_LLM_I	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1772
	RH_TRU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	71
Total for BAT_CLBS_LAB		0	0	0	0	0	0	0	0	0	0	0	0	0	0	1891

G-20

WHL-EP-U/08

4/20/94

Waste Class Volumes (m³)
by Waste Generator

Page 2b

Waste Generator	Waste Class	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total
BRKRVN	CH_LLM_I	5	5	5	5	5	5	6	6	6	6	7	7	7	8	136
	CH_LLM_I	464	487	511	537	564	592	622	653	685	720	756	793	833	875	16115
	RH_LLM_I	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11
Total for BRKRVN		469	492	516	542	569	597	627	659	691	726	762	800	840	882	16262
B_LEHR_DAV	CH_LLM_I	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
	CH_LLM_I	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1017
Total for B_LEHR_DAV		0	0	0	0	0	0	0	0	0	0	0	0	0	0	1021
EG&G	CH_LLM_I	0	0	0	0	0	0	0	0	0	0	0	0	0	0	286
Total for EG&G		0	0	0	0	0	0	0	0	0	0	0	0	0	0	286
FERMI	CH_LLM_I	2	2	2	2	2	2	2	2	2	2	2	2	2	2	63
	CH_LLM_I	40	40	40	40	40	40	40	40	40	40	40	40	40	40	1191
Total for FERMI		42	42	42	42	42	42	42	42	42	42	42	42	42	42	1254
FUSRAP	CH_LLM_I	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12720
	CH_LLM_III	0	3163	3163	0	13768	13768	0	0	0	0	0	0	0	0	44722
Total for FUSRAP		0	3163	3163	0	13768	13768	0	0	0	0	0	0	0	0	57450
GEN_ATOM	CH_LLM_I	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
	CH_LLM_I	0	0	0	0	0	0	0	0	0	0	0	0	0	0	523
Total for GEN_ATOM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	531
KAPL_SHIPYDS	CH_LLM_III	22	22	22	22	22	22	22	22	22	22	22	22	22	22	657

G-21

WMC-EP-0768

4/20/94

Waste Class Volumes (m³)
by Waste Generator

Page 3b

Waste Generator	Waste Class	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total
KAPL_SHIPYDS	CH_LLM_III	0	0	0	0	0	0	0	0	0	0	0	0	0	0	633
Total for KAPL_SHIPYDS		22	22	22	22	22	22	22	22	22	22	22	22	22	22	1290
KEH_100	CH_LLM_I	0	0	0	0	0	0	0	0	0	0	0	0	0	0	61
Total for KEH_100		0	0	0	0	0	0	0	0	0	0	0	0	0	0	61
LBL	CH_LIWM_I	8	8	8	8	8	8	8	8	8	8	8	8	8	8	257
	CH_LIWM_III	1	1	1	1	1	1	1	1	1	1	1	1	1	1	30
	CH_LLM_I	41	41	41	41	41	41	41	41	41	41	41	41	41	41	9602
	CH_LLM_III	4	4	4	4	4	4	4	4	4	4	4	4	4	4	1078
	CH_TRU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Total for LBL		54	54	54	54	54	54	54	54	54	54	54	54	54	54	10969
LIHL	CH_LIWM_I	21	21	21	21	21	21	21	21	21	21	21	21	21	21	629
	CH_LLM_I	215	215	215	215	215	215	215	215	215	215	215	215	215	215	6900
	CH_TRU	23	23	23	23	23	23	23	23	23	23	23	23	23	23	776
	CH_TRUM	1	1	1	1	1	1	1	1	1	1	1	1	1	1	31
Total for LIHL		260	260	260	260	260	260	260	260	260	260	260	260	260	260	8336
LL_EQUIP	RH_LIWM_III	3298	4071	5008	5415	6229	6880	7084	7287	2687	2443	2076	2402	2728	2687	87733
	RH_TRUM	366	452	556	602	692	764	787	810	299	271	231	267	303	299	9748
Total for LL_EQUIP		3664	4524	5564	6016	6921	7645	7871	8097	2986	2714	2307	2669	3031	2986	97481
LL_EQUIP_SEC	CH_LIWM_I	18	22	27	29	34	37	38	40	15	13	11	13	15	15	476
	CH_LIWM_III	44	54	66	71	82	91	93	96	35	32	27	32	36	35	1150
	CH_LLM_I	124	153	188	203	234	258	266	274	101	92	78	90	102	101	3293

G-22

MHC-EP-0768

4/20/94

Waste Class Volumes (m³)
by Waste Generator

Page 4b

Waste Generator	Waste Class	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total
Total for LL_EQUIP_SEC		185	229	281	304	350	386	398	409	451	437	417	435	453	451	4927
MIT_BATES	CH_LLM_I	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Total for MIT_BATES		0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
PADUCAH_ES	CH_LLM_I	57	57	57	57	57	57	57	57	57	57	57	57	57	57	2620
	CH_LLM_III	0	0	0	0	0	0	0	0	0	0	0	0	0	0	308
	CH_LLM_I	293	142	142	142	142	142	142	142	142	142	142	142	142	142	44919
Total for PADUCAH_ES		340	198	198	198	198	198	198	198	198	198	198	198	198	198	47847
PADUCAH_U	CH_LLM_I	3	3	3	3	3	3	3	3	3	3	3	3	3	3	84
	CH_LLM_I	170	170	170	170	170	170	170	170	170	170	170	170	170	170	4827
Total for PADUCAH_U		173	173	173	173	173	173	173	173	173	173	173	173	173	173	4911
PAST_PRAC_REM	CH_LLM_GTCIII	76	76	61	61	61	61	46	46	31	31	15	15	15	0	1484
	CH_LLM_I	2669	1836	1155	1155	1155	1155	1155	1155	1155	0	0	0	0	0	47769
	CH_LLM_III	31	15	15	15	15	15	15	15	15	0	0	0	0	0	520
	CH_TRU	306	306	245	245	245	245	184	184	122	122	61	61	61	0	5935
Total for PAST_PRAC_REM		3082	2233	1476	1476	1476	1476	1400	1400	1323	153	76	76	76	0	55729
PNL	CH_LLM_GTCIII	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14
	CH_LLM_I	7	7	7	7	7	7	7	7	7	7	7	7	7	7	221
	CH_LLM_III	7	7	7	7	7	7	7	7	7	7	7	7	7	7	198
	CH_LLM_I	404	404	404	404	404	404	404	404	404	404	404	404	404	404	12181
	CH_LLM_III	6	6	6	6	6	6	6	6	6	6	6	6	6	6	231
	CH_TRU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	111

G-23

WMC-EP-0768

4/20/94

Waste Class Volume (m³)
by Waste Generator

Waste Generator	Waste Class	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total
PWL	CH_TRUM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	RM_LLMW_GTC111	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14
	RM_LLMW_GTC111	0	0	0	0	0	0	0	0	0	0	0	0	0	0	33
	RM_LLM_I	1	1	1	1	1	1	1	1	1	1	1	1	1	1	71
	RM_LLM_111	10	10	10	10	10	10	10	10	10	10	10	10	10	10	816
	RM_TRU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	Total for PWL															13092
	CH_LLMW_GTC111	0	0	0	0	0	0	0	0	0	0	0	0	0	0	34
	CH_LLMW_I	050	425	425	425	425	425	425	425	425	425	425	425	425	425	21300
	CH_LLMW_111	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11
PORTSMOUTH	CH_LLM_I	57	57	57	57	57	57	57	57	57	57	57	57	57	57	8273
	Total for PORTSMOUTH															29706
	CH_LLMW_I	0	0	0	0	0	0	0	0	0	0	0	0	0	0	57
	CH_LLMW_1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	57
	CH_LLMW_111	24	24	24	24	24	24	24	24	24	24	24	24	24	24	346
	CH_LLMW_I	0	0	0	0	0	0	0	0	0	0	0	0	0	0	57
	Total for PRINCETON															6063
	CH_LLM_I	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1629
	CH_TRU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
	CH_TRUM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
RM_CANOGA	CH_LLM_I	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1629
	Total for PRINCETON															6063
	CH_LLM_I	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1629
	CH_TRU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
	CH_TRUM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total for RM_CANOGA															1631
	CH_LLM_I	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11
	CH_LLMW_I	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1346
	CH_LLMW_1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	25
	CH_LLMW_111	0	0	0	0	0	0	0	0	0	0	0	0	0	0	25
STANFORD	CH_LLMW_I	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11
	CH_LLMW_1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	25
	CH_LLMW_111	0	0	0	0	0	0	0	0	0	0	0	0	0	0	25
	CH_TRU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	25
	CH_TRUM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	25
	Total for RM_CANOGA															1631
	CH_LLMW_I	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11
	CH_LLMW_1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	25
	CH_LLMW_111	0	0	0	0	0	0	0	0	0	0	0	0	0	0	25
	CH_TRU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	25

4/20/94

Waste Class Volumes (m³)
by Waste Generator

Page 5b

Waste Generator	Waste Class	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total
Total for STANFORD		26	25	26	25	26	25	26	25	26	25	26	25	26	25	1350
TPNL_231Z	CH_LLM_I	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
	CH_TRU	0	0	0	3	3	3	3	3	3	3	3	3	3	0	32
	CH_TRUM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Total for TPNL_231Z		0	0	0	4	4	4	4	4	4	4	4	4	4	0	38
TPNL_242B/BL	CH_LLM_I	0	0	0	10	10	10	10	10	10	10	10	10	10	0	96
Total for TPNL_242B/BL		0	0	0	10	10	10	10	10	10	10	10	10	10	0	96
TPNL_306W	CH_LLM_I	0	0	0	5	5	5	5	5	5	5	5	5	5	0	51
Total for TPNL_306W		0	0	0	5	5	5	5	5	5	5	5	5	5	0	51
TPNL_314	CH_LLM_I	0	0	0	310	310	310	310	310	310	310	310	310	310	0	3170
Total for TPNL_314		0	0	0	310	310	310	310	310	310	310	310	310	310	0	3170
TPNL_324	CH_LJPM_I	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
	CH_LLM_I	0	0	0	35	35	35	35	35	35	35	35	35	35	0	350
	CH_LLM_III	0	0	0	1	1	1	1	1	1	1	1	1	1	0	10
	RH_LJPM_I	0	0	0	21	21	21	21	21	21	21	21	21	21	0	212
	RH_LJPM_III	0	0	0	21	21	21	21	21	21	21	21	21	21	0	212
	RH_LLM_GTCIII	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
	RH_LLM_I	0	0	0	1	1	1	1	1	1	1	1	1	1	0	12
	RH_LLM_III	0	0	0	1	1	1	1	1	1	1	1	1	1	0	14

G-25

WMC-EP-0768

4/20/94

Waste Class Volumes (m³)
by Waste Generator

Page 7b

Waste Generator	Waste Class	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total
Total for TPML_324		0	0	0	82	82	82	82	82	82	82	82	82	82	0	817
TPML_326	CH_LLM_I	0	0	0	2	2	2	2	2	2	2	2	2	2	0	18
	CH_LLM_I	0	0	0	2	2	2	2	2	2	2	2	2	2	0	16
	RH_LLM_I	0	0	0	1	1	1	1	1	1	1	1	1	1	0	7
Total for TPML_326		0	0	0	4	4	4	4	4	4	4	4	4	4	0	41
TPML_327	CH_LLM_I	0	0	0	115	115	115	115	115	115	115	115	115	115	0	1149
	CH_TRU	0	0	0	3	3	3	3	3	3	3	3	3	3	0	27
	RH_LLM_I	0	0	0	31	31	31	31	31	31	31	31	31	31	0	314
	RH_TRU	0	0	0	101	101	101	101	101	101	101	101	101	101	0	1015
	RH_TRUM	0	0	0	1	1	1	1	1	1	1	1	1	1	0	8
Total for TPML_327		0	0	0	251	251	251	251	251	251	251	251	251	251	0	2512
TPML_331	CH_LLM_I	0	0	0	191	191	191	191	191	191	191	191	191	191	0	1908
Total for TPML_331		0	0	0	191	191	191	191	191	191	191	191	191	191	0	1908
TMHC_100N	CH_LLM_I	0	0	0	833	833	833	833	833	833	833	833	833	833	0	8326
	RH_TRU	0	0	0	119	119	119	119	119	119	119	119	119	119	0	1186
Total for TMHC_100N		0	0	0	951	951	951	951	951	951	951	951	951	951	0	9512
TMHC_202A	CH_LLM_I	0	0	0	24	24	24	24	24	24	24	24	24	24	0	236
	CH_LLM_GTCIII	0	0	0	238	238	238	238	238	238	238	238	238	238	0	2384
	CH_LLM_III	0	0	0	238	238	238	238	238	238	238	238	238	238	0	2384
	CH_TRU	0	0	0	59	59	59	59	59	59	59	59	59	59	0	595
	CH_TRUM	0	0	0	1	1	1	1	1	1	1	1	1	1	0	9

G-26

WHC-EP-U/68

4/20/94

Waste Class Volumes (m³)
by Waste Generator

Page 8b

Waste Generator	Waste Class	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total
TWMC_202A	RH_LLM_I	0	0	0	6	6	6	6	6	6	6	6	6	6	0	59
	RH_LLM_GTCIII	0	0	0	106	106	106	106	106	106	106	106	106	106	0	1055
	RH_LLM_III	0	0	0	14	14	14	14	14	14	14	14	14	14	0	137
	RH_TRU	0	0	0	12	12	12	12	12	12	12	12	12	12	0	119
	RH_TRUM	0	0	0	3	3	3	3	3	3	3	3	3	3	0	32
	Total for TWMC_202A	0	0	0	701	701	701	701	701	701	701	701	701	701	0	7010
TWMC_202A_TM	RH_LLM_I	0	0	0	0	0	0	0	0	0	0	0	0	0	0	242
	RH_LLM_I	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1022
	RH_TRU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	697
Total for TWMC_202A_TM		0	0	0	0	0	0	0	0	0	0	0	0	0	0	1961
TWMC_221T	CH_LLM_GTCIII	0	0	0	101	101	101	101	101	101	101	101	101	101	0	1013
	CH_LLM_III	0	0	0	363	363	363	363	363	363	363	363	363	363	0	3626
	CH_LLM_I	0	0	0	714	714	714	714	714	714	714	714	714	714	0	7144
	CH_TRU	0	0	0	85	85	85	85	85	85	85	85	85	85	0	850
	CH_TRUM	0	0	0	272	272	272	272	272	272	272	272	272	272	0	2720
	RH_LLM_GTCIII	0	0	0	45	45	45	45	45	45	45	45	45	45	0	453
	RH_LLM_III	0	0	0	91	91	91	91	91	91	91	91	91	91	0	906
	RH_LLM_I	0	0	0	179	179	179	179	179	179	179	179	179	179	0	1786
	RH_TRU	0	0	0	21	21	21	21	21	21	21	21	21	21	0	212
	RH_TRUM	0	0	0	60	60	60	60	60	60	60	60	60	60	0	600
	Total for TWMC_221T	0	0	0	2019	2019	2019	2019	2019	2019	2019	2019	2019	2019	0	20190
TWMC_222S	CH_LLM_GTCIII	0	0	0	1	1	1	1	1	1	1	1	1	1	0	5
	CH_LLM_I	0	0	0	4	4	4	4	4	4	4	4	4	4	0	36
	CH_LLM_I	0	0	0	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	0	12003
	RH_LLM_GTCIII	0	0	0	11	11	11	11	11	11	11	11	11	11	0	107

G-27

WMC-EP-0768

4/20/94

Waste Class Volumes (m³)
by Waste Generator

Page 9b

Waste Generator	Waste Class	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total
Total for TWHC_2225		0	0	0	1295	1295	1295	1295	1295	1295	1295	1295	1295	1295	0	12951
TWHC_2250	CH_LLPW_III	0	0	0	20	20	20	20	20	20	20	20	20	20	0	277
	CH_LLM_I	0	0	0	600	600	600	600	600	600	600	600	600	600	0	6000
	CH_LLM_III	0	0	0	2739	2739	2739	2739	2739	2739	2739	2739	2739	2739	0	27307
	RH_LLPW_III	0	0	0	7	7	7	7	7	7	7	7	7	7	0	69
	RH_LLM_I	0	0	0	172	172	172	172	172	172	172	172	172	172	0	1720
	RH_LLM_III	0	0	0	605	605	605	605	605	605	605	605	605	605	0	6047
Total for TWHC_2250		0	0	0	4310	4310	4310	4310	4310	4310	4310	4310	4310	4310	0	43100
TWHC_23452	CH_TRU	0	0	0	866	866	866	866	866	866	866	866	866	866	0	8663
	CH_TRUM	0	0	0	1004	1004	1004	1004	1004	1004	1004	1004	1004	1004	0	10041
	RH_TRU	0	0	0	217	217	217	217	217	217	217	217	217	217	0	2166
	RH_TRUM	0	0	0	251	251	251	251	251	251	251	251	251	251	0	2510
Total for TWHC_23452		0	0	0	2338	2338	2338	2338	2338	2338	2338	2338	2338	2338	0	23381
TWHC_242A	CH_LLPW_I	0	0	0	20	20	20	20	20	20	20	20	20	20	0	204
	CH_LLPW_III	0	0	0	12	12	12	12	12	12	12	12	12	12	0	122
	RH_LLPW_GTC111	0	0	0	2	2	2	2	2	2	2	2	2	2	0	22
Total for TWHC_242A		0	0	0	35	35	35	35	35	35	35	35	35	35	0	340
TWHC_2425	CH_LLPW_I	0	0	0	20	20	20	20	20	20	20	20	20	20	0	204
	CH_LLPW_III	0	0	0	12	12	12	12	12	12	12	12	12	12	0	122
	RH_LLPW_GTC111	0	0	0	2	2	2	2	2	2	2	2	2	2	0	22
Total for TWHC_2425		0	0	0	35	35	35	35	35	35	35	35	35	35	0	340

G-28

MHC-EP-0/68

4/26/94

Waste Class Volumes (m³)
by Waste Generator

Page 10b

Waste Generator	Waste Class	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total
TWMC_242T	CH_LLMW_GTCIII	0	0	0	3	3	3	3	3	3	3	3	3	3	0	34
	CH_LLMW_III	0	0	0	3	3	3	3	3	3	3	3	3	3	0	30
	RH_LLMW_GTCIII	0	0	0	1	1	1	1	1	1	1	1	1	1	0	12
Total for TWMC_242T		0	0	0	8	8	8	8	8	8	8	8	8	8	0	76
TWMC_306	CH_LLM_I	0	0	0	1	1	1	1	1	1	1	1	1	1	0	5
Total for TWMC_306		0	0	0	1	1	1	1	1	1	1	1	1	1	0	5
TWMC_308	CH_LLM_I	0	0	0	13	13	13	13	13	13	13	13	13	13	0	129
	CH_TRU	0	0	0	9	9	9	9	9	9	9	9	9	9	0	90
Total for TWMC_308		0	0	0	22	22	22	22	22	22	22	22	22	22	0	219
TWMC_340	CH_LLM_I	0	0	0	20	20	20	20	20	20	20	20	20	20	0	190
	RH_TRUPH	0	0	0	2	2	2	2	2	2	2	2	2	2	0	23
Total for TWMC_340		0	0	0	22	22	22	22	22	22	22	22	22	22	0	221
TWMC_GROUT	CH_LLM_I	0	0	0	28	28	28	28	28	28	28	28	28	28	0	276
	RH_LLM_I	0	0	0	1	1	1	1	1	1	1	1	1	1	0	8
Total for TWMC_GROUT		0	0	0	28	28	28	28	28	28	28	28	28	28	0	284
TWMC_MWVP	CH_LLMW_I	0	0	0	15	15	15	15	15	15	15	15	15	15	0	147
	CH_LLMW_III	0	0	0	22	22	22	22	22	22	22	22	22	22	0	221
	CH_LLM_I	0	0	0	37	37	37	37	37	37	37	37	37	37	0	357
	CH_LLM_III	0	0	0	74	74	74	74	74	74	74	74	74	74	0	736
	RH_LLM_III	0	0	0	663	663	663	663	663	663	663	663	663	663	0	6626
	RH_TRU	0	0	0	721	721	721	721	721	721	721	721	721	721	0	7215

G-29

WMC-EP-0768

4/28/94

Waste Class Volumes (m³)
by Waste Generator

Page 11b

Waste Generator	Waste Class	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total
Total for TWMC_MWVP		0	0	0	1531	1531	1531	1531	1531	1531	1531	1531	1531	1531	0	15314
TWMC_PX_C018H	CH_LLM_I	0	0	0	150	150	150	150	150	150	150	150	150	150	0	1501
	CH_LLM_III	0	0	0	10	10	10	10	10	10	10	10	10	10	0	98
Total for TWMC_PX_C018H		0	0	0	160	160	160	160	160	160	160	160	160	160	0	1599
TWMC_TRUSAF	CH_LLM_I	0	0	0	1	1	1	1	1	1	1	1	1	1	0	13
Total for TWMC_TRUSAF		0	0	0	1	1	1	1	1	1	1	1	1	1	0	13
U_U	CH_LLM_I	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
	CH_LLM_I	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
Total for U_U		0	0	0	0	0	0	0	0	0	0	0	0	0	0	12
WMC_100	CH_LLM_I	0	0	0	0	0	0	0	0	0	0	0	0	0	0	68
	CH_LLM_I	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1527
	RH_LLM_I	0	0	0	0	0	0	0	0	0	0	0	0	0	0	136
Total for WMC_100		0	0	0	0	0	0	0	0	0	0	0	0	0	0	1723
WMC_100K	CH_LLM_I	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
	CH_LLM_I	108	108	108	108	108	108	0	0	0	0	0	0	0	0	2473
	CH_TRU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	133
	RH_LLM_I	20	20	20	20	20	20	0	0	0	0	0	0	0	0	429
	RH_TRU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	136
Total for WMC_100K		129	129	129	129	129	129	0	0	0	0	0	0	0	0	3180

G-30

WMC-EP-0768

4/20/94

Page 12b

Waste Class Volumes (m³)
by Waste Generator

Waste Generator	Waste Class	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total
MHC_105DR	CH_LJPM_I	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total for MHC_105DR																
MHC_202A	CH_LJPM_I	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14
	CH_LJPM_III	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	CH_LJPM_I	0	0	0	0	0	0	0	0	0	0	0	0	0	0	441
	CH_LJPM_III	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
	CH_TRU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	99
	CH_TRUH	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10
Total for MHC_202A																
MHC_221NE	CH_LJPM_I	0	0	0	0	0	0	0	0	0	0	0	0	0	0	575
Total for MHC_221NE																
MHC_221T	CH_LJPM_I	20	20	20	20	20	20	20	20	20	20	20	20	20	20	594
	CH_LJPM_I	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1167
	MH_LJPM_I	0	0	0	0	0	0	0	0	0	0	0	0	0	0	312
	MH_LJPM_I	0	0	0	0	0	0	0	0	0	0	0	0	0	0	227
	MH_TRUH	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20
Total for MHC_221T																
MHC_222S	CH_LJPM_GTC111	2	2	2	2	2	2	2	2	2	2	2	2	2	2	69
	CH_LJPM_I	54	54	54	54	54	54	54	54	54	54	54	54	54	54	1651
	CH_LJPM_III	2	2	2	2	2	2	2	2	2	2	2	2	2	2	68
	CH_LJPM_I	636	636	636	636	636	636	636	636	636	636	636	636	636	636	18841
	CH_LJPM_III	17	17	17	17	17	17	17	17	17	17	17	17	17	17	530
	MH_LJPM_I	4	4	4	4	4	4	4	4	4	4	4	4	4	4	122

4/20/94

Waste Class Volumes (m³)
by Waste Generator

Page 13b

Waste Generator	Waste Class	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total
Total for MHC_2225		715	715	715	763	769	769	769	769	769	769	769	769	769	769	21200
MHC_225B	CH_LLM_I	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
	CH_LLM_I	0	0	0	0	0	0	0	0	0	0	0	0	0	0	170
	CH_LLM_III	0	0	0	0	0	0	0	0	0	0	0	0	0	0	45
	RH_LLM_III	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
Total for MHC_225B		0	0	0	0	0	0	0	0	0	0	0	0	0	0	224
MHC_2345Z	CH_LLM_I	7	7	7	7	7	7	7	7	7	7	7	7	7	7	219
	CH_LLM_I	245	245	245	245	245	245	245	245	245	245	245	245	245	245	7356
	CH_LLM_III	4	4	4	4	4	4	4	4	4	4	4	4	4	4	114
	CH_TRU	124	124	124	124	124	124	124	124	124	124	124	124	124	124	3723
	CH_TRUM	2	2	2	2	2	2	2	2	2	2	2	2	2	2	57
Total for MHC_2345Z		302	302	302	302	302	302	302	302	302	302	302	302	302	302	11469
MHC_2724W	CH_LLM_I	116	116	116	116	116	116	116	116	116	116	116	116	116	116	3480
Total for MHC_2724W		116	116	116	116	116	116	116	116	116	116	116	116	116	116	3480
MHC_2ETP	CH_LLM_I	113	113	113	113	113	113	113	113	113	113	113	113	113	113	3342
	CH_LLM_III	26	26	26	26	26	26	26	26	26	26	26	26	26	26	752
	CH_LLM_I	510	510	510	510	510	510	510	510	510	510	510	510	510	510	15240
Total for MHC_2ETP		649	649	649	649	649	649	649	649	649	649	649	649	649	649	19335
MHC_303K	CH_LLM_I	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17
	CH_LLM_I	0	0	0	0	0	0	0	0	0	0	0	0	0	0	229

G-32

MHC-EP-0768

4/28/94

Waste Class Volumes (m³)
by Waste Generator

Page 14b

Waste Generator	Waste Class	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total
Total for WMC_303K		0	0	0	0	0	0	0	0	0	0	0	0	0	0	245
WMC_308	CH_LIWM_III	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	CH_LIWM_I	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
	CH_LIWM_III	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
	CH_TRU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	CH_TRUM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total for WMC_308		0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
WMC_340	CH_LIWM_I	1	1	1	1	1	1	1	1	1	1	1	1	1	1	24
	CH_LIWM_I	14	14	14	14	14	14	14	14	14	14	14	14	14	14	426
	CH_LIWM_III	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12
Total for WMC_340		15	15	15	15	15	15	15	15	15	15	15	15	15	15	462
WMC_377	CH_LIWM_I	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
	CH_LIWM_I	1	1	1	1	1	1	1	1	1	1	1	1	1	1	26
Total for WMC_377		1	1	1	1	1	1	1	1	1	1	1	1	1	1	29
WMC_BKLOG	CH_LIWM_I	0	0	0	0	0	0	0	0	0	0	0	0	0	0	854
	CH_LIWM_III	0	0	0	0	0	0	0	0	0	0	0	0	0	0	77
	CH_LIWM_I	0	0	0	0	0	0	0	0	0	0	0	0	0	0	266
	CH_LIWM_III	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Total for WMC_BKLOG		0	0	0	0	0	0	0	0	0	0	0	0	0	0	1201
WMC_BQUIP	CH_LIWM_I	170	170	227	227	255	283	340	198	198	227	283	340	170	0	7663

G-33

WMC-EP-0768

4/20/94

Waste Class Volumes (m³)
by Waste Generator

Page 15b

Waste Generator	Waste Class	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total
Total for MHC_BQUIP		170	170	227	227	255	203	340	198	198	227	203	340	170	0	7663
MHC_DSTPSRET	CH_LLM_I	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
Total for MHC_DSTPSRET		0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
MHC_DST_PRT	RII_TRUM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10414
Total for MHC_DST_PRT		0	0	0	0	0	0	0	0	0	0	0	0	0	0	10414
MHC_DST_RET	CH_LLM_I	126	52	84	73	73	73	42	0	0	0	0	0	0	0	673
Total for MHC_DST_RET		126	52	84	73	73	73	42	0	0	0	0	0	0	0	673
MHC_EA_M112	CH_TRU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	38
Total for MHC_EA_M112		0	0	0	0	0	0	0	0	0	0	0	0	0	0	38
MHC_EA_M113	CH_TRU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	46
Total for MHC_EA_M113		0	0	0	0	0	0	0	0	0	0	0	0	0	0	46
MHC_EA_M221	CH_TRU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	103
Total for MHC_EA_M221		0	0	0	0	0	0	0	0	0	0	0	0	0	0	103
MHC_ENV_RES	CH_LJMM_GTC111	57	28	14	3	0	0	0	0	0	0	0	0	0	0	923
	CH_LJMM_I	57	28	14	3	0	0	0	0	0	0	0	0	0	0	996
	CH_LJMM_111	57	28	14	3	0	0	0	0	0	0	0	0	0	0	929
	CH_LLM_GTC111	2266	1416	708	708	0	0	0	0	0	0	0	0	0	0	39943

G-34

MHC-EP-0768

4/20/94

Waste Class Volumes (m³)
by Waste Generator

Page 16b

Waste Generator	Waste Class	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total
MHC_ENV_RES	CH_LLM_I	12578	2210	1048	1116	0	0	0	0	0	0	0	0	0	0	943850
	CH_LLM_III	3966	2833	1416	1416	0	0	0	0	0	0	0	0	0	0	89654
	CH_TRU	28	28	28	28	0	0	0	0	0	0	0	0	0	0	1153
	CH_TRUM	28	28	28	28	0	0	0	0	0	0	0	0	0	0	674
	RH_LLMW_GTCIII	57	28	14	3	0	0	0	0	0	0	0	0	0	0	923
	RH_LLMW_I	57	28	14	3	0	0	0	0	0	0	0	0	0	0	923
	RH_LLMW_III	57	28	14	3	0	0	0	0	0	0	0	0	0	0	923
	RH_LLM_GTCIII	2266	1416	708	708	0	0	0	0	0	0	0	0	0	0	39943
	RH_TRU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
	RH_TRUM	28	28	28	28	0	0	0	0	0	0	0	0	0	0	708
Total for MHC_ENV_RES		21502	8130	4051	4051	0	0	0	0	0	0	0	0	0	0	1121547
MHC_FFIF_MAINT	CH_LLM_I	9	9	9	9	9	9	9	9	9	9	9	9	9	9	261
	RH_LLM_III	32	32	32	32	32	32	32	32	32	32	32	32	32	32	1065
Total for MHC_FFIF_MAINT		41	41	41	41	41	41	41	41	41	41	41	41	41	41	1326
MHC_GROUT	CH_LLMW_I	5	5	5	5	5	5	5	5	5	5	5	5	5	5	129
	CH_LLMW_III	73	14	43	35	75	14	60	14	56	55	43	14	73	14	1148
	CH_LLM_I	198	53	125	125	198	53	198	53	125	198	125	53	198	53	3503
	CH_LLM_III	5	5	5	5	5	5	5	5	5	5	5	5	5	5	152
	RH_LLMW_III	140	136	192	136	180	136	196	136	136	136	192	136	140	136	4298
Total for MHC_GROUT		421	213	370	306	463	213	463	213	328	399	370	213	421	213	9229
MHC_IMVP	CH_LLMW_I	18	18	18	18	18	18	18	18	18	18	18	18	18	18	420
	CH_LLMW_III	28	25	28	25	28	25	28	25	28	25	28	25	28	25	610
	CH_LLM_I	450	450	450	450	450	450	450	450	450	450	450	450	450	450	10352
	CH_LLM_III	844	844	844	844	844	844	844	844	844	844	844	844	844	844	19480
	CH_TRU	0	0	0	0	0	50	59	61	59	58	59	58	59	61	1002

G-35

MHC-EP-0768

4/20/94

Waste Class Volumes (m³)
by Waste Generator

Page 17b

Waste Generator	Waste Class	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total
MHC_HMVP	CH_TRUM	0	0	0	0	0	59	50	59	50	59	61	59	50	59	1000
	RH_LLM_III	130	130	133	130	130	130	133	130	130	130	133	130	130	130	2999
	RH_TRU	47	50	49	47	49	169	172	169	47	49	47	49	47	49	1426
	RH_TRUM	50	47	50	49	47	169	169	169	49	47	49	49	47	49	1429
Total for MHC_HMVP		1566	1563	1572	1563	1566	1922	1932	1924	1603	1679	1609	1602	1601	1606	38637
MHC_L045H	CH_LLM_I	216	216	216	216	216	216	216	216	216	216	216	216	216	216	6261
Total for MHC_L045H		216	216	216	216	216	216	216	216	216	216	216	216	216	216	6261
MHC_LLBG	CH_LIAPW_I	0	0	3	0	0	3	0	0	3	0	0	3	0	0	34
	CH_LLM_I	6	6	6	6	6	6	6	6	6	6	6	6	6	6	109
Total for MHC_LLBG		6	6	10	6	6	10	6	6	10	6	6	10	6	6	223
MHC_PX_C010H	CH_LIAPW_I	34	34	34	34	34	34	34	34	34	34	34	34	34	34	900
	CH_LIAPW_III	165	165	165	165	165	165	165	165	165	165	165	165	165	165	4702
Total for MHC_PX_C010H		199	199	199	199	199	199	199	199	199	199	199	199	199	199	5762
MHC_SSTRET	CH_LIAPW_I	1	1	1	7	7	7	7	7	7	7	7	7	7	7	85
	CH_LIAPW_III	3	3	3	10	10	10	10	10	10	10	10	10	10	10	200
	CH_LLM_I	7	7	7	51	51	51	51	51	51	51	51	51	51	51	591
Total for MHC_SSTRET		11	11	11	77	77	77	77	77	77	77	77	77	77	77	885
MHC_TRUSAF	CH_LIAPW_I	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
	CH_LLM_I	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12

G-36

MHC-EP-U/08

4/20/94

Waste Class Volumes (m³)
by Waste Generator

Page 10b

Waste Generator	Waste Class	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total
Total for MHC_TRUSAF		0	0	0	0	0	0	0	0	0	0	0	0	0	0	15
MHC_TWP_106C	CH_LLM_I	0	0	0	0	0	0	0	0	0	0	0	0	0	0	140
	RH_LLM_III	0	0	0	0	0	0	0	0	0	0	0	0	0	0	203
Total for MHC_TWP_106C		0	0	0	0	0	0	0	0	0	0	0	0	0	0	422
MHC_TWP_M020	CH_LLM_I	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50
		0	0	0	0	0	0	0	0	0	0	0	0	0	0	50
Total for MHC_TWP_M020		0	0	0	0	0	0	0	0	0	0	0	0	0	0	50
MHC_TWP_M030	CH_LLM_III	0	0	0	0	0	0	0	0	0	0	0	0	0	0	75
		0	0	0	0	0	0	0	0	0	0	0	0	0	0	75
Total for MHC_TWP_M030		0	0	0	0	0	0	0	0	0	0	0	0	0	0	75
MHC_TWP_M050	CH_LLM_I	0	0	0	0	0	0	0	0	0	0	0	0	0	0	109
		0	0	0	0	0	0	0	0	0	0	0	0	0	0	109
Total for MHC_TWP_M050		0	0	0	0	0	0	0	0	0	0	0	0	0	0	109
MHC_TWP_M062	CH_LLM_I	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
		0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Total for MHC_TWP_M062		0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
MHC_TWP_M151	CH_LLM_I	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
		0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Total for MHC_TWP_M151		0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
MHC_TWP_M211	CH_LLM_I	0	0	0	0	0	0	0	0	0	0	0	0	0	0	462

G-37

MHC-EP-0768

4/20/94

**Waste Class Volumes (m³)
by Waste Generator**

Page 19b

Waste Generator	Waste Class	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total
Total for MHC_TMP_W211		0	0	0	0	0	0	0	0	0	0	0	0	0	0	462
MHC_TMP_W314	CH_LLMW_I	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6196
Total for MHC_TMP_W314		0	0	0	0	0	0	0	0	0	0	0	0	0	0	6196
MHC_WELL_DRL	CH_LLMW_I	1	1	1	1	1	1	1	1	1	1	1	1	1	1	28
	CH_LLM_I	4	4	4	4	4	4	4	4	4	4	4	4	4	4	174
	CH_LLM_III	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17
	CH_TRU	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12
	CH_TRUM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
	RH_LLM_I	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13
Total for MHC_WELL_DRL		6	6	6	6	6	6	6	6	6	6	6	6	6	6	253
Grand Total		36225	25242	21785	33484	44454	45459	32606	32310	26209	24830	24399	24712	25165	12350	1803701

G-38

MHC-EP-0768

APPENDIX H

FY-1993 WASTE GENERATOR LIST BY WASTE GENERATOR GROUP

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APPENDIX H

FY-1993 WASTE GENERATOR LIST BY WASTE GENERATOR GROUP

Waste Generator Group	Waste Generator Abbreviation	Waste Generator Name
D&D	SURPLUS FAC	ENV Restoration Operations
D&D	TPNL 231Z	PNL - 231Z - T-Plant Study
D&D	TPNL 242B/BL	PNL - 242 Bldg - T-Plant Study
D&D	TPNL 306W	PNL - 306W Bldg - T-Plant Study
D&D	TPNL 314	PNL - 314 Bldg - T-Plant Study
D&D	TPNL 324	PNL - 324 Bldg - T-Plant Study
D&D	TPNL 326	PNL - 326 Bldg - T-Plant Study
D&D	TPNL 327	PNL - 327 Bldg - T-Plant Study
D&D	TPNL 331	PNL - 331 Bldg - T-Plant Study
D&D	TWHC 100N	N-Reactor - T-Plant Study
D&D	TWHC 202A	CP Purex & UO3-224U - T-Plant Study
D&D	TWHC 221T	T-Plant Bldg. - T-Plant Study
D&D	TWHC 222S	CP 222-S Lab - T-Plant Study
D&D	TWHC 225B	DWM B Plant & WESF - T-Plant Study
D&D	TWHC 2345Z	CP Pu Fin. Plant - T-Plant Study
D&D	TWHC 242A	A Evaporator - T-Plant Study
D&D	TWHC 242S	S Evaporator - T-Plant Study
D&D	TWHC 242T	T Evaporator - T-Plant Study
D&D	TWHC 306	ARD 306E Bldg. FDL - T-Plt Study
D&D	TWHC 308	ARD Fuel Fab. Bldg. - T-Plant Study
D&D	TWHC 340	Liq Wst Handling Fac - T-Plant Study
D&D	TWHC GROUT	DWM Grout Fac - T-Plant Study
D&D	TWHC HWVP	PD Waste Vit Proj - T-Plant Study
D&D	TWHC PX C018H	Purex-242A Eff Tmt - T-Plant Study
D&D	TWHC TRUSAF	DWM Sol Wst Ops - T-Plant Study
D&D	WHC 202A TW	CP Purex & UO3-224U Tunnel Wst
Remedial Action	PAST PRAC REM	Past Practice Remediation
Remedial Action	WHC WELL DRL	Environmental Projects
Offsite Receipts	AMES	Ames Laboratory-Ames, Iowa
Offsite Receipts	ANL E	Argonne Nat. Lab.-East
Offsite Receipts	B LEHR DAV	Univ. of CA, Davis
Offsite Receipts	BAPL	Bettis Atomic Power Laboratory
Offsite Receipts	BAPL SHIPYDS	Bettis Atomic Power Shipyards
Offsite Receipts	BAT CLBS LAB	Battelle Columbus Labs.
Offsite Receipts	BRKHVN	Brookhaven

Waste Generator Group	Waste Generator Abbreviation	Waste Generator Name
Offsite Receipts	EG&G	EG&G Rocky Flats Plant
Offsite Receipts	FERMI	FERMI Nat. Accelerator Lab.
Offsite Receipts	FUSRAP	ORNL Oak Ridge National Lab.
Offsite Receipts	GEN_ATOM	General Atomics
Offsite Receipts	KAPL SHIPYDS	Knolls Atomic Power Shipyards
Offsite Receipts	LBL	Lawrence Berkeley Lab
Offsite Receipts	LLNL	Lawrence Livermore Natl Lab
Offsite Receipts	MIT_BATES	Bates Accelerat.-Massachusetts
Offsite Receipts	PADUCAH ES	Paducah Energy Systems
Offsite Receipts	PADUCAH U	Paducah Utility Services
Offsite Receipts	PORTSMOUTH	Gaseous Diffusion Plant
Offsite Receipts	PRINCETON	Plasma Physics Laboratory
Offsite Receipts	RKW CANOGA	Rockwell Canoga Park
Offsite Receipts	STANFORD	Stanford Lin Accelerator Cntr
Offsite Receipts	U U	Univ. of Utah
Site Support	HEHF	Hanford Env. Health Found.
Site Support	KEH 100	Kaiser Engineers
Site Support	PNL	Pacific Northwest Laboratories
Site Support	WHC 100	DRD 100 Area
Site Support	WHC 100K	K-Basin Operations
Site Support	WHC 105DR	ARD Large Sodium Fire Facility
Site Support	WHC 202A	CP Purex & UO3-224U Facilities
Site Support	WHC 221HE	T-Plant Head End Cleanup
Site Support	WHC 221T	T-Plant Bldg. 2706/221
Site Support	WHC 222S	CP 222-S Laboratory
Site Support	WHC 225B	B Plant/WESF Facilities
Site Support	WHC 2345Z	CP Pu Finishing Plant
Site Support	WHC 2724W	Laundry-Equip. Decon Facility
Site Support	WHC 303K	Fuels Operations
Site Support	WHC 308	ARD Fuel Fabrication Bldg.
Site Support	WHC 340	Liquid Waste Handling Facility
Site Support	WHC 377	Geo. Tech. Engineering Lab.
Site Support	WHC BQUIP	Buried Equipment
Site Support	WHC EA W112	SW RMW Storage Facility
Site Support	WHC EA W113	SW Retrieval Fac.-Phase 1
Site Support	WHC EA W221	SW Retrieval Fac.-Phase 2
Site Support	WHC FFTF MAINT	FFTF/FMEF Maintenance.
Site Support	WHC L045H	300 Area Water Treatment Proj.
Site Support	WHC LLBG	DWM Low Level Burial Grounds
Site Support	WHC PX C018H	Purex242A Condensate Treatment

Table H-1. (contd)

Waste Generator Group	Waste Generator Abbreviation	Waste Generator Name
Site Support	WHC TRUSAF	DWM Solid Waste Operations
TWRS	LL EQUIP	Long-length Equipment
TWRS	LL EQUIP SEC	Long-length Equipment Secondary Waste
TWRS	WHC ZETP	Single Shell Tank Farms
TWRS	WHC BKLOG	Tank Farms Backlog Waste
TWRS	WHC DST PRT	DST NCAM Process Tests
TWRS	WHC DST RET	W343 DST Retrieval (17 Tanks)
TWRS	WHC DSTPSRET	CC, PFP&NCRWDST Pilot Scale Ret
TWRS	WHC GROUT	DWM GROUT Facility
TWRS	WHC HMVP	PD Waste Vitrification Project
TWRS	WHC SSTLE	SST Long Length Equipment
TWRS	WHC SSTRET	SST Retrieval (458 tanks)
TWRS	WHC TWP 106C	W320 Tank 241 Sluicing
TWRS	WHC TWP W028	Aging Waste Transfer Lines
TWRS	WHC TWP W030	Tank Farm Ventilation Upgrade
TWRS	WHC TWP W058	Cross-Site Transfer Lines
TWRS	WHC TWP W062	Tank AP-104 Upgrade
TWRS	WHC TWP W151	Tank Farm-101-AZ Retrieval Sys
TWRS	WHC TWP W211	DST Retrieval (10 tanks)
TWRS	WHC TWP W314	Tank Farm Restoration

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