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DOE Mixed Waste Treatment Capacity Analysis

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ABSTRACT

This initial DOE-wide analysis compares the reported national capacity for treatment of mixed wastes with the calculated need for treatment capacity based on both a full treatment of mixed low-level and transuranic wastes to the Land Disposal Restrictions and on treatment of transuranic wastes to the WIPP waste acceptance criteria. The status of treatment capacity is reported based on a fifty-element matrix of radiation-handling requirements and functional treatment technology categories. The report defines the classifications for the assessment, describes the models used for the calculations, provides results from the analysis, and includes appendices of the waste treatment facilities data and the waste stream data used in the analysis.

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CONTENTS

ABSTRACT	iii
ACKNOWLEDGMENTS	v
GLOSSARY	xv
EXECUTIVE SUMMARY	S.1
1.0 INTRODUCTION	1.1
1.1 METHODOLOGY	1.1
1.2 OUTLINE OF REPORT	1.2
1.3 CATEGORIES AND CLASSIFICATIONS	1.3
1.3.1 Generic Treatment Technology Categories	1.3
1.3.2 Radiation-Handling Categories	1.3
1.3.3 Facility Status Categories	1.5
1.3.4 Waste Matrix Categories	1.5
1.3.5 Waste Contaminant Categories	1.5
1.4 LIMITATIONS OF ANALYSIS RESULTS	1.9
2.0 FACILITY CAPACITY DATABASE	2.1
2.1 IDENTIFICATION OF TREATMENT FACILITIES	2.1
2.2 BASES AND ASSUMPTIONS FOR FACILITY DATA	2.2
2.3 RESOLVED NATIONAL CAPACITIES	2.3
3.0 CALCULATIONS OF NEED FOR AND UTILIZATION OF TREATMENT CAPACITIES	3.1
3.1 DESCRIPTION OF COMPUTER MODEL	3.1
3.1.1 Operation of the Model	3.1
3.1.2 Model Inputs	3.1

3.2	WASTE STREAM INFORMATION	3.2
3.3	TREATMENT FLOWSHEETS	3.3
3.3.1	LDR Treatment Flowsheet	3.3
3.3.2	WIPP-WAC Treatment Flowsheet	3.6
3.4	SCENARIOS USED FOR THIS ANALYSIS	3.9
3.4.1	Outline of Scenario Characteristics	3.9
3.4.2	Overview of Output from Scenarios	3.12
3.4.3	Scenario #1 - LDR Treatment with Unlimited Capacities	3.12
3.4.4	Scenario #2 - LDR Treatment with Current Capacities	3.13
3.4.5	Scenario #3 - LDR Treatment with Potential Capacities	3.15
3.4.6	Scenario #4 - WIPP-WAC Treatment with Unlimited Capacities	3.16
3.4.7	Scenario #5 - WIPP-WAC Treatment with Current Capacities	3.17
3.4.8	Scenario #6 - WIPP-WAC Treatment with Potential Capacities	3.19
4.0	EVALUATION OF MIXED WASTE PROCESSING NEEDS AND CAPACITIES	4.1
4.1	EVALUATION OF TREATMENT CAPACITIES	4.1
4.1.1	Treatment Capacities for LDR Treatment of MTRU and MLLW	4.1
4.1.2	Treatment Capacities for Treatment of MTRU to WIPP-WAC	4.4
4.2	ESTIMATION OF THE PERCENT OF WASTES TREATABLE BY CURRENT AND POTENTIAL CAPACITIES	4.6
4.2.1	Percent of Mixed-Waste LDR-Treatment Possible with Current and Projected Treatment Capacities	4.6
4.2.2	Percent of Mixed-Waste WIPP-WAC Treatment Possible with Current and Projected Treatment Capacities	4.6
5.0	REFERENCES	5.1

APPENDIX A - Waste Treatment Facilities and Systems Included in Analysis	A.1
APPENDIX B-1 - Current Inventory of Mixed Wastes by Treatability Groups	B-1.1
APPENDIX B-2 - Five-Year Projections of Mixed Waste Generation by Treatability Groups . .	B-2.1
APPENDIX B-3 - Volumes of Mixed Waste by Treatability Groups Expected During the Next 20 Years	B-3.1
APPENDIX B-4 - Listing of All CSTEP Waste Streams by Site with Treatability Group and Waste Volume Information as Used in This Analysis.	B-4.1

FIGURES

S.1 - Status of Treatment Capacity for DOE's Mixed Wastes Based on Current Operating Facilities and the LDR Flowsheet	S.3
S.2 - Status of Treatment Capacity for DOE's Mixed Wastes Based on All Potential Capacities and the LDR Flowsheet	S.4
S.3 - Percentage of Mixed Wastes Processed by Current and Potential Capacities as Determined from the Volumes of Waste Processed and the Volumes of Final Waste Form for both the LDR and WIPP Certification Treatment Methods.	S.6
1.1 - Capacity Analysis Flowchart	1.2
3.1 - LDR Treatment Flowsheet	3.5
3.2 - Mixed Waste Matrix-Contaminant Treatment Grid	3.7
3.3 - Mixed Waste Matrix-Contaminant Treatment Grid with Treatment Flows	3.8
3.4 - Flowsheet for Treatment of MTRU to WIPP-WAC	3.10
4.1 - Status of Treatment Capacity Based on Current Capacities and 20-Year Processing Need . .	4.2
4.2 - Status of Treatment Capacity Based on Potential Capacities and 20-Year Processing Need	4.3

TABLES

S.1 - Additional Capacities Needed (m^3/yr) for Mixed Waste Treatment After Use of All Potential Treatment Capacities for LDR Flowsheet	S.4
1.1 - Generic Treatment Categories and Descriptions	1.4
1.2 - Facility Status Categories, Codes, and Descriptions	1.6
1.3 - Descriptions of Waste Matrix Categories Used in the IMWIR	1.7
1.4 - Waste Contaminant Categories and Descriptions	1.9
2.1 - Mixed Waste Treatment Capacities by Five-Year Intervals (m^3/year)	2.4
2.2 - Summary of Current Mixed Waste Treatment Capacities (m^3/year)	2.5
2.3 - Summary of Potential Mixed Waste Treatment Capacities in 2009 (m^3/year)	2.5
3.1 - Bases for WIPP-WAC Treatment Calculations	3.11
3.2 - Outline of Scenarios Used for in the Analysis	3.11
3.3 - Cumulative 20-Year Processing Volumes (m^3) for LDR Treatment with Unlimited Capacity	3.13
3.4 - Cumulative Volumes of Final Waste Forms for LDR Treatment for 20 Years with Unlimited Capacities (m^3)	3.13
3.5 - Cumulative 20 Year Processing Volumes (m^3) for LDR Treatment with Current Available Capacities	3.14
3.6 - Maximum Volumes of Storage Required for Unprocessed Wastes (m^3) during 20 Years of LDR Processing with Current Capacities	3.14
3.7 - Cumulative Volumes of Final Waste Forms (m^3) from LDR Processing for 20 Years with Current Capacities	3.15
3.8 - Cumulative 20-Year Processing Volumes (m^3) for LDR Treatment with Potential Capacities	3.15
3.9 - Maximum Volumes (m^3) of Storage Required for Unprocessed Wastes During 20 Years of LDR Processing with Potential Capacities	3.16
3.10 - Cumulative Volumes (m^3) of Final Waste Forms from LDR Processing for 20 Years with Potential Capacities	3.16

3.11 - Cumulative 20-Year Processing Volumes (m^3) for WIPP-WAC Treatment with Unlimited Capacity	3.17
3.12 - Cumulative Volumes (m^3) of Final Waste Forms from WIPP-WAC Processing for 20 Years with Unlimited Capacity	3.17
3.13 - Cumulative 20-Year Processing Volumes (m^3) for WIPP-WAC Treatment with Current Capacities	3.17
3.14 - Volumes (m^3) of Wastes in Queue at the End of 20 Years of WIPP-WAC Processing with the Current Capacities	3.18
3.15 - Maximum Volumes (m^3) of Storage Required for Unprocessed Wastes during 20 Years of WIPP-WAC Processing with Current Capacities	3.18
3.16 - Cumulative Volumes (m^3) of Final Waste Forms from WIPP-WAC Processing for 20 Years with Current Capacities	3.18
3.17 - Cumulative 20-Year Processing Volumes (m^3) for WIPP-WAC Treatment with Potential Capacities	3.19
3.18 - Volumes of Wastes (m^3) in Queue at the End of 20 Years of WIPP-WAC Processing with Potential Capacities	3.19
3.19 - Maximum Volumes (m^3) of Storage Required for Unprocessed Wastes after 20 Years of WIPP-WAC Processing with Potential Capacities	3.20
3.20 - Cumulative Volumes (m^3) of Final Waste Forms from WIPP-WAC Processing for 20 Years with Potential Capacities	3.20
4.1 - Needed Treatment Capacity (m^3/yr) for Processing All of DOE's Mixed Wastes During the Next 20 Years	4.2
4.2 - Type and Quantity of Additional Capacity (m^3/yr) Needed by 2004 to Process All of the Mixed Waste by 2014 Based on Current Capacities	4.4
4.3 - Type and Quantity of Additional Capacity (m^3/yr) Needed by 2004 to Process All of the Mixed Waste by 2014 Based on Potential Capacities	4.4
4.4 - Potential Excess in Treatment Capacity (m^3/yr) for Mixed Wastes	4.5
4.5 - Needed Treatment Capacity (m^3/yr) for Treatment of DOE's MTRU to WIPP-WAC	4.5
4.6 - Estimates of the Percent of Mixed Waste Processable Within the LDR Flowsheet with the Current and Potential Capacities	4.7
4.7 - Estimates of the Percent of MTRU Processable Within the WIPP-WAC Flowsheet by Current and Potential Capacities	4.8

GLOSSARY

AL	Transuranic Alpha Containing
CH	Contact-Handled
CO	Commercial Operating
CSTP	Conceptual Site Treatment Plan
D&D	Decontamination and Decommissioning
DEACT	Deactivation
DECON1	Decontamination for organic removal
DECON	Decontamination
DOE	Department of Energy
EC	Existing - Could be used
EN	Existing - No plans for operation
EO	Existing Operating
EP	Existing Planned Operations
ER	Environmental Restoration
HGSEP	Mercury Separation
HLW	High-Level Waste
IMWIR	Interim Mixed Waste Inventory Report
LDR	Land Disposal Restricted (Part of RCRA)
LLW	Low-Level Waste
METRC	Metal Recovery
METRM	Metal ion removal from waste waters
MLLW	Mixed Low-Level Waste
MLLW-CH	Contact-Handled Mixed Low-Level Waste
MLLW-CH/AL	Contact-Handled Mixed Low-Level Waste with Transuranic Alpha
MLLW-RH	Remote-Handled Mixed Low-Level Waste
MWTP	Mixed Waste Treatment Project
MTRU	Mixed Transuranic Waste
MTRU-CH	Contact-Handled Mixed Transuranic Waste
MTRU-RH	Remote-Handled Mixed Transuranic Waste
NEUTR	Neutralization
ORDST	Organic Destruction
PA	Planned and Approved for Construction
PEIS	Programmatic Environmental Impact Statement (for DOE's Waste Management Activities)
PN	Planned but Not approved for Construction
RAD-CAD	Radiation-Handling Category
RCRA	Resource Conservation and Recovery Act
RH	Remote-Handled
STABL	Stabilization
STABL1	Mercury Stabilization
TSCA	Toxic Substance Control Act
UP	Unplanned Facility
WIPP	Waste Isolation Pilot Plant
WIPP-WAC	Waste Isolation Pilot Plant - Waste Acceptance Criteria
WWTOR	Waste Water Treatment for Organics

EXECUTIVE SUMMARY

This report provides an initial analysis and comparison of the nation's treatment capacity and treatment capacity requirements for DOE's mixed low-level wastes (MLLW) and mixed transuranic wastes (MTRU). High-level wastes are not considered. The analysis indicates that while there is significant treatment capacity for some specific waste types (mostly waste waters), there is insufficient treatment capacity to provide treatment to meet land disposal restrictions for many waste types. It was determined that 64% of the total treatment capacity needed currently exists, but only 42% of the wastes can be treated to all applicable land disposal restricted (LDR) treatment standards, because of a lack of capacity in some technology categories. If all of the potential capacities identified in this report become available, the total treatment capacity and fully processed volumes increase to 79% and 48%, respectively.

The approach taken in this analysis has been to systematically categorize and compare the treatment facilities capacities and the waste treatment needs using a common matrix set of 5 radiation-handling categories and 10 treatment technology categories. The analysis activities have assigned the individual facilities and the wastes to their respective set of radiation handling-treatment technology combinations, summed the individual facility capacities and the individual waste treatment needs for each of the 50 combinations, and then compared the totals for each of the 50 sets of capacities and treatment needs.

The seven major complicating factors for the analysis are: 1) most facilities provide capacities for multiple radiation handling-treatment technology categories, 2) most wastes require multiple treatment technologies and not necessarily the same set of treatment technologies as any specific treatment facility, 3) the waste treatment technology needs are dependant on the treatment objectives and on the individual waste characteristics, 4) the facilities capacities have not previously been uniquely assigned for each of the 50 radiation handling-treatment technology combinations, 5) facilities are in a wide variety of states of ability to receive and process mixed wastes, 6) there are a large number of facilities and wastes to account for in the analysis, and 7) the databases for facilities and wastes, while extensive, are not complete. The analysis activities have required the resolution of the complicating factors by development of limiting cases, by manual reviews and classifications of the facilities and wastes, by development of automated analysis methods, and by simplifying assumptions where necessary.

Information on treatment methods and waste inventories was used to estimate the total treatment need and to determine the fraction of that need that can be met with current and projected treatment facilities. The information used, the bases for this analysis, and analysis results are summarized here and detailed in the body of the report.

Treatment Methods

Two treatment methods were simulated in this analysis: 1) providing Resource Conservation and Recovery Act (RCRA) treatment for LDR mixed transuranic wastes and mixed low-level wastes, and 2) providing Waste Isolation Pilot Plant (WIPP) Certification for mixed transuranic wastes. For the RCRA-LDR treatment method used for this analysis, organic materials are removed or destroyed and the residual toxic materials and radioactivity are immobilized primarily in grout or cement waste forms. For the WIPP Certification method, the liquids are removed and particulates immobilized

without concern for LDR contaminants. The five radiation-handling categories are: contact-handled mixed transuranic wastes (MTRU-CH), remote-handled mixed transuranic wastes (MTRU-RH), contact-handled mixed low-level wastes (MLLW-CH), contact-handled mixed low-level wastes with transuranic alpha (MLLW-CH/AL), and remote-handled mixed low-level wastes (MLLW-RH). The treatment technologies used in the two treatment methods are summarized into 10 generic treatment technology categories (see Section 1.3.1 for details) that are based on functional operations (e.g., organic destruction) rather than on specific treatment technologies (e.g., incineration).

Waste Inventories

The waste inventories and projections used in the analysis are those in the Conceptual Site Treatment Plans (CSTPs), as summarized by the CSTP Summary Report (DOE 1994). In the CSTP Summary Report the volumes of waste to be processed are generally based on the December 31, 1992 inventories. The annual projections of future waste volumes were based on the CSTP Summary Report average generation rates expected from 1993 through 1997, but were extended for 20 years. The waste characteristics of radiation-handling requirements, waste matrix, and hazardous contaminants are used to determine specific treatment and capacity requirements. The 20 waste matrices and the eight toxic contaminant categories used in the analysis are taken from the Interim Mixed Waste Inventory Report (DOE 1993).

Facilities and Processing Capacities

Facilities and their treatment capacities used were generally the design or maximum technical capacities taken from the CSTP Summary Report and maximize the possible treatment. Many facilities did not have any identified treatment capacity and could not be included in this analysis. When capacities are established for these facilities, the additional needed capacities determined in this analysis should be correspondingly reduced. The results of this analysis can be useful in helping define the capacities and technologies for such facilities. For this analysis, the treatment capacities have been divided into two cases: "current capacities" (which includes only the DOE and commercial facilities currently operating), and "potential capacities" (which includes all existing and planned facilities for which capacity values have been identified). A third set of capacities, "unlimited capacities," was also defined. With unlimited capacities, waste processing is unrestricted based on available capacity. The unlimited capacities case is used to determine the total treatment capacity requirements of the wastes and allows comparisons with the other two cases. All of the facilities were assigned to one or more generic treatment categories based on their functional operational capabilities. The use of the same treatment categories and radiation-handling categories for the facilities and the wastes allows direct comparison. Facilities with the appropriate treatment category and radiation-handling characteristics are assumed to be capable of treating any waste with the same requirements. This assumption maximizes the amount of waste that can be treated by each facility and therefore may overestimate the total amount of waste potentially treated. The process of classifying the facilities has required the use of some assumptions concerning the operations and capabilities of the facilities. The assumptions have been generally chosen to maximize the amount waste that can be treated by the existing and planned facility capacities.

Analysis Results for LDR Treatment

This analysis used the nation as one treatment system without limits on transportation or receipt of wastes by facilities. The ability to transport the mixed wastes has not been confirmed as

part of this study, and receipt of some off-site wastes may be in conflict with current agreements for some facilities.

The results of the analysis for treatment of all wastes by the LDR method utilizing the current capacities are summarized in Figure S.1. This figure illustrates the status of the current treatment capacity with respect to the projected capacity needed for each of the 50 combinations of treatment and radiation-handling categories. The status is summarized into one of four conditions: 1) treatment capacity was not needed based on the wastes and simulated treatment methods; 2) there was major excess in capacity compared with the projected need; 3) existing treatment capacity was within 50% of the projected need; or 4) there was less than 50% of the projected need available. Figure S.1 identifies a lack of capacity for 36 treatment technology-radiation handling combinations and an excess of capacity for 11 such combinations. Since treatment of wastes usually requires multiple steps and technologies, the deficiencies result in the inability to fully treat much of the wastes. Figure S.2 is similar to Figure S.1, except that it represents the status of treatment capacity when potential treatment capacities are utilized. It identifies a lack of capacity for 25 treatment-radiation handling combinations, an excess of capacity for 19 combinations, and 4 combinations with capacity within 50% of the projected need. The major treatment technology needs are in capacity for treatment of solid wastes. Treatment of aqueous wastes, and most MLLW-CH wastes, may be accomplished with existing facilities.

The additional capacity needed for treatment to LDR standards is quantified in Table S.1. The capacity values in this table are based on the use of all potential capacities and the additional assumptions that 10 years will be required to establish the additional capacity needed and that treatment of all existing and projected wastes for the 20-year period will be completed within the second 10-year period. As shown in the table, the major needs are for treatment capacity for the

Treatment Category	Radiation Category				
	MTRU-RH	MTRU-CH	MLLW-RH	MLLW-CH/AL	MLLW-CH
Metal Removal - Aqueous					
Neutralization - Aqueous					
Organic Treatment - Aqueous					
Deactivation					
Organic Removal					
Organic Destruction					
Metal Recovery					
Stabilization					
Mercury Separation					
Mercury Stabilization					
		No Treatment Capacity Needed			
		Excess Capacity Available			
		Existing Capacity Similar to Need			
		Need Capacity			

Figure S.1 - Status of Treatment Capacity for DOE's Mixed Wastes Based on Current Operating Facilities and the LDR Flowsheet

Radiation Category Treatment Category	MTRU-RH	MTRU-CH	MLLW-RH	MLLW-CH/AL	MLLW-CH
Metal Removal - Aqueous					
Neutralization - Aqueous					
Organic Treatment - Aqueous					
Deactivation					
Organic Removal					
Organic Destruction					
Metal Recovery					
Stabilization					
Mercury Separation					
Mercury Stabilization					
		No Treatment Capacity Needed			
		Excess Capacity Available			
		Existing Capacity Similar to Need			
		Need Capacity			

Figure S.2 - Status of Treatment Capacity for DOE's Mixed Wastes Based on Potential Capacities and the LDR Flowsheet

Table S.1 - Additional Capacities Needed (m³/yr) for Mixed Waste Treatment After Use of All Potential Treatment Capacities for LDR Flowsheet

Radiation Category Treatment Category	MTRU-RH	MTRU-CH	MLLW-RH	MLLW-CH/AL	MLLW-CH
Metal Removal - Aqueous	0	0	1,605	0	0
Neutralization - Aqueous	0	0	0	0	0
Organic Treatment - Aqueous	104	6,674	85	0	0
Deactivation	0.02	0	0.94	0	318
Organic Removal	0.05	1,280	0.002	3,236	0
Organic Destruction	0	1,742	135	6,856	0
Metal Recovery	0	404	0	125	0
Stabilization	0	634	0	4,914	0
Mercury Separation	73	548	792	609	4,004
Mercury Stabilization	2	0	17	74	291
Total by Radiation Category	180	11,283	2,635	15,813	4,614

MLLW-CH/AL and MTRU-CH wastes. The need for treatment capacity for respective treatment-radiation handling combinations will increase if some of the potential capacity is determined to be unsuitable for mixed waste treatment, and if some projected facilities are not constructed.

Analysis Results for WIPP Certification

For MTRU treatment based on the WIPP Certification method and current capacities, the analysis identified a need for additional stabilization capacities for both MTRU-RH and MTRU-CH

wastes and minor needs for additional capacities for neutralization and deactivation for MTRU-RH wastes. The additional MTRU-RH stabilization capacity possible with the potential capacities will meet the projected need in the future. It should be noted that in this analysis the relative locations of the wastes and treatment capacity were not considered nor were the characterization requirements developed. Specific sites may not have adequate characterization or treatment capacity for their wastes and the actual needs with site-specific considerations may exceed that calculated in this analysis.

Summary Status of Treatment Capacity

It was not possible in this analysis to directly calculate the percent of the wastes that can be processed by the current and potential capacities, since wastes are subdivided and combined with other wastes and secondary wastes are generated during the waste treatment processes. However, two methods were identified to compare the amount of waste treatment needed based on unlimited capacities with that possible with current and potential treatment capacities. The first comparison method is based on volumes of waste processed and does not require the completion of the treatment of the waste. In this method the volumes of waste going through each process step were summed for each specific treatment method and each facility capacity case. The sums were then divided by the sum of the volumes for total processing of all wastes. The second comparison method provides a better measure of the available capacity to totally treat the wastes. For this method, the sum of the volumes of final waste forms produced by the current and projected capacities were compared with the sum of the volumes of final waste forms produced with total treatment of the wastes (e.g., unlimited capacity). The results of the two comparison methods are shown in Figure S.3 for each major waste-handling type for both the current and potential capacities and for the LDR and WIPP Certification treatment methods. While these two comparison methods gave similar results for the WIPP Certification treatment methods, the differences for LDR treatment are not as consistent. The differences primarily result from the ability to treat the high-volume aqueous wastes but the lack of capacity to complete the treatment into a final waste form.

The results indicate that, except for the MLLW-CH, only a small percentage of the wastes can generally be treated by the LDR treatment method. Comparison of the LDR and WIPP Certification treatment methods shows that, except for the MTRU-RH with current capacity, more of the MTRU wastes can be processed based on the WIPP Certification treatment method.

Limitations on Results

This analysis represents an early step in establishing the treatment capacity requirements for mixed wastes in the U.S. Additional analysis needs include 1) analysis on a site-by-site basis (e.g., what logistical support is required for optimum use of existing and potential treatment capacity), 2) evaluation of different treatment methods that may use technology more advantageously, 3) increases in the scope of the analysis to include additional components in the waste management system, additional pretreatment and post-treatment processes, and additional facilities, and 4) further improvements in the quality, completeness, and consistency of the waste characteristics and generation rates, and facility capacities and waste acceptance limits available for use in the analysis.

Figure S.3 - Percentage of Mixed Wastes Processed by Current and Potential Capacities as Determined from the Volumes of Waste Processed and the Volumes of Final Waste Form for both the LDR and WIPP Certification Treatment Methods.

Based on the results of this study, it is recommended that work continue towards identifying the best locations and types of technology to fill the need for additional treatment capacity. It is further recommended that studies be conducted to identify the actual amounts of capacity needed at specific sites and that the treatment methods or flowsheet be optimized based on the technology available at that site.

1.0 INTRODUCTION

This report provides an initial analysis and comparison of DOE needs and capacities for mixed waste treatment. It will be a starting point for more detailed analyses. It identifies from a national perspective the major needs for treatment capacity, the type of capacity available, and where there is no apparent waste processing capacity needed. This information may then be used to focus further studies on where and how DOE should establish treatment capacity to meet the nation's needs for treatment and disposal of its mixed transuranic wastes (MTRU) and mixed low-level wastes (MLLW).

This report is provided as a supplement to the Conceptual Site Treatment Plan (CSTP) Summary Report (DOE 1994), which gives detailed information on individual site plans for waste treatment and identifies many options for treating mixed wastes as reported by the sites.

There were seven major complicating factors for the analysis: 1) most facilities provide capacity for multiple radiation handling-treatment technology categories, 2) most wastes require multiple treatment technology categories and not necessarily the same as any specific treatment facility, 3) the waste treatment technology needs are dependent on the treatment objectives and on the individual waste characteristics, 4) the facilities capacities have not previously been uniquely assigned for each of the 50 radiation handling-treatment technology combinations, 5) facilities are in a wide variety of states of ability to receive and process mixed wastes, 6) there are a large number of facilities and wastes to account for in the analysis, and 7) the data bases for facilities and wastes, while extensive, are not complete. The analysis activities have required the resolution of the complicating factors by development of limiting cases, by appropriate manual reviews and classification of the facilities and wastes, by development of automated analysis methods, and by simplifying assumptions where necessary.

Additional analysis will be necessary to provide DOE with an effective waste management system for mixed wastes. Such a system will involve optimizing the location, type, and quantity of treatment resources.

1.1 METHODOLOGY

The approach taken in this analysis has been to systematically categorize and compare the treatment facilities capacities and the waste treatment needs using a common matrix set of 5 radiation-handling categories and 10 treatment technology categories. The analysis activities have assigned the individual facilities and the wastes to their respective set of radiation handling-treatment technology combinations, summed the individual facility capacities and the individual waste treatment needs for each of the 50 combinations, and then compared the totals for each of the 50 sets of capacities and treatment needs.

The methodology used in this analysis is illustrated in Figure 1.1, which shows the four major steps in the analysis. Step one was the preparation of the analysis bases. The second step was the determination of the nation's treatment capacity. This was done with CSTP databases (DOE 1994). The third step was the determination of the capacity requirements. This was done primarily with the Mixed Waste Processing Model, a computer analysis model that requires the input of a treatment method, facility capacities, and waste stream data. The model determined (for each technology

included in the treatment method) the throughput, and therefore, the capacity requirement for that element. The fourth step was the comparison of the treatment requirements with facilities capacities. Each of the major steps is described in the following major sections of this report and results in estimates of additional treatment capacity needed and the throughput possible with existing capacity.

The organization of the report, the categories and nomenclature used, and some limitations of the results of the report are described in the balance of this section. Many of the bases of the analysis are identified here, and additional bases or assumptions for each of the other steps are identified in the respective sections that deal with that step in the analysis.

1.2 OUTLINE OF REPORT

This report is organized into six major sections, and appendixes. This section provides an introduction to the report, including the categories used to define the analysis. The second section identifies and discusses the facilities included within the scope of this analysis, the bases used in

Figure 1.1 - Capacity Analysis Flowchart

selecting the facilities, and the facility characteristics that are the most important to this analysis (e.g., treatment category provided, processing capacity, facility status, and potential operational dates). The technology and the utilization of treatment capacity. Inputs required to calculate the treatment needs and other output data from the model are identified and discussed. The fourth section compares the facility capacities from Section 2 with the treatment needs and treatment capabilities of the current and potential capacities identified in Section 3 and categorizes the status of treatment capacity and need for additional capacity by treatment technology and handling category. References are listed in Section 5. Appendix A contains information on treatment facilities used in the analysis, and Appendix B provides summaries of waste stream information and a detailed listing of waste streams and key information used in the analysis.

1.3 CATEGORIES AND CLASSIFICATIONS

Sets of categories or classifications are used in this report to allow grouping, summarization, and discussion. The major categories include generic treatment technology, radiation-handling, facility status, waste matrices, and waste contaminants. These are each defined in the following subsections.

1.3.1 Generic Treatment Technology Categories

Generic treatment technology categories are used as upper-level categories to group similar technologies that may be interchangeable in function. The generic treatment categories identified by the Mixed Waste Treatment Project (MWTP) (Borduir 1994) have been used in this analysis. These treatment categories and a brief description of each are given in Table 1.1. A few treatment categories have been subdivided to provide the additional detail for this analysis and are noted with a number at the end of the abbreviation. The organic removal technology has been subdivided from the general decontamination technology and is used in the selected treatment methods instead of the general decontamination category. Thus, the summaries only show 10 categories rather than the 11 listed in Table 1.1. These treatment categories have been used by many sites in their CSTPs, and are generally being used in DOE's Programmatic Environmental Impact Statement (PEIS).

1.3.2 Radiation-Handling Categories

Radionuclide content determines, to a high degree, the containment requirements for mixed waste and therefore the type of facility that is needed to process the wastes. Wastes are first classified as either MTRU or MLLW. Then, for handling purposes, the wastes and facilities are categorized as either remote-handled (i.e., those wastes with a radiation dose exceeding 200 mrem/hr) or contact-handled (i.e., those wastes with a radiation dose less than 200 mrem/hr). The third characteristic of importance for MLLW is the content of transuranic alpha isotopes. Wastes with transuranic alpha isotopes are considered by some to require additional containment to prevent an inhalation hazard to the workers from the transuranic alpha content. Such wastes are designated as alpha wastes (AL). With the understanding that remote-handling requirements are also usually sufficient for alpha containment, there are three categories for LLW: MLLW-RH, MLLW-CH, and MLLW-CH/AL. The use of the term alpha wastes has previously led to some confusion in the community, since uranium and thorium are also alpha-emitters and some sites have classified uranium and thorium-containing wastes as alpha wastes. Information used from the database for this analysis recognizes this potential problem and the most recent site designations are used.

Table 1.1 - Generic Treatment Categories and Descriptions

<u>Treatment Category</u>	<u>Abbrev.</u>	<u>Description</u>
Organic Destruction	ORDST	Destruction of organic liquids and solids by a broad spectrum of thermal and non-thermal organic destruction technologies, including incineration; other thermal technologies such as vitrification, plasma hearth, molten metal, etc.; and non-thermal technologies such as chemical oxidation, electron beam, silent discharge plasma. Some of these technologies are also applicable for the STABL and METRC groups.
Organic Treatment-Aqueous (Waste Water Treatment for Organics)	WWTOR	Treatment technologies for oxidation or removal of organics contained in a predominantly aqueous medium. Examples of destruction technologies include wet oxidation, catalyzed wet oxidation, supercritical water oxidation, and electrochemical oxidation (CEPOD). Removal technologies include steam stripping or distillation, and activated carbon bed for organic absorption.
Metal Removal-Aqueous	METRM	Metal ion and particulate removal from liquids. Examples include settling, filtration, precipitation, ion exchange, carbon adsorption, etc.
Stabilization	STABL	All immobilization and microencapsulation technologies, e.g., cementation, vitrification, polymer encapsulation, etc.
Mercury Stabilization	STABL1	Amalgamation of Hg for disposal. Potential amalgamation materials include sulfur and zinc. This code is used rather than HGSEP for the final immobilization of Hg wastes.
Metal Recovery	METRC	Methods for separation/collection of metals from waste streams for reuse or recycle. Examples include sorting, melting, and decontamination.
Mercury Separation	HGSEP	All mercury separation and collection methods. Examples include gravitational, thermal, and chemical techniques to separate mercury for recycle or disposal. Some mercury separation may occur as the part of another function. For example, if a waste is incinerated, the Hg would be removed from the waste and become part of the off-gas stream. METRC and DECON1 technologies also may be used for mercury separation. Note that amalgamation is included as STABL1.

Table 1.1 (contd.)

Decontamination	DECON	Extractive, mechanical, hydraulic, thermal, and electrochemical techniques used to remove contamination from substrate materials.
Organic Removal	DECON1	Technologies for removal of organic contamination from a waste matrix. Thermal desorption is one such technology. Other technologies also may be utilized. Where thermal desorption is used it may also accomplish HGSEP.
Neutralization-Aqueous	NEUTR	Acid or base additions to neutralize characteristic waste streams. Neutralization also may be a part of METRM.
Deactivation	DEACT	Appropriate technologies to deactivate reactives such as metallic sodium, uranium metal fine particulates, pressurized gases, explosives, or cyanides before disposal.

Mixed TRU wastes are all alpha wastes and are further classified as remote-handled or contact-handled (noted in the report as MTRU-RH and MTRU-CH). Thus, there are five radiation-handling categories considered in this report (i.e., MTRU-RH, MTRU-CH, MLLW-RH, MLLW-CH/AL, MLLW-CH).

1.3.3 Facility Status Categories

Facilities are grouped into four major categories based on their status and availability, with several subdivisions. The major categories are: existing DOE facilities, planned facilities, existing commercial facilities, and unplanned facilities. The descriptions of the categories and the codes are given in Table 1.2. As described in Section 2 these categories were summarized for the analysis into two cases — The "current" operating facilities, which only include the "CO" and "EO" categories, and the "potential" facilities, which include all categories.

1.3.4 Waste Matrix Categories

One of the most important characteristics with respect to processing is the waste matrix (i.e., physical/chemical form). Mixed wastes have been categorized by a variety of matrix classification schemes. The waste matrix categories used in this report are identified in Table 1.3. The 20 matrix categories were used in the Interim Mixed Waste Inventory Report (IMWIR) (DOE 1993) and are used in this analysis, along with contaminant categories, to determine the treatment requirements.

1.3.5 Waste Contaminant Categories

The waste contaminant categories used for this analysis were defined for use in the Mixed Waste Matrix-Contaminant Treatment Grid (Borduin 1994) described in Section 3.3.1. The eight contaminant categories are described in Table 1.4. A waste stream is placed in only one of the contaminant categories, which helps identify the types of treatment necessary. Mercury, with its volatile and toxic nature, has been given specific attention in the selected categories.

Table 1.2 - Facility Status Categories, Codes, and Descriptions

Category	CODE	Description
Existing - Operating	EO	Existing DOE facility processing mixed wastes.
Existing - Planned Operations	EP	Existing DOE facility for which processing of mixed wastes is planned.
Existing - Could Be Used	EC	Existing DOE facility not currently processing mixed wastes that could potentially process mixed wastes.
Existing - No Plans for Operation	EN	Existing DOE facility not currently processing mixed wastes and currently planned for D&D Modifications to these facilities may allow them to be used for processing mixed wastes.
Planned and Approved for Construction	PA	A planned DOE facility that has passed the KD-0 approval status as defined by DOE-HQ.
Planned but Not Approved for Construction	PN	A facility proposed for construction, but currently not approved by DOE-HQ.
Commercial Facility	CO	A commercial facility that has approvals to process mixed wastes.
Unplanned Facility	UP	A recognition of a potential treatment need by specific sites. No conceptual design work has started on such a facility.

Table 1.3 - Descriptions of Waste Matrix Categories Used in the IMWIR

<u>Matrix Category</u>	<u>Matrix Description</u>
Aqueous Liquids	Aqueous liquids consist primarily of water, have a total organic carbon content less than 1%, and less than 35% to 40% settled or suspended solids. Most aqueous liquids are commonly called wastewaters, but they may not always meet EPA's definition of wastewaters under RCRA (< 1% total organic carbon, or > 1% suspended solids). According to EPA's definition for nonwastewaters, aqueous liquids containing > 1% total organic carbon or > 1% total suspended solids are considered nonwastewaters rather than wastewaters. Aqueous liquids contained in lab packs are grouped with lab packs.
Organic Liquids	Organic liquids are liquid materials comprised primarily of hydrocarbons such as petroleum distillates. Organic liquids include liquids and slurries with a total organic carbon content of > 1%, and less than 35% to 40% suspended or settled solids. The organic liquid may or may not be the hazardous component of concern. Solvents are the primary type of organic liquid waste. Lab packs containing organic liquids are grouped under lab packs.
Inorganic Sludges/ Particulates	Inorganic sludges and solids are solid or semi-solid materials comprised mostly of inorganic or mineralogical materials (other than soil or debris). Inorganic sludges and solids in this category are generally homogenous (e.g., sludge from chemical wastewater treatment plants or dusts from air pollution control devices).
Cemented Solids	Wastes that have been mixed with cement for solidification or stabilization. They do not necessarily meet RCRA requirements for stabilization.
Organic Sludges/Particulates	Solid or semi-solids comprised mostly of organic materials. Semi-solids materials include highly viscous liquids as well as sludges composed of mixtures of liquids and solids. Organic sludges and solids are generally homogenous materials (activated carbon, organic resin).
Soils	Soils contaminated with hazardous and radioactive contaminants that are stored in waste containers (rather than in situ soils).
Soils with < 50% Debris	Soils containing less than 50% debris and contaminated with hazardous and radioactive contaminants.

Table 1.3 (contd.)

Inorganic Debris	Debris is solid materials exceeding 60 mm particle size that is 1) a manufactured object; or 2) plant or animal matter; or 3) natural or geological materials (e.g., boulders and cobbles) discarded or intended to be discarded. Mixtures of debris and soil or sludge are considered debris if the mixture is comprised primarily of debris (> 50%) by volume. Inorganic debris includes metallic or ceramic construction or refractory materials, metal turnings, and glass.
Organic Debris	Debris as defined above for particle size and source but composed primarily of paper, plastic, wood, fabric materials such as rags or clothing.
Heterogenous Debris	Debris composed of mixtures of both organic and inorganic materials. It often includes manufactured items such as filters.
Lab Packs with Metals	Lab packs are unique in that they generally include relatively small amounts of a variety of laboratory chemicals. They are multiple containers of material within a larger container or drum. This category includes lab packs with toxic metal contamination.
Lab Packs without metals	The same as the previous category, except they do not contain hazardous metal contaminants.
Reactive Metals	Reactive metals including metallic sodium, alkaline metal alloys, and materials contaminated with such materials, aluminum fines, uranium fines, and zirconium fines.
Explosives	Explosive materials or propellants.
Compressed Gases	Containers of compressed gases or aerosol cans.
Liquid Mercury	Containers of elemental mercury.
Elemental Lead	Surface-contaminated lead (e.g., bricks, counterweights, shipping casks, and other shielding materials) and activated lead (e.g., lead from accelerators or reactors).
Beryllium Dust	Fine particulates containing beryllium as a major component.
Batteries	Lead acid, cadmium and other types of batteries.
Other	Wastes that could not be included into one of the above categories because they contain multiple materials or their contents were insufficiently characterized to allow classification.

Table 1.4 - Waste Contaminant Categories and Descriptions

Contaminant Category	Description
Toxic Organics	Contains listed organic contaminants at sufficient levels to require treatment.
Toxic Organics and Metals with Mercury	Contains listed organic and metal contaminants at sufficient levels to require treatment. Also contains mercury contamination above the regulatory limit of 250 ppm.
Toxic Organics and Metals without Mercury	Contains listed organic and metal contaminants at sufficient levels to require treatment.
Toxic Metals without Mercury	Contains listed inorganic contaminant at sufficient levels to require treatment. It does not contain mercury above 250 ppm.
Toxic Metals with Mercury	Contains listed inorganic contaminant at sufficient levels to require treatment. It also contains mercury above 250 ppm, which can be the only contaminant.
Ignitable	A characteristic waste with the ignitable characteristic.
Corrosive	A characteristic waste with the corrosive characteristic.
Reactive	A characteristic waste with the reactive characteristic.

1.4 LIMITATIONS OF ANALYSIS RESULTS

Because of the overview nature of this analysis, the need to summarize wastes and facilities into the generic treatment categories, and the lack of some specific characterization information about facilities and wastes streams, this report should be viewed as an initial analysis with additional details to be defined in subsequent studies as needed. The following limitations have increased the calculated amount of waste processed in these analysis:

- Since the detailed characterization data for some wastes and facilities are lacking, particularly for the radiation types and levels, full assurance cannot be given that the wastes can actually be processed with the identified current and potential capacity.
- It is also recognized that shipment of large volumes of wastes or some waste types would not be practical. However, the locations of the wastes and difficulties of transporting the wastes to treatment facilities were not analyzed.
- The maximum technical capacities for each system or facility have been used for the analysis. Not all systems can sustain operations at these high capacities.

- The technology groupings inherently assume that capacity that has the same treatment category is interchangeable; for example, polymer, grout, or vitrification can be used for stabilization for any waste stream. This also maximizes the amount of potential waste treatment possible.
- All of the waste streams currently being processed in the facilities identified and included in this analysis or needing processing are not necessarily included in the identified waste streams in the CSTP database. Groundwaters and LLW are specific examples of streams needing processing that are not included in the waste stream database used for this study. This means that if the treatment capacity identified in this analysis for mixed waste is currently being used for other waste types (e.g., groundwater or LLW), the capacity may not be available for the mixed waste streams as projected in this analysis.

The inability to include many of the facilities because they did not include capacity data is one limitation that has decreased the amount of waste treatable with the CSTP facilities.

2.0 FACILITY CAPACITY DATABASE

This section addresses the criteria for identifying and including facilities in the analysis and the bases for defining their technology and capacity. It also includes a summary of DOE and commercial facility capacities as a function of radiation-handling category, treatment category, and year of operation.

2.1 IDENTIFICATION OF TREATMENT FACILITIES

The existing and potential capacities for treatment of mixed wastes that have been identified to date and that appear applicable have been included in this report. The information was obtained from four primary sources and collected into an electronic database for use in this analysis. The primary sources for identification of facilities and their characteristics included are described below.

- 1) The primary electronic database was obtained from MACTEC Inc., Germantown, MD. The hard copy database was included in most of the CSTPs as Appendix B. It is often called Table A in the CSTPs and was prepared for use by the sites in their CSTPs.
- 2) Information on commercial processing capacity was updated by MACTEC in December 1993 for several commercial facilities. Those updates have been included in this analysis.
- 3) CSTPs identified facilities at various sites for use in processing of wastes. Occasionally these identified facilities were not included in the Table A database. About 18 such facilities were identified and included in the database. The CSTPs were also considered the most up-to-date source of information on the individual systems and facilities. Capacities were reported in the CSTPs in a variety of forms for several different conditions. The maximum capacity has been used for this analysis.
- 4) Supplemental information on specific facilities was obtained from the IMWIR (DOE 1993). This includes descriptions of specific facilities at each site and provides additional information on the capacities and limitations of individual facilities.
- 5) A Mixed Waste Workshop was held by DOE in Chicago on May 16-19, 1994, at which sites discussed their facilities and plans to use facilities. At that meeting several facilities were deleted from the listing of potential treatment facilities. Those facilities with identified capacities were also deleted from this database.

While the above data sources identified most of DOE's processing capabilities, it is likely that the data need continued updating and reverification. Such reverification has not been a specific part of the scope of this report. However, limited information in the databases has been updated by contacts to specific facilities where significant changes were noted or the information did not appear to be correct. Several facilities were also deleted from consideration by the May 16-19, 1994 Chicago Mixed Waste Workshop.

2.2 BASES AND ASSUMPTIONS FOR FACILITY DATA

The key information on facilities and the bases used for compiling the information for this analysis are described as follows:

- 1) The processing capacity of the facility. The capacity information is available in different forms depending on the facility. Primary information was given as normal annual capacity, annual design capacity, or annual permitted capacity from "Table A." The CSTPs contained some information defined as maximum technical capacity, maximum technical capacity for mixed wastes, normal operating capacities, and utilized capacities. Information was provided in cubic meters/year, kg/year, and in some cases, process rates per hour or day. Maximum technical capacity was used where available. The maximum technical capacity represents the technical limits to operating conditions, rather than permit limits or the current operating rates which may be limited by the current waste generation rates. Where maximum technical capacity information was not available, design or permitted capacities were used preferentially to the normal capacity. Information given in processing rates per hour or day was converted to annual capacities using the assumption of 24-hour-per-day operations, 365 days per year with an effective utilization of 70% for facilities that process over 500 m³/year, and a 5-day-per-week operation with 48 weeks per year and 70% availability was used for facilities that process less than 500 m³/year.
- 2) The facilities' unit operations. Individual unit operations were grouped into waste treatment categories that provide capacities consistent with the definitions of waste processing described in Table 1.1. For example, neutralization, precipitation, and filtration capabilities were all combined into one facility unit identified as metal removal-aqueous, or METRM, and only one capacity was included for the combined processing operations. If a facility also has capacity for organic removal or destruction, it would be listed for that category as well. Since the need for treatment was also defined in that manner, it should minimize the potential for dual-counting of capacity while being able to identify the more detailed capacity requirements for both organic and metal removal of an aqueous stream.
- 3) Facilities that did not include a capacity value were not included in the database. Many such facilities are recently proposed and are planned to meet the specific site needs that are still being defined. Studies such as this one will be useful in determining what their capacities should be.
- 4) Operational dates were given in the DOE databases for many treatment facilities but not for all. Existing facilities that have been planned for shutdown were the most common without a startup date. To allow a time-based capacity, it was necessary to have an operational date for all facilities. Dates were generated based on the potential difficulty to modify and license the facility.
- 5) Each facility was assigned to one or more generic treatment category but only one radiation-handling category. The treatment categories were identified in Table 1.1. Information from the IMWIR was often used to support the classification of the treatment capacities. Sites classified their facilities in the CSTPs into one or more of nine categories similar to the Table 1.1 categories. For this analysis we have added specific categories for mercury stabilization and organic removal (from solids) to the CSTEP categories.

6) For radiation-handling capability the facilities were categorized into what was considered to be the most difficult-to-treat category in the following order of decreasing difficulty: MTRU-RH, MLLW-RH, MTRU-CH, MLLW-CH/AL, and MLLW-CH. It is recognized that if excess capacity is available at a more difficult-to-treat facility, it may be possible to treat a less difficult waste within that facility if criticality concerns for TRU wastes were addressed by LLW facilities. However, for this initial analysis, this option was not analyzed.

7) Since this is a national analysis no limitations on the use of any specific were considered. Some facilities may be limited to on-site waste streams or have other current permitting limitations, but such limits were not considered in the analysis.

2.3 RESOLVED NATIONAL CAPACITIES

The nation's potential capacities to process mixed wastes are shown in Table 2.1. The table is arranged in the following manner. First, the capacity is grouped by radiation-handling category, then by treatment category, by facility status, and finally, the capacity at five-year increments. The information in Table 2.1 is summarized into two tables for further use in this analysis. Table 2.2 shows a summary of the treatment capacities by treatment category and radiation-handling category for all of the facilities noted as "current capacity." This includes only the existing operating (EO) and commercial operating (CO) facilities. Table 2.3 shows a summary of all of the treatment capacity that is expected in the year 2009, regardless of its status. This second group of technology capacities is called "potential capacity" throughout the report. For use in this analysis, the potential capacities started with 1994 and increased every five years according to the values shown in Table 2.1 for all categories.

A review of the capacity values shows that there are some large capacities (both currently and projected) for the treatment of mixed wastes. More careful examination of Table 2.3, however, shows that most of the capacity is related to aqueous waste treatment either as removal of organic or metal contaminants from aqueous streams or neutralization of aqueous waste streams. There is also significant stabilization capacity. While there is not a large increase in capacity for remote-handled processing, a major increase for contact-handled wastes can be noted between Tables 2.2 and 2.3. The other point that can be noted is that most of the capacity is related to MLLW-CH. The HLW capacities are not included in the table since HLW facilities will be dedicated to HLW streams. A complete listing of the facilities by site and the characteristics of the facilities used in this analysis is provided in Appendix A.

Table 2.1 - Mixed Waste Treatment Capacities by Five-Year Intervals (m³/year)

Radiation Categories	Treatment Technology	Facility Status	Capacity 1994	Capacity 1999	Capacity 2004	Capacity 2009
MTRU-RH	Metal Removal - Aqueous	EO	39788	39788	39788	39788
MTRU-RH	Organic Destruction	PN			550	550
MTRU-RH	Metal Recovery	EP	100	100	100	100
MTRU-RH	Metal Recovery	EC		83	83	83
MTRU-RH	Stabilization	EO	1.2	1.2	1.2	1.2
MTRU-RH	Stabilization	PA			2480	2480
MTRU-CH	Metal Removal - Aqueous	EO	38992	38992	38992	38992
MTRU-CH	Metal Removal - Aqueous	PA		49140	49187	49187
MTRU-CH	Neutralization - Aqueous	EO	47945	47945	47945	47945
MTRU-CH	Neutralization - Aqueous	PA		91	91	91
MTRU-CH	Deactivation	EC	300	300	300	300
MTRU-CH	Organic Destruction	EP		680	680	680
MTRU-CH	Organic Destruction	PN			50	50
MTRU-CH	Stabilization	EO	551	1236	1236	1236
MTRU-CH	Stabilization	PA		8	8	44
MTRU-CH	Stabilization	PN			50	790
MTRU-CH	Mercury Stabilization	PA		18	18	18
MLLW-RH	Metal Removal - Aqueous	EO	210	210	210	210
MLLW-RH	Organic Treatment - Aqueous	EO	210	210	210	210
MLLW-RH	Metal Recovery	PA	100	100	100	100
MLLW-RH	Stabilization	EO	1560	1560	1560	1560
MLLW-CH/AL	Metal Removal - Aqueous	EC	34731	34731	34731	34731
MLLW-CH/AL	Metal Removal - Aqueous	PA	100000	115120	115120	115120
MLLW-CH/AL	Neutralization - Aqueous	EO	120000	120000	120000	120000
MLLW-CH/AL	Neutralization - Aqueous	EP		1	1	1
MLLW-CH/AL	Neutralization - Aqueous	EC	89	89	89	89
MLLW-CH/AL	Organic Treatment - Aqueous	EC	34731	34731	34731	34731
MLLW-CH/AL	Organic Treatment - Aqueous	PA	100000	100000	100000	100018
MLLW-CH/AL	Deactivation	EC	4	4	4	4
MLLW-CH/AL	Metal Recovery	EP		1	1	1
MLLW-CH/AL	Stabilization	EO	2305	2305	2305	2305
MLLW-CH/AL	Stabilization	EP		178	178	178
MLLW-CH/AL	Stabilization	EC	250	250	250	250
MLLW-CH/AL	Stabilization	PA		700	700	850
MLLW-CH	Metal Removal - Aqueous	EO	492221	492221	492221	492221
MLLW-CH	Metal Removal - Aqueous	EP	1000	1000	1000	1000
MLLW-CH	Metal Removal - Aqueous	EC	15732	19653	19653	19653
MLLW-CH	Metal Removal - Aqueous	EN	7411000	7411121	7411121	7411121
MLLW-CH	Metal Removal - Aqueous	PA	3790	18790	18790	18790
MLLW-CH	Metal Removal - Aqueous	PN		8939	8939	8939
MLLW-CH	Metal Removal - Aqueous	UP			20	20
MLLW-CH	Neutralization - Aqueous	EO	514539	514539	514539	514539
MLLW-CH	Neutralization - Aqueous	EC	332	4253	4253	4253
MLLW-CH	Neutralization - Aqueous	PA	147000	147099	147099	147099
MLLW-CH	Neutralization - Aqueous	PN		567	567	567
MLLW-CH	Organic Treatment - Aqueous	EO	660253	660253	660253	660253
MLLW-CH	Organic Treatment - Aqueous	EC	23862	39148	39148	39148
MLLW-CH	Organic Treatment - Aqueous	PA	84528	84553	84553	84553
MLLW-CH	Deactivation	EP	47.8	47.8	47.8	47.8
MLLW-CH	Organic Removal	EC	3040	3040	3040	3040
MLLW-CH	Organic Removal	PN			10	10
MLLW-CH	Organic Destruction	CO	18350	18350	18350	18350
MLLW-CH	Organic Destruction	EO	13500	13500	13500	13500
MLLW-CH	Organic Destruction	EP	2300	2500	2500	2500
MLLW-CH	Organic Destruction	EC		360	360	360
MLLW-CH	Organic Destruction	PA		8202	8202	8202
MLLW-CH	Organic Destruction	PN	1200	1200	2082	2082
MLLW-CH	Organic Destruction	UP			20	20
MLLW-CH	Metal Recovery	CO	1000	1000	1000	1000
MLLW-CH	Metal Recovery	EO	100	100	100	100
MLLW-CH	Metal Recovery	PN	1200	1200	94006	94006
MLLW-CH	Metal Recovery	UP			20	20
MLLW-CH	Stabilization	CO	40340	40340	40340	40340
MLLW-CH	Stabilization	EO			40	40
MLLW-CH	Stabilization	EP	2765	5605	5605	5605
MLLW-CH	Stabilization	EC	787	19401	19401	19401
MLLW-CH	Stabilization	EN		5360	5360	5360
MLLW-CH	Stabilization	PA		3458	3458	3458
MLLW-CH	Stabilization	PN		5297	46032	46032
MLLW-CH	Stabilization	UP			120	120
MLLW-CH	Mercury Stabilization	EO	0.4	0.4	0.4	0.4
MLLW-CH	Mercury Stabilization	PA			1.2	1.2
MLLW-CH	Mercury Stabilization	PN		0.7	0.7	0.7

Table 2.2 - Summary of Current Mixed Waste Treatment Capacities (m³/year)

Radiation Category Treatment Category	MTRU-RH	MTRU-CH	MLLW-RH	MLLW-CH/AL	MLLW-CH	Total Treatment Category Capacity
Metal Removal - Aqueous	39,788	38,992	210	0	492,221	571,211
Neutralization - Aqueous	0	47,945	0	120,000	514,539	682,484
Organic Treatment - Aqueous	0	0	210	0	660,253	660,463
Deactivation	0	0	0	0	0	0
Organic Removal	0	0	0	0	0	0
Organic Destruction	0	0	0	0	31,850	31,850
Metal Recovery	0	0	0	0	1,100	1,100
Stabilization	1	551	1,560	2,305	40,340	44,757
Mercury Separation	0	0	0	0	0	0
Mercury Stabilization	0	0	0	0	0.4	0
Total by Radiation Category	39,789	87,488	1,980	122,305	1,740,303	1,991,865

Table 2.3 - Summary of Potential Mixed Waste Treatment Capacities in 2009 (m³/year)

Radiation Category Treatment Category	MTRU-RH	MTRU-CH	MLLW-RH	MLLW-CH/AL	MLLW-CH	Total Treatment Category Capacity
Metal Removal - Aqueous	39,788	88,179	210	149,851	7,951,744	8,229,772
Neutralization - Aqueous	0	48,036	0	120,070	666,458	834,564
Organic Treatment - Aqueous	0	0	210	134,749	783,952	918,911
Deactivation	0	300	0	4	48	352
Organic Removal	0	234	0	0	3,050	3,284
Organic Destruction	550	730	0	0	45,014	46,294
Metal Recovery	183	0	100	1	95,126	95,410
Stabilization	2,461	2,070	1,560	3,681	120,356	130,128
Mercury Separation	0	0	0	0	0	0
Mercury Stabilization	0	18	0	0	2	20
Total by Radiation Category	42,982	139,567	2,080	408,356	9,665,750	10,258,735

3.0 CALCULATIONS OF NEED FOR AND UTILIZATION OF TREATMENT CAPACITIES

The estimated use and need of treatment technology capacities for each of the radiation-handling categories is provided in this section. The information was generated using a discrete-event simulation model that uses inputs of waste stream characteristics (waste matrix and contaminants), waste inventories and generation rates, facility treatment capacities, and a treatment method or flowsheet that describes a treatment strategy and treatment technologies used for waste treatment. The following subsections describe the computer model, the waste streams, the flowsheets, and the outputs from the model calculations.

3.1 DESCRIPTION OF COMPUTER MODEL

To analyze the large volumes of data and provide useful information from these data, a discrete-event simulation model was developed using SIMSCRIPT II.5.¹ The model simulates the processing of small batches of each waste stream through a defined sequence of treatment technologies. If the technology is available, the model processes the waste and then sends the residues to the next treatment or accumulation point. The model tracks the amount of material going through each treatment category on an annual basis. It also notes any storage required for the waste because of a lack of capacity. Sections 3.1.1 and 3.1.2 provide descriptions of the model operation and the inputs required for the model operation.

3.1.1 Operation of the Model

The waste streams can be thought of as entities, or batches, of waste that travel through the treatment technologies or categories (as defined by the treatment grid or flowsheet), requesting treatment resources, and are placed into storage when the requested treatment capacity is not available. As the waste streams travel through the treatment technologies, the volume, physical matrix, and hazardous contaminant attributes are modified to reflect the effects of treatment processes.

During a model run information is collected on the amount of waste treated by each technology. The information is tracked and recorded separately for each radiation category, physical matrix, and hazardous contaminant as defined in the model inputs discussed below. Besides throughput information, the volume of waste that could not be treated due to capacity constraints is tracked and reported in similar detail.

3.1.2 Model Inputs

The model requires three primary input files. The first input file is the waste stream data file created from the CSTP waste stream database and includes waste stream volumes and attributes. Critical attributes are those that are used to define a treatability group and include: the waste matrix, the hazardous contaminant, and radiation-handling categories. The input file contains the volume currently in inventory and the annual projection of waste generation for each stream. Details on the waste stream data are described in Section 3.2.

¹CACI Products Co., La Jolla, CA.

The second file is the treatment flowsheet, or grid. The grid is dimensioned by waste matrix category and hazardous contaminant category and represents the specific routing of each treatability group through the set of treatment operations included in the treatment grid. The grid provides the required parameters that the model uses to determine the waste attributes on the output side of a treatment operation. The waste streams can be split into independent streams with unique attributes of waste matrix and hazardous contaminant categories. The treatment flowsheets or grids used for this analysis are described in greater detail in Section 3.3.

The third input file contains the treatment capacities. Capacities are defined for each technology for each radiation-handling category by five-year intervals as shown in Table 2.1. The file is used by the model to select the appropriate capacity for each operating period. For this analysis three sets or files of capacities were used. The first set is "unlimited capacity," which allows all of the existing wastes to be processed the first year, and then the annual generation is processed each succeeding year. The second set of "current capacities" was based on the 1994 currently operating facilities as identified in Table 2.1. It includes both the commercial operating (CO) and the DOE operating (EO) facilities. The third set of capacities, "potential capacities," was all facilities identified in Table 2.1 and Appendix A, both current and future, DOE and commercial.

3.2 WASTE STREAM INFORMATION

The waste streams included in this analysis are the MLLW and MTRU streams contained in the CSTP Summary Report (DOE 1994). This database contains information on 1,556 streams, of which 19 are HLW streams that are not being included in this analysis. The CSTP database contains information on about 150 streams that are not contained in the IMWIR, and some waste streams have been recategorized since the IMWIR to meet specific site needs. The major changes are at Hanford, where all of the tank wastes are now included with the HLW category. The Hanford changes have major impacts on the volumes of MLLW and MTRU.

The computer simulation model was established with the objective of using the treatability groups, as defined in Section 1.3, for defining the treatment requirements. The CSTP contains limited waste characterization information. Supplemental information from the IMWIR was also used to provide matrix and contaminant information about most waste streams.

In the database, three streams did not contain information on the radiation category. They were all classified as MLLW based on the source of the wastes. For some new streams it was not noted if they contained transuranic alpha. These streams were considered to contain transuranic alpha if the site proposed to send them only to facilities that could accept transuranic alpha materials.

For streams with insufficient contaminant information in the IMWIR or CSTP, it was assumed that the streams contained worst-case contaminants (toxic metals, organics, and mercury) to allow them to be processed in the computer simulation model. This will maximize the total treatment needs and result in a conservative estimation of the treatment needs. The total volume of such streams is less than 1% of the current inventory and less than 1.5% of the projected five-year generation inventory, and will not significantly affect the results of the analysis. Since mercury levels in the waste are not known, it was assumed that wastes identified as mercury-contaminated have a mercury content of 5000 ppm. The need for mercury stabilization requirement will vary in direct proportion to the mercury content.

Several streams were reported as "multiple" or "other" matrix categories. To the extent possible they have been reclassified into the other 20 waste matrix categories identified in Table 1.3.

The information on waste volumes is provided as the current (generally December 1992, except for a few sites that last reported for December 1991) inventory and as a projected five-year generation. The five-year generation has been annualized and then projected at the same annual rate for the next 20 years to allow capacity analysis modeling over a 20-year period. It is recognized that the five-year generation rate data is subject to a high degree of uncertainty and does not provide a highly accurate measure of future waste generation.

A total listing of the waste streams and their characteristics, as used in this analysis, is contained in Appendix B-4. The listing is by site, waste stream, radiation category, waste matrix category, contaminant category, and then waste volumes. Appendix B-1 contains a summary of the current national inventory of waste volumes by treatability group. Appendix B-2 contains a summary of the five-year generation rates of the waste streams by treatability group. Appendix B-3 contains a summary of the waste volumes processed through the simulation model. It represents the sum of Appendix B-1 and four times the volumes in Appendix B-2.

3.3 TREATMENT FLOWSHEETS

The treatment flowsheets identify the type of treatment required for each waste matrix category or treatability group. For this analysis two flowsheets were used. The first flowsheet treats all waste for destruction of organics and immobilization of hazardous metals to meet LDR requirements. The second flowsheet provides basic treatment for MTRU to allow this waste type to be disposed of in the Waste Isolation Pilot Plant (WIPP) based on the current WIPP waste acceptance criteria (WIPP-WAC) (WIPP 1991). These flowsheets are described in more detail in the following subsections.

3.3.1 LDR Treatment Flowsheet

The treatment model or flowsheet used for this analysis for LDR treatment is complex. To illustrate the model, first a simpler flowsheet is introduced, then a previously developed treatment grid is described, and finally the quantitative model used for the calculations is discussed. These three steps are described below.

The treatment approach selected for this analysis is based on the Mixed Waste Treatment Project (MWTP) consolidated flowsheet with debris and process residue grouted (Borduin 1994). The flowsheet is illustrated in Figure 3.1 and shows the basic flows of wastes from treatment process to treatment process, and how waste streams are divided into substreams and secondary waste streams. The focus of this analysis is on the Primary Treatment, Secondary Treatment, and Stabilization portions of the flowsheet. These three portions provide the LDR treatment. For complete waste treatment the pretreatment categories of sorting, separation, and size reduction also will be needed but have not been reported in this analysis. This flowsheet starts with groups of the waste matrices on the left-hand side and processes the wastes through a series of operations and treatment to the left-hand side where the final wastes forms are identified. The treatment categories from Table 1.1 (e.g., ORDST) used throughout this analysis are indicated in the respective boxes of the flowsheet, along with the flowsheet technology (e.g., incineration). The indicated flowsheet technologies are only one specific type of technology of the many potential technologies for that category. The basic objectives

of the treatment processes represented on the flowsheet are to remove and/or destroy toxic organic materials and immobilize or stabilize toxic metals, primarily in grout or cement. A polymer waste form is included for salt wastes that are not compatible with grouts. Other final forms are amalgamated mercury (HgS or cinnabar) and decontaminated lead. It is recognized that other flowsheets using other technologies could be used. Such flowsheets should be a part of follow-on studies. The technologies identified in this flowsheet are the more common types currently employed for waste treatment. It has not been verified by testing and demonstration that this flowsheet will provide complete LDR treatment.

The flowsheet in Figure 3.1 does not directly consider the contaminants in the waste stream nor fully differentiate between the different waste matrix types. To allow full consideration for the contaminants and individual matrices, the flowsheet was expanded into a grid, or an array. The more detailed treatment requirements were initially laid out as the Mixed Waste Matrix-Contaminant Treatment Grid (Borduin 1994), shown in Figure 3.2, which was developed for mixed low-level wastes. This figure identified both required and alternative generic treatment technologies for each treatability group, based on the treatment categories in Table 1.1. The figure contains a number of blank cells that result from no waste of that type having been identified at the time the matrix was developed.

For this analysis Figure 3.2 has been modified as illustrated in Figure 3.3 so that only one treatment is specified for each treatability group or grid position. The general approach taken is to first remove or destroy the toxic organics; second, remove the mercury, if present; and, last, solidify or immobilize the residual hazardous or radioactive materials. For the analysis the wastes are sent to their initial position in the grid based on their initial treatability group (waste matrix and contaminant combination). The residual wastes from the initial treatment are then referenced to the next appropriate follow-on treatment(s) in a new position(s) in the grid. The residuals are volume-adjusted and split into several streams as appropriate. The volumes of the residual and secondary do not total to 1.0 because only secondary and residual wastes volumes are tracked. Some materials may be removed or destroyed in a process unit and sent to the off-gas treatment system or recycled within the facility. It can be noted that the volumes of the waste increase (the fraction is greater than 1.0) at stabilization points, which accounts for the additives necessary to solidify the wastes. The final routing is to a final waste form. Several processes, primarily stabilization, refer to a position FF, which are the final waste forms at the end of the treatment grid. Row 21 is used for internally generated streams and their processing to a polymer. The final waste forms from this flowsheet are grout, lead for recycle, cinnabar (HgS), and polymer.

The following is an example of how the grid operates: If one has an organic debris with only toxic organics as a contaminant, it would begin its treatment in box 6A (Waste Matrix #6, Contaminant "A"). In Figure 3.2 the treatments required are DECON or ORDST and STABL. Since the reference flowsheet (Figure 3.1) uses incineration (ORDST) followed by grouting (STABL), this must be represented in the grid of Figure 3.3. In Figure 3.3 the treatment for box 6A is only shown as ORDST, but it then refers a 25% fraction to 4D, which is the stabilization of the ash from incineration. A small fraction of the stream (3.75%) is also sent to polymer stabilization (21A), which represents the salts from the off-gas treatment of the gases from the incinerator.

The development of Figure 3.3 required the use of several sources to develop the fractional volumes remaining after each process. The primary information comes from Borduin (1994) with supplemental information from the authors and others.

RCRA Treatment of Mixed Wastes

Figure 3.1 - LDR Treatment Flowsheet

All elements or boxes in Figure 3.3 have been completed, even when waste streams or final forms are not included with the currently utilized waste stream listing or flowsheet. This provides future flexibility in the use of this treatment grid. This successive treatment method provides complete treatment for all of the wastes with consideration for their contaminants. It also allows more specific treatment of each of the waste types and tracking of Hg contamination. Since the level of Hg contamination of most waste streams is not known, we have assumed a level of 5,000 ppm for all wastes identified as Hg-contaminated. This is considered to be conservatively high, but future characterization should provide a better number.

A major consideration in this flowsheet is that of secondary waste generation. Previous MWTP activities have identified that large volumes of aqueous waste may be generated during the decontamination of the receiving drums and other process operations. To account for this in the flowsheet and process model, a volume equal to 1.36 times the volume of all non-liquid wastes is added to the aqueous waste volumes as the solid waste is brought into the model calculations. All other secondary waste volumes from LDR process operations can be noted in Figure 3.3.

It can be noted in Appendix B-3 that the relative volumes of ignitable, corrosive, and reactive wastes are small compared with the other wastes. It was therefore assumed in Figure 3.3 development that ignitable and reactive wastes would be treated with the RCRA-listed wastes rather than establish separate processes, whereas the simple neutralization function could be in systems dedicated to characteristic corrosive wastes. This assumption means that the neutralized wastes only need simple neutralization treatment and can then be treated outside of the mixed waste facilities as LLW. However, the ignitable, reactive, and toxic characteristic wastes, because they are treated in a listed waste facility, become listed wastes and remain within the mixed waste treatment scope.

3.3.2 WIPP-WAC Treatment Flowsheet

Treatment to the WIPP-WAC is much simpler than treatment to LDR since destruction of toxic organics or immobilization of hazardous materials are not necessary. The flowsheet used to model the WIPP-WAC treatment is shown in Figure 3.4. The major objectives of the treatments depicted in this flowsheet are to stabilize liquids and immobilize particulates. The aqueous wastes are treated to remove the radioactive materials and recycled within the facility. Or with sufficient cleanup they are released to the atmosphere. The organic liquids are stabilized using a clay base material to absorb and retrain the liquids since typical grouts often do not set up with organic materials. Other materials with particulates are stabilized in grout. Materials without particulates or reactives are shipped unprocessed. The reactive materials are deactivated and then immobilized. No liquid mercury streams were identified in the current wastes, but if present they would be stabilized by reaction and amalgamation with sulfur. All WIPP Certification scenarios used the same waste stream input files and same facility capacities as with the LDR scenarios.

It is recognized that many waste streams will not require treatment since they are currently in compliance with the WIPP-WAC. The fraction of wastes that can be shipped directly to WIPP is unknown at this time. The values used for these calculations are based on preliminary engineering estimates and will change as better information is obtained on the wastes. To model these waste processing steps, it was not necessary to consider the contaminants in the waste streams. Therefore, the processing was modeled directly after Figure 3.4. The summary of key assumptions and information used for the computer simulation is shown in Table 3.1.

		A	B	C	D	E	F	G	H
	Waste Matrix	Toxic Organics	Toxic Organics & Metals w/Hg	Toxic Organics & Metals w/o Hg	Toxic Metals w/o Hg	Toxic Metals w/Hg	Ignitable	Corrosive	Reactive
1	Organic Liquids	ORDST	HGSEP, ORDST, STABL	ORDST, STABL	ORDST, STABL	HGSEP, ORDST, STABL	ORDST	NEUTR, ORDST	DEACT, ORDST
2	Aqueous Liquids	WWTOR	HGSEP, WWTOR, METRM, STABL	WWTOR, METRM, STABL	METRM, STABL	HGSEP, METRM, STABL	WWTOR	NEUTR	DEACT
3	Organic Sludges/Particulate	ORDST	HGSEP, ORDST, STABL	ORDST, STABL	ORDST, STABL	HGSEP, ORDST, STABL	ORDST	NEUTR, ORDST	
4	Inorganic Sludges/Particulate	ORDST	HGSEP, ORDST, STABL	ORDST, STABL	STABL	HGSEP, STABL	ORDST		DEACT
5	Cemented Solids	ORDST	HGSEP, ORDST, STABL	ORDST, STABL	STABL	HGSEP, STABL			
6	Organic Debris	DECON, ORDST, STABL	HGSEP, ORDST, STABL, DECON	ORDST, STABL, DECON	ORDST, STABL, DECON	HGSEP, ORDST, STABL, DECON	DEACT, DECON, ORDST, STABL		
7	Inorganic Debris	DECON, ORDST, STABL	HGSEP, ORDST, STABL, DECON	ORDST, STABL, DECON	DECON, STABL	HGSEP, STABL, DECON	DEACT, DECON, ORDST, STABL		
8	Heterogeneous Debris	DECON, ORDST, STABL	HGSEP, ORDST, STABL, DECON	ORDST, STABL, DECON	METRC, ORDST, DECON, STABL	HGSEP, STABL, DECON, ORDST	DEACT, DECON, ORDST, STABL		
9	Soils with <50% Debris	ORDST			STABL		DEACT, DECON, ORDST,		
10	Soils	ORDST	HGSEP, ORDST, STABL	ORDST, STABL	STABL	HGSEP, STABL			
11	Lab Packs with Metals	ORDST		ORDST, STABL	STABL	HGSEP, STABL	ORDST, STABL		DEACT, STABL
12	Lab Packs without Metals	ORDST		ORDST, STABL			ORDST		DEACT
13	Reactive Metals					HGSEP, DEACT, STABL	DEACT		DEACT
14	Explosives					HGSEP, DEACT, STABL			
15	Compressed Gases	ORDST			ORDST, STABL		DEACT, ORDST		
16	Liquid Mercury					HGSEP, METRC, STABL			
17	Elemental Lead			ORDST, METRC, STABL	METRC, STABL	HGSEP, METRC, STABL			
18	Beryllium Dust				STABL				
19	Batteries (Lead Acid and Cadmium)				NEUTR, METRC, STABL	NEUTR, METRC, STABL			
20	Other/Multiple	ND	ND	ND	ND	ND	ND	ND	ND

Figure 3.2 - Mixed Waste Matrix-Contaminant Treatment Grid

Waste Matrix		A	B	C	D	E	F	G	H
		Toxic Organics	Toxic Organics & Metals w/Hg	Toxic Organics & Metals w/o Hg	Toxic Metals w/o Hg	Toxic Metals w/ Hg	Ignitable	Corrosive	Reactive
1	Organic Liquids	ORDST	ORDST	ORDST	ORDST	ORDST	ORDST	ORDST	ORDST
		.10 to 4D .045 to 21A	.10 to 4D .045 to 21A .005 to 16E	.10 to 4D .045 to 21A	.10 to 4D .045 to 21A	.10 to 4D .045 to 21A .005 to 16E	.10 to 4D .045 to 21A	.10 to 4D .045 to 21A	.10 to 4D .045 to 21A
2	Aqueous Liquids	WWTOR	WWTOR	WWTOR	METRM	METRM	WWTOR	NEUTR	DEACT
		1.0 to 2D	1.0 to 2E	1.0 to 2D	.045 to 4D .005 to 21A	.045 to 4D .005 to 21A .005 to 16E	.045 to 4D .005 to 21A		1.0 to 2D
3	Organic Sludges/ Particulates	ORDST	ORDST	ORDST	ORDST	ORDST	ORDST	NEUTR	DEACT
		.25 to 4D .0375 to 21A	.25 to 4D .0375 to 21A .005 to 16E	.25 to 4D .0375 to 21A	.25 to 4D .0375 to 21A	.25 to 4D .0375 to 21A .005 to 16E	.25 to 4D .0375 to 21A		1.0 to 3D
4	Inorganic Sludges/ Particulates	ORDST	ORDST	ORDST	STABL	HGSEP	ORDST	NEUTR	DEACT
		1.0 to 4D .01 to 21A	1.0 to 4D .01 to 21A .005 to 16E	1.0 to 4D .01 to 21A	1.2 to FF	1.0 to 4D .005 to 16E	1.0 to 4D .01 to 21A		1.0 to 4D
5	Comminuted Solids	ORDST	ORDST	ORDST	STABL	HGSEP	ORDST	NEUTR	DEACT
		1.0 to 5D .1 to 21A	1.0 to 5D .1 to 21A .005 to 16E	1.0 to 5D .1 to 21A	2.0 to FF-F	1.0 to 5D .005 to 16E	1.0 to 5D .1 to 21A		1.0 to 4D
6	Organic Debris	ORDST	ORDST	ORDST	ORDST	ORDST	ORDST	ORDST	ORDST
		.25 to 4D .0375 to 21A	.25 to 4E .0375 to 21A .005 to 16E	.25 to 4D .0375 to 21A	.25 to 4D .0375 to 21A	.25 to 4E .0375 to 21A .005 to 16E	.25 to 4D .0375 to 21A	.25 to 4D	.25 to 4D
7	Inorganic Debris	DECON1	HGSEP	DECON1	STABL	HGSEP	DECON1	NEUTR	DEACT
		.95 to 7D .05 to 1A	.95 to 7D .05 to 1A .005 to 16E	.95 to 7D .05 to 1A	1.2 to FF-F	1.0 to 7D .005 to 16E	.95 to 7D .005 to 1A		1.0 to 7C
8	Heterogeneous Debris	DECON1	HGSEP	DECON1	STABL	HGSEP	DECON1	NEUTR	DEACT
		.95 to 8D .05 to 1A	.95 to 8D .05 to 1A .005 to 16E	.95 to 8D .05 to 1A	1.2 to FF-F	1.0 to 8D .005 to 16E	.95 to 8D .05 to 1A		1.0 to 8C
9	Soils with < 50% Debris	None	None	None	None	None	None	NEUTR	None
		.9 to 10A .1 to 8A	.9 to 10B .1 to 8B	.9 to 10C .1 to 8C	.9 to 10D .1 to 8D	.9 to 10E .1 to 8E	.9 to 10F .1 to 8F		.9 to 10H .1 to 8H
10	Soils	ORDST	ORDST	ORDST	STABL	HGSEP	ORDST	NEUTR	DEACT
		.95 to 10D .0025 to 21A	.95 to 10D .0025 to 21A .005 to 16E	.95 to 10D .0025 to 21A	1.2 to FF-F	1.0 to 10D .005 to 16E	.95 to 10D		1.0 to 10D
11	Lab Packs with Metals	None	None	None	None	None	None	None	None
		.15 to 1A .85 to 8A	.15 to 1B .85 to 8B	.15 to 1C .85 to 8C	.15 to 1D .85 to 8D	.15 to 1E .85 to 8E	.15 to 1F .85 to 8F	.15 to 1G .85 to 8G	.15 to 1H .85 to 8H
12	Lab Packs without Metals	None	None	None	None	None	None	None	None
		.15 to 1A .85 to 8A	.15 to 1B .85 to 8B	.15 to 1C .85 to 8C	.15 to 1D .85 to 8D	.15 to 1E .85 to 8E	.15 to 1F .85 to 8F	.15 to 1G .85 to 8G	.15 to 1H .85 to 8H

Figure 3.3 - Mixed Waste Matrix-Contaminant Treatment Grid with Treatment Flows (Continued on next page)

Waste Matrix		A	B	C	D	E	F	G	H
		Toxic Organics	Toxic Organics & Metals w/Hg	Toxic Organics & Metals w/o Hg	Toxic Metals w/o Hg	Toxic Metals w/ Hg	Ignitable	Corrosive	Reactive
13	Reactive Metals	DEACT	DEACT	DEACT	DEACT	DEACT	DEACT	DEACT	DEACT
		1.3 to 4A	1.3 to 4B	1.3 to 4C	1.3 to 4D	1.3 to 4E	1.3 to 4F	1.3 to 4G	1.3 to 4D
14	Explosives	DEACT	DEACT	DEACT	DEACT	DEACT	DEACT	DEACT	DEACT
		.1 to 4A	.1 to 4B	.1 to 4C	.1 to 4D	.1 to 4E	.1 to 4F	.1 to 4G	.1 to 4D
15	Compressed Gases	DECON1	DECON1	ORDST	ORDST	ORDST	ORDST	ORDST	ORDST
		.05 to 4D	.05 to 4D .005 to 16E	.05 to 4D	.05 to 4D	.05 to 4D .005 to 16E	.05 to 4D	.05 to 4D	.05 to 4D
16	Liquid Mercury	ORDST	ORDST	n/a	n/a	STABL1	ORDST	NEUTR	DEACT
		.95 to 16E	.95 to 16E			1.3 to FF-E	.95 to 16E .05 to 1A		1.0 to 16E
17	Elemental Lead	DECON1	HGSEP	DECON1	METRC	HGSEP	ORDST	NEUTR	DEACT
		1.0 to 17D	1.0 to 17D .005 to 16E	1.0 to 17D	1.0 to FF-D .03 to 4B	1.0 to 17D .005 to 16E	1.0 to 17D		1.0 to 17D
18	Beryllium Dust	ORDST	ORDST	ORDST	STABL	HGSEP	DEACT	NEUTR	DEACT
		1.0 to 18D	1.0 to 18D .005 to 16E	1.0 to 18D	1.2 to FF-F	1.0 to 18D .005 to 16E	1.0 to 18D		1.0 to 18D
19	Batteries (Lead Acid and Cadmium)	ORDST	ORDST	ORDST	STABL	HGSEP	ORDST	NEUTR	DEACT
		.5 to 19D	.5 to 19E .025 to 21A	.5 to 19D .025 to 21A	1.3 to FF-F .025 to 21A	1.0 to 19D .005 to 16E	.5 to 19D .025 to 21A		1.0 to 19D
20	Other/Multiple	ORDST	ORDST	ORDST	STABL	HGSEP	ORDST	NEUTR	DEACT
		1.0 to 8D	1.0 to 8D .005 to 16E	1.0 to 8D	1.2 to FF-F	1.0 to 20D .005 to 16E	1.0 to 8D		1.0 to 8D
21	Internal Generated Stream Treatment	STABL							
		1.6 to FF-H							
FF	Final Forms	A	B	C	D	E	F	G	H
		Soil	Glass	Metal	Lead	HgS	Grout	WIPP	Polymer

Figure 3.3 (Contd.)

3.4 SCENARIOS USED FOR THIS ANALYSIS

This section defines the scenarios used to provide the information for the analysis.

3.4.1 Outline of Scenario Characteristics

A series of six scenarios was considered. A basic assumption for the six scenarios is that processing is started now and continues for 20 years. Each scenario then represents 20 years of waste processing. The outline of the inputs to each of the scenarios is shown in Table 3.2.

Treatment of TRU Mixed Wastes to WIPP-WAC

Figure 3.4 - Flowsheet for Treatment of MTRU to WIPP-WAC

Table 3.1 - Bases for WIPP-WAC Treatment Calculations

Waste Matrix	Fraction Not Requiring Treatment	Pretreatment	Treatment
Aqueous Liquid	0	METRM	STABL
Batteries	0	Shred	STABL
Beryllium Dust	0	None	STABL
Cemented Solids	0.9	Shred	STABL
Compressed Gases	0	DEACT	STABL
Elemental Lead	1	None	None
Explosives	0	DEACT	STABL
Heterogeneous Debris	0.5	Shred	STABL
Inorganic Debris	0.5	Shred	STABL
Inorganic Sludges/Particulates	0.5	None	STABL
Lab Packs with Metals	0	Shred	STABL
Lab Packs without Metals	0	Shred	STABL
Liquid Mercury	0	None	STABL1
Organic Debris	0.5	Shred	STABL
Organic Liquids	0	None	STABL (In Clay)
Organic Sludges/Particulates	0.5	None	STABL
Other	0	Shred	STABL
Reactive Metals	0	DEACT	STABL
Soil with < 50% Debris	0.5	None	STABL
Soils	0.9	None	STABL

Table 3.2 - Outline of Scenarios Used in the Analysis

Scenario Number	Flowsheet	Capacity
1	LDR Treatment	Unlimited Capacities
2	LDR Treatment	Current Capacities
3	LDR Treatment	Potential Capacities
4	WIPP-WAC	Unlimited Capacities
5	WIPP-WAC	Current Capacities
6	WIPP-WAC	Potential Capacities

3.4.2 Overview of Output from Scenarios

The output from the models has been collected into a series of tables. Each table has the five radiation categories as columns and various information in the rows. Not all table types are applicable to each scenario; however, the following is an outline of the various tables and the information contained therein. Section 4 of this report discusses the implication of the information in the tables. The table types are described below:

<u>Table Type</u>	<u>Description</u>
Cumulative 20-Year Waste Processing Throughput	This information gives the volumes of waste processed through each radiation handling-treatment technology combination over the 20 years of simulated operations.
Wastes in Queue at Year 20	This information gives the volumes of waste awaiting processing by a specific technology at the end of the 20-year processing period based on the waste matrix and radiation-handling category. It provides a guide as to the amount of treatment technology capacity required to process the remaining wastes. Waste volumes in queues are controlled by the first limiting process and will not provide a good estimate of needed capacity for subsequent limiting treatment technology capacity.
Final Waste Form Volumes	This information gives the types and volume of final waste forms produced over the 20-year period.
Maximum Storage Volumes	This information gives the maximum amount of storage required for each waste type during any year except for the first year. The maximum instantaneous volumes can occurred any time during the 20-year processing period. This information may be useful in estimating the need for additional interim storage during process periods. It should be noted that the volumes reported do not include the volumes of final waste forms produced from the treatment operations.

3.4.3 Scenario #1 - LDR Treatment with Unlimited Capacities

Scenario #1 used the LDR flowsheet with unlimited treatment capacities. The scenario results shown in Table 3.3 provide the amounts of processing throughput needed for each radiation handling-treatment technology combination to process all of the mixed wastes currently in inventory and expected to be generated over the next 20 years. Table 3.4 provides the volumes of final waste forms that would be produced from the 20 years of operations of facilities that would process all of the anticipated wastes.

Table 3.3 - Cumulative 20-Year Processing Volumes (m³) for LDR Treatment with Unlimited Capacity

Radiation Category Treatment Category	MTRU-RH	MTRU-CH	MLLW-RH	MLLW-CH/AL	MLLW-CH
Metal Removal - Aqueous	2,840	77,995	20,253	180,550	716,754
Neutralization - Aqueous	0	6	0	1,293	114
Organic Treatment - Aqueous	1,038	66,737	5,050	138,449	629,539
Deactivation	0.15	288	9	1.7	4,140
Organic Removal	0.48	17,482	0.02	32,360	1,852
Organic Destruction	1,182	32,024	1,346	68,558	82,945
Metal Recovery	0.24	4,042	933	1,266	4,833
Stabilization	1,403	47,745	10,439	122,759	141,997
Mercury Separation	734	5,483	7,924	6,092	40,042
Mercury Stabilization	24	246	166	739	2,959
Total by Radiation Category	7,223	252,046	46,119	552,067	1,625,176

Table 3.4 - Cumulative Volumes of Final Waste Forms for LDR Treatment for 20 Years with Unlimited Capacities (m³)

Radiation Category Treatment Category	MTRU-RH	MTRU-CH	MLLW-RH	MLLW-CH/AL	MLLW-CH
GROUT	1,613	56,620	12,369	144,133	163,181
HgS	28	320	215	960	3,847
LEAD	0.00	4,042	933	1,266	4,833
POLYMER	77	1,982	209	5,495	10,343
Total by Radiation Category	1,717	62,964	13,727	151,854	182,204

3.4.4 Scenario #2 - LDR Treatment with Current Capacities

Scenario #2 used the LDR flowsheet with current treatment capacities. The scenario provides the amounts of processing that could occur with the current capacities over the next 20 years. No increase in capacities occurs during the 20-year period. Table 3.5 is the cumulative 20-year waste throughputs for each of the treatment categories for the 20 years of operations. It can be noted that the throughput for some processes such as MTRU-RH, metal removal-aqueous is lower than the throughput in Table 3.3 even though there is excess metal-removal-aqueous capacity. This results from the waste being held up by another process operation(s) which has insufficient capacity. For this specific example the deficiency in organic treatment-aqueous prevents the wastes from reaching the metal removal-aqueous process. Table 3.6 is the maximum storage volumes of unprocessed wastes that may be required anytime during the 20-year processing period. Table 3.7 is the volumes of final waste forms from the processing operations.

Table 3.5 - Cumulative 20 Year Processing Volumes (m³) for LDR Treatment with Current Available Capacities

Radiation Category Treatment Category	MTRU-RH	MTRU-CH	MLLW-RH	MLLW-CH/AL	MLLW-CH
Metal Removal - Aqueous	1,802	12,763	4,151	0	716,640
Neutralization - Aqueous	0	6	0	1,293	114
Organic Treatment - Aqueous	0	0	4,058	0	629,539
Deactivation	0	0	0	0	0
Organic Removal	0	0	0	0	0
Organic Destruction	0	0	0	0	81,501
Metal Recovery	0	0	0	0	4,823
Stabilization	24	4,127	442	36,943	96,020
Mercury Separation	0	0	0	0	0
Mercury Stabilization	0	0	0	0	7.6
Total by Radiation Category	1,826	16,896	8,651	38,236	1,528,645

Table 3.6 - Maximum Volumes of Storage Required for Unprocessed Wastes (m³) During 20 Years of LDR Processing with Current Capacities

Radiation Category Waste Matrix	MTRU-RH	MTRU-CH	MLLW-RH	MLLW-CH/AL	MLLW-CH
Aqueous Liquid	828	26,174	14,069	62,030	115
Batteries	0	247	0	115	2,486
Beryllium Dust	0	0	0	2	0
Cemented Solids	0	398	0	783	4
Compressed Gases	0	0	0	20	0
Elemental Lead	0	3,238	933	1,266	10
Explosives	0	0	0	0	12
Heterogeneous Debris	612	5,721	7,613	7,456	23,594
Inorganic Debris	80	8,863	140	8,059	3,000
Inorganic Sludges/Particulates	102	4,402	1,238	25,459	3,837
Liquid Mercury	7	24	39	287	2,746
Organic Debris	0	9,057	0	6,353	0
Organic Liquids	132	185	0	13,803	0
Organic Sludges/Particulates	971	621	62	1,015	3
Other	7	8,941	0	3,425	14
Reactive Metals	0	0	9	0	3,804
Soils	0	0	0	765	6,608
Total by Radiation Category	2,740	67,872	24,104	130,839	46,235
Total without Aqueous	1,911	41,698	10,035	68,808	46,119

Table 3.7 - Cumulative Volumes of Final Waste Forms (m³) from LDR Processing for 20 Years with Current Capacities

Final Waste Form \ Radiation Category	MTRU-RH	MTRU-CH	MLLW-RH	MLLW-CH/AL	MLLW-CH
GROUT	27	5,037	488	43,584	107,909
LEAD	0	0	0	0	4,823
POLYMER	0	244	56	1,036	10,148
Total by Radiation Category	27	5,280	544	44,620	122,880

3.4.5 Scenario #3 - LDR Treatment with Potential Capacities

Scenario #3 used the LDR flowsheet with potential treatment capacities. The scenario provides the amounts of processing that could occur with the potential capacities over the next 20 years. During the scenario the capacities increased each five years according to the data in Table 2.1. Table 3.8 is the cumulative 20-year waste throughputs for each of the treatment categories for the 20 years of operations. Table 3.9 is the maximum storage volumes of unprocessed wastes that may be required anytime during the 20-year processing period. Table 3.10 is the volumes of final waste forms from the processing operations.

Table 3.8 - Cumulative 20-Year Processing Volumes (m³) for LDR Treatment with Potential Capacities

Treatment Category \ Radiation Category	MTRU-RH	MTRU-CH	MLLW-RH	MLLW-CH/AL	MLLW-CH
Metal Removal - Aqueous	1,802	12,928	4,070	180,549	716,682
Neutralization - Aqueous	0	6	0	1,293	114
Organic Treatment - Aqueous	0	0	4,000	138,449	629,539
Deactivation	0	288	0	2	887
Organic Removal	0	747	0	0	1,851
Organic Destruction	1,151	9,904	0	0	81,608
Metal Recovery	0.24	0	933	0	4,823
Stabilization	643	11,055	438	46,579	98,867
Mercury Separation	0	0	0	0	0
Mercury Stabilization	0	39	0	0	36
Total by Radiation Category	3,597	34,965	9,441	366,872	1,534,407

**Table 3.9 - Maximum Volumes (m³) of Storage Required for Unprocessed Wastes
During 20 Years of LDR Processing with Potential Capacities**

Radiation Category					
Waste Matrix	MTRU-RH	MTRU-CH	MLLW-RH	MLLW-CH/AL	MLLW-CH
Aqueous Liquid	828	26,174	13,966	0	73
Batteries	0	247	0	115	2,486
Beryllium Dust	0	0	0	2	0
Cemented Solids	0	398	0	783	4
Compressed Gases	0	0	0	20	0
Elemental Lead	0	3,238	370	1,266	10
Explosives	0	0	0	0	10
Heterogeneous Debris	612	5,522	7,613	7,456	23,594
Inorganic Debris	76	8,929	140	8,059	3,000
Inorganic Sludges/Particulates	95	4,399	1,266	29,563	3,839
Liquid Mercury	12	13	39	608	2,722
Organic Debris	0	9,057	0	6,353	0
Organic Liquids	131	137	0	15,803	0
Organic Sludges/Particulates	852	621	62	1,015	2
Other	7	8,894	0	3,425	9
Reactive Metals	0	0	9	0	3,000
Soils	0	0	0	765	6,608
Total by Radiation Category	2,614	67,628	23,465	73,233	45,356
Total without Aqueous	1,785	41,454	9,499	73,233	45,283

**Table 3.10 - Cumulative Volumes (m³) of Final Waste Forms from LDR Processing for
20 Years with Potential Capacities**

Radiation Category					
Final Waste Form	MTRU-RH	MTRU-CH	MLLW-RH	MLLW-CH/AL	MLLW-CH
GROUT	708	13,217	484	53,990	111,321
HgS	0	50	0	0	45
LEAD	0	0	933	0	4,823
POLYMER	77	593	55	2,578	10,155
Total by Radiation Category	785	13,860	1,472	56,568	126,344

3.4.6 Scenario #4 - WIPP-WAC Treatment with Unlimited Capacities

Scenario #4 used the WIPP-WAC flowsheet with unlimited treatment capacities. The scenario results shown in Table 3.11 provide the amounts of processing throughput needed for each treatment category to process all of the MTRU wastes currently in inventory and expected to be generated over the next 20 years. Table 3.12 provides the volumes of final waste form that would be produced from the 20 years of operations. The model determined that about 900 cubic meters of MTRU-RH and 22,300 cubic meters of MTRU-CH could be directly shipped to WIPP.

Table 3.11 - Cumulative 20-Year Processing Volumes (m³) for WIPP-WAC Treatment with Unlimited Capacity

Radiation Category Treatment Category	MTRU-RH	MTRU-CH
Metal Removal - Aqueous	5	21
Neutralization - Aqueous	5	21
Deactivation	0.15	0
Stabilization	1,190	32,556
Total by Radiation Category	1,200	32,598

Table 3.12 - Cumulative Volumes (m³) of Final Waste Forms from WIPP-WAC Processing for 20 Years with Unlimited Capacity

Radiation Category Final Waste Form	MTRU-RH	MTRU-CH
CLAY	272	3
GROUT	1,235	38,778
LEAD	0	4,042
POLYMER	0	55
Total by Radiation Category	1,507	42,876

3.4.7 Scenario #5 - WIPP-WAC Treatment with Current Capacities

Scenario #5 used the WIPP-WAC flowsheet with current treatment capacities. The scenario provides the amounts of processing that could occur with the current capacities over the next 20 years. No increase in capacities occurs during the 20-year processing period. Table 3.13 is the cumulative 20-year waste throughputs for each of the treatment categories for the 20 years of operations. Table 3.14 is the volume of waste remaining in the queues unprocessed at the end of the 20-year processing period. Table 3.15 is the maximum storage volumes of unprocessed wastes that can be expected to be required sometime during the 20-year processing period. Table 3.16 is the volumes of final waste forms from the processing operations.

Table 3.13 - Cumulative 20-Year Processing Volumes (m³) for WIPP-WAC Treatment with Current Capacities

Radiation Category Treatment Category	MTRU-RH	MTRU-CH
Metal Removal - Aqueous	0	21
Neutralization - Aqueous	0	21
Deactivation	0	0
Stabilization	24	24,683
Total by Radiation Category	24	24,726

Table 3.14 - Volumes (m³) of Wastes in Queue at the End of 20 Years of WIPP-WAC Processing with the Current Capacities

Radiation Category Treatment Category	MTRU-RH	MTRU-CH
Metal Removal - Aqueous	0	0
Neutralization - Aqueous	5	0
Deactivation	0.19	0
Stabilization	1,166	7,873
Total by Radiation Category	1,171	7,873

Table 3.15 - Maximum Volumes (m³) of Storage Required for Unprocessed Wastes During 20 Years of WIPP-WAC Processing with Current Capacities

Radiation Category Waste Matrix	MTRU-RH	MTRU-CH
Aqueous Liquid	5	0
Batteries	0	267
Cemented Solids	0	83
Heterogeneous Debris	359	2,725
Inorganic Debris	41	4,556
Inorganic Sludges/Particulates	20	3,272
Lab Packs with Metals	131	0
Lab Packs without Metals	0	262
Organic Debris	0	7,042
Organic Liquids	136	0
Organic Sludges/Particulates	475	313
Other	13	8,723
Total by Radiation Category	1,179	27,243

Table 3.16 - Cumulative Volumes (m³) of Final Waste Forms from WIPP-WAC Processing for 20 Years with Current Capacities

Radiation Category Final Waste Form	MTRU-RH	MTRU-CH
CLAY	5	3
GROUT	25	29,378
LEAD	0	4,042
POLYMER	0	41
Total by Radiation Category	29	33,463

3.4.8 Scenario #6 - WIPP-WAC Treatment with Potential Capacities

Scenario #6 used the WIPP-WAC flowsheet with potential treatment capacities. The scenario provides the amounts of processing that could occur with the potential capacities over the next 20 years. During the scenario the capacities increase for each five-year period according to the data in Table 2.1. Table 3.17 is the cumulative 20-year waste throughputs for each of the treatment categories for the 20 years of operations. Table 3.18 is the volume of waste remaining in the queues unprocessed at the end of the 20-year processing period. Examination of Table 3.18 indicates that there is insufficient capacity for stabilization of MTRU-CH. Table 2.3 shows that there is about 2058 m³/yr capacity in 2009 and with 20 years of processing one might think that all of the waste would be stabilized. It needs to be remembered that the 2058 m³/yr is the capacity in 2009. Table 2.1 shows that in 1994 the capacity is only 539 m³/yr and then the capacity builds to 2058 m³/yr in 2009. It is the integrated annual capacity that determines the total waste processed. If processing was continued for several more years all of the waste would be processed. Table 3.19 is the maximum storage volumes of unprocessed wastes that can be expected to be required sometime during the 20-year processing period. Table 3.20 is the volume of final waste forms from the processing operations.

Table 3.17 - Cumulative 20-Year Processing Volumes (m³) for WIPP-WAC Treatment with Potential Capacities

Treatment Category	Radiation Category	
	MTRU-RH	MTRU-CH
Metal Removal - Aqueous	0	21
Neutralization - Aqueous	0	21
Deactivation	0	0
Stabilization	1,189	25,723
Total by Radiation Category	1,189	25,765

Table 3.18 - Volumes of Wastes (m³) in Queue at the End of 20 Years of WIPP-WAC Processing with Potential Capacities

Treatment Category	Radiation Category	
	MTRU-RH	MTRU-CH
Metal Removal - Aqueous	0	0
Neutralization - Aqueous	5	0
Deactivation	0.19	0
Stabilization	0	6,833
Total by Radiation Category	5	6,833

Table 3.19 - Maximum Volumes (m³) of Storage Required for Unprocessed Wastes after 20 Years of WIPP-WAC Processing with Potential Capacities

Waste Matrix \ Radiation Category	MTRU-RH	MTRU-CH
Aqueous Liquid	5	0
Batteries	0	228
Cemented Solids	0	94
Heterogeneous Debris	359	3,037
Inorganic Debris	39	4,656
Inorganic Sludges/Particulates	19	3,272
Lab Packs with Metals	131	0
Lab Packs without Metals	0	457
Organic Debris	0	7,292
Organic Liquids	136	0
Organic Sludges/Particulates	414	263
Other	11	9,023
Total by Radiation Category	1,113	28,324

Table 3.20 - Cumulative Volumes (m³) of Final Waste Forms from WIPP-WAC Processing for 20 Years with Potential Capacities

Final Waste Form \ Radiation Category	MTRU-RH	MTRU-CH
CLAY	272	3
GROUT	1,235	30,660
LEAD	0	4,042
POLYMER	0	43
Total by Radiation Category	1,507	34,748

4.0 EVALUATION OF MIXED WASTE PROCESSING NEEDS AND CAPACITIES

This section provides an evaluation of the needs and capabilities for treating DOE's mixed wastes. In the previous sections, the basis and the data limitations for this analysis were given. The limitations need to be carefully considered when applying this information. This section also presents estimates of the fraction of waste that can be processed by either current or potential treatment capacities.

4.1 EVALUATION OF TREATMENT CAPACITIES

This subsection first evaluates the capacities with respect to LDR treatment of all MTRU and MLLW and then evaluates the capacities with respect to treatment of MTRU to the WIPP-WAC.

4.1.1 Treatment Capacities for LDR Treatment of MTRU and MLLW

The treatment capacity needed to process the mixed wastes is shown in Table 4.1. This table is developed from the information in Table 3.3, which is the total amount of treatment needed for all of the mixed wastes over the next 20 years. The annual capacities needed in Table 4.1 are 5% of the volume of wastes in Table 3.3. This is based on the assumption that the goal is to be current within 20 years and that processing begins immediately. It can be noted that some of the needed capacities are very small with less than 1 cubic meter/yr needed. The current and potentially available treatment capacities were summarized in Tables 2.2 and 2.3. Comparison of Tables 2.2 and 2.3 with Table 4.1 shows the status of treatment facilities in comparison to the needs. In some cases, such as for metal removal from aqueous waste waters, the available DOE capacities are orders-of-magnitude higher than the projected need. This results from the construction of large facilities to treat groundwater. However, groundwaters are not included in the CSTP inventories of wastes since they are not in inventory nor are they generated in the future.

To aid in the visualization of where capacity is needed, Figure 4.1 shows the status of the capacity based on the current capacities for each of the 50 combinations of radiation-handling categories and treatment technology categories. The status is summarized into one of four conditions: 1) the treatment capacity was not needed based on the wastes and simulated treatment methods; 2) there was major excess in capacity compared with the projected need; 3) the needed treatment capacity was within 50% of the projected need; or 4) there was less than 50% of the projected need available. A count of the classifications shows that 11 radiation handling-treatment technology combinations have excess capacity, whereas technology capacity is needed in 36 combinations.

Figure 4.2 is similar to 4.1, except the comparison of capacity need is to all potential capacities. In this case, there is excess capacity in 19 combinations and additional capacity is needed in 25 combinations.

No radiation-handling category has all of the needed treatment technology capacity required. The MLLW-CH is the most nearly complete for the spectrum of technologies, whereas the MLLW-CH/AL is the least complete. Mercury separation and stabilization treatment capacities are required across all waste handling categories. While not considered further in this analysis, it may be possible to meet some treatment needs for a specific radiation category/technology area by using an excess

capacity from a more difficult category. For example, excess capacity exists for metal removal-aqueous for MTRU-RH. It may be possible to use some of that capacity for MLLW-RH. Additional studies will be needed to evaluate these potentials.

Table 4.1 - Needed Treatment Capacity (m³/yr) for Processing All of DOE's Mixed Wastes During the Next 20 Years

Radiation Category Treatment Category	MTRU-RH	MTRU-CH	MLLW-RH	MLLW-CH/AL	MLLW-CH
Metal Removal - Aqueous	142	3,900	1,013	9,027	35,838
Neutralization - Aqueous	0	0	0	65	6
Organic Treatment - Aqueous	52	3,337	252	6,922	31,477
Deactivation	0	14	0	0	207
Organic Removal	0	874	0	1,618	93
Organic Destruction	59	1,601	67	3,428	4,147
Metal Recovery	0	202	47	63	242
Stabilization	70	2,387	522	6,138	7,100
Mercury Separation	37	274	396	305	2,002
Mercury Stabilization	1	12	8	37	148
Total by Radiation Category	361	12,602	2,306	27,603	81,259

Radiation Category Treatment Category	MTRU-RH	MTRU-CH	MLLW-RH	MLLW-CH/AL	MLLW-CH
Metal Removal - Aqueous					
Neutralization - Aqueous					
Organic Treatment - Aqueous					
Deactivation					
Organic Removal					
Organic Destruction					
Metal Recovery					
Stabilization					
Mercury Separation					
Mercury Stabilization					
		No Treatment Capacity Needed			
		Excess Capacity Available			
		Existing Capacity Similar to Need			
		Need Capacity			

Figure 4.1 - Status of Treatment Capacity Based on Current Capacities and 20-Year Processing Need

Radiation Category Treatment Category	MTRU-RH	MTRU-CH	MLLW-RH	MLLW-CH/AL	MLLW-CH
Metal Removal - Aqueous					
Neutralization - Aqueous					
Organic Treatment - Aqueous					
Deactivation					
Organic Removal					
Organic Destruction					
Metal Recovery					
Stabilization					
Mercury Separation					
Mercury Stabilization					
		No Treatment Capacity Needed			
		Excess Capacity Available			
		Existing Capacity Similar to Need			
		Need Capacity			

Figure 4.2 - Status of Treatment Capacity Based on Potential Capacities and 20-Year Processing Need

The amounts of additional capacity needed for each technology and both current and potential capacities are determined by subtracting the capacity available (as given in Tables 2.2 and 2.3) from the needed capacity (as identified in Table 4.1) and multiplying by 2 since additional capacity cannot usually be available until 2004 and the goal is to be current in waste processing by 2014. The resulting values are shown in Tables 4.2 and 4.3.

The potential excess capacity also can be identified from the comparison of Tables 2.3 and 4.1. The values for excess capacity are shown in Table 4.4. As noted previously, all of this capacity may not be idle waiting for mixed waste. Some capacity is being used for other waste types. A complete assessment of all wastes, including LLW, MLLW, groundwaters, and other TSCA wastes, would be needed to determine the true excess capacity.

Table 4.2 - Type and Quantity of Additional Capacity (m³/yr) Needed by 2004 to Process All of the Mixed Waste by 2014 Based on Current Capacities

Radiation Category Treatment Category	MTRU-RH	MTRU-CH	MLLW-RH	MLLW-CH/AL	MLLW-CH
Metal Removal - Aqueous	0	0	1,605	18,055	0
Neutralization - Aqueous	0	0	0	0	0
Organic Treatment - Aqueous	104	6,674	85	13,845	0
Deactivation	0.02	29	1	0	414
Organic Removal	0.05	1,748	0.002	3,236	185
Organic Destruction	118	3,202	135	6,856	0
Metal Recovery	0.02	404	93	127	0
Stabilization	138	3,672	0	7,666	0
Mercury Separation	73	548	792	609	4,004
Mercury Stabilization	2	25	17	74	296
Total by Radiation Category	436	16,303	2,728	50,467	4,899

Table 4.3 - Type and Quantity of Additional Capacity (m³/yr) Needed by 2004 to Process All of the Mixed Waste by 2014 Based on Potential Capacities

Radiation Category Treatment Category	MTRU-RH	MTRU-CH	MLLW-RH	MLLW-CH/AL	MLLW-CH
Metal Removal - Aqueous	0	0	1,605	0	0
Neutralization - Aqueous	0	0	0	0	0
Organic Treatment - Aqueous	104	6,674	85	0	0
Deactivation	0.02	0	0.94	0	318
Organic Removal	0.05	1,280	0.002	3,236	0
Organic Destruction	0	1,742	135	6,856	0
Metal Recovery	0	404	0	125	0
Stabilization	0	634	0	4,914	0
Mercury Separation	73	548	792	609	4,004
Mercury Stabilization	2	0	17	74	291
Total by Radiation Category	180	11,283	2,635	15,813	4,614

4.1.2 Treatment Capacities for Treatment of MTRU to WIPP-WAC

The need for treatment capacity for MTRU to provide WIPP-acceptable waste is shown in Table 4.5, which is developed with the understanding that the annual capacity needed is 5% of the throughput requirements in the Table 3.11. This is based on the assumption that the goal is to be current within 20 years and that processing begins immediately. The potential capacities were summarized in Tables 2.2 and 2.3. Comparison of Table 4.5 with Tables 2.2 and 2.3 shows that

Table 4.4 - Potential Excess in Treatment Capacity (m³/yr) for Mixed Wastes

Radiation Category Treatment Category	MTRU-RH	MTRU-CH	MLLW-RH	MLLW-CH/AL	MLLW-CH
Metal Removal - Aqueous	39,646	84,279	0	140,824	7,915,906
Neutralization - Aqueous	0	48,036	0	120,005	666,452
Organic Treatment - Aqueous	0	0	0	127,827	752,475
Deactivation	0	286	0	0	0
Organic Removal	0	0	0	0	2,957
Organic Destruction	491	0	0	0	40,867
Metal Recovery	183	0	53	0	94,884
Stabilization	2,391	0	1,038	0	113,256
Mercury Separation	0	0	0	0	0
Mercury Stabilization	0	6	0	0	0
Total by Radiation Category	42,711	132,606	1,091	388,655	9,586,798

Table 4.5 - Needed Treatment Capacity (m³/yr) for Treatment of DOE's MTRU to WIPP-WAC

Radiation Category Treatment Category	MTRU-RH	MTRU-CH
Metal Removal - Aqueous	0.26	1
Neutralization - Aqueous	0.26	1
Deactivation	0.01	0
Stabilization	59	1,628
Total by Radiation Category	60	1,630

capacities for metal removal-aqueous for both RH and CH wastes and neutralization-aqueous are available. The small capacities for deactivation and neutralization for RH wastes are not available. The current stabilization capacities are not adequate, but with potential capacities are expected to be available in the future. The total stabilization capacity required for CH wastes is about 1600 cubic meters per year and the current capacity is about 550 cubic meters per year. The capacity could increase to about 2000 cubic meters per year with all potential capacities, which would be potentially adequate if sufficient time is allowed for processing. The potential capacity of 2460 cubic meters/yr for RH wastes is well in excess of the 1166 cubic meters/yr calculated to be necessary but is not sufficient to process all of the wastes in the projected processing period.

A second, more accurate method for estimating the need for additional stabilization capacity for this case is through the use of the queuing volume information. Examination of Tables 3.14 and 3.18, which show the CH wastes in queues remaining to be processed at the end of the 20-year processing period, shows stabilization needs of about 683 and 787 cubic meters per year for the current capacities and all potential capacity scenarios, respectively. This is based on the same assumptions noted previously that it will take 10 years to establish the capacity and then the wastes will be processed in the following 10 years.

While the flowsheet (Figure 3.4) shows that other types of technology may be needed, no wastes requiring other types of treatment were included in the inventory.

Comparison of the need for treatment capacity between the two flowsheets (Tables 4.1 and 4.5) shows a much higher need for the LDR treatment, both in the quantities and types of treatment. This results from the more extensive treatment needed for LDR and the lack of secondary aqueous waste generation in the simpler WIPP-WAC flowsheet.

4.2 ESTIMATION OF THE PERCENT OF WASTES TREATABLE BY CURRENT AND POTENTIAL CAPACITIES

This section first evaluates the percent of wastes treatable with respect to LDR treatment of all MTRU and MLLW and then evaluates the percent of MTRU treatable to the WIPP-WAC.

4.2.1 Percent of Mixed-Waste LDR-Treatment Possible with Current and Projected Treatment Capacities

Because the individual waste streams are split and then joined with other wastes as they go through the treatment operations, it is not practical to uniquely follow each waste stream through the flowsheet and identify its many potential end states. Therefore, to estimate the percent of treatment possible, two indirect comparison methods have been used. For each method the comparison is based on each radiation category and each flowsheet. The first method is based on the throughput for each technology. The totals by radiation category in Table 3.3 provide the 20-year throughputs needed for total treatment of the wastes. These totals can then be compared with the total treatment provided by the current and potential capacities from Tables 3.5 and 3.8. This is done in Table 4.6.

The second method for estimating the possible treatment is based on the relative percentage of final waste form produced. This is done by comparing the volumes of final forms with unlimited capacity in Table 3.4 with the volumes of final form produced with the current and potential capacities in Tables 3.7 and 3.10. This comparison also is shown in Table 4.6.

The comparisons between the two methods are quite similar for some radiation categories but give different values for others. These major differences result from the ability to process some waste types through some treatment operations (aqueous wastes through organic removal and metal removal, in the case of the MLLW-CH/AL potential) but not having the capacity to complete the total processing.

The overall ability to process mixed wastes is shown in the last column of Table 4.6. This analysis indicates that 64% of the total treatment capacity needed currently exists but only 42% of the wastes can be treated to all of the applicable LDR treatment standards due to lack of capacity in some technology categories. If all of the potential capacities identified in this report and the Conceptual Site Treatment Plans (CSTPs) become available, the total treatment capacity and fully processed volumes increase to 79% and 48%, respectively.

4.2.2 Percent of Mixed-Waste WIPP-WAC Treatment Possible with Current and Projected Treatment Capacities

As noted in the previous section, two methods can be used to estimate the percent of processing possible. In this section, those wastes that are considered shippable to WIPP without

**Table 4.6 - Estimates of the Percent of Mixed Waste Processable Within the LDR
Flowsheet with the Current and Potential Capacities**

Radiation Category	MTRU-RH	MTRU-CH	MLLW-RH	MLLW-CH/AL	MLLW-CH	Total	Total MLLW
<i>Process Throughput</i>							
Unlimited Capacity (m3) (Table 3.3)	7,223	252,046	46,119	552,067	1,625,176	2,482,631	2,223,362
Current Capacity (m3) (Table 3.5)	1,826	16,896	8,651	38,236	1,528,645	1,594,254	1,575,532
Potential Capacity (m3) (Table 3.8)	3,597	34,965	9,441	366,872	1,534,407	1,949,282	1,910,720
% By Current Capacity	25%	7%	19%	7%	94%	64%	71%
% By Potential Capacity	50%	14%	20%	66%	94%	79%	86%
<i>Final Waste Form Volumes</i>							
Unlimited Capacity (m3) (Table 3.4)	1,717	62,964	13,727	151,854	182,204	412,467	347,785
Current Capacity (m3) (Table 3.7)	27	5,280	544	44,620	122,880	173,352	168,045
Potential Capacity (m3) (Table 3.10)	785	13,860	1,472	56,568	126,344	199,030	184,385
% By Current Capacity	2%	8%	4%	29%	67%	42%	48%
% By Potential Capacity	46%	22%	11%	37%	69%	48%	53%

treatment (about one-third of the total) are not included in the calculations and comparisons. The percent treatable would increase if they are included as "treated."

The first method is based on the throughput of the technologies. It can be noted in comparison with the volumes of wastes to be processed in Appendix B-3 that each volume of waste is processed nearly three times within the flowsheet. The totals by radiation-handling category in Table 3.11 provide the 20-year throughputs needed for total treatment of the wastes. These totals can then be compared with the totals processed by the two capacities from Tables 3.13 and 3.17. This is done in Table 4.7.

The second method for estimating the throughput is based on the relative volumes of final waste forms produced. This is done by comparing the total final forms from Tables 3.12, 3.16, and 3.20, which is also done in Table 4.6.

For this flowsheet the two comparison methods give very similar results with agreement within a few percent. Comparison of Table 4.7 with Table 4.6 shows that the percentages of processing and final waste forms are generally higher for the WIPP-WAC, as expected with the less-intensive treatment needs. The results should be viewed with some caution, since it has been noted in previous studies that transportation of MTRU-RH waste was sufficiently difficult that on-site treatment may be needed. The scope of this analysis did not consider this restriction. The overall processability of MTRU is noted in the final column of Table 4.7 and the domination by the large volumes of CH wastes can be seen.

Table 4.7 - Estimates of the Percent of MTRU Processable Within the WIPP-WAC Flowsheet by Current and Potential Capacities

Radiation Category	MTRU-RH	MTRU-CH	Total
<i>Process Throughput</i>			
Unlimited Capacity (m3) (Table 3.11)	1,200	32,598	33,799
Current Capacity (m3) (Table 3.13)	24	24,726	24,749
Potential Capacity (m3) (Table 3.17)	1,189	25,765	26,954
% By Current Capacity	2%	76%	73%
% By Potential Capacity	99%	79%	80%
<i>Final Waste Form Volumes</i>			
Unlimited Capacity (m3) (Table 3.12)	1,507	42,876	44,384
Current Capacity (m3) (Table 3.16)	29	33,463	33,492
Potential Capacity (m3) (Table 3.20)	1,507	34,748	36,255
% By Current Capacity	2%	78%	75%
% By Potential Capacity	100%	81%	82%

5.0 REFERENCES

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APPENDIX A

Waste Treatment Facilities and Systems Included in Analysis

(Note that all capacities are in cubic meters per year)

APPEND-A.XLS

SITE	FACILITY	SYSTEM	System Status	Operational Date	Radiation Category	Treatment Technology	Maximum Capacity (m3/y)
Argonne National Laboratory - East		Aqueous Waste Treatment (Module PP)	UP	2004	MLLW-CH	METRM	20
Argonne National Laboratory - East		Building 306 Precipitation /Filtration Unit	EC	1993	MLLW-CH	METRM	47
Argonne National Laboratory - East		Decontamination (Module TT)	UP	2004	MLLW-CH	METRC	20
Argonne National Laboratory - East		Organic Liquids Wet-Air Oxidation (Module QQ)	UP	2004	MLLW-CH	ORDST	20
Argonne National Laboratory - East		Stabilization (Module YY)	UP	2004	MLLW-CH	STABL	20
Argonne National Laboratory - East	Alkali Metal Reaction Booth	Alkali Metal Reaction Booth	EP	1994	MLLW-CH	DEACT	40.5
Argonne National Laboratory - East	MTRU Precipitation /Filtration Unit	MTRU Precipitation /Filtration Unit	PA	2004	MTRU-CH	METRM	47
Brookhaven National Laboratory		Polyethylene Encapsulation	UP	2004	MLLW-CH	STABL	100
DSSI, Oak Ridge, TN	Diversified Scientific Services	Diversified Scientific Services	CO	1993	MLLW-CH	ORDST	4160
Energy Technology Engineering Center	Radioactive Materials Disposal Facility	Amalgamation Process	EO	1993	MLLW-CH	STABL1	0.4
Energy Technology Engineering Center	Radioactive Materials Disposal Facility	Evaporation/Ion Exchange	EC	1993	MLLW-CH	METRM	345
Energy Technology Engineering Center	Radioactive Materials Disposal Facility	Neutralization Process	EC	1993	MLLW-CH	NEUTR	332
Energy Technology Engineering Center	Radioactive Materials Disposal Facility	Thermal Treatment	PN	1994	MLLW-CH	METRC	1200
Energy Technology Engineering Center	Radioactive Materials Disposal Facility	Thermal Treatment	PN	1995	MLLW-CH	STABL	1200
Energy Technology Engineering Center	Radioactive Materials Disposal Facility	Thermal Treatment	PN	1994	MLLW-CH	ORDST	1200
Envirocare of Utah, Clive, UT	Envirocare Treatment & Disposal Facility	Treatment & Disposal Facility	CO	1994	MLLW-CH	STABL	40000
Fernald Environmental Management Project	Minimum Additive Waste Stabilization Facility	Minimum Additive Waste Stabilization Facility	PN	2000	MLLW-CH	STABL	40000
Fernald Environmental Management Project	Plant 8 VOC Treatment System	Plant 8 VOC Treatment System	EC	1993	MLLW-CH	WWTOR	23862
Fernald Environmental Management Project	Rotary Kiln	Rotary Kiln	EC	1994	MLLW-CH	DECON1	3040
Fernald Environmental Management Project	Soil Washing Process Facility	Soil Washing Process Facility	PN	2000	MLLW-CH	METRC	90000
Fernald Environmental Management Project	UNH Treatment Facility	UNH Treatment Facility	EC	1993	MLLW-CH	METRM	785
General Atomic		Filtration	EO	1993	MLLW-CH	METRM	108
General Atomic		Neutralization	EO	1993	MLLW-CH	NEUTR	10
General Atomic		Stabilization	EO	2004	MLLW-CH	STABL	40
Hanford Site		Centrifugation and Filtration	EP	1994	MLLW-CH	METRM	1000
Hanford Site		Maintenance and Storage Facility	EP	1994	MLLW-CH	DEACT	7.3
Hanford Site		Shielded Analytical Laboratory	EO	1992	MTRU-RH	STABL	1.2
Hanford Site		Solidification	EC	1994	MLLW-CH	STABL	8
Hanford Site	242-A Evaporator	242-A Evaporator	EP	1994	HLW	METRM	31800
Hanford Site	242-A/Purex Effluent Treatment Facility	Effluent Treatment Facility	PA	1994	MLLW-CH/AL	WWTOR	100000
Hanford Site	242-A/Purex Effluent Treatment Facility	Effluent Treatment Facility	PA	1994	MLLW-CH/AL	METRM	100000
Hanford Site	300 Area Waste Acid Treatment System	pH Adjustment, Centrifugation and Filtration	EN	1997	MLLW-CH	METRM	121
Hanford Site	303-M Oxide Facility	Calcination	EC	1996	MLLW-CH	ORDST	360
Hanford Site	Concretion Facility	Solidification	EN	1996	MLLW-CH	STABL	360
Hanford Site	Hanford Waste Vitrification Plant	Hanford Waste Vitrification Plant	PA	2009	HLW	STABL	2190
Hanford Site	Maintenance & Storage Facility	Maintenance & Storage Facility	EC	1994	MTRU-CH	DEACT	300
Hanford Site	Mixed Waste Treatment Facility	Separation, Distillation	EP	19961	MLLW-CH/AL	METRM	20
Hanford Site	Pu Finishing Plant Water Disposal	Filtration, Ion Exchange, and Activated Charcoal	EC	1994	MLLW-CH/AL	WWTOR	30000
Hanford Site	Pu Finishing Plant Water Disposal	Filtration, Ion Exchange, and Activated Charcoal	EC	1994	MLLW-CH/AL	METRM	30000
Hanford Site	Thermal Treatment Facility	Incineration	PN	2004	MTRU-RH	ORDST	550
Hanford Site	Waste Receiving And Processing Facility	WRAP II A & B	PA	2000	MTRU-RH	STABL	2460
Idaho National Engineering Laboratory		WCF Amalgamation	PA	1997	MLLW-CH	STABL1	1.2
Idaho National Engineering Laboratory	HEPA Filter Leaching System (ICPP-659)	HEPA Filter Leaching System (ICPP-659)	EC	1996	MTRU-RH	METRC	83
Idaho National Engineering Laboratory	ICPP Decontamination Facility	Unit2: CO2 Decontamination System	PA	1994	MLLW-RH	METRC	100
Idaho National Engineering Laboratory	ICPP Decontamination Facility	Water Washing System	EP	1994	MTRU-RH	METRC	100
Idaho National Engineering Laboratory	Liquid Effluent Treatment And Disposal (LET&D)	Liquid Effluent Treatment And Disposal (LET&D)	EO	1993	MTRU-CH	METRM	36472
Idaho National Engineering Laboratory	New Waste Calcining Facility	New Waste Calcining Facility	EO	1994	HLW	METRM	8620
Idaho National Engineering Laboratory	Portable Water Treatment System (PWTU)	Portable Water Treatment System (PWTU)	EC	1995	MLLW-CH	METRM	3921
Idaho National Engineering Laboratory	Portable Water Treatment System (PWTU)	Portable Water Treatment System (PWTU)	EC	1995	MLLW-CH	NEUTR	3921
Idaho National Engineering Laboratory	Portable Water Treatment System (PWTU)	Portable Water Treatment System (PWTU)	EC	1995	MLLW-CH	WWTOR	3921
Idaho National Engineering Laboratory	TAN 726-A Treatment	TAN 726-A Treatment Unit	EN	1994	MLLW-CH	METRM	11000
Idaho National Engineering Laboratory	Waste Characterization Facility	Waste Characterization Facility	PA	1996	MTRU-CH	STABL1	18
Idaho National Engineering Laboratory	Waste Characterization Facility	Waste Characterization Facility	PA	1996	MTRU-CH	NEUTR	81
Idaho National Engineering Laboratory	Waste Characterization Facility	Waste Characterization Facility	PA	1996	MTRU-CH	STABL	8
Idaho National Engineering Laboratory	Waste Engineering Development Facility (WEDF)	Amalgamation Unit	PN	1997	MLLW-CH	STABL1	0.7
Idaho National Engineering Laboratory	Waste Engineering Development Facility (WEDF)	Neutralization Unit	PN	1997	MLLW-CH	NEUTR	567
Idaho National Engineering Laboratory	Waste Engineering Development Facility (WEDF)	Stabilization Unit	PN	1997	MLLW-CH	STABL	2765

APPEND-A.XLS

SITE	FACILITY	SYSTEM	System Status	Operational Date	Radiation Category	Treatment Technology	Maximum Capacity (m3/y)
Idaho National Engineering Laboratory	WERF Incinerator	WERF Incinerator	EP	1994	MLLW-CH	ORDST	2300
Idaho National Engineering Laboratory	WERF Waste Stabilization Unit	WERF Waste Stabilization Unit	EP	1994	MLLW-CH	STABL	2766
Lawrence Berkeley Laboratory	Building 76	Unit 131 AFH	EC	1993	MLLW-CH/AL	NEUTR	69
Lawrence Berkeley Laboratory	Building 76	Unit 131 E	EC	1993	MLLW-CH	STABL	768
Lawrence Berkeley Laboratory	Building 86	Unit MW-6	PA	1996	MLLW-CH	NEUTR	89
Lawrence Berkeley Laboratory	Building 86	Unit MW-7	PA	1996	MLLW-CH	STABL	768
Lawrence Livermore National Laboratory	Area 514 WWFU	Area 514 WWFU	EO	1993	MLLW-CH	METRM	3398
Lawrence Livermore National Laboratory	Area 514 WWFU	Area 514 WWTF	EO	1993	MLLW-CH	NEUTR	6922
Lawrence Livermore National Laboratory	Area 514-1	Carbon Adsorption Unit	EO	1993	MLLW-CH	VWTOR	147000
Lawrence Livermore National Laboratory	Area 514-1	Centrifugation Unit	EO	1993	MLLW-CH	METRM	9611
Lawrence Livermore National Laboratory	Area 514-1	Cold Vapor Evaporation Unit	PA	1994	MLLW-CH	METRM	3790
Lawrence Livermore National Laboratory	Area 514-1	Portable Blending Unit	PA	1994	MLLW-CH	NEUTR	147000
Lawrence Livermore National Laboratory	Building 513	Solidification Facility	PN	1996	MLLW-CH	STABL	1332
Los Alamos National Laboratory	Controlled Air Incinerator	Liquid & Solid Feed Systems	EP	1996	MTRU-CH	ORDST	680
Los Alamos National Laboratory	Hazardous Waste Treatment Facility (HWWF)	Detox Skid	PA	1996	MLLW-CH	VWTOR	26
Los Alamos National Laboratory	Lead Decontamination Trailer	Lead Decontamination Trailer	EO	1994	MLLW-CH	METRC	100
Mound		Packed Bed Reactor	PA	1998	MLLW-CH	ORDST	2
Mound Facility	Mound Glass Melter	Mound Glass Melter	EP	1996	MLLW-CH	ORDST	200
Nevada Test Site	Liquid Waste Treatment Facility	Liquid Waste Treatment System	PA	1996	MLLW-CH	METRM	16000
Oak Ridge K-26 Site	Central Neutralization Facility	Central Neutralization Facility	EO	1993	MLLW-CH/AL	NEUTR	120000
Oak Ridge K-26 Site	K-26	K-1232 Wastewater Treatment Facility	EC	1993	MLLW-CH	METRM	7000
Oak Ridge K-26 Site	K-26	Sludge Fixation Unit	EN	1997	MLLW-CH	STABL	6000
Oak Ridge K-26 Site	K-26 Site TSCA Incinerator	K-26 Site TSCA Incinerator	EO	1993	MLLW-CH	ORDST	13600
Oak Ridge National Laboratory	Liquid Low Level Waste Evaporation Facility	Liquid Low Level Waste Evaporation Facility	EO	1993	MTRU-RH	METRM	39788
Oak Ridge National Laboratory	Melton Valley Low-Level Waste Immobilization Facility	Melton Valley Low-Level Waste Immobilization Facility	EO	1993	MLLW-RH	STABL	1680
Oak Ridge Y-12 Plant	Central Pollution Control Facility (CPCF)	Mercury Waste Water Treatment System	PN	1996	MLLW-CH	METRM	8939
Oak Ridge Y-12 Plant	Central Pollution Control Facility (CPCF)	Mopwater and Concentrated Waste System	EO	1993	MLLW-CH	NEUTR	7671
Oak Ridge Y-12 Plant	Central Pollution Control Facility (CPCF)	Mopwater and Concentrated Waste System	EO	1993	MLLW-CH	VWTOR	7600
Oak Ridge Y-12 Plant	Groundwater Treatment Facility	Groundwater Treatment Facility	EO	1993	MLLW-CH	VWTOR	17714
Oak Ridge Y-12 Plant	Oak Ridge Res. Mixed Waste Treatment Facility	MW Treatment Facility - Acid Dissolution - U Removal	PN	2004	MLLW-CH	METRC	2208
Oak Ridge Y-12 Plant	Oak Ridge Res. Mixed Waste Treatment Facility	MW Treatment Facility - Fixation/Stabilization	PN	2004	MLLW-CH	STABL	736
Oak Ridge Y-12 Plant	Oak Ridge Res. Mixed Waste Treatment Facility	MW Treatment Facility - Incineration	PN	2004	MLLW-CH	ORDST	882
Oak Ridge Y-12 Plant	Oak Ridge Res. Mixed Waste Treatment Facility	MW Treatment Facility - Surface Decontamination	PN	2004	MLLW-CH	METRC	600
Oak Ridge Y-12 Plant	Oak Ridge Res. Mixed Waste Treatment Facility	MW Treatment Facility - Thermal Desorption	PN	2004	MLLW-CH	DECON1	10
Oak Ridge Y-12 Plant	Plating Rinsewater Treatment Facility	Plating Rinsewater Treatment Facility	EC	1994	MLLW-CH	METRM	7676
Oak Ridge Y-12 Plant	Waste Coolant Processing Facility	Waste Coolant Processing Facility	EC	1996	MLLW-CH	VWTOR	11363
Oak Ridge Y-12 Plant	West End Treatment Facility	Wastewater Treatment	EO	1993	MLLW-CH	METRM	8489
Oak Ridge Y-12 Plant	West End Treatment Facility	Wastewater Treatment	EO	1993	MLLW-CH	VWTOR	8489
Paducah Gaseous Diffusion Plant	C-400-D Lime Precipitation Unit	C-400-D Lime Precipitation Unit	EO	1993	MLLW-CH	NEUTR	136
Pentax		Encapsulation	EC	1993	MLLW-CH/AL	STABL	260
Pentax Plant	Building 11-16A	Building 11-16A	EP	1996	MLLW-CH/AL	STABL	132
Pentax Plant	Building 11-9	Building 11-9	EP	1996	MLLW-CH/AL	STABL	43
Pentax Plant	Burning Ground	One Cage, One Tray, and One Pan	EC	1993	MLLW-CH/AL	DEACT	4
Pentax Plant	Hazardous Waste Treatment & Processing Facility	Hazardous Waste Treatment & Processing Facility	PA	1998	MLLW-CH/AL	STABL	600
Portsmouth Gaseous Diffusion Plant	X-616 Liquid Effluent Control Facility	X-616 Liquid Effluent Control Facility	EN	1994	MLLW-CH	METRM	7400000
Portsmouth Gaseous Diffusion Plant	X-622 Groundwater Treatment Facility	X-622 Groundwater Treatment Facility	EO	1993	MLLW-CH	VWTOR	169000
Portsmouth Gaseous Diffusion Plant	X-622T Groundwater Treatment Facility	X-622T Groundwater Treatment Facility	PA	1994	MLLW-CH	VWTOR	89928
Portsmouth Gaseous Diffusion Plant	X-623 Groundwater Treatment Facility	X-623 Groundwater Treatment Facility	PA	1994	MLLW-CH	VWTOR	14900
Portsmouth Gaseous Diffusion Plant	X-624 Groundwater Treatment Facility	X-624 Groundwater Treatment Facility	EO	1993	MLLW-CH	VWTOR	89470
Portsmouth Gaseous Diffusion Plant	X-701E Groundwater Treatment Facility	X-701E Groundwater Treatment Facility	EO	1993	MLLW-CH	VWTOR	120000
Quadrex Environmental, Gainesville, FL	Quadrex Environmental	Incineration of Scintillation Liquids	CO	1993	MLLW-CH	ORDST	10000
Ramp Industries, Denver, CO	Ramp Industries	Ramp Industries	CO	1993	MLLW-CH	METRC	1000
Ramp Industries, Denver, CO	Ramp Industries	Ramp Industries	CO	1993	MLLW-CH	STABL	100
Rocky Flats Plant		Aqueous Waste Immobilization System	PN	2006	MTRU-CH	STABL	740
Rocky Flats Plant		Liquid Waste Treatment Upgrade	PA	1998	MLLW-CH/AL	METRM	16120
Rocky Flats Plant	Aqueous Process Waste Treatment: Building 774	Wastewater	EO	1993	MTRU-CH	METRM	2620
Rocky Flats Plant	Aqueous Process Waste Treatment: Building 774	Wastewater	EO	1993	MTRU-CH	NEUTR	2620

APPEND-A.XLS

SITE	FACILITY	SYSTEM	System Status	Operational Date	Radiation Category	Treatment Technology	Maximum Capacity (m3/y)
Rocky Flats Plant	Building 374	Process Waste Treatment Facility: Building 374	EO	1988	MTRU-CH	STABL	685
Rocky Flats Plant	Building 374	Process Waste Treatment Facility: Building 374	EO	1993	MTRU-CH	NEUTR	45426
Rocky Flats Plant	Building 374	Process Waste Treatment Facility: Building 374	PA	1988	MTRU-CH	METRM	49140
Rocky Flats Plant	Chip Cementation: Building 447	Chip Cementation: Building 447	EC	1986	MLLW-CH	STABL	834
Rocky Flats Plant	Misc. Waste Handling & Immob.: Bldg 774	Misc. Waste Handling & Immob.: Bldg 774	EO	1993	MTRU-CH	STABL	64
Rocky Flats Plant	Miscellaneous Waste Form Treatment	Miscellaneous Waste Form Treatment	PA	2006	MLLW-CH/AL	WWTOR	18
Rocky Flats Plant	Miscellaneous Waste Form Treatment	Miscellaneous Waste Form Treatment	PA	2006	MLLW-CH/AL	STABL	260
Rocky Flats Plant	Mixed Residue Treatment	Mixed Residue Treatment	PN	2003	MTRU-CH	ORDST	60
Rocky Flats Plant	Mixed Residue Treatment	Mixed Residue Treatment	PN	2003	MTRU-CH	STABL	60
Rocky Flats Plant	Modular Storage Tanks and Building 810 Evaporator	Evaporation/Immobilization	EO	1993	MLLW-CH	METRM	68137
Rocky Flats Plant	Organic and Sludge Immob. System: Building 774	Organic & Sludge Immobilization Sys.: Bldg 774	EO	1993	MTRU-CH	STABL	497
Rocky Flats Plant	Pondcrete Solidification Process: Building 788	Pondcrete Solidification Process: Building 788	EC	1986	MLLW-CH	STABL	17800
Rocky Flats Plant	Pondcrete/Saltcrete Reprocessing Facility: 904PAD	Pondcrete/Saltcrete Reprocessing Fac.: 904PAD	EP	1996	MLLW-CH	STABL	2840
Rocky Flats Plant	Solidified Bypass Sludge Treatment	Solidified Bypass Sludge Treatment	PA	2006	MTRU-CH	STABL	38
Rocky Flats Plant	Solvent Contaminated Waste System	Solvent Contaminated Waste System	PU	2006	MTRU-CH	DECON I	234.1
Rocky Flats Plant	Surface Organic Removal	Leaded Gloves, and Bulk Lead Treatment	PN	2004	MLLW-CH	METRC	100
Sandia National Lab - New Mexico	Radioactive & Mixed Waste Management Facility	Radioactive & Mixed Waste Management Facility	EP	1986	MLLW-CH/AL	METRC	1
Sandia National Lab - New Mexico	Radioactive & Mixed Waste Management Facility	Radioactive & Mixed Waste Management Facility	EP	1986	MLLW-CH/AL	STABL	1
Sandia National Lab - New Mexico	Radioactive & Mixed Waste Management Facility	Radioactive & Mixed Waste Management Facility	EP	1986	MLLW-CH/AL	NEUTR	1
Savannah River Site	Consolidated Incineration Facility	CIF Ashcrete	PA	1986	MLLW-CH/AL	STABL	200
Savannah River Site	Consolidated Incineration Facility	CIF Incinerator - Liquid Feed System	PA	1986	MLLW-CH	ORDST	8200
Savannah River Site	Consolidated Incineration Facility (CIF)	CIF Blowdown Treatment System	PA	1986	MLLW-CH	STABL	200
Savannah River Site	DWPF Vitrification Plant	DWPF Vitrification Plant	PA	1986	HLW	STABL	19570
Savannah River Site	F/H Area Effluent Treatment Facility	F/H Area Effluent Treatment Facility	EO	1993	MLLW-CH	METRM	300000
Savannah River Site	F/H Area Effluent Treatment Facility	F/H Area Effluent Treatment Facility	EO	1993	MLLW-CH	NEUTR	400000
Savannah River Site	M-Area Liquid Effluent Treatment Facility	M-Area Liquid Effluent Treatment Facility	EO	1993	MLLW-CH	NEUTR	100000
Savannah River Site	M-Area Liquid Effluent Treatment Facility	M-Area Liquid Effluent Treatment Facility	EO	1993	MLLW-CH	METRM	100000
Savannah River Site	M-Area Liquid Effluent Treatment Facility	M-Area Liquid Effluent Treatment Facility	EO	1993	MLLW-CH	WWTOR	100000
Savannah River Site	M-Area Vendor Treatment	M-Area Vendor Treatment	PA	1986	MLLW-CH	STABL	2600
Savannah River Site	SRL Ion Exchange Treatment Probe	High Activity	EO	1993	MLLW-RH	METRM	210
Savannah River Site	SRL Ion Exchange Treatment Probe	High Activity	EO	1993	MLLW-RH	WWTOR	210
Savannah River Site	SRL Ion Exchange Treatment Probe	Low Activity	EO	1993	MLLW-CH	METRM	1600
Scientific Ecology Group - Oak Ridge, TN	Scientific Ecology Group - Oak Ridge, TN	SEG Incinerator - Commercial	CO	1993	MLLW-CH	ORDST	4200
Scientific Ecology Group - Oak Ridge, TN	Scientific Ecology Group - Oak Ridge, TN	SEG Stabilization - Commercial	CO	1993	MLLW-CH	STABL	240
West Valley Demonstration Project	Integrated Radwaste Treatment System	Integrated Radwaste Treatment System	EO	1993	MLLW-CH/AL	STABL	2306
West Valley Demonstration Project	Integrated Radwaste Treatment System	Integrated Radwaste Treatment System	EO	1993	HLW	METRM	2306
West Valley Demonstration Project	Liquid Pretreatment System	Liquid Pretreatment System - 82	EC	1984	MLLW-CH/AL	METRM	4731
West Valley Demonstration Project	Liquid Pretreatment System	Liquid Pretreatment System - 82	EC	1984	MLLW-CH/AL	WWTOR	4731
West Valley Demonstration Project	Vitrification Facility	Vitrification Facility	PA	1986	HLW	STABL	289

APPENDIX B-1

Current Inventory of Mixed Wastes by Treatability Groups. Most data is as of December 1992, but a few sites reported the December 1991 inventory data.

(Note that all inventories are in cubic meters)

Radiation Handling Category	MATRIX	Volumes in Cubic Meters								Total by Matrix
		Toxic Organics	Toxic Organics and Metals w/ Mercury	Toxic Organics and Metals w/o Mercury	Toxic Metals w/o Mercury	Toxic Metals w/ Mercury	Ignitable	Corrosive	Reactive	
HLW	Aqueous Liquid		63537.0	4129.0	9895.4	122040.7		4898.3		204500.4
HLW	Inorganic Debris		23.6							23.6
HLW	Inorganic Sludges/Particulates		142257.0			243.6				142500.6
HLW	Organic Liquids		21301.6							21301.6
HLW	Organic Sludges/Particulates		0.0							0.0
	Total by Contaminant	0.0	227119.2	4129.0	9895.4	122284.3	0.0	4898.3	0.0	368326.2
MTRU-RH	Aqueous Liquid				0.8					0.8
MTRU-RH	Elemental Lead				0.3					0.3
MTRU-RH	Heterogeneous Debris		612.0		105.2					717.2
MTRU-RH	Inorganic Debris		0.0		74.0					74.0
MTRU-RH	Inorganic Sludges/Particulates	9.5			25.9	2.1				37.5
MTRU-RH	Lab Packs with Metals					130.5				130.5
MTRU-RH	Organic Debris		0.0							0.0
MTRU-RH	Organic Liquids	136.0								136.0
MTRU-RH	Organic Sludges/Particulates					720.0				720.0
MTRU-RH	Other	7.4			1.0					8.4
MTRU-RH	Reactive Metals	0.1								0.1
	Total by Contaminant	153.1	612.0	0.0	206.8	852.6	0.0	0.0	0.0	1824.5
MTRU-CH	Aqueous Liquid				14.9	0.1		0.1		15.0
MTRU-CH	Batteries				0.6	0.4				1.1
MTRU-CH	Cemented Solids	493.3	16.1	297.6	30.5			2.0		839.5
MTRU-CH	Elemental Lead				2084.5	662.2				2746.7
MTRU-CH	Heterogeneous Debris	4504.6	25.4	199.8	434.8	480.2				5624.7
MTRU-CH	Inorganic Debris	1009.1	169.1	8129.2	54.0	40.7			110.1	9512.2
MTRU-CH	Inorganic Sludges/Particulates	1167.8	5074.8	308.9	217.3	42.0				8810.9
MTRU-CH	Lab Packs without Metals						2.1			2.1
MTRU-CH	Organic Debris	168.9	5000.8	9533.3		81.8				14784.8
MTRU-CH	Organic Liquids					1.3	0.0			1.3
MTRU-CH	Organic Sludges/Particulates	5.1	0.0	620.9						626.0
MTRU-CH	Other	8867.1			156.3					9023.4
	Total by Contaminant	16216.0	10286.2	19089.7	2992.8	1288.7	2.1	2.1	110.1	49987.7
MLLW-RH	Aqueous Liquid		71.1			2338.0				2409.1
MLLW-RH	Elemental Lead				389.1					389.1
MLLW-RH	Heterogeneous Debris				0.2	13.1				13.3
MLLW-RH	Inorganic Debris		0.0		0.3	6.8				7.1
MLLW-RH	Inorganic Sludges/Particulates	0.4	0.0		3.6					4.0
MLLW-RH	Organic Sludges/Particulates				0.0	62.4				62.4
MLLW-RH	Other	0.4			9.7					10.1
MLLW-RH	Reactive Metals	4.2					0.7			4.9
	Total by Contaminant	5.0	71.1	0.0	402.8	2420.3	0.7	0.0	0.0	2900.0
MLLW-CH/AL	Aqueous Liquid	1.3	1.4		13.2	143.3	0.2	32.4	0.1	191.9
MLLW-CH/AL	Batteries				1.2	0.5				1.7
MLLW-CH/AL	Beryllium Dust				1.5					1.5
MLLW-CH/AL	Cemented Solids	314.6	989.4	112.7	0.2					1396.9
MLLW-CH/AL	Compressed Gases	0.1	0.8							0.9
MLLW-CH/AL	Elemental Lead			0.2	588.2					588.4
MLLW-CH/AL	Explosives		0.0							0.0
MLLW-CH/AL	Heterogeneous Debris	1779.1	0.2	121.3	1233.9	853.8	3.0	4.6		3996.0
MLLW-CH/AL	Inorganic Debris	736.9	120.4	7488.4	23.4	2.8				8371.7
MLLW-CH/AL	Inorganic Sludges/Particulates	622.7	1528.6	12022.3	27491.3	141.2	666.7	12.9	0.2	42485.9
MLLW-CH/AL	Lab Packs with Metals	1.3	2.3	35.9	3.2	0.7		0.0		43.5
MLLW-CH/AL	Lab Packs without Metals	55.1	2.3		11.6		42.0	0.6		111.6
MLLW-CH/AL	Liquid Mercury					19.4				19.4

Radiation Handling Category	MATRIX	Volumes in Cubic Meters								Total by Matrix
		Toxic Organics	Toxic Organics and Metals w/ Mercury	Toxic Organics and Metals w/o Mercury	Toxic Metals w/o Mercury	Toxic Metals w/ Mercury	Ignitable	Corrosive	Reactive	
MLLW-CH/AL	Organic Debris	137.9	2820.4	5510.8	0.8	9.9				8479.8
MLLW-CH/AL	Organic Liquids	123.6	912.3	102.5	1.8	0.4				1140.6
MLLW-CH/AL	Organic Sludges/Particulates	45.4	31.2	1010.8			8.4			1095.8
MLLW-CH/AL	Other	3425.4	5.7		4.4				0.0	3435.5
MLLW-CH/AL	Soil with <50% Debris	16.8	0.2		5.3		0.3			22.7
MLLW-CH/AL	Soils		18.1							18.1
	Total by Contaminant	7260.3	6413.3	26404.8	29380.0	1171.9	720.5	50.6	0.3	71401.7
MLLW-CH	Aqueous Liquid	67.6	107.9	45492.4	816.9	135.9		15.0		46635.7
MLLW-CH	Batteries		51.0		60.5	18.0				129.5
MLLW-CH	Beryllium Dust		0.0							0.0
MLLW-CH	Cemented Solids	1.1	30.0		42.3	5.5				78.9
MLLW-CH	Compressed Gases	1.3	1.2		2.2		29.7	0.3		34.6
MLLW-CH	Elemental Lead		10.8		219.6					230.4
MLLW-CH	Explosives	0.2				0.8				1.0
MLLW-CH	Heterogeneous Debris	43.6	3332.9	52.9	205.5	40.0	1.2			3676.1
MLLW-CH	Inorganic Debris	23.9	17.4	4.9	302.9	217.8	0.2		2.4	569.5
MLLW-CH	Inorganic Sludges/Particulates	307.9	51.5	4.3	806.3	30.4	1.1			1201.5
MLLW-CH	Lab Packs with Metals	0.1	101.9	2.1	7.0	0.9	21.8		0.0	133.7
MLLW-CH	Lab Packs without Metals	9.4	140.5	177.3						327.2
MLLW-CH	Liquid Mercury		2.3			1018.9				1021.2
MLLW-CH	Organic Debris	193.0	38.8	5.6	290.0	2.5				530.0
MLLW-CH	Organic Liquids	317.1	497.4	404.3	57.9	14.8	104.5	0.0	0.1	1396.0
MLLW-CH	Organic Sludges/Particulates	872.9	4888.0	12.4	178.0	416.6	67.6	0.2	0.6	6436.3
MLLW-CH	Other	1.7	17.1	11.3	0.9	0.5		22.4	2.0	55.9
MLLW-CH	Reactive Metals	2.0	77.1		4.4	0.5			12.5	86.4
MLLW-CH	Soil with <50% Debris	0.8	0.4		0.1					1.3
MLLW-CH	Soils	4117.2	4751.5	0.0	23948.0	613.6				33431.4
	Total by Contaminant	5959.9	14117.5	46167.5	26943.4	2516.8	226.1	37.9	17.6	95986.7

APPENDIX B-2

Five-Year Projections of Mixed Waste Generation by Treatability Groups

(Note that all generation rates are in cubic meters per five years)

Radiation Handling Category	MATRIX	Volumes in Cubic Meters								Total by Matrix
		Toxic Organics	Toxic Organics and Metals w/ Mercury	Toxic Organics and Metals w/o Mercury	Toxic Metals w/o Mercury	Toxic Metals w/ Mercury	Ignitable	Corrosive	Reactive	
HLW	Aqueous Liquid		106368.0	241.0	0.0	8320.0		0.0		115929.0
HLW	Inorganic Debris		34.0							34.0
HLW	Inorganic Sludges/Particulates		2325.0			0.0				2325.0
HLW	Organic Liquids		7251.0							7251.0
HLW	Organic Sludges/Particulates		4.4							4.4
	Total by Contaminant		115982.4				0.0	0.0	0.0	115982.4
MTRU-RH	Aqueous Liquid				1.2					1.2
MTRU-RH	Elemental Lead				0.0					0.0
MTRU-RH	Heterogeneous Debris		0.0		0.2					0.2
MTRU-RH	Inorganic Debris		0.1		3.0					3.1
MTRU-RH	Inorganic Sludges/Particulates	0.0			0.8	0.0				0.8
MTRU-RH	Lab Packs with Metals					0.0				0.0
MTRU-RH	Organic Debris		0.1							0.1
MTRU-RH	Organic Liquids	0.6								0.6
MTRU-RH	Organic Sludges/Particulates					66.0				66.0
MTRU-RH	Other	0.0			1.2					1.2
MTRU-RH	Reactive Metals	0.0								0.0
	Total by Contaminant	0.6	0.2	0.0	6.3	66.0	0.0	0.0	0.0	73.1
MTRU-CH	Aqueous Liquid				0.6	0.6		0.4		1.7
MTRU-CH	Batteries				97.4	64.9				162.3
MTRU-CH	Cemented Solids	0.0	0.0	0.0	85.8			0.0		85.8
MTRU-CH	Elemental Lead				348.5	48.3				396.8
MTRU-CH	Heterogeneous Debris	298.2	0.0	0.0	228.4	457.0				983.6
MTRU-CH	Inorganic Debris	124.8	0.0	67.8	21.3	5.9			3.1	222.8
MTRU-CH	Inorganic Sludges/Particulates	0.2	0.0	3.8	0.3	0.3				4.6
MTRU-CH	Lab Packs without Metals						324.6			324.6
MTRU-CH	Organic Debris	14.1	140.0	0.0		0.0				154.1
MTRU-CH	Organic Liquids					0.0	0.0			0.0
MTRU-CH	Organic Sludges/Particulates	0.0	0.0	0.0						0.0
MTRU-CH	Other	19.5			0.1					19.6
	Total by Contaminant	456.8	140.0	71.8	782.3	577.0	324.6	0.4	3.1	2355.7
MLLW-RH	Aqueous Liquid		800.0			249.0				1049.0
MLLW-RH	Elemental Lead				156.0					156.0
MLLW-RH	Heterogeneous Debris				0.1	2000.0				2000.1
MLLW-RH	Inorganic Debris		4.3		0.0	35.0				39.3
MLLW-RH	Inorganic Sludges/Particulates	0.0	374.0		0.6					374.6
MLLW-RH	Organic Sludges/Particulates				0.0	0.0				0.0
MLLW-RH	Other	0.0			4.9					4.9
MLLW-RH	Reactive Metals	1.2					0.0			1.2
	Total by Contaminant	1.2	1178.3	0.0	161.6	2284.0	0.0	0.0	0.0	3625.1
MLLW-CH/AL	Aqueous Liquid	148.1	7.1		3.5	40.2	0.7	32.0	0.2	231.8
MLLW-CH/AL	Batteries				69.2	30.2				99.4
MLLW-CH/AL	Beryllium Dust				0.7					0.7
MLLW-CH/AL	Cemented Solids	0.4	0.0	0.0	1.0					1.4
MLLW-CH/AL	Compressed Gases	5.3	0.0							5.4
MLLW-CH/AL	Elemental Lead			0.1	195.8					195.9
MLLW-CH/AL	Explosives		0.0							0.0
MLLW-CH/AL	Heterogeneous Debris	392.4	0.0	21.1	45.5	11.2	21.5	26.4		618.1
MLLW-CH/AL	Inorganic Debris	323.4	0.0	77.6	68.3	1.7				470.9
MLLW-CH/AL	Inorganic Sludges/Particulates	962.5	11.7	3169.5	204.7	927.4	0.2	65.8	0.0	5341.8
MLLW-CH/AL	Lab Packs with Metals	3.3	9.1	1858.4	106.9	38.0		0.0		2015.7
MLLW-CH/AL	Lab Packs without Metals	1150.9	116.2		649.7		2150.2	35.2		4102.2
MLLW-CH/AL	Liquid Mercury					70.4				70.4
MLLW-CH/AL	Organic Debris	1723.6	122.0	0.0	0.0	0.0				1845.6
MLLW-CH/AL	Organic Liquids	143.6	3539.7	0.0	0.0	0.0				3683.3
MLLW-CH/AL	Organic Sludges/Particulates	0.0	37.3	0.0			0.4			37.7
MLLW-CH/AL	Other	0.0	9.0		9.7				0.0	18.7
MLLW-CH/AL	Soil with <50% Debris	244.1	2.8		70.4		4.4			321.7
MLLW-CH/AL	Soils		0.0							0.0
	Total by Contaminant	5097.4	3854.9	5126.6	1425.4	1119.1	2177.4	159.4	0.2	18960.5

Radiation Handling Category	MATRIX	Volumes in Cubic Meters								Total by Matrix
		Toxic Organics	Toxic Organics and Metals w/ Mercury	Toxic Organics and Metals w/o Mercury	Toxic Metals w/o Mercury	Toxic Metals w/ Mercury	Ignitable	Corrosive	Reactive	
MLLW-CH	Aqueous Liquid	114684.8	6725.1	151.6	41.1	18.8		11.1		121632.6
MLLW-CH	Batteries		1263.0		58.4	11.3				1332.7
MLLW-CH	Beryllium Dust		0.0							0.0
MLLW-CH	Cemented Solids	0.0	70.0		20.0	0.0				90.0
MLLW-CH	Compressed Gases	3.1	0.5		1.0		11.0	0.5		16.1
MLLW-CH	Elemental Lead		0.0		1278.2					1278.2
MLLW-CH	Explosives	1.0				3.0				4.0
MLLW-CH	Heterogeneous Debris	40.1	4850.3	24.7	170.1	15.0	0.0			5200.9
MLLW-CH	Inorganic Debris	0.0	72.8	6.0	123.9	616.8	0.0		0.4	819.9
MLLW-CH	Inorganic Sludges/Particulates	12.0	345.5	0.0	1240.2	473.0	0.0			2070.7
MLLW-CH	Lab Packs with Metals	0.0	100.8	1.2	0.1	2.9	0.2		0.1	105.2
MLLW-CH	Lab Packs without Metals	8.5	231.6	219.6						459.6
MLLW-CH	Liquid Mercury		2.7			21.8				24.5
MLLW-CH	Organic Debris	2568.9	5.9	20.5	72.6	2309.0				4876.8
MLLW-CH	Organic Liquids	144.3	4749.8	223.3	72.8	5.1	106.3	0.0	0.2	5301.8
MLLW-CH	Organic Sludges/Particulates	109.5	3254.7	18.1	83.0	269.3	27.9	0.0	0.5	3763.0
MLLW-CH	Other	0.0	0.0	0.0	0.0	0.0		0.0	3.1	3.1
MLLW-CH	Reactive Metals	0.9	9.5		1000.0	0.0			13.6	1023.9
MLLW-CH	Soil with <50% Debris	0.0	120.1		0.0					120.1
MLLW-CH	Soils	123.3	8.0	0.0	6.0	1577.4				1713.7
	Total by Contaminant	117696.2	21910.4	664.9	4166.4	5324.2	145.4	11.6	17.8	149937.0

APPENDIX B-3

Volumes of Mixed Waste by Treatability Groups Expected During the Next 20 Years. Each treatability group volume is the sum of respective treatability group volumes in Appendix B-1 and four times the volumes in Appendix B-2.

(Note that all volumes are in cubic meters)

Radiation Handling Category	MATRIX	Volumes in Cubic Meters								Total by Matrix
		Toxic Organics	Toxic Organics and Metals w/ Mercury	Toxic Organics and Metals w/o Mercury	Toxic Metals w/o Mercury	Toxic Metals w/ Mercury	Ignitable	Corrosive	Reactive	
MTRU-RH	Aqueous Liquid				5.4					5.4
MTRU-RH	Elemental Lead				0.3					0.3
MTRU-RH	Heterogeneous Debris		612.0		106.0					718.0
MTRU-RH	Inorganic Debris		0.2		86.0					86.2
MTRU-RH	Inorganic Sludges/Particulates	9.5			28.9	2.1				40.5
MTRU-RH	Lab Packs with Metals					130.5				130.5
MTRU-RH	Organic Debris		0.5							0.5
MTRU-RH	Organic Liquids	138.4								138.4
MTRU-RH	Organic Sludges/Particulates					984.0				984.0
MTRU-RH	Other	7.4			6.7					13.2
MTRU-RH	Reactive Metals	0.2								0.2
	Total by Contaminant	155.5	612.7	0.0	232.2	1116.6	0.0	0.0	0.0	2117.0
										0.0
MTRU-CH	Aqueous Liquid				17.4	2.6		1.6		21.6
MTRU-CH	Batteries				390.2	260.0				650.3
MTRU-CH	Cemented Solids	493.3	16.1	297.6	373.5			2.0		1182.5
MTRU-CH	Elemental Lead				3478.3	855.5				4333.7
MTRU-CH	Heterogeneous Debris	5697.4	25.4	199.8	1348.4	2288.2				9559.2
MTRU-CH	Inorganic Debris	1508.1	169.1	8400.4	139.0	64.2			122.5	10403.3
MTRU-CH	Inorganic Sludges/Particulates	1168.7	5074.8	324.1	218.5	43.0				6829.1
MTRU-CH	Lab Packs without Metals						1300.5			1300.5
MTRU-CH	Organic Debris	225.3	5560.8	9533.3		81.8				15401.2
MTRU-CH	Organic Liquids					1.3	0.1			1.4
MTRU-CH	Organic Sludges/Particulates	5.1	0.0	620.9						626.0
MTRU-CH	Other	8945.1			156.7					9101.8
	Total by Contaminant	18043.1	10846.2	19376.1	6122.0	3596.6	1300.6	3.6	122.5	59410.6
MLLW-RH	Aqueous Liquid		3271.1			3334.0				6605.1
MLLW-RH	Elemental Lead				1013.1					1013.1
MLLW-RH	Heterogeneous Debris				0.6	8013.1				8013.7
MLLW-RH	Inorganic Debris		17.2		0.3	146.8				164.4
MLLW-RH	Inorganic Sludges/Particulates	0.4	1496.0		5.8					1502.2
MLLW-RH	Organic Sludges/Particulates				0.0	62.4				62.4
MLLW-RH	Other	0.4			29.3					29.7
MLLW-RH	Reactive Metals	9.0					0.7			9.7
	Total by Contaminant	9.8	4784.3	0.0	1049.1	11556.3	0.7	0.0	0.0	17400.3
MLLW-CH/AL	Aqueous Liquid	593.6	29.8		27.2	304.1	3.0	160.4	0.9	1119.0
MLLW-CH/AL	Batteries				278.0	121.3				399.3
MLLW-CH/AL	Beryllium Dust				4.3					4.3
MLLW-CH/AL	Cemented Solids	316.0	969.4	112.7	4.2					1402.3
MLLW-CH/AL	Compressed Gases	21.5	0.9							22.3
MLLW-CH/AL	Elemental Lead			0.6	1371.4					1371.9
MLLW-CH/AL	Explosives		0.0							0.0
MLLW-CH/AL	Heterogeneous Debris	3348.7	0.2	205.7	1416.0	898.6	88.9	110.2		6068.3
MLLW-CH/AL	Inorganic Debris	2030.3	120.4	7798.6	296.7	9.6				10255.4
MLLW-CH/AL	Inorganic Sludges/Particulates	4472.5	1575.5	24700.3	28310.1	3850.8	667.6	276.1	0.2	63853.0
MLLW-CH/AL	Lab Packs with Metals	14.5	38.7	7469.5	430.9	152.7		0.0		8106.3
MLLW-CH/AL	Lab Packs without Metals	4658.7	467.0		2610.4		8642.8	141.4		16520.3
MLLW-CH/AL	Liquid Mercury					300.9				300.9
MLLW-CH/AL	Organic Debris	7032.3	3308.4	5510.8	0.8	9.9				15862.2
MLLW-CH/AL	Organic Liquids	697.8	15071.1	102.5	1.8	0.4				15873.7
MLLW-CH/AL	Organic Sludges/Particulates	45.4	180.4	1010.8			9.9			1246.5
MLLW-CH/AL	Other	3425.4	41.7		43.2				0.2	3510.4
MLLW-CH/AL	Soil with <50% Debris	993.2	11.4		286.9		17.9			1309.5
MLLW-CH/AL	Solids		18.1							18.1
	Total by Contaminant	27650.1	21832.9	46911.3	35081.8	5648.2	9430.0	688.2	1.2	147243.8

Radiation Handling Category	MATRIX	Volumes in Cubic Meters								Total by Matrix
		Toxic Organics	Toxic Organics and Metals w/ Mercury	Toxic Organics and Metals w/o Mercury	Toxic Metals w/o Mercury	Toxic Metals w/ Mercury	Ignitable	Corrosive	Reactive	
MLLW-CH	Aqueous Liquid	458806.7	27008.4	46098.8	991.5	211.2		59.6		533166.2
MLLW-CH	Batteries		5103.0		294.1	63.2				5460.3
MLLW-CH	Beryllium Dust		0.0							0.0
MLLW-CH	Cemented Solids	1.1	310.0		122.3	5.5				438.9
MLLW-CH	Compressed Gases	13.7	3.2		6.2		73.7	2.3		99.0
MLLW-CH	Elemental Lead		10.8		5332.6					5343.4
MLLW-CH	Explosives	4.2				12.8				17.0
MLLW-CH	Heterogeneous Debris	204.0	23134.0	151.5	885.7	103.3	1.2			24479.7
MLLW-CH	Inorganic Debris	23.9	308.6	28.9	798.5	2684.6	0.2		3.9	3848.9
MLLW-CH	Inorganic Sludges/Particulates	355.9	1433.6	4.3	5767.1	1922.3	1.1			9484.4
MLLW-CH	Lab Packs with Metals	0.1	505.0	6.7	7.4	12.5	22.6		0.4	554.6
MLLW-CH	Lab Packs without Metals	43.2	1066.9	1055.6						2165.7
MLLW-CH	Liquid Mercury		13.1			1106.1				1119.2
MLLW-CH	Organic Debris	10488.5	62.4	67.7	580.3	9238.5				20437.4
MLLW-CH	Organic Liquids	894.3	19496.8	1297.5	349.0	35.1	529.8	0.0	0.7	22603.3
MLLW-CH	Organic Sludges/Particulates	1310.9	17906.8	84.8	510.0	1493.9	179.2	0.2	2.6	21488.4
MLLW-CH	Other	1.7	17.1	11.3	0.9	0.5		22.4	14.4	66.3
MLLW-CH	Reactive Metals	5.4	115.1		4004.4	0.5			66.7	4192.0
MLLW-CH	Soil with <50% Debris	0.8	480.8		0.1					481.7
MLLW-CH	Soils	4610.3	4783.5	0.0	23969.0	6923.2				40286.0
	Total by Contaminant	476744.6	101759.2	48827.1	43809.0	23913.5	807.8	84.5	88.7	695734.6

APPENDIX B-4

Listing of All CSTP Waste Streams by Site with Treatability Group and Waste Volume Information as used in this analysis.

**(Note that all current inventories are in cubic meters and
all generation rates are in cubic meters per five years)**

APPEND-B.XLS

SITE	Waste Stream Number	Radiation Category	Waste Matrix	Contaminant Type	Current Inventory (m3)	Five Year Generation (m3)
Ames Laboratory	0000000004	MLLW-CH	Aqueous Liquid	Corrosive	0.0	0.1
Ames Laboratory	0000000002	MLLW-CH	Elemental Lead	Toxic Metals w/o Mercury	0.1	0.0
Ames Laboratory	0000000001	MLLW-CH	Lab Packs with Metals	Toxic Metals w/o Mercury	0.0	0.0
Ames Laboratory	0000000003	MLLW-CH/AL	Lab Packs with Metals	Corrosive	0.0	0.0
Ames Laboratory	0000000005	MTRU-CH	Other	Toxic Metals w/o Mercury	0.0	0.1
Argonne National Laboratory - East	1120	MLLW-CH	Aqueous Liquid	Corrosive	0.1	0.8
Argonne National Laboratory - East	1190m	MLLW-CH	Aqueous Liquid	Toxic Metals w/o Mercury	0.7	5.6
Argonne National Laboratory - East	1190o	MLLW-CH	Aqueous Liquid	Toxic Organics	0.0	1.1
Argonne National Laboratory - East	7300	MLLW-CH	Beryllium Dust	Toxic Organics and Metals w/ Mercury	0.0	0.0
Argonne National Laboratory - East	5390	MLLW-CH	Heterogeneous Debris	Toxic Metals w/ Mercury	0.8	4.8
Argonne National Laboratory - East	5220	MLLW-CH	Heterogeneous Debris	Toxic Metals w/o Mercury	0.3	0.6
Argonne National Laboratory - East	3100	MLLW-CH	Inorganic Debris	Toxic Metals w/ Mercury	3.2	30.0
Argonne National Laboratory - East	3131	MLLW-CH	Inorganic Debris	Toxic Metals w/o Mercury	0.0	3.8
Argonne National Laboratory - East	3121	MLLW-CH	Inorganic Sludges/Particulates	Toxic Metals w/ Mercury	25.3	470.8
Argonne National Laboratory - East	5350	MLLW-CH	Organic Debris	Toxic Organics and Metals w/o Mercury	2.8	0.0
Argonne National Laboratory - East	2900	MLLW-CH	Organic Liquids	Toxic Organics	6.0	1.0
Argonne National Laboratory - East	6210	MLLW-CH	Reactive Metals	Reactive	0.1	7.7
Argonne National Laboratory - East	4100	MLLW-CH	Soils	Toxic Metals w/ Mercury	13.0	1571.2
Argonne National Laboratory - East	1110	MLLW-CH/AL	Aqueous Liquid	Toxic Metals w/o Mercury	2.9	2.8
Argonne National Laboratory - East	7200	MLLW-CH/AL	Elemental Lead	Toxic Metals w/o Mercury	5.4	77.9
Argonne National Laboratory - East	9300	MLLW-CH/AL	Inorganic Debris	Toxic Metals w/ Mercury	0.0	1.7
Argonne National Laboratory - East	5130	MLLW-CH/AL	Inorganic Debris	Toxic Metals w/o Mercury	0.1	0.3
Argonne National Laboratory - East	5110	MLLW-CH/AL	Inorganic Debris	Toxic Metals w/o Mercury	0.0	5.1
Argonne National Laboratory - East	5120	MLLW-CH/AL	Inorganic Debris	Toxic Metals w/o Mercury	0.0	0.4
Argonne National Laboratory - East	3121a	MLLW-CH/AL	Inorganic Sludges/Particulates	Toxic Organics and Metals w/ Mercury	17.7	0.0
Argonne National Laboratory - East	6100	MLLW-CH/AL	Lab Packs without Metals	Toxic Organics	32.4	0.0
Argonne National Laboratory - East	1190oT	MTRU-CH	Aqueous Liquid	Corrosive	0.1	0.4
Argonne National Laboratory - East	1190mT	MTRU-CH	Aqueous Liquid	Toxic Metals w/ Mercury	0.1	0.6
Argonne National Laboratory - East	1110T	MTRU-CH	Aqueous Liquid	Toxic Metals w/o Mercury	1.4	0.6
Argonne National Laboratory - East	7200T	MTRU-CH	Elemental Lead	Toxic Metals w/o Mercury	0.3	0.0
Argonne National Laboratory - East	9300T	MTRU-CH	Inorganic Debris	Toxic Metals w/ Mercury	0.0	0.0
Argonne National Laboratory - East	3121T	MTRU-CH	Inorganic Sludges/Particulates	Toxic Metals w/ Mercury	0.2	0.3
Argonne National Laboratory - East	3212T	MTRU-CH	Organic Sludges/Particulates	Toxic Organics and Metals w/ Mercury	0.0	0.0
BCL Decommissioning Project	BCLDP/Lead	MLLW-CH	Elemental Lead	Toxic Metals w/o Mercury	0.0	0.7
BCL Decommissioning Project	BCLDP/LPI	MLLW-CH	Lab Packs with Metals	Ignitable	0.0	0.2
BCL Decommissioning Project	BCLDP/LPO	MLLW-CH	Lab Packs without Metals	Toxic Organics	0.0	0.0
BCL Decommissioning Project	BCLDP/SSD	MLLW-CH	Soils	Toxic Organics	0.0	23.1
BETTIS	0000002070	MLLW-CH	Heterogeneous Debris	Toxic Organics	4.8	2.1
BETTIS	0000002056	MLLW-CH	Inorganic Debris	Toxic Metals w/ Mercury	0.2	0.2
BETTIS	0000002073	MLLW-CH	Inorganic Sludges/Particulates	Ignitable	0.0	0.0
BETTIS	0000000390	MLLW-CH	Inorganic Sludges/Particulates	Toxic Metals w/o Mercury	0.2	0.2
BETTIS	0000002074	MLLW-CH	Inorganic Sludges/Particulates	Toxic Metals w/o Mercury	0.0	0.0
BETTIS	0000002077	MLLW-CH	Lab Packs with Metals	Toxic Metals w/ Mercury	0.0	0.0
BETTIS	0000000839	MLLW-CH	Organic Debris	Toxic Organics	6.3	0.8
BETTIS	0000000838	MLLW-CH	Organic Debris	Toxic Organics	0.3	0.0
BETTIS	0000000050	MLLW-CH	Organic Debris	Toxic Organics	0.2	0.0
BETTIS	0000002062	MLLW-CH	Organic Liquids	Toxic Metals w/ Mercury	0.1	0.0
BETTIS	0000002075	MLLW-CH	Organic Liquids	Toxic Organics	0.0	0.0
BETTIS	0000000049	MLLW-CH	Organic Sludges/Particulates	Toxic Metals w/ Mercury	12.7	0.2
BETTIS	0000000051	MLLW-CH	Organic Sludges/Particulates	Toxic Metals w/o Mercury	0.5	0.2
BETTIS	0000000388	MLLW-CH	Organic Sludges/Particulates	Toxic Organics	1.7	0.0
BETTIS	0000002069	MLLW-CH	Organic Sludges/Particulates	Toxic Organics	0.0	0.0
BETTIS	0000002072	MLLW-CH	Soil with <50% Debris	Toxic Organics	0.8	0.0
BETTIS	0000002058	MLLW-CH	Soils	Toxic Organics	0.4	0.0
BETTIS	0000002076	MLLW-RH	Organic Sludges/Particulates	Toxic Metals w/o Mercury	0.0	0.0
BROOKHAVEN NATIONAL LABORATORY	M20	MLLW-CH	Elemental Lead	Toxic Metals w/o Mercury	1.5	0.7
BROOKHAVEN NATIONAL LABORATORY	M22	MLLW-CH	Inorganic Debris	Toxic Metals w/ Mercury	0.0	0.1
BROOKHAVEN NATIONAL LABORATORY	M25	MLLW-CH	Lab Packs with Metals	Reactive	0.0	0.1
BROOKHAVEN NATIONAL LABORATORY	M27	MLLW-CH	Lab Packs with Metals	Toxic Metals w/o Mercury	5.6	0.1
BROOKHAVEN NATIONAL LABORATORY	M21	MLLW-CH	Lab Packs without Metals	Toxic Organics	6.0	0.5
BROOKHAVEN NATIONAL LABORATORY	M29	MLLW-CH	Lab Packs without Metals	Toxic Organics and Metals w/ Mercury	0.0	0.1
BROOKHAVEN NATIONAL LABORATORY	M24	MLLW-CH	Organic Liquids	Toxic Metals w/ Mercury	0.3	0.5
BROOKHAVEN NATIONAL LABORATORY	M26	MLLW-CH	Organic Liquids	Toxic Organics	0.6	0.1
Charleston Naval Shipyard	0000000004	MLLW-CH	Elemental Lead	Toxic Metals w/o Mercury	0.0	2.0
Charleston Naval Shipyard	0000000005	MLLW-CH	Inorganic Sludges/Particulates	Toxic Metals w/o Mercury	0.0	0.2
Charleston Naval Shipyard	0000000003	MLLW-CH	Organic Debris	Toxic Metals w/o Mercury	0.0	3.0
ETEC	1124	MLLW-CH	Aqueous Liquid	Toxic Metals w/o Mercury	0.1	0.0
ETEC	381.1115	MLLW-CH	Elemental Lead	Toxic Metals w/o Mercury	5.0	0.1
ETEC	HEPA System	MLLW-CH	Reactive Metals	Reactive	0.0	0.0
ETEC	1121	MLLW-CH	Soils	Toxic Metals w/ Mercury	600.0	0.0
ETEC	382	MTRU-CH	Elemental Lead	Toxic Metals w/o Mercury	0.0	0.0
Fernald Environmental Management Project	01692	MLLW-CH	Aqueous Liquid	Corrosive	0.4	0.0
Fernald Environmental Management Project	00844	MLLW-CH	Aqueous Liquid	Toxic Metals w/o Mercury	785.0	0.0
Fernald Environmental Management Project	01297	MLLW-CH	Aqueous Liquid	Toxic Metals w/o Mercury	5.7	0.0
Fernald Environmental Management Project	00873	MLLW-CH	Aqueous Liquid	Toxic Metals w/o Mercury	1.2	4.6
Fernald Environmental Management Project	00594	MLLW-CH	Aqueous Liquid	Toxic Metals w/o Mercury	0.6	0.0

APPEND-B.XLS

SITE	Waste Stream Number	Radiation Category	Waste Matrix	Contaminant Type	Current Inventory (m3)	Five Year Generation (m3)
Fernald Environmental Management Project	01751	MLLW-CH	Aqueous Liquid	Toxic Metals w/o Mercury	0.8	0.0
Fernald Environmental Management Project	20046	MLLW-CH	Aqueous Liquid	Toxic Metals w/o Mercury	0.4	0.0
Fernald Environmental Management Project	40181	MLLW-CH	Aqueous Liquid	Toxic Metals w/o Mercury	0.4	0.0
Fernald Environmental Management Project	01185	MLLW-CH	Aqueous Liquid	Toxic Metals w/o Mercury	0.2	1.1
Fernald Environmental Management Project	30080	MLLW-CH	Aqueous Liquid	Toxic Metals w/o Mercury	0.2	0.0
Fernald Environmental Management Project	00383	MLLW-CH	Aqueous Liquid	Toxic Metals w/o Mercury	0.2	0.0
Fernald Environmental Management Project	01536	MLLW-CH	Aqueous Liquid	Toxic Organics	32.4	0.0
Fernald Environmental Management Project	01891	MLLW-CH	Aqueous Liquid	Toxic Organics	16.7	0.0
Fernald Environmental Management Project	10014	MLLW-CH	Aqueous Liquid	Toxic Organics	3.0	0.0
Fernald Environmental Management Project	00358	MLLW-CH	Aqueous Liquid	Toxic Organics	0.4	0.0
Fernald Environmental Management Project	02257	MLLW-CH	Aqueous Liquid	Toxic Organics	0.2	0.0
Fernald Environmental Management Project	01180	MLLW-CH	Aqueous Liquid	Toxic Organics	0.2	0.0
Fernald Environmental Management Project	01229	MLLW-CH	Aqueous Liquid	Toxic Organics and Metals w/o Mercury	3.5	18.1
Fernald Environmental Management Project	01707	MLLW-CH	Aqueous Liquid	Toxic Organics and Metals w/o Mercury	1.3	0.0
Fernald Environmental Management Project	01178	MLLW-CH	Aqueous Liquid	Toxic Organics and Metals w/o Mercury	0.6	0.0
Fernald Environmental Management Project	01938	MLLW-CH	Aqueous Liquid	Toxic Organics and Metals w/o Mercury	0.2	0.0
Fernald Environmental Management Project	02211	MLLW-CH	Batteries	Toxic Metals w/ Mercury	0.4	0.0
Fernald Environmental Management Project	00405	MLLW-CH	Batteries	Toxic Metals w/ Mercury	0.2	1.1
Fernald Environmental Management Project	00676	MLLW-CH	Batteries	Toxic Metals w/ Mercury	0.2	1.1
Fernald Environmental Management Project	00382	MLLW-CH	Batteries	Toxic Metals w/ Mercury	0.2	0.0
Fernald Environmental Management Project	00423	MLLW-CH	Batteries	Toxic Metals w/ Mercury	0.0	0.1
Fernald Environmental Management Project	00433	MLLW-CH	Compressed Gases	Ignitable	0.2	0.0
Fernald Environmental Management Project	01987	MLLW-CH	Elemental Lead	Toxic Metals w/o Mercury	0.0	0.0
Fernald Environmental Management Project	50358	MLLW-CH	Heterogeneous Debris	Ignitable	0.8	0.0
Fernald Environmental Management Project	50407	MLLW-CH	Heterogeneous Debris	Ignitable	0.2	0.0
Fernald Environmental Management Project	50361	MLLW-CH	Heterogeneous Debris	Toxic Metals w/ Mercury	0.8	0.0
Fernald Environmental Management Project	60011	MLLW-CH	Heterogeneous Debris	Toxic Metals w/o Mercury	11.0	0.0
Fernald Environmental Management Project	30009	MLLW-CH	Heterogeneous Debris	Toxic Metals w/o Mercury	10.4	0.0
Fernald Environmental Management Project	01421	MLLW-CH	Heterogeneous Debris	Toxic Metals w/o Mercury	0.2	0.0
Fernald Environmental Management Project	00659	MLLW-CH	Heterogeneous Debris	Toxic Metals w/o Mercury	0.2	0.0
Fernald Environmental Management Project	10011	MLLW-CH	Heterogeneous Debris	Toxic Metals w/o Mercury	0.2	0.0
Fernald Environmental Management Project	20107	MLLW-CH	Heterogeneous Debris	Toxic Metals w/o Mercury	0.2	0.0
Fernald Environmental Management Project	50014	MLLW-CH	Heterogeneous Debris	Toxic Organics	1.0	0.0
Fernald Environmental Management Project	30074	MLLW-CH	Heterogeneous Debris	Toxic Organics	1.0	0.0
Fernald Environmental Management Project	20036	MLLW-CH	Heterogeneous Debris	Toxic Organics	0.8	0.0
Fernald Environmental Management Project	00644	MLLW-CH	Heterogeneous Debris	Toxic Organics	0.6	0.0
Fernald Environmental Management Project	01716	MLLW-CH	Heterogeneous Debris	Toxic Organics	0.4	0.0
Fernald Environmental Management Project	20114	MLLW-CH	Heterogeneous Debris	Toxic Organics	0.4	0.0
Fernald Environmental Management Project	01428	MLLW-CH	Heterogeneous Debris	Toxic Organics	0.2	0.0
Fernald Environmental Management Project	00527	MLLW-CH	Heterogeneous Debris	Toxic Organics	0.2	0.0
Fernald Environmental Management Project	00628	MLLW-CH	Heterogeneous Debris	Toxic Organics	0.2	0.0
Fernald Environmental Management Project	00627	MLLW-CH	Heterogeneous Debris	Toxic Organics	0.2	0.0
Fernald Environmental Management Project	01427	MLLW-CH	Heterogeneous Debris	Toxic Organics	0.2	0.0
Fernald Environmental Management Project	10023	MLLW-CH	Heterogeneous Debris	Toxic Organics and Metals w/o Mercury	3.8	0.0
Fernald Environmental Management Project	20094	MLLW-CH	Heterogeneous Debris	Toxic Organics and Metals w/o Mercury	1.7	0.0
Fernald Environmental Management Project	00434	MLLW-CH	Heterogeneous Debris	Toxic Organics and Metals w/o Mercury	1.4	2.4
Fernald Environmental Management Project	20095	MLLW-CH	Heterogeneous Debris	Toxic Organics and Metals w/o Mercury	1.2	2.0
Fernald Environmental Management Project	01425	MLLW-CH	Heterogeneous Debris	Toxic Organics and Metals w/o Mercury	0.6	0.0
Fernald Environmental Management Project	00399	MLLW-CH	Heterogeneous Debris	Toxic Organics and Metals w/o Mercury	0.2	1.0
Fernald Environmental Management Project	00415	MLLW-CH	Heterogeneous Debris	Toxic Organics and Metals w/o Mercury	0.2	6.3
Fernald Environmental Management Project	00480	MLLW-CH	Heterogeneous Debris	Toxic Organics and Metals w/o Mercury	0.2	0.0
Fernald Environmental Management Project	30053	MLLW-CH	Heterogeneous Debris	Toxic Organics and Metals w/o Mercury	0.2	0.0
Fernald Environmental Management Project	00417	MLLW-CH	Heterogeneous Debris	Toxic Organics and Metals w/o Mercury	0.2	0.0
Fernald Environmental Management Project	40137	MLLW-CH	Inorganic Debris	Ignitable	0.2	0.0
Fernald Environmental Management Project	01199	MLLW-CH	Inorganic Debris	Toxic Metals w/ Mercury	3.5	3.6
Fernald Environmental Management Project	00432	MLLW-CH	Inorganic Debris	Toxic Metals w/ Mercury	1.2	3.6
Fernald Environmental Management Project	10018	MLLW-CH	Inorganic Debris	Toxic Metals w/ Mercury	0.8	0.0
Fernald Environmental Management Project	00091	MLLW-CH	Inorganic Debris	Toxic Metals w/ Mercury	0.2	0.0
Fernald Environmental Management Project	10025	MLLW-CH	Inorganic Debris	Toxic Metals w/o Mercury	30.6	0.0
Fernald Environmental Management Project	01271	MLLW-CH	Inorganic Debris	Toxic Metals w/o Mercury	7.7	0.0
Fernald Environmental Management Project	30065	MLLW-CH	Inorganic Debris	Toxic Metals w/o Mercury	6.4	0.0
Fernald Environmental Management Project	50031	MLLW-CH	Inorganic Debris	Toxic Metals w/o Mercury	3.3	0.0
Fernald Environmental Management Project	10005	MLLW-CH	Inorganic Debris	Toxic Metals w/o Mercury	1.7	0.0
Fernald Environmental Management Project	50063	MLLW-CH	Inorganic Debris	Toxic Metals w/o Mercury	1.5	0.0
Fernald Environmental Management Project	20151	MLLW-CH	Inorganic Debris	Toxic Metals w/o Mercury	0.6	0.0
Fernald Environmental Management Project	30039	MLLW-CH	Inorganic Debris	Toxic Metals w/o Mercury	0.6	0.0
Fernald Environmental Management Project	80140	MLLW-CH	Inorganic Debris	Toxic Metals w/o Mercury	0.4	0.0
Fernald Environmental Management Project	40152	MLLW-CH	Inorganic Debris	Toxic Metals w/o Mercury	0.4	0.0
Fernald Environmental Management Project	01080	MLLW-CH	Inorganic Debris	Toxic Metals w/o Mercury	0.2	0.0
Fernald Environmental Management Project	50367	MLLW-CH	Inorganic Debris	Toxic Metals w/o Mercury	0.2	0.0
Fernald Environmental Management Project	01537	MLLW-CH	Inorganic Debris	Toxic Organics	23.9	0.0
Fernald Environmental Management Project	50036	MLLW-CH	Inorganic Debris	Toxic Organics and Metals w/o Mercury	1.9	0.0
Fernald Environmental Management Project	50185	MLLW-CH	Inorganic Sludges/Particulates	Toxic Metals w/ Mercury	0.2	0.0
Fernald Environmental Management Project	40122	MLLW-CH	Inorganic Sludges/Particulates	Toxic Metals w/ Mercury	0.2	0.0
Fernald Environmental Management Project	10022	MLLW-CH	Inorganic Sludges/Particulates	Toxic Metals w/ Mercury	179.7	0.0
Fernald Environmental Management Project	50323	MLLW-CH	Inorganic Sludges/Particulates	Toxic Metals w/o Mercury	142.0	0.0

APPENDIX 19

SITE	Waste Stream Number	Radiation Category	Waste Matrix	Contaminant Type	Current Inventory (m3)	Five Year Generation (m3)
Fernald Environmental Management Project	50148	MLLW-CH	Inorganic Sludges/Particulates	Toxic Metals w/o Mercury	113.8	0.0
Fernald Environmental Management Project	50185	MLLW-CH	Inorganic Sludges/Particulates	Toxic Metals w/o Mercury	11.9	0.0
Fernald Environmental Management Project	50180	MLLW-CH	Inorganic Sludges/Particulates	Toxic Metals w/o Mercury	7.9	0.0
Fernald Environmental Management Project	10002	MLLW-CH	Inorganic Sludges/Particulates	Toxic Metals w/o Mercury	8.9	0.0
Fernald Environmental Management Project	50408	MLLW-CH	Inorganic Sludges/Particulates	Toxic Metals w/o Mercury	8.8	0.0
Fernald Environmental Management Project	50174	MLLW-CH	Inorganic Sludges/Particulates	Toxic Metals w/o Mercury	8.4	0.0
Fernald Environmental Management Project	10013	MLLW-CH	Inorganic Sludges/Particulates	Toxic Metals w/o Mercury	6.0	0.0
Fernald Environmental Management Project	20015	MLLW-CH	Inorganic Sludges/Particulates	Toxic Metals w/o Mercury	5.0	0.0
Fernald Environmental Management Project	50293	MLLW-CH	Inorganic Sludges/Particulates	Toxic Metals w/o Mercury	5.0	0.0
Fernald Environmental Management Project	40186	MLLW-CH	Inorganic Sludges/Particulates	Toxic Metals w/o Mercury	3.7	0.0
Fernald Environmental Management Project	50173	MLLW-CH	Inorganic Sludges/Particulates	Toxic Metals w/o Mercury	3.3	0.0
Fernald Environmental Management Project	50188	MLLW-CH	Inorganic Sludges/Particulates	Toxic Metals w/o Mercury	2.5	0.0
Fernald Environmental Management Project	20024	MLLW-CH	Inorganic Sludges/Particulates	Toxic Metals w/o Mercury	1.9	0.0
Fernald Environmental Management Project	30036	MLLW-CH	Inorganic Sludges/Particulates	Toxic Metals w/o Mercury	1.0	0.0
Fernald Environmental Management Project	20033	MLLW-CH	Inorganic Sludges/Particulates	Toxic Metals w/o Mercury	1.0	0.0
Fernald Environmental Management Project	20035	MLLW-CH	Inorganic Sludges/Particulates	Toxic Metals w/o Mercury	0.8	0.0
Fernald Environmental Management Project	50405	MLLW-CH	Inorganic Sludges/Particulates	Toxic Metals w/o Mercury	0.8	0.0
Fernald Environmental Management Project	50387	MLLW-CH	Inorganic Sludges/Particulates	Toxic Metals w/o Mercury	0.4	0.0
Fernald Environmental Management Project	30060	MLLW-CH	Inorganic Sludges/Particulates	Toxic Metals w/o Mercury	0.4	0.0
Fernald Environmental Management Project	20027	MLLW-CH	Inorganic Sludges/Particulates	Toxic Metals w/o Mercury	0.4	0.0
Fernald Environmental Management Project	50102	MLLW-CH	Inorganic Sludges/Particulates	Toxic Metals w/o Mercury	0.4	0.0
Fernald Environmental Management Project	20047	MLLW-CH	Inorganic Sludges/Particulates	Toxic Metals w/o Mercury	0.4	0.0
Fernald Environmental Management Project	50189	MLLW-CH	Inorganic Sludges/Particulates	Toxic Metals w/o Mercury	0.2	1.0
Fernald Environmental Management Project	50351	MLLW-CH	Inorganic Sludges/Particulates	Toxic Metals w/o Mercury	0.2	0.0
Fernald Environmental Management Project	50349	MLLW-CH	Inorganic Sludges/Particulates	Toxic Metals w/o Mercury	0.2	0.0
Fernald Environmental Management Project	20139	MLLW-CH	Inorganic Sludges/Particulates	Toxic Metals w/o Mercury	0.2	0.0
Fernald Environmental Management Project	40185	MLLW-CH	Inorganic Sludges/Particulates	Toxic Metals w/o Mercury	0.2	0.0
Fernald Environmental Management Project	50091	MLLW-CH	Inorganic Sludges/Particulates	Toxic Metals w/o Mercury	0.2	0.0
Fernald Environmental Management Project	20058	MLLW-CH	Inorganic Sludges/Particulates	Toxic Metals w/o Mercury	0.2	0.0
Fernald Environmental Management Project	50314	MLLW-CH	Inorganic Sludges/Particulates	Toxic Metals w/o Mercury	0.2	0.0
Fernald Environmental Management Project	00817	MLLW-CH	Inorganic Sludges/Particulates	Toxic Metals w/o Mercury	0.2	0.0
Fernald Environmental Management Project	30004	MLLW-CH	Inorganic Sludges/Particulates	Toxic Organics	112.3	0.0
Fernald Environmental Management Project	60152	MLLW-CH	Inorganic Sludges/Particulates	Toxic Organics	71.8	0.0
Fernald Environmental Management Project	60149	MLLW-CH	Inorganic Sludges/Particulates	Toxic Organics	52.2	0.0
Fernald Environmental Management Project	50154	MLLW-CH	Inorganic Sludges/Particulates	Toxic Organics	33.9	0.0
Fernald Environmental Management Project	50152	MLLW-CH	Inorganic Sludges/Particulates	Toxic Organics	8.7	0.0
Fernald Environmental Management Project	50129	MLLW-CH	Inorganic Sludges/Particulates	Toxic Organics	7.9	0.0
Fernald Environmental Management Project	50079	MLLW-CH	Inorganic Sludges/Particulates	Toxic Organics	4.4	0.0
Fernald Environmental Management Project	50113	MLLW-CH	Inorganic Sludges/Particulates	Toxic Organics	4.0	0.0
Fernald Environmental Management Project	00588	MLLW-CH	Inorganic Sludges/Particulates	Toxic Organics	1.7	0.0
Fernald Environmental Management Project	50175	MLLW-CH	Inorganic Sludges/Particulates	Toxic Organics	1.0	0.0
Fernald Environmental Management Project	50100	MLLW-CH	Inorganic Sludges/Particulates	Toxic Organics	0.8	0.0
Fernald Environmental Management Project	50131	MLLW-CH	Inorganic Sludges/Particulates	Toxic Organics	0.5	0.0
Fernald Environmental Management Project	50183	MLLW-CH	Inorganic Sludges/Particulates	Toxic Organics	0.4	0.0
Fernald Environmental Management Project	50170	MLLW-CH	Inorganic Sludges/Particulates	Toxic Organics and Metals w/o Mercury	0.8	0.0
Fernald Environmental Management Project	10034	MLLW-CH	Lab Packs without Metals	Toxic Organics	0.2	0.0
Fernald Environmental Management Project	10035	MLLW-CH	Lab Packs without Metals	Toxic Organics	0.2	0.0
Fernald Environmental Management Project	00389	MLLW-CH	Organic Debris	Toxic Metals w/ Mercury	0.2	2300.0
Fernald Environmental Management Project	10017	MLLW-CH	Organic Debris	Toxic Metals w/o Mercury	0.6	0.0
Fernald Environmental Management Project	20120	MLLW-CH	Organic Debris	Toxic Metals w/o Mercury	0.4	0.0
Fernald Environmental Management Project	50058	MLLW-CH	Organic Debris	Toxic Metals w/o Mercury	0.2	0.0
Fernald Environmental Management Project	50061	MLLW-CH	Organic Debris	Toxic Metals w/o Mercury	0.2	0.0
Fernald Environmental Management Project	10012	MLLW-CH	Organic Debris	Toxic Organics	6.0	0.0
Fernald Environmental Management Project	01501	MLLW-CH	Organic Debris	Toxic Organics	1.0	0.0
Fernald Environmental Management Project	50359	MLLW-CH	Organic Debris	Toxic Organics	0.8	0.0
Fernald Environmental Management Project	50002	MLLW-CH	Organic Debris	Toxic Organics	0.6	0.0
Fernald Environmental Management Project	00396	MLLW-CH	Organic Debris	Toxic Organics	0.4	1300.0
Fernald Environmental Management Project	10024	MLLW-CH	Organic Debris	Toxic Organics	0.4	0.0
Fernald Environmental Management Project	50025	MLLW-CH	Organic Debris	Toxic Organics	0.4	0.0
Fernald Environmental Management Project	00398	MLLW-CH	Organic Debris	Toxic Organics	0.2	1200.0
Fernald Environmental Management Project	30075	MLLW-CH	Organic Debris	Toxic Organics	0.2	0.0
Fernald Environmental Management Project	50010	MLLW-CH	Organic Debris	Toxic Organics	0.2	0.0
Fernald Environmental Management Project	00180	MLLW-CH	Organic Debris	Toxic Organics	0.2	0.0
Fernald Environmental Management Project	00387	MLLW-CH	Organic Debris	Toxic Organics and Metals w/o Mercury	1.2	8.4
Fernald Environmental Management Project	00410	MLLW-CH	Organic Debris	Toxic Organics and Metals w/o Mercury	0.4	10.5
Fernald Environmental Management Project	00404	MLLW-CH	Organic Debris	Toxic Organics and Metals w/o Mercury	0.4	1.8
Fernald Environmental Management Project	00376	MLLW-CH	Organic Debris	Toxic Organics and Metals w/o Mercury	0.2	0.0
Fernald Environmental Management Project	00380	MLLW-CH	Organic Debris	Toxic Organics and Metals w/o Mercury	0.2	0.0
Fernald Environmental Management Project	00413	MLLW-CH	Organic Debris	Toxic Organics and Metals w/o Mercury	0.2	0.0
Fernald Environmental Management Project	00788	MLLW-CH	Organic Liquids	Ignitable	6.4	0.0
Fernald Environmental Management Project	01432	MLLW-CH	Organic Liquids	Ignitable	1.0	5.3
Fernald Environmental Management Project	01182	MLLW-CH	Organic Liquids	Ignitable	1.0	5.2
Fernald Environmental Management Project	00870	MLLW-CH	Organic Liquids	Ignitable	0.2	5.1
Fernald Environmental Management Project	00508	MLLW-CH	Organic Liquids	Ignitable	0.2	0.0
Fernald Environmental Management Project	00533	MLLW-CH	Organic Liquids	Ignitable	0.2	0.0
Fernald Environmental Management Project	00587	MLLW-CH	Organic Liquids	Ignitable	0.2	0.0

APPEND-R.XLS

SITE	Waste Stream Number	Radiation Category	Waste Matrix	Contaminant Type	Current Inventory (m3)	Five Year Generation (m3)
Fernald Environmental Management Project	01337	MLLW-CH	Organic Liquids	Ignitable	0.2	0.0
Fernald Environmental Management Project	00428	MLLW-CH	Organic Liquids	Ignitable	0.0	0.0
Fernald Environmental Management Project	01852	MLLW-CH	Organic Liquids	Toxic Metals w/o Mercury	38.1	0.0
Fernald Environmental Management Project	00393	MLLW-CH	Organic Liquids	Toxic Metals w/o Mercury	0.4	2.1
Fernald Environmental Management Project	50095	MLLW-CH	Organic Liquids	Toxic Metals w/o Mercury	0.2	0.0
Fernald Environmental Management Project	20003	MLLW-CH	Organic Liquids	Toxic Organics	58.2	0.0
Fernald Environmental Management Project	30034	MLLW-CH	Organic Liquids	Toxic Organics	17.6	0.0
Fernald Environmental Management Project	20028	MLLW-CH	Organic Liquids	Toxic Organics	10.0	0.0
Fernald Environmental Management Project	60331	MLLW-CH	Organic Liquids	Toxic Organics	4.4	0.0
Fernald Environmental Management Project	30033	MLLW-CH	Organic Liquids	Toxic Organics	3.6	0.0
Fernald Environmental Management Project	20021	MLLW-CH	Organic Liquids	Toxic Organics	3.1	0.0
Fernald Environmental Management Project	00426	MLLW-CH	Organic Liquids	Toxic Organics	2.9	5.6
Fernald Environmental Management Project	10027	MLLW-CH	Organic Liquids	Toxic Organics	2.9	0.0
Fernald Environmental Management Project	00633	MLLW-CH	Organic Liquids	Toxic Organics	2.8	0.0
Fernald Environmental Management Project	01708	MLLW-CH	Organic Liquids	Toxic Organics	1.4	0.0
Fernald Environmental Management Project	02224	MLLW-CH	Organic Liquids	Toxic Organics	0.8	0.0
Fernald Environmental Management Project	00418	MLLW-CH	Organic Liquids	Toxic Organics	0.7	1.2
Fernald Environmental Management Project	10030	MLLW-CH	Organic Liquids	Toxic Organics	0.6	0.0
Fernald Environmental Management Project	00632	MLLW-CH	Organic Liquids	Toxic Organics	0.6	0.0
Fernald Environmental Management Project	01725	MLLW-CH	Organic Liquids	Toxic Organics	0.6	0.0
Fernald Environmental Management Project	00425	MLLW-CH	Organic Liquids	Toxic Organics	0.6	0.1
Fernald Environmental Management Project	00386	MLLW-CH	Organic Liquids	Toxic Organics	0.4	1.8
Fernald Environmental Management Project	10032	MLLW-CH	Organic Liquids	Toxic Organics	0.4	0.0
Fernald Environmental Management Project	00447	MLLW-CH	Organic Liquids	Toxic Organics	0.4	0.0
Fernald Environmental Management Project	20142	MLLW-CH	Organic Liquids	Toxic Organics	0.4	0.0
Fernald Environmental Management Project	01998	MLLW-CH	Organic Liquids	Toxic Organics	0.4	0.3
Fernald Environmental Management Project	00455	MLLW-CH	Organic Liquids	Toxic Organics	0.2	0.0
Fernald Environmental Management Project	01709	MLLW-CH	Organic Liquids	Toxic Organics	0.2	1.0
Fernald Environmental Management Project	00397	MLLW-CH	Organic Liquids	Toxic Organics	0.2	1.0
Fernald Environmental Management Project	00419	MLLW-CH	Organic Liquids	Toxic Organics	0.2	1.0
Fernald Environmental Management Project	00507	MLLW-CH	Organic Liquids	Toxic Organics	0.2	0.0
Fernald Environmental Management Project	00421	MLLW-CH	Organic Liquids	Toxic Organics	0.2	0.0
Fernald Environmental Management Project	00438	MLLW-CH	Organic Liquids	Toxic Organics	0.2	0.0
Fernald Environmental Management Project	00638	MLLW-CH	Organic Liquids	Toxic Organics	0.2	0.0
Fernald Environmental Management Project	00658	MLLW-CH	Organic Liquids	Toxic Organics	0.2	0.0
Fernald Environmental Management Project	20054	MLLW-CH	Organic Liquids	Toxic Organics	0.2	0.0
Fernald Environmental Management Project	00385	MLLW-CH	Organic Liquids	Toxic Organics	0.2	0.0
Fernald Environmental Management Project	00457	MLLW-CH	Organic Liquids	Toxic Organics	0.2	0.0
Fernald Environmental Management Project	01708	MLLW-CH	Organic Liquids	Toxic Organics	0.2	0.0
Fernald Environmental Management Project	20055	MLLW-CH	Organic Liquids	Toxic Organics	0.2	0.0
Fernald Environmental Management Project	00459	MLLW-CH	Organic Liquids	Toxic Organics	0.2	0.0
Fernald Environmental Management Project	00478	MLLW-CH	Organic Liquids	Toxic Organics	0.2	0.0
Fernald Environmental Management Project	00493	MLLW-CH	Organic Liquids	Toxic Organics	0.2	0.0
Fernald Environmental Management Project	00485	MLLW-CH	Organic Liquids	Toxic Organics	0.2	0.0
Fernald Environmental Management Project	50022	MLLW-CH	Organic Liquids	Toxic Organics	0.2	0.0
Fernald Environmental Management Project	00422	MLLW-CH	Organic Liquids	Toxic Organics	0.0	0.0
Fernald Environmental Management Project	00479	MLLW-CH	Organic Liquids	Toxic Organics and Metals w/ Mercury	0.4	1.1
Fernald Environmental Management Project	00414	MLLW-CH	Organic Liquids	Toxic Organics and Metals w/ Mercury	0.4	0.0
Fernald Environmental Management Project	02259	MLLW-CH	Organic Liquids	Toxic Organics and Metals w/ Mercury	0.2	0.0
Fernald Environmental Management Project	10008	MLLW-CH	Organic Liquids	Toxic Organics and Metals w/ Mercury	0.2	0.0
Fernald Environmental Management Project	00388	MLLW-CH	Organic Liquids	Toxic Organics and Metals w/o Mercury	6.7	22.8
Fernald Environmental Management Project	10004	MLLW-CH	Organic Liquids	Toxic Organics and Metals w/o Mercury	4.6	0.0
Fernald Environmental Management Project	60069	MLLW-CH	Organic Liquids	Toxic Organics and Metals w/o Mercury	2.7	0.0
Fernald Environmental Management Project	10028	MLLW-CH	Organic Liquids	Toxic Organics and Metals w/o Mercury	2.1	0.0
Fernald Environmental Management Project	02235	MLLW-CH	Organic Liquids	Toxic Organics and Metals w/o Mercury	2.1	0.0
Fernald Environmental Management Project	20031	MLLW-CH	Organic Liquids	Toxic Organics and Metals w/o Mercury	1.9	0.0
Fernald Environmental Management Project	10029	MLLW-CH	Organic Liquids	Toxic Organics and Metals w/o Mercury	1.7	0.0
Fernald Environmental Management Project	10018	MLLW-CH	Organic Liquids	Toxic Organics and Metals w/o Mercury	1.2	0.0

APPEND-B.XLS

SITE	Waste Stream Number	Radiation Category	Waste Matrix	Contaminant Type	Current Inventory (m3)	Five Year Generation (m3)
Fernald Environmental Management Project	30081	MLLW-CH	Organic Sludges/Particulates	Corrosive	0.2	0.0
Fernald Environmental Management Project	30008	MLLW-CH	Organic Sludges/Particulates	Ignitable	32.2	0.0
Fernald Environmental Management Project	30088	MLLW-CH	Organic Sludges/Particulates	Ignitable	14.0	0.0
Fernald Environmental Management Project	30385	MLLW-CH	Organic Sludges/Particulates	Ignitable	3.3	0.0
Fernald Environmental Management Project	30045	MLLW-CH	Organic Sludges/Particulates	Ignitable	0.6	0.0
Fernald Environmental Management Project	30346	MLLW-CH	Organic Sludges/Particulates	Ignitable	0.4	0.0
Fernald Environmental Management Project	30347	MLLW-CH	Organic Sludges/Particulates	Ignitable	0.2	0.0
Fernald Environmental Management Project	20007	MLLW-CH	Organic Sludges/Particulates	Toxic Metals w/o Mercury	64.7	0.0
Fernald Environmental Management Project	30047	MLLW-CH	Organic Sludges/Particulates	Toxic Metals w/o Mercury	1.0	0.0
Fernald Environmental Management Project	30177	MLLW-CH	Organic Sludges/Particulates	Toxic Metals w/o Mercury	0.8	0.0
Fernald Environmental Management Project	20145	MLLW-CH	Organic Sludges/Particulates	Toxic Metals w/o Mercury	0.4	0.0
Fernald Environmental Management Project	30204	MLLW-CH	Organic Sludges/Particulates	Toxic Metals w/o Mercury	0.2	0.0
Fernald Environmental Management Project	30202	MLLW-CH	Organic Sludges/Particulates	Toxic Metals w/o Mercury	0.2	0.0
Fernald Environmental Management Project	01832	MLLW-CH	Organic Sludges/Particulates	Toxic Organics	423.0	0.0
Fernald Environmental Management Project	30101	MLLW-CH	Organic Sludges/Particulates	Toxic Organics	145.4	0.0
Fernald Environmental Management Project	10010	MLLW-CH	Organic Sludges/Particulates	Toxic Organics	109.6	0.0
Fernald Environmental Management Project	20006	MLLW-CH	Organic Sludges/Particulates	Toxic Organics	26.4	0.0
Fernald Environmental Management Project	30005	MLLW-CH	Organic Sludges/Particulates	Toxic Organics	16.4	0.0
Fernald Environmental Management Project	30010	MLLW-CH	Organic Sludges/Particulates	Toxic Organics	11.0	0.0
Fernald Environmental Management Project	10026	MLLW-CH	Organic Sludges/Particulates	Toxic Organics	9.6	0.0
Fernald Environmental Management Project	30026	MLLW-CH	Organic Sludges/Particulates	Toxic Organics	5.4	0.0
Fernald Environmental Management Project	30018	MLLW-CH	Organic Sludges/Particulates	Toxic Organics	4.4	0.0
Fernald Environmental Management Project	30119	MLLW-CH	Organic Sludges/Particulates	Toxic Organics	3.3	0.0
Fernald Environmental Management Project	10003	MLLW-CH	Organic Sludges/Particulates	Toxic Organics	2.9	0.0
Fernald Environmental Management Project	30339	MLLW-CH	Organic Sludges/Particulates	Toxic Organics	2.3	0.0
Fernald Environmental Management Project	30046	MLLW-CH	Organic Sludges/Particulates	Toxic Organics	2.1	0.0
Fernald Environmental Management Project	00584	MLLW-CH	Organic Sludges/Particulates	Toxic Organics	1.7	0.0
Fernald Environmental Management Project	00390	MLLW-CH	Organic Sludges/Particulates	Toxic Organics	0.8	1.4
Fernald Environmental Management Project	30042	MLLW-CH	Organic Sludges/Particulates	Toxic Organics	0.8	0.0
Fernald Environmental Management Project	30037	MLLW-CH	Organic Sludges/Particulates	Toxic Organics	0.8	0.0
Fernald Environmental Management Project	20037	MLLW-CH	Organic Sludges/Particulates	Toxic Organics	0.6	0.0
Fernald Environmental Management Project	10031	MLLW-CH	Organic Sludges/Particulates	Toxic Organics	0.6	0.0
Fernald Environmental Management Project	00517	MLLW-CH	Organic Sludges/Particulates	Toxic Organics	0.4	0.0
Fernald Environmental Management Project	00456	MLLW-CH	Organic Sludges/Particulates	Toxic Organics	0.4	0.0
Fernald Environmental Management Project	00194	MLLW-CH	Organic Sludges/Particulates	Toxic Organics	0.2	0.0
Fernald Environmental Management Project	30085	MLLW-CH	Organic Sludges/Particulates	Toxic Organics	0.2	0.0
Fernald Environmental Management Project	20045	MLLW-CH	Organic Sludges/Particulates	Toxic Organics	0.2	0.0
Fernald Environmental Management Project	30200	MLLW-CH	Organic Sludges/Particulates	Toxic Organics	0.2	0.0
Fernald Environmental Management Project	00448	MLLW-CH	Organic Sludges/Particulates	Toxic Organics	0.2	0.0
Fernald Environmental Management Project	20048	MLLW-CH	Organic Sludges/Particulates	Toxic Organics	0.2	0.0
Fernald Environmental Management Project	30123	MLLW-CH	Organic Sludges/Particulates	Toxic Organics	0.2	0.0
Fernald Environmental Management Project	00700	MLLW-CH	Reactive Metals	Reactive	0.2	0.0
Fernald Environmental Management Project	30089	MLLW-CH	Reactive Metals	Toxic Organics and Metals w/ Mercury	35.2	0.0
Fernald Environmental Management Project	30080	MLLW-CH	Reactive Metals	Toxic Organics and Metals w/ Mercury	2.3	0.0
Fernald Environmental Management Project	30051	MLLW-CH	Reactive Metals	Toxic Organics and Metals w/ Mercury	0.2	0.0
Fernald Environmental Management Project	30096	MLLW-CH	Soils	Toxic Metals w/o Mercury	26.6	0.0
Fernald Environmental Management Project	30027	MLLW-CH	Soils	Toxic Metals w/o Mercury	1.9	0.0
Fernald Environmental Management Project	00539	MLLW-CH	Soils	Toxic Metals w/o Mercury	0.4	0.0
Fernald Environmental Management Project	00541	MLLW-CH	Soils	Toxic Metals w/o Mercury	0.4	0.0
Fernald Environmental Management Project	00542	MLLW-CH	Soils	Toxic Metals w/o Mercury	0.2	0.0
Fernald Environmental Management Project	00545	MLLW-CH	Soils	Toxic Metals w/o Mercury	0.2	0.0
Fernald Environmental Management Project	00543	MLLW-CH	Soils	Toxic Metals w/o Mercury	0.2	0.0
Fernald Environmental Management Project	00538	MLLW-CH	Soils	Toxic Metals w/o Mercury	0.2	0.0
Fernald Environmental Management Project	00540	MLLW-CH	Soils	Toxic Metals w/o Mercury	0.2	0.0
Fernald Environmental Management Project	01841	MLLW-CH	Soils	Toxic Organics	1.2	0.0
Fernald Environmental Management Project	00580	MLLW-CH	Soils	Toxic Organics	0.4	0.0
Fernald Environmental Management Project	00619	MLLW-CH	Soils	Toxic Organics	0.4	0.0
Fernald Environmental Management Project	00720	MLLW-CH	Soils	Toxic Organics	0.2	0.0
Fernald Environmental Management Project	00661	MLLW-CH	Soils	Toxic Organics	0.2	0.0
Fernald Environmental Management Project	00776	MLLW-CH	Soils	Toxic Organics	0.2	0.0
Fernald Environmental Management Project	01842	MLLW-CH	Soils	Toxic Organics	0.2	0.0
General Atomics	GA-003	MLLW-CH	Aqueous Liquid	Corrosive	1.5	0.0
General Atomics	GA-008	MLLW-CH	Aqueous Liquid	Toxic Organics and Metals w/ Mercury	3.8	0.0
General Atomics	GA-009	MLLW-CH	Aqueous Liquid	Toxic Organics and Metals w/ Mercury	1.3	0.0
General Atomics	GA-010	MLLW-CH	Aqueous Liquid	Toxic Organics and Metals w/ Mercury	0.6	0.0
General Atomics	GA-007	MLLW-CH	Elemental Lead	Toxic Organics and Metals w/ Mercury	10.8	0.0
General Atomics	GA-006	MLLW-CH	Heterogeneous Debris	Toxic Organics and Metals w/ Mercury	3.6	0.0
General Atomics	GA-011	MLLW-CH	Heterogeneous Debris	Toxic Organics and Metals w/ Mercury	0.2	0.0
General Atomics	GA-004	MLLW-CH	Inorganic Sludges/Particulates	Toxic Metals w/o Mercury	1.5	0.0
General Atomics	GA-001	MLLW-CH	Inorganic Sludges/Particulates	Toxic Metals w/o Mercury	0.6	0.0
General Atomics	GA-005	MLLW-CH	Inorganic Sludges/Particulates	Toxic Organics and Metals w/ Mercury	0.6	0.0
General Atomics	GA-002	MLLW-CH	Inorganic Sludges/Particulates	Toxic Organics and Metals w/o Mercury	0.6	0.0
General Atomics	GA-012	MLLW-CH	Liquid Mercury	Toxic Organics and Metals w/ Mercury	0.0	0.0
General Atomics	GA-013	MLLW-CH	Organic Liquids	Toxic Organics and Metals w/ Mercury	11.9	0.0
GUPO	1132	MLLW-CH	Aqueous Liquid	Toxic Metals w/o Mercury	0.0	0.0
GUPO	1	MLLW-CH	Aqueous Liquid	Toxic Metals w/o Mercury	0.0	0.0

APPEND-B.XLS

SITE	Waste Stream Number	Radiation Category	Waste Matrix	Contaminant Type	Current Inventory (m3)	Five Year Generation (m3)
GJPO	1136	MLLW-CH	Aqueous Liquid	Toxic Organics	0.4	0.0
GJPO	1a	MLLW-CH	Aqueous Liquid	Toxic Organics	0.1	0.0
GJPO	2223	MLLW-CH	Aqueous Liquid	Toxic Organics	0.0	0.0
GJPO	1135	MLLW-CH	Organic Liquids	Toxic Organics	0.1	0.0
GJPO	2a	MLLW-CH	Organic Liquids	Toxic Organics	0.0	0.0
GJPO	2b	MLLW-CH	Organic Liquids	Toxic Organics	0.0	0.0
GJPO	1b	MLLW-CH	Organic Liquids	Toxic Organics	0.0	0.0
GJPO	2	MLLW-CH	Organic Liquids	Toxic Organics	0.0	0.0
GJPO	2228	MLLW-CH	Organic Liquids	Toxic Organics and Metals w/ Mercury	0.0	0.1
GJPO	2c	MLLW-CH	Other	Toxic Metals w/o Mercury	0.4	0.0
GJPO	1c	MLLW-CH	Soils	Toxic Metals w/ Mercury	0.0	0.0
GJPO	1134	MLLW-CH	Soils	Toxic Organics	0.0	0.1
GJPO	2070	MLLW-CH	Soils	Toxic Organics	0.0	0.0
GJPO	1f	MLLW-CH	Soils	Toxic Organics	0.0	0.0
GJPO	1139	MLLW-CH	Soils	Toxic Organics	0.0	0.0
GJPO	1e	MLLW-CH	Soils	Toxic Organics	0.0	0.0
GJPO	2227	MLLW-CH	Soils	Toxic Organics and Metals w/o Mercury	0.0	0.0
GJPO	1d	MLLW-CH	Soils	Toxic Organics and Metals w/o Mercury	0.0	0.0
Hanford	2069	MLLW-CH	Aqueous Liquid	Toxic Organics	0.0	114600.0
Hanford	2469	MLLW-CH	Heterogeneous Debris	Toxic Metals w/o Mercury	48.9	32.3
Hanford	2467	MLLW-CH	Inorganic Sludges/Particulates	Toxic Metals w/o Mercury	13.2	739.1
Hanford	2468	MLLW-CH	Inorganic Sludges/Particulates	Toxic Metals w/o Mercury	0.2	11.7
Hanford	0938	MLLW-CH/AL	Batteries	Toxic Metals w/o Mercury	1.0	57.8
Hanford	2466	MLLW-CH/AL	Batteries	Toxic Metals w/o Mercury	0.2	11.7
Hanford	0939	MLLW-CH/AL	Elemental Lead	Toxic Metals w/o Mercury	131.8	56.8
Hanford	0971	MLLW-CH/AL	Elemental Lead	Toxic Organics and Metals w/o Mercury	0.2	0.1
Hanford	0994	MLLW-CH/AL	Heterogeneous Debris	Corrosive	4.6	26.4
Hanford	0931	MLLW-CH/AL	Heterogeneous Debris	Ignitable	2.2	1.6
Hanford	0930	MLLW-CH/AL	Heterogeneous Debris	Toxic Metals w/ Mercury	9.8	6.3
Hanford	0929	MLLW-CH/AL	Heterogeneous Debris	Toxic Metals w/ Mercury	4.3	2.9
Hanford	0935	MLLW-CH/AL	Heterogeneous Debris	Toxic Metals w/ Mercury	1.8	1.2
Hanford	0928	MLLW-CH/AL	Heterogeneous Debris	Toxic Metals w/ Mercury	1.2	0.8
Hanford	2466	MLLW-CH/AL	Heterogeneous Debris	Toxic Metals w/o Mercury	18.9	12.6
Hanford	0933	MLLW-CH/AL	Heterogeneous Debris	Toxic Metals w/o Mercury	11.3	7.4
Hanford	0926	MLLW-CH/AL	Heterogeneous Debris	Toxic Metals w/o Mercury	10.0	6.6
Hanford	0927	MLLW-CH/AL	Heterogeneous Debris	Toxic Metals w/o Mercury	3.4	2.2
Hanford	0969	MLLW-CH/AL	Heterogeneous Debris	Toxic Organics	13.9	9.2
Hanford	0945	MLLW-CH/AL	Heterogeneous Debris	Toxic Organics	9.9	6.6
Hanford	0964	MLLW-CH/AL	Heterogeneous Debris	Toxic Organics	8.8	5.7
Hanford	0965	MLLW-CH/AL	Heterogeneous Debris	Toxic Organics	0.4	0.3
Hanford	0932	MLLW-CH/AL	Heterogeneous Debris	Toxic Organics and Metals w/o Mercury	23.9	15.8
Hanford	0968	MLLW-CH/AL	Heterogeneous Debris	Toxic Organics and Metals w/o Mercury	5.0	3.3
Hanford	0967	MLLW-CH/AL	Heterogeneous Debris	Toxic Organics and Metals w/o Mercury	3.1	2.0
Hanford	0934	MLLW-CH/AL	Inorganic Debris	Toxic Metals w/o Mercury	1.1	28.8
Hanford	0940	MLLW-CH/AL	Inorganic Debris	Toxic Metals w/o Mercury	0.6	17.2
Hanford	0987	MLLW-CH/AL	Inorganic Sludges/Particulates	Ignitable	866.6	0.0
Hanford	0923	MLLW-CH/AL	Inorganic Sludges/Particulates	Toxic Metals w/ Mercury	15.8	879.9
Hanford	0924	MLLW-CH/AL	Inorganic Sludges/Particulates	Toxic Metals w/ Mercury	0.2	11.7
Hanford	0942	MLLW-CH/AL	Inorganic Sludges/Particulates	Toxic Metals w/ Mercury	0.0	1.1
Hanford	0921	MLLW-CH/AL	Inorganic Sludges/Particulates	Toxic Metals w/o Mercury	2.6	144.7
Hanford	0922	MLLW-CH/AL	Inorganic Sludges/Particulates	Toxic Metals w/o Mercury	0.3	14.6
Hanford	2453	MLLW-CH/AL	Inorganic Sludges/Particulates	Toxic Metals w/o Mercury	0.1	6.1
Hanford	2455	MLLW-CH/AL	Inorganic Sludges/Particulates	Toxic Organics	16.6	926.8
Hanford	0925	MLLW-CH/AL	Inorganic Sludges/Particulates	Toxic Organics	8.7	0.0
Hanford	0980	MLLW-CH/AL	Inorganic Sludges/Particulates	Toxic Organics	0.4	21.9
Hanford	2470	MLLW-CH/AL	Inorganic Sludges/Particulates	Toxic Organics	0.2	11.7
Hanford	0963	MLLW-CH/AL	Inorganic Sludges/Particulates	Toxic Organics and Metals w/ Mercury	0.2	11.7
Hanford	0986	MLLW-CH/AL	Inorganic Sludges/Particulates	Toxic Organics and Metals w/o Mercury	1099.3	231.7
Hanford	0985	MLLW-CH/AL	Inorganic Sludges/Particulates	Toxic Organics and Metals w/o Mercury	543.7	79.1
Hanford	0970	MLLW-CH/AL	Inorganic Sludges/Particulates	Toxic Organics and Metals w/o Mercury	1.1	58.7
Hanford	0962	MLLW-CH/AL	Inorganic Sludges/Particulates	Toxic Organics and Metals w/o Mercury	0.0	1.7
Hanford	0948	MLLW-CH/AL	Lab Packs with Metals	Toxic Metals w/ Mercury	0.7	38.0
Hanford	0946	MLLW-CH/AL	Lab Packs with Metals	Toxic Metals w/o Mercury	1.5	83.8
Hanford	0949	MLLW-CH/AL	Lab Packs with Metals	Toxic Metals w/o Mercury	0.2	11.7
Hanford	0973	MLLW-CH/AL	Lab Packs with Metals	Toxic Organics and Metals w/o Mercury	35.6	1856.4
Hanford	2472	MLLW-CH/AL	Lab Packs without Metals	Corrosive	0.6	35.2
Hanford	0944	MLLW-CH/AL	Lab Packs without Metals	Ignitable	21.8	1231.8
Hanford	0943	MLLW-CH/AL	Lab Packs without Metals	Ignitable	11.3	633.6
Hanford	0950	MLLW-CH/AL	Lab Packs without Metals	Ignitable	4.0	223.6
Hanford	0920	MLLW-CH/AL	Lab Packs without Metals	Ignitable	0.4	23.6
Hanford	2465	MLLW-CH/AL	Lab Packs without Metals	Ignitable	0.0	1.7
Hanford	0947	MLLW-CH/AL	Lab Packs without Metals	Toxic Metals w/o Mercury	11.6	649.7
Hanford	0974	MLLW-CH/AL	Lab Packs without Metals	Toxic Organics	15.8	823.6
Hanford	0975	MLLW-CH/AL	Lab Packs without Metals	Toxic Organics	4.8	262.2
Hanford	0972	MLLW-CH/AL	Lab Packs without Metals	Toxic Organics	1.1	56.4
Hanford	0976	MLLW-CH/AL	Lab Packs without Metals	Toxic Organics	0.2	11.0

APPEND-B.XLS

SITE	Waste Stream Number	Radiation Category	Waste Matrix	Contaminant Type	Current Inventory (m3)	Five Year Generation (m3)
Hanford	2473	MLLW-CH/AL	Lab Packs without Metals	Toxic Organics and Metals w/ Mercury	2.1	114.6
Hanford	0941	MLLW-CH/AL	Liquid Mercury	Toxic Metals w/ Mercury	1.3	69.8
Hanford	0966	MLLW-CH/AL	Organic Debris	Toxic Organics	104.2	1723.6
Hanford	0952	MLLW-CH/AL	Soil with <50% Debris	Ignitable	0.3	4.4
Hanford	2471	MLLW-CH/AL	Soil with <50% Debris	Toxic Metals w/o Mercury	5.0	66.0
Hanford	0951	MLLW-CH/AL	Soil with <50% Debris	Toxic Metals w/o Mercury	0.3	4.4
Hanford	0957	MLLW-CH/AL	Soil with <50% Debris	Toxic Organics	14.7	215.7
Hanford	1006	MLLW-CH/AL	Soil with <50% Debris	Toxic Organics	1.9	25.6
Hanford	0958	MLLW-CH/AL	Soil with <50% Debris	Toxic Organics	0.2	2.8
Hanford	0959	MLLW-CH/AL	Soil with <50% Debris	Toxic Organics and Metals w/ Mercury	0.2	2.8
Hanford	0996	MTRU-CH	Batteries	Toxic Metals w/ Mercury	0.4	64.9
Hanford	0995	MTRU-CH	Batteries	Toxic Metals w/o Mercury	0.6	97.4
Hanford	0999	MTRU-CH	Elemental Lead	Toxic Metals w/ Mercury	0.2	0.3
Hanford	0997	MTRU-CH	Elemental Lead	Toxic Metals w/o Mercury	26.9	40.4
Hanford	1000	MTRU-CH	Elemental Lead	Toxic Metals w/o Mercury	0.6	0.9
Hanford	0990	MTRU-CH	Heterogeneous Debris	Toxic Metals w/ Mercury	66.2	375.6
Hanford	0989	MTRU-CH	Heterogeneous Debris	Toxic Metals w/ Mercury	8.0	45.3
Hanford	0993	MTRU-CH	Heterogeneous Debris	Toxic Metals w/ Mercury	3.2	16.0
Hanford	0992	MTRU-CH	Heterogeneous Debris	Toxic Metals w/ Mercury	3.2	17.9
Hanford	0991	MTRU-CH	Heterogeneous Debris	Toxic Metals w/o Mercury	29.6	166.2
Hanford	0988	MTRU-CH	Heterogeneous Debris	Toxic Metals w/o Mercury	9.7	54.9
Hanford	0998	MTRU-CH	Heterogeneous Debris	Toxic Metals w/o Mercury	0.4	3.7
Hanford	1003	MTRU-CH	Heterogeneous Debris	Toxic Organics	6.3	47.0
Hanford	1002	MTRU-CH	Heterogeneous Debris	Toxic Organics	2.1	11.9
Hanford	0937	MTRU-CH	Heterogeneous Debris	Toxic Organics	0.6	0.4
Hanford	1001	MTRU-CH	Lab Packs without Metals	Ignitable	2.1	324.6
Hanford	2477	MTRU-CH	Organic Debris	Toxic Organics	2.1	14.1
INEL	ID-WIN-302	MLLW-CH	Aqueous Liquid	Corrosive	0.3	2.1
INEL	ID-EGG-188	MLLW-CH	Aqueous Liquid	Toxic Metals w/ Mercury	106.0	0.0
INEL	ID-EGG-290	MLLW-CH	Aqueous Liquid	Toxic Metals w/ Mercury	5.8	0.0
INEL	ID-EGG-121	MLLW-CH	Aqueous Liquid	Toxic Metals w/ Mercury	0.6	0.3
INEL	CH-ANL-244	MLLW-CH	Aqueous Liquid	Toxic Metals w/ Mercury	0.4	0.1
INEL	ID-EGG-170	MLLW-CH	Aqueous Liquid	Toxic Metals w/ Mercury	0.4	0.0
INEL	ID-EGG-271	MLLW-CH	Aqueous Liquid	Toxic Metals w/ Mercury	0.3	0.4
INEL	ID-WIN-301	MLLW-CH	Aqueous Liquid	Toxic Metals w/ Mercury	0.1	2.1
INEL	ID-EGG-279	MLLW-CH	Aqueous Liquid	Toxic Metals w/ Mercury	0.0	2.6
INEL	ID-EGG-192	MLLW-CH	Aqueous Liquid	Toxic Metals w/o Mercury	2.2	0.0
INEL	NR-NRF-189	MLLW-CH	Aqueous Liquid	Toxic Metals w/o Mercury	0.3	0.0
INEL	ID-DOE-664	MLLW-CH	Aqueous Liquid	Toxic Metals w/o Mercury	0.2	0.0
INEL	ID-EGG-284	MLLW-CH	Aqueous Liquid	Toxic Metals w/o Mercury	0.0	3.0
INEL	ID-EGG-276	MLLW-CH	Aqueous Liquid	Toxic Organics	1.7	0.0
INEL	ID-SMC-301	MLLW-CH	Aqueous Liquid	Toxic Organics	1.2	0.0
INEL	ID-EGG-298	MLLW-CH	Aqueous Liquid	Toxic Organics	0.1	0.0
INEL	ID-DOE-732	MLLW-CH	Aqueous Liquid	Toxic Organics	0.0	0.0
INEL	ID-EGG-257	MLLW-CH	Aqueous Liquid	Toxic Organics and Metals w/ Mercury	0.1	0.0
INEL	ID-WIN-216	MLLW-CH	Aqueous Liquid	Toxic Organics and Metals w/ Mercury	0.0	0.0
INEL	ID-EGG-124	MLLW-CH	Cemented Solids	Toxic Metals w/ Mercury	5.5	0.0
INEL	ID-EGG-147	MLLW-CH	Cemented Solids	Toxic Metals w/o Mercury	3.2	5.0
INEL	ID-EGG-278	MLLW-CH	Cemented Solids	Toxic Metals w/o Mercury	0.0	15.0
INEL	NR-NRF-143	MLLW-CH	Elemental Lead	Toxic Metals w/o Mercury	35.3	0.0
INEL	ID-EGG-266	MLLW-CH	Elemental Lead	Toxic Metals w/o Mercury	5.4	0.0
INEL	CH-ANL-142	MLLW-CH	Elemental Lead	Toxic Metals w/o Mercury	0.6	0.4
INEL	ID-DOE-667	MLLW-CH	Elemental Lead	Toxic Metals w/o Mercury	0.0	0.2
INEL	ID-EGG-272	MLLW-CH	Elemental Lead	Toxic Metals w/o Mercury	0.0	0.0
INEL	ID-EGG-281	MLLW-CH	Elemental Lead	Toxic Metals w/o Mercury	0.0	17.2
INEL	ID-EGG-282	MLLW-CH	Elemental Lead	Toxic Metals w/o Mercury	0.0	4.3
INEL	ID-SMC-400	MLLW-CH	Elemental Lead	Toxic Metals w/o Mercury	0.0	0.6
INEL	ID-EGG-280	MLLW-CH	Elemental Lead	Toxic Metals w/o Mercury	0.0	0.6
INEL	ID-EGG-213	MLLW-CH	Heterogeneous Debris	Toxic Metals w/ Mercury	0.6	0.0
INEL	ID-EGG-267	MLLW-CH	Heterogeneous Debris	Toxic Metals w/ Mercury	0.5	5.0
INEL	ID-EGG-128	MLLW-CH	Heterogeneous Debris	Toxic Metals w/ Mercury	0.4	0.0
INEL	ID-EGG-142	MLLW-CH	Heterogeneous Debris	Toxic Metals w/o Mercury	6.8	6.4
INEL	ID-EGG-263	MLLW-CH	Heterogeneous Debris	Toxic Metals w/o Mercury	2.8	10.5
INEL	CH-ANL-178	MLLW-CH	Heterogeneous Debris	Toxic Metals w/o Mercury	0.2	0.0
INEL	CH-ANL-111	MLLW-CH	Heterogeneous Debris	Toxic Metals w/o Mercury	0.2	0.3
INEL	CH-ANL-176	MLLW-CH	Heterogeneous Debris	Toxic Organics	3.9	0.0
INEL	CH-ANL-185	MLLW-CH	Heterogeneous Debris	Toxic Organics	0.5	0.0
INEL	ID-EGG-285	MLLW-CH	Heterogeneous Debris	Toxic Organics and Metals w/ Mercury	0.0	0.2
INEL	CH-ANL-183	MLLW-CH	Heterogeneous Debris	Toxic Organics and Metals w/o Mercury	4.0	0.6
INEL	ID-WIN-307	MLLW-CH	Heterogeneous Debris	Toxic Organics and Metals w/o Mercury	0.2	2.5
INEL	NR-NRF-131	MLLW-CH	Inorganic Debris	Toxic Metals w/ Mercury	0.2	0.0
INEL	ID-WIN-306	MLLW-CH	Inorganic Debris	Toxic Metals w/ Mercury	0.1	5.0
INEL	ID-EGG-269	MLLW-CH	Inorganic Debris	Toxic Metals w/ Mercury	0.0	12.5
INEL	ID-SMC-411	MLLW-CH	Inorganic Debris	Toxic Metals w/ Mercury	0.0	12.0
INEL	ID-WIN-300	MLLW-CH	Inorganic Debris	Toxic Metals w/o Mercury	41.2	0.0
INEL	ID-EGG-263	MLLW-CH	Inorganic Debris	Toxic Metals w/o Mercury	37.8	0.0

APPEND-B.XLS

SITE	Waste Stream Number	Radiation Category	Waste Matrix	Contaminant Type	Current Inventory (m3)	Five Year Generation (m3)
INEL	ID-EGG-265	MLLW-CH	Inorganic Debris	Toxic Metals w/o Mercury	3.0	0.0
INEL	ID-WIN-111	MLLW-CH	Inorganic Debris	Toxic Metals w/o Mercury	2.8	20.0
INEL	ID-EGG-117	MLLW-CH	Inorganic Debris	Toxic Metals w/o Mercury	0.3	0.0
INEL	ID-WIN-303	MLLW-CH	Inorganic Debris	Toxic Metals w/o Mercury	0.2	1.1
INEL	NR-NRF-117	MLLW-CH	Inorganic Debris	Toxic Metals w/o Mercury	0.2	0.0
INEL	ID-SMC-304	MLLW-CH	Inorganic Debris	Toxic Metals w/o Mercury	0.0	1.2
INEL	ID-EGG-108	MLLW-CH	Inorganic Debris	Toxic Metals w/o Mercury	0.0	0.0
INEL	ID-SMC-413	MLLW-CH	Inorganic Debris	Toxic Metals w/o Mercury	0.0	10.0
INEL	ID-EGG-262	MLLW-CH	Inorganic Debris	Toxic Metals w/o Mercury	0.0	3.0
INEL	ID-WIN-305	MLLW-CH	Inorganic Debris	Toxic Organics and Metals w/ Mercury	0.9	25.0
INEL	ID-WIN-308	MLLW-CH	Inorganic Debris	Toxic Organics and Metals w/ Mercury	0.0	2.7
INEL	ID-EGG-153	MLLW-CH	Inorganic Sludges/Particulates	Toxic Metals w/ Mercury	2.3	0.0
INEL	ID-EGG-126	MLLW-CH	Inorganic Sludges/Particulates	Toxic Metals w/ Mercury	1.2	0.0
INEL	ID-EGG-254	MLLW-CH	Inorganic Sludges/Particulates	Toxic Metals w/ Mercury	0.8	0.0
INEL	ID-EGG-291	MLLW-CH	Inorganic Sludges/Particulates	Toxic Metals w/ Mercury	0.0	1.1
INEL	ID-EGG-258	MLLW-CH	Inorganic Sludges/Particulates	Toxic Metals w/ Mercury	0.0	0.0
INEL	ID-EGG-275	MLLW-CH	Inorganic Sludges/Particulates	Toxic Metals w/ Mercury	2.1	69.0
INEL	ID-EGG-274	MLLW-CH	Inorganic Sludges/Particulates	Toxic Metals w/o Mercury	1.0	12.6
INEL	ID-SMC-302	MLLW-CH	Inorganic Sludges/Particulates	Toxic Metals w/o Mercury	0.7	2.5
INEL	CH-ANL-601	MLLW-CH	Inorganic Sludges/Particulates	Toxic Metals w/o Mercury	0.0	0.0
INEL	ID-EGG-277	MLLW-CH	Inorganic Sludges/Particulates	Toxic Metals w/o Mercury	0.0	0.5
INEL	ID-EGG-161	MLLW-CH	Inorganic Sludges/Particulates	Toxic Organics	3.7	0.0
INEL	ID-EGG-157	MLLW-CH	Inorganic Sludges/Particulates	Toxic Organics and Metals w/ Mercury	1.9	0.1
INEL	ID-EGG-270	MLLW-CH	Inorganic Sludges/Particulates	Toxic Organics and Metals w/ Mercury	0.2	6.5
INEL	ID-SMC-303	MLLW-CH	Inorganic Sludges/Particulates	Toxic Organics and Metals w/o Mercury	1.4	0.0
INEL	ID-DOE-662	MLLW-CH	Lab Packs with Metals	Ignitable	0.2	0.0
INEL	ID-EGG-297	MLLW-CH	Lab Packs with Metals	Toxic Metals w/ Mercury	0.2	0.0
INEL	ID-EGG-299	MLLW-CH	Lab Packs with Metals	Toxic Metals w/o Mercury	1.3	0.0
INEL	ID-EGG-289	MLLW-CH	Lab Packs with Metals	Toxic Organics and Metals w/ Mercury	0.1	1.2
INEL	ID-EGG-103	MLLW-CH	Lab Packs with Metals	Toxic Organics and Metals w/o Mercury	0.2	0.0
INEL	CH-ANL-224	MLLW-CH	Liquid Mercury	Toxic Metals w/ Mercury	0.0	0.1
INEL	ID-EGG-261	MLLW-CH	Organic Debris	Toxic Metals w/o Mercury	6.5	0.0
INEL	NR-NRF-113	MLLW-CH	Organic Debris	Toxic Metals w/o Mercury	3.6	0.0
INEL	NR-NRF-142	MLLW-CH	Organic Debris	Toxic Metals w/o Mercury	0.2	0.2
INEL	ID-EGG-264	MLLW-CH	Organic Debris	Toxic Metals w/o Mercury	0.0	23.0
INEL	ID-EGG-219	MLLW-CH	Organic Debris	Toxic Organics	1.8	0.0
INEL	ID-WIN-201	MLLW-CH	Organic Debris	Toxic Organics	0.1	0.8
INEL	ID-EGG-293	MLLW-CH	Organic Debris	Toxic Organics	0.0	0.2
INEL	ID-EGG-210	MLLW-CH	Organic Debris	Toxic Organics and Metals w/o Mercury	0.2	0.0
INEL	ID-EGG-252	MLLW-CH	Organic Debris	Toxic Organics and Metals w/o Mercury	0.0	0.0
INEL	ID-EGG-221	MLLW-CH	Organic Liquids	Ignitable	0.0	0.0
INEL	ID-SMC-412	MLLW-CH	Organic Liquids	Toxic Metals w/o Mercury	3.2	0.0
INEL	ID-EGG-217	MLLW-CH	Organic Liquids	Toxic Metals w/o Mercury	1.6	0.0
INEL	ID-WIN-217	MLLW-CH	Organic Liquids	Toxic Metals w/o Mercury	1.3	0.7
INEL	ID-EGG-260	MLLW-CH	Organic Liquids	Toxic Metals w/o Mercury	0.2	0.0
INEL	ID-SMC-149B	MLLW-CH	Organic Liquids	Toxic Metals w/o Mercury	0.2	0.0
INEL	ID-EGG-155	MLLW-CH	Organic Liquids	Toxic Organics	0.5	0.0
INEL	ID-EGG-259	MLLW-CH	Organic Liquids	Toxic Organics	0.4	0.0
INEL	ID-DOE-734	MLLW-CH	Organic Liquids	Toxic Organics	0.2	0.0
INEL	ID-EGG-214	MLLW-CH	Organic Liquids	Toxic Organics	0.2	0.0
INEL	ID-EGG-188	MLLW-CH	Organic Liquids	Toxic Organics	0.1	0.0
INEL	CH-ANL-184	MLLW-CH	Organic Liquids	Toxic Organics	0.0	0.0
INEL	ID-EGG-292	MLLW-CH	Organic Liquids	Toxic Organics	0.0	0.1
INEL	ID-EGG-162	MLLW-CH	Organic Liquids	Toxic Organics and Metals w/ Mercury	5.9	0.0
INEL	ID-SMC-133	MLLW-CH	Organic Liquids	Toxic Organics and Metals w/ Mercury	0.6	1.0
INEL	ID-EGG-256	MLLW-CH	Organic Liquids	Toxic Organics and Metals w/ Mercury	0.2	0.0
INEL	ID-SMC-305	MLLW-CH	Organic Liquids	Toxic Organics and Metals w/o Mercury	11.6	12.0
INEL	ID-SMC-149A	MLLW-CH	Organic Liquids	Toxic Organics and Metals w/o Mercury	2.7	0.0
INEL	ID-SMC-101D	MLLW-CH	Organic Liquids	Toxic Organics and Metals w/o Mercury	0.2	0.0
INEL	ID-EGG-268	MLLW-CH	Organic Sludges/Particulates	Toxic Metals w/ Mercury	0.2	0.1
INEL	ID-EGG-286	MLLW-CH	Organic Sludges/Particulates	Toxic Metals w/ Mercury	3.0	94.6
INEL	ID-EGG-107	MLLW-CH	Organic Sludges/Particulates	Toxic Organics	0.6	0.0
INEL	ID-EGG-222	MLLW-CH	Organic Sludges/Particulates	Toxic Organics	0.0	0.0
INEL	ID-EGG-220	MLLW-CH	Organic Sludges/Particulates	Toxic Organics and Metals w/ Mercury	0.2	2.1
INEL	ID-EGG-251	MLLW-CH	Organic Sludges/Particulates	Toxic Organics and Metals w/o Mercury	0.1	0.0
INEL	ID-EGG-209	MLLW-CH	Other	Toxic Metals w/o Mercury	0.4	0.0
INEL	ID-EGG-187	MLLW-CH	Reactive Metals	Toxic Metals w/ Mercury	0.5	0.0
INEL	CH-ANL-179	MLLW-CH	Reactive Metals	Toxic Organics	2.0	0.9
INEL	ID-EGG-212	MLLW-CH	Soil with <50% Debris	Toxic Metals w/o Mercury	0.1	0.0
INEL	ID-EGG-255	MLLW-CH	Soils	Toxic Metals w/ Mercury	0.6	6.3
INEL	ID-EGG-112-835	MLLW-CH/AL	Cemented Solids	Toxic Organics	178.9	0.0
INEL	ID-EGG-112-834	MLLW-CH/AL	Cemented Solids	Toxic Organics	39.9	0.0
INEL	ID-EGG-112-112	MLLW-CH/AL	Cemented Solids	Toxic Organics	5.1	0.0
INEL	ID-EGG-112-836	MLLW-CH/AL	Cemented Solids	Toxic Organics and Metals w/ Mercury	880.2	0.0
INEL	ID-EGG-112-976	MLLW-CH/AL	Cemented Solids	Toxic Organics and Metals w/ Mercury	63.8	0.0
INEL	ID-EGG-112-978	MLLW-CH/AL	Cemented Solids	Toxic Organics and Metals w/ Mercury	25.4	0.0

APPEND-B.XLS

SITE	Waste Stream Number	Radiation Category	Waste Matrix	Contaminant Type	Current Inventory (m3)	Five Year Generation (m3)
INEL	ID-EGG-112-4	MLLW-CH/AL	Cemented Solids	Toxic Organics and Metals w/o Mercury	103.9	0.0
INEL	ID-EGG-112-114	MLLW-CH/AL	Cemented Solids	Toxic Organics and Metals w/o Mercury	4.0	0.0
INEL	ID-EGG-143	MLLW-CH/AL	Elemental Lead	Toxic Metals w/o Mercury	409.8	50.0
INEL	NR-NRF-190	MLLW-CH/AL	Elemental Lead	Toxic Metals w/o Mercury	0.0	0.0
INEL	ID-EGG-134-824	MLLW-CH/AL	Heterogeneous Debris	Toxic Metals w/ Mercury	836.9	0.0
INEL	ID-EGG-134-950	MLLW-CH/AL	Heterogeneous Debris	Toxic Metals w/o Mercury	1065.0	0.0
INEL	ID-EGG-134-201	MLLW-CH/AL	Heterogeneous Debris	Toxic Metals w/o Mercury	80.5	0.0
INEL	ID-EGG-134-101	MLLW-CH/AL	Heterogeneous Debris	Toxic Metals w/o Mercury	38.5	0.0
INEL	ID-EGG-120-123	MLLW-CH/AL	Heterogeneous Debris	Toxic Metals w/o Mercury	2.3	0.0
INEL	ID-EGG-118-490	MLLW-CH/AL	Heterogeneous Debris	Toxic Organics	873.4	0.0
INEL	ID-EGG-134-100	MLLW-CH/AL	Heterogeneous Debris	Toxic Organics	371.0	0.0
INEL	ID-EGG-118-338	MLLW-CH/AL	Heterogeneous Debris	Toxic Organics	240.7	0.0
INEL	ID-EGG-118-376	MLLW-CH/AL	Heterogeneous Debris	Toxic Organics	94.7	0.0
INEL	ID-EGG-118-119	MLLW-CH/AL	Heterogeneous Debris	Toxic Organics	69.2	0.0
INEL	ID-EGG-118-360	MLLW-CH/AL	Heterogeneous Debris	Toxic Organics	50.4	0.0
INEL	ID-EGG-118-335	MLLW-CH/AL	Heterogeneous Debris	Toxic Organics	16.5	0.0
INEL	ID-EGG-118-328	MLLW-CH/AL	Heterogeneous Debris	Toxic Organics	0.2	0.0
INEL	ID-EGG-134-121	MLLW-CH/AL	Heterogeneous Debris	Toxic Organics and Metals w/ Mercury	0.2	0.0
INEL	ID-EGG-109-302	MLLW-CH/AL	Heterogeneous Debris	Toxic Organics and Metals w/o Mercury	55.4	0.0
INEL	ID-EGG-134-241	MLLW-CH/AL	Heterogeneous Debris	Toxic Organics and Metals w/o Mercury	24.2	0.0
INEL	ID-EGG-120-339	MLLW-CH/AL	Heterogeneous Debris	Toxic Organics and Metals w/o Mercury	4.9	0.0
INEL	ID-EGG-109-464	MLLW-CH/AL	Heterogeneous Debris	Toxic Organics and Metals w/o Mercury	3.8	0.0
INEL	ID-EGG-120-463	MLLW-CH/AL	Heterogeneous Debris	Toxic Organics and Metals w/o Mercury	1.1	0.0
INEL	ID-EGG-132-803	MLLW-CH/AL	Inorganic Debris	Toxic Metals w/ Mercury	2.8	0.0
INEL	ID-EGG-115-371	MLLW-CH/AL	Inorganic Debris	Toxic Organics	183.5	0.0
INEL	ID-EGG-132-20	MLLW-CH/AL	Inorganic Debris	Toxic Organics	62.3	0.0
INEL	ID-EGG-137-300	MLLW-CH/AL	Inorganic Debris	Toxic Organics	18.4	0.0
INEL	ID-EGG-115-122	MLLW-CH/AL	Inorganic Debris	Toxic Organics	12.3	0.0
INEL	ID-EGG-115-375	MLLW-CH/AL	Inorganic Debris	Toxic Organics	3.2	0.0
INEL	ID-EGG-137-301	MLLW-CH/AL	Inorganic Debris	Toxic Organics	1.3	0.0
INEL	ID-EGG-119-118	MLLW-CH/AL	Inorganic Debris	Toxic Organics and Metals w/ Mercury	6.4	0.0
INEL	ID-EGG-132-480	MLLW-CH/AL	Inorganic Debris	Toxic Organics and Metals w/o Mercury	6688.0	0.0
INEL	ID-EGG-119-441	MLLW-CH/AL	Inorganic Debris	Toxic Organics and Metals w/o Mercury	164.7	0.0
INEL	ID-EGG-132-481	MLLW-CH/AL	Inorganic Debris	Toxic Organics and Metals w/o Mercury	164.3	0.0
INEL	ID-EGG-132-117	MLLW-CH/AL	Inorganic Debris	Toxic Organics and Metals w/o Mercury	147.5	0.0
INEL	ID-EGG-119-442	MLLW-CH/AL	Inorganic Debris	Toxic Organics and Metals w/o Mercury	138.4	0.0
INEL	ID-EGG-119-440	MLLW-CH/AL	Inorganic Debris	Toxic Organics and Metals w/o Mercury	95.4	0.0
INEL	ID-EGG-132-320	MLLW-CH/AL	Inorganic Debris	Toxic Organics and Metals w/o Mercury	28.6	0.0
INEL	ID-EGG-141-842	MLLW-CH/AL	Inorganic Sludges/Particulates	Toxic Metals w/ Mercury	85.6	0.0
INEL	ID-EGG-141-372	MLLW-CH/AL	Inorganic Sludges/Particulates	Toxic Metals w/ Mercury	0.8	0.0
INEL	ID-EGG-163	MLLW-CH/AL	Inorganic Sludges/Particulates	Toxic Metals w/ Mercury	0.3	0.0
INEL	ID-EGG-141-374	MLLW-CH/AL	Inorganic Sludges/Particulates	Toxic Organics	368.0	0.0
INEL	ID-EGG-141-990	MLLW-CH/AL	Inorganic Sludges/Particulates	Toxic Organics	99.8	0.0
INEL	ID-EGG-141-90	MLLW-CH/AL	Inorganic Sludges/Particulates	Toxic Organics	28.6	0.0
INEL	ID-EGG-146-5	MLLW-CH/AL	Inorganic Sludges/Particulates	Toxic Organics	13.6	0.0
INEL	ID-EGG-102-113	MLLW-CH/AL	Inorganic Sludges/Particulates	Toxic Organics	2.5	0.0
INEL	ID-EGG-102-7	MLLW-CH/AL	Inorganic Sludges/Particulates	Toxic Organics and Metals w/ Mercury	464.3	0.0
INEL	ID-EGG-102-2	MLLW-CH/AL	Inorganic Sludges/Particulates	Toxic Organics and Metals w/ Mercury	342.4	0.0
INEL	ID-EGG-102-111	MLLW-CH/AL	Inorganic Sludges/Particulates	Toxic Organics and Metals w/ Mercury	285.3	0.0
INEL	ID-EGG-102-1	MLLW-CH/AL	Inorganic Sludges/Particulates	Toxic Organics and Metals w/ Mercury	58.9	0.0
INEL	ID-EGG-102-282	MLLW-CH/AL	Inorganic Sludges/Particulates	Toxic Organics and Metals w/o Mercury	4.9	0.0
INEL	ID-EGG-102-290	MLLW-CH/AL	Inorganic Sludges/Particulates	Toxic Organics and Metals w/o Mercury	0.2	0.0
INEL	ID-EGG-114-826	MLLW-CH/AL	Organic Debris	Toxic Metals w/ Mercury	9.9	0.0
INEL	ID-EGG-114-10	MLLW-CH/AL	Organic Debris	Toxic Organics	33.7	0.0
INEL	ID-EGG-114-330	MLLW-CH/AL	Organic Debris	Toxic Organics and Metals w/o Mercury	3150.6	0.0
INEL	ID-EGG-114-336	MLLW-CH/AL	Organic Debris	Toxic Organics and Metals w/o Mercury	1452.4	0.0
INEL	ID-EGG-114-116	MLLW-CH/AL	Organic Debris	Toxic Organics and Metals w/o Mercury	371.1	0.0
INEL	ID-EGG-114-337	MLLW-CH/AL	Organic Debris	Toxic Organics and Metals w/o Mercury	352.9	0.0
INEL	ID-EGG-114-900	MLLW-CH/AL	Organic Debris	Toxic Organics and Metals w/o Mercury	92.4	0.0
INEL	ID-EGG-114-970	MLLW-CH/AL	Organic Debris	Toxic Organics and Metals w/o Mercury	91.3	0.0
INEL	ID-EGG-127	MLLW-CH/AL	Organic Liquids	Toxic Organics and Metals w/o Mercury	0.3	0.0
INEL	ID-EGG-145-430	MLLW-CH/AL	Organic Sludges/Particulates	Toxic Organics	1.8	0.0
INEL	ID-EGG-145-431	MLLW-CH/AL	Organic Sludges/Particulates	Toxic Organics	0.4	0.0
INEL	ID-EGG-158-3	MLLW-CH/AL	Organic Sludges/Particulates	Toxic Organics and Metals w/o Mercury	1001.9	0.0
INEL	ID-EGG-145-432	MLLW-CH/AL	Organic Sludges/Particulates	Toxic Organics and Metals w/o Mercury	8.9	0.0
INEL	ID-EGG-287-9999	MLLW-CH/AL	Other	Toxic Organics	3007.9	0.0
INEL	ID-EGG-288-847	MLLW-CH/AL	Other	Toxic Organics	152.9	0.0
INEL	ID-EGG-287-0	MLLW-CH/AL	Other	Toxic Organics	136.7	0.0
INEL	ID-EGG-288-156	MLLW-CH/AL	Other	Toxic Organics	28.5	0.0
INEL	ID-EGG-288-848	MLLW-CH/AL	Other	Toxic Organics	27.1	0.0
INEL	ID-EGG-288-203	MLLW-CH/AL	Other	Toxic Organics	21.0	0.0
INEL	ID-EGG-288-202	MLLW-CH/AL	Other	Toxic Organics	14.0	0.0
INEL	ID-EGG-288-102	MLLW-CH/AL	Other	Toxic Organics	13.5	0.0
INEL	ID-EGG-288-155	MLLW-CH/AL	Other	Toxic Organics	4.4	0.0
INEL	ID-EGG-288-204	MLLW-CH/AL	Other	Toxic Organics	0.6	0.0
INEL	ID-EGG-288-838	MLLW-CH/AL	Other	Toxic Organics	0.2	0.0

APPEND-B.XLS

SITE	Waste Stream Number	Radiation Category	Waste Matrix	Contaminant Type	Current Inventory (m3)	Five Year Generation (m3)
INEL	ID-WIN-154	MLLW-RH	Elemental Lead	Toxic Metals w/o Mercury	54.3	126.0
INEL	CH-ANL-143	MLLW-RH	Elemental Lead	Toxic Metals w/o Mercury	0.9	0.0
INEL	ID-WIN-304	MLLW-RH	Heterogeneous Debris	Toxic Metals w/ Mercury	13.1	2000.0
INEL	CH-ANL-242	MLLW-RH	Heterogeneous Debris	Toxic Metals w/o Mercury	0.2	0.1
INEL	ID-WIN-131	MLLW-RH	Inorganic Debris	Toxic Metals w/ Mercury	6.8	35.0
INEL	CH-ANL-218	MLLW-RH	Inorganic Sludges/Particulates	Toxic Metals w/o Mercury	0.0	0.6
INEL	ID-EGG-193	MLLW-RH	Reactive Metals	Ignitable	0.7	0.0
INEL	CH-ANL-180	MLLW-RH	Reactive Metals	Toxic Organics	4.0	1.2
INEL	CH-ANL-182	MLLW-RH	Reactive Metals	Toxic Organics	0.2	0.0
INEL	ID-EGG-144-104	MLLW-RH	Elemental Lead	Toxic Metals w/o Mercury	47.8	0.0
INEL	ID-EGG-144-153	MLLW-RH	Elemental Lead	Toxic Metals w/o Mercury	5.9	0.0
INEL	ID-EGG-144-154	MLLW-RH	Elemental Lead	Toxic Metals w/o Mercury	0.2	0.0
INEL	ID-EGG-141-150	MLLW-RH	Inorganic Sludges/Particulates	Toxic Metals w/o Mercury	3.6	0.0
INEL	ID-EGG-102-30	MLLW-RH	Inorganic Sludges/Particulates	Toxic Organics	0.4	0.0
INEL	ID-EGG-288-181	MLLW-RH	Other	Toxic Organics	0.4	0.0
INEL	ID-EGG-112T-835	MTRU-CH	Cemented Solids	Toxic Organics	176.2	0.0
INEL	ID-EGG-112T-112	MTRU-CH	Cemented Solids	Toxic Organics	164.1	0.0
INEL	ID-EGG-112T-834	MTRU-CH	Cemented Solids	Toxic Organics	151.2	0.0
INEL	ID-EGG-112T-700	MTRU-CH	Cemented Solids	Toxic Organics	1.9	0.0
INEL	ID-EGG-112T-978	MTRU-CH	Cemented Solids	Toxic Organics and Metals w/ Mercury	9.5	0.0
INEL	ID-EGG-112T-836	MTRU-CH	Cemented Solids	Toxic Organics and Metals w/ Mercury	5.5	0.0
INEL	ID-EGG-112T-976	MTRU-CH	Cemented Solids	Toxic Organics and Metals w/ Mercury	1.1	0.0
INEL	ID-EGG-112T-4	MTRU-CH	Cemented Solids	Toxic Organics and Metals w/o Mercury	228.8	0.0
INEL	ID-EGG-112T-114	MTRU-CH	Cemented Solids	Toxic Organics and Metals w/o Mercury	70.8	0.0
INEL	ID-EGG-134T-824	MTRU-CH	Heterogeneous Debris	Toxic Metals w/ Mercury	370.9	0.0
INEL	ID-EGG-118T-805	MTRU-CH	Heterogeneous Debris	Toxic Metals w/ Mercury	8.1	0.0
INEL	ID-EGG-118T-813	MTRU-CH	Heterogeneous Debris	Toxic Metals w/ Mercury	0.6	0.0
INEL	ID-EGG-134T-101	MTRU-CH	Heterogeneous Debris	Toxic Metals w/o Mercury	211.9	0.0
INEL	ID-EGG-134T-201	MTRU-CH	Heterogeneous Debris	Toxic Metals w/o Mercury	64.9	0.0
INEL	ID-EGG-120T-123	MTRU-CH	Heterogeneous Debris	Toxic Metals w/o Mercury	63.6	0.0
INEL	ID-EGG-120T-802	MTRU-CH	Heterogeneous Debris	Toxic Metals w/o Mercury	25.7	0.0
INEL	ID-EGG-134T-950	MTRU-CH	Heterogeneous Debris	Toxic Metals w/o Mercury	14.0	0.0
INEL	ID-EGG-118T-490	MTRU-CH	Heterogeneous Debris	Toxic Organics	2512.4	0.0
INEL	ID-EGG-134T-100	MTRU-CH	Heterogeneous Debris	Toxic Organics	770.1	0.0
INEL	ID-EGG-118T-376	MTRU-CH	Heterogeneous Debris	Toxic Organics	460.2	0.0
INEL	ID-EGG-118T-119	MTRU-CH	Heterogeneous Debris	Toxic Organics	383.1	0.0
INEL	ID-EGG-118T-338	MTRU-CH	Heterogeneous Debris	Toxic Organics	60.2	0.0
INEL	ID-EGG-118T-335	MTRU-CH	Heterogeneous Debris	Toxic Organics	26.2	0.0
INEL	ID-EGG-118T-360	MTRU-CH	Heterogeneous Debris	Toxic Organics	3.4	0.0
INEL	ID-EGG-118T-328	MTRU-CH	Heterogeneous Debris	Toxic Organics	1.5	0.0
INEL	ID-EGG-134T-121	MTRU-CH	Heterogeneous Debris	Toxic Organics and Metals w/ Mercury	25.4	0.0
INEL	ID-EGG-120T-339	MTRU-CH	Heterogeneous Debris	Toxic Organics and Metals w/o Mercury	160.2	0.0
INEL	ID-EGG-109T-302	MTRU-CH	Heterogeneous Debris	Toxic Organics and Metals w/o Mercury	22.2	0.0
INEL	ID-EGG-120T-463	MTRU-CH	Heterogeneous Debris	Toxic Organics and Metals w/o Mercury	10.2	0.0
INEL	ID-EGG-109T-464	MTRU-CH	Heterogeneous Debris	Toxic Organics and Metals w/o Mercury	6.1	0.0
INEL	ID-EGG-134T-241	MTRU-CH	Heterogeneous Debris	Toxic Organics and Metals w/o Mercury	1.1	0.0
INEL	ID-EGG-132T-803	MTRU-CH	Inorganic Debris	Toxic Metals w/ Mercury	35.4	0.0
INEL	ID-EGG-119T-810	MTRU-CH	Inorganic Debris	Toxic Metals w/ Mercury	2.8	0.0
INEL	ID-EGG-137T-814	MTRU-CH	Inorganic Debris	Toxic Metals w/ Mercury	0.4	0.0
INEL	ID-EGG-137T-300	MTRU-CH	Inorganic Debris	Toxic Organics	391.8	0.0
INEL	ID-EGG-115T-371	MTRU-CH	Inorganic Debris	Toxic Organics	111.4	0.0
INEL	ID-EGG-132T-20	MTRU-CH	Inorganic Debris	Toxic Organics	106.0	0.0
INEL	ID-EGG-115T-122	MTRU-CH	Inorganic Debris	Toxic Organics	18.2	0.0
INEL	ID-EGG-137T-301	MTRU-CH	Inorganic Debris	Toxic Organics	6.4	0.0
INEL	ID-EGG-137T-312	MTRU-CH	Inorganic Debris	Toxic Organics	1.9	0.0
INEL	ID-EGG-115T-375	MTRU-CH	Inorganic Debris	Toxic Organics	0.8	0.0
INEL	ID-EGG-119T-118	MTRU-CH	Inorganic Debris	Toxic Organics and Metals w/ Mercury	169.1	0.0
INEL	ID-EGG-132T-480	MTRU-CH	Inorganic Debris	Toxic Organics and Metals w/o Mercury	5243.4	0.0
INEL	ID-EGG-132T-117	MTRU-CH	Inorganic Debris	Toxic Organics and Metals w/o Mercury	1513.4	0.0
INEL	ID-EGG-132T-481	MTRU-CH	Inorganic Debris	Toxic Organics and Metals w/o Mercury	443.2	0.0
INEL	ID-EGG-119T-440	MTRU-CH	Inorganic Debris	Toxic Organics and Metals w/o Mercury	247.7	0.0
INEL	ID-EGG-119T-442	MTRU-CH	Inorganic Debris	Toxic Organics and Metals w/o Mercury	199.5	0.0
INEL	ID-EGG-119T-441	MTRU-CH	Inorganic Debris	Toxic Organics and Metals w/o Mercury	169.0	0.0
INEL	ID-EGG-132T-320	MTRU-CH	Inorganic Debris	Toxic Organics and Metals w/o Mercury	74.6	0.0
INEL	ID-EGG-141T-842	MTRU-CH	Inorganic Sludges/Particulates	Toxic Metals w/ Mercury	38.0	0.0
INEL	ID-EGG-141T-372	MTRU-CH	Inorganic Sludges/Particulates	Toxic Metals w/ Mercury	3.0	0.0
INEL	ID-EGG-102T-811	MTRU-CH	Inorganic Sludges/Particulates	Toxic Metals w/ Mercury	0.8	0.0
INEL	ID-EGG-141T-374	MTRU-CH	Inorganic Sludges/Particulates	Toxic Organics	53.2	0.0
INEL	ID-EGG-102T-113	MTRU-CH	Inorganic Sludges/Particulates	Toxic Organics	14.4	0.0
INEL	ID-EGG-146T-409	MTRU-CH	Inorganic Sludges/Particulates	Toxic Organics	6.6	0.0
INEL	ID-EGG-146T-124	MTRU-CH	Inorganic Sludges/Particulates	Toxic Organics	3.2	0.0
INEL	ID-EGG-146T-414	MTRU-CH	Inorganic Sludges/Particulates	Toxic Organics	1.1	0.0
INEL	ID-EGG-146T-5	MTRU-CH	Inorganic Sludges/Particulates	Toxic Organics	0.6	0.0
INEL	ID-EGG-102T-1	MTRU-CH	Inorganic Sludges/Particulates	Toxic Organics and Metals w/ Mercury	2531.0	0.0
INEL	ID-EGG-102T-2	MTRU-CH	Inorganic Sludges/Particulates	Toxic Organics and Metals w/ Mercury	1266.8	0.0
INEL	ID-EGG-102T-111	MTRU-CH	Inorganic Sludges/Particulates	Toxic Organics and Metals w/ Mercury	553.5	0.0

APPEND-B.XLS

SITE	Waste Stream Number	Radiation Category	Waste Matrix	Contaminant Type	Current Inventory (m3)	Five Year Generation (m3)
INEL	ID-EGG-102T-7	MTRU-CH	Inorganic Sludges/Particulates	Toxic Organics and Metals w/ Mercury	459.2	0.0
INEL	ID-EGG-102T-292	MTRU-CH	Inorganic Sludges/Particulates	Toxic Organics and Metals w/o Mercury	110.6	0.0
INEL	ID-EGG-102T-980	MTRU-CH	Inorganic Sludges/Particulates	Toxic Organics and Metals w/o Mercury	0.2	0.0
INEL	ID-EGG-114T-826	MTRU-CH	Organic Debris	Toxic Metals w/ Mercury	79.9	0.0
INEL	ID-EGG-114T-827	MTRU-CH	Organic Debris	Toxic Metals w/ Mercury	1.9	0.0
INEL	ID-EGG-114T-10	MTRU-CH	Organic Debris	Toxic Organics	165.6	0.0
INEL	ID-EGG-114T-480	MTRU-CH	Organic Debris	Toxic Organics	1.3	0.0
INEL	ID-EGG-114T-330	MTRU-CH	Organic Debris	Toxic Organics and Metals w/o Mercury	5774.8	0.0
INEL	ID-EGG-114T-116	MTRU-CH	Organic Debris	Toxic Organics and Metals w/o Mercury	2695.1	0.0
INEL	ID-EGG-114T-336	MTRU-CH	Organic Debris	Toxic Organics and Metals w/o Mercury	778.3	0.0
INEL	ID-EGG-114T-337	MTRU-CH	Organic Debris	Toxic Organics and Metals w/o Mercury	170.4	0.0
INEL	ID-EGG-114T-970	MTRU-CH	Organic Debris	Toxic Organics and Metals w/o Mercury	109.9	0.0
INEL	ID-EGG-114T-110	MTRU-CH	Organic Debris	Toxic Organics and Metals w/o Mercury	3.6	0.0
INEL	ID-EGG-114T-900	MTRU-CH	Organic Debris	Toxic Organics and Metals w/o Mercury	0.8	0.0
INEL	ID-EGG-114T-120	MTRU-CH	Organic Debris	Toxic Organics and Metals w/o Mercury	0.4	0.0
INEL	ID-EGG-145T-430	MTRU-CH	Organic Sludges/Particulates	Toxic Organics	4.2	0.0
INEL	ID-EGG-145T-431	MTRU-CH	Organic Sludges/Particulates	Toxic Organics	0.8	0.0
INEL	ID-EGG-158T-3	MTRU-CH	Organic Sludges/Particulates	Toxic Organics and Metals w/o Mercury	569.4	0.0
INEL	ID-EGG-145T-432	MTRU-CH	Organic Sludges/Particulates	Toxic Organics and Metals w/o Mercury	51.5	0.0
INEL	ID-EGG-287T-999	MTRU-CH	Other	Toxic Organics	4511.8	0.0
INEL	ID-EGG-287T-0	MTRU-CH	Other	Toxic Organics	4139.7	0.0
INEL	ID-EGG-288T-102	MTRU-CH	Other	Toxic Organics	54.3	0.0
INEL	ID-EGG-288T-155	MTRU-CH	Other	Toxic Organics	14.6	0.0
INEL	ID-EGG-288T-162	MTRU-CH	Other	Toxic Organics	8.7	0.0
INEL	ID-EGG-288T-801	MTRU-CH	Other	Toxic Organics	7.4	0.0
INEL	ID-EGG-288T-203	MTRU-CH	Other	Toxic Organics	5.5	0.0
INEL	ID-EGG-288T-847	MTRU-CH	Other	Toxic Organics	4.2	0.0
INEL	ID-EGG-288T-202	MTRU-CH	Other	Toxic Organics	4.1	0.0
INEL	ID-EGG-288T-105	MTRU-CH	Other	Toxic Organics	1.5	0.0
INEL	ID-EGG-288T-163	MTRU-CH	Other	Toxic Organics	1.3	0.0
INEL	ID-EGG-288T-848	MTRU-CH	Other	Toxic Organics	1.3	0.0
INEL	ID-EGG-288T-204	MTRU-CH	Other	Toxic Organics	0.8	0.0
INEL	ID-EGG-288T-815	MTRU-CH	Other	Toxic Organics	0.4	0.0
INEL	CH-ANL-177T	MTRU-RH	Elemental Lead	Toxic Metals w/o Mercury	0.3	0.0
INEL	ID-EGG-144T-104	MTRU-RH	Heterogeneous Debris	Toxic Metals w/o Mercury	58.8	0.0
INEL	ID-EGG-144T-40	MTRU-RH	Heterogeneous Debris	Toxic Metals w/o Mercury	36.5	0.0
INEL	ID-EGG-142T	MTRU-RH	Heterogeneous Debris	Toxic Metals w/o Mercury	5.4	0.0
INEL	ID-EGG-144T-154	MTRU-RH	Heterogeneous Debris	Toxic Metals w/o Mercury	1.9	0.0
INEL	ID-EGG-144T-153	MTRU-RH	Heterogeneous Debris	Toxic Metals w/o Mercury	1.9	0.0
INEL	ID-EGG-144T-151	MTRU-RH	Heterogeneous Debris	Toxic Metals w/o Mercury	0.4	0.0
INEL	CH-ANL-241T	MTRU-RH	Heterogeneous Debris	Toxic Metals w/o Mercury	0.2	0.2
INEL	ID-EGG-291T	MTRU-RH	Inorganic Sludges/Particulates	Toxic Metals w/ Mercury	2.1	0.0
INEL	ID-EGG-141T-150	MTRU-RH	Inorganic Sludges/Particulates	Toxic Metals w/o Mercury	26.9	0.0
INEL	CH-ANL-243T	MTRU-RH	Inorganic Sludges/Particulates	Toxic Metals w/o Mercury	0.0	0.8
INEL	ID-EGG-102T-30	MTRU-RH	Inorganic Sludges/Particulates	Toxic Organics	9.5	0.0
INEL	CH-ANL-245T	MTRU-RH	Other	Toxic Metals w/o Mercury	0.0	1.1
INEL	CH-ANL-246T	MTRU-RH	Other	Toxic Metals w/o Mercury	0.0	0.1
INEL	ID-EGG-288T-107	MTRU-RH	Other	Toxic Organics	6.4	0.0
INEL	ID-EGG-288T-157	MTRU-RH	Other	Toxic Organics	0.4	0.0
INEL	ID-EGG-288T-200	MTRU-RH	Other	Toxic Organics	0.2	0.0
INEL	ID-EGG-288T-106	MTRU-RH	Other	Toxic Organics	0.2	0.0
INEL	ID-EGG-288T-160	MTRU-RH	Other	Toxic Organics	0.2	0.0
INEL	CH-ANL-180T	MTRU-RH	Reactive Metals	Toxic Organics	0.1	0.0
INEL	CH-ANL-182T	MTRU-RH	Reactive Metals	Toxic Organics	0.0	0.0
Inhalation Tox RI	3	MLLW-CH	Elemental Lead	Toxic Metals w/o Mercury	0.0	1.2
Inhalation Tox RI	5	MLLW-CH	Organic Liquids	Ignitable	0.0	2.5
Inhalation Tox RI	6	MLLW-CH	Organic Liquids	Ignitable	0.0	0.5
Inhalation Tox RI	2	MLLW-CH	Organic Liquids	Toxic Organics	0.8	0.1
Inhalation Tox RI	7	MLLW-CH	Organic Liquids	Toxic Organics	0.4	0.2
Inhalation Tox RI	4	MLLW-CH	Organic Liquids	Toxic Organics	0.0	0.1
KAPL	0000000015	MLLW-CH	Elemental Lead	Toxic Metals w/o Mercury	0.0	1.0
KAPL	0000000006	MLLW-CH	Heterogeneous Debris	Toxic Metals w/ Mercury	0.0	0.1
KAPL	0000000007	MLLW-CH	Inorganic Debris	Toxic Metals w/ Mercury	0.2	0.0
KAPL	0000000014	MLLW-CH	Inorganic Debris	Toxic Metals w/ Mercury	0.0	0.5
KAPL	0000000018	MLLW-CH	Inorganic Sludges/Particulates	Toxic Metals w/ Mercury	0.0	0.4
KAPL	0000000011	MLLW-CH	Lab Packs with Metals	Toxic Metals w/ Mercury	0.0	0.7
KAPL	0000000003	MLLW-CH	Lab Packs without Metals	Toxic Organics	0.0	2.0
KAPL	0000000012	MLLW-CH	Organic Debris	Toxic Metals w/ Mercury	0.0	2.5
KAPL	0000000008	MLLW-CH	Organic Debris	Toxic Organics	0.4	0.0
KAPL	0000000036	MLLW-CH	Organic Debris	Toxic Organics	0.0	0.4
KAPL	0000000004	MLLW-CH	Organic Liquids	Toxic Metals w/ Mercury	0.0	0.1
KAPL	0000000009	MLLW-CH	Organic Liquids	Toxic Metals w/o Mercury	0.0	2.0
KAPL	0000000013	MLLW-CH	Organic Sludges/Particulates	Toxic Metals w/ Mercury	0.0	0.4
KAPL	0000000005	MLLW-CH	Organic Sludges/Particulates	Toxic Organics	0.2	0.1
KAPL	0000000044	MTRU-RH	Inorganic Debris	Toxic Organics and Metals w/ Mercury	0.0	0.1
KAPL	0000000045	MTRU-RH	Organic Debris	Toxic Organics and Metals w/ Mercury	0.0	0.1

APPEND-B.XLS

SITE	Waste Stream Number	Radiation Category	Waste Matrix	Contaminant Type	Current Inventory (m3)	Five Year Generation (m3)
KAPL	0000000046	MLLW-RH	Organic Debris	Toxic Organics and Metals w/ Mercury	0.0	0.1
KAPL - Windsor	0000000044	MLLW-CH	Elemental Lead	Toxic Metals w/o Mercury	0.0	2.5
KAPL - Windsor	0000000038	MLLW-CH	Inorganic Debris	Toxic Metals w/ Mercury	0.0	3.4
KAPL - Windsor	0000000040	MLLW-CH	Inorganic Sludges/Particulates	Toxic Metals w/ Mercury	0.0	0.2
KAPL - Windsor	0000000035	MLLW-CH	Lab Packs with Metals	Toxic Metals w/ Mercury	0.0	0.1
KAPL - Windsor	0000000045	MLLW-CH	Lab Packs without Metals	Toxic Organics and Metals w/ Mercury	0.0	0.3
KAPL - Windsor	0000000036	MLLW-CH	Organic Debris	Toxic Metals w/ Mercury	0.0	1.5
KAPL - Windsor	0000000033	MLLW-CH	Organic Liquids	Toxic Metals w/o Mercury	0.0	0.5
KAPL - Windsor	0000000043	MLLW-CH	Organic Sludges/Particulates	Toxic Metals w/ Mercury	0.0	1.8
KAPL-Kesseling	0000000034	MLLW-CH	Elemental Lead	Toxic Metals w/o Mercury	0.0	1.0
KAPL-Kesseling	0000000028	MLLW-CH	Inorganic Debris	Toxic Metals w/ Mercury	0.0	0.6
KAPL-Kesseling	0000000022	MLLW-CH	Inorganic Debris	Toxic Metals w/o Mercury	0.0	0.1
KAPL-Kesseling	0000000030	MLLW-CH	Inorganic Sludges/Particulates	Toxic Metals w/ Mercury	0.0	0.5
KAPL-Kesseling	0000000036	MLLW-CH	Lab Packs with Metals	Toxic Metals w/ Mercury	0.0	1.0
KAPL-Kesseling	0000000025	MLLW-CH	Lab Packs without Metals	Toxic Organics and Metals w/ Mercury	0.0	1.3
KAPL-Kesseling	0000000026	MLLW-CH	Organic Debris	Toxic Metals w/ Mercury	1.5	3.5
KAPL-Kesseling	0000000019	MLLW-CH	Organic Debris	Toxic Metals w/o Mercury	0.2	0.0
KAPL-Kesseling	0000000033	MLLW-CH	Organic Debris	Toxic Organics	0.0	0.4
KAPL-Kesseling	0000000035	MLLW-CH	Organic Liquids	Toxic Metals w/ Mercury	0.0	0.4
KAPL-Kesseling	0000000023	MLLW-CH	Organic Liquids	Toxic Metals w/o Mercury	0.0	1.0
KAPL-Kesseling	0000000032	MLLW-CH	Organic Sludges/Particulates	Toxic Metals w/ Mercury	0.0	4.2
KCP	0794	MLLW-CH	Elemental Lead	Toxic Metals w/o Mercury	1.0	0.0
KCP	0037	MLLW-CH	Heterogeneous Debris	Toxic Organics	2.1	0.0
KCP	2122(inor)	MLLW-CH	Inorganic Debris	Toxic Metals w/o Mercury	0.4	0.0
KCP	0162	MLLW-CH	Organic Debris	Toxic Metals w/o Mercury	1.3	0.0
KCP	0161	MLLW-CH	Organic Debris	Toxic Metals w/o Mercury	0.3	0.0
KCP	2122(org)	MLLW-CH	Organic Debris	Toxic Organics	0.4	0.0
Lab. for Energy-Related Health Research	COR-MW-2	MLLW-CH	Aqueous Liquid	Corrosive	0.6	0.0
Lab. for Energy-Related Health Research	FLAM-MW-1c	MLLW-CH	Organic Liquids	Ignitable	3.0	0.0
Lab. for Energy-Related Health Research	FLAM-MW-1a	MLLW-CH	Organic Liquids	Ignitable	0.1	0.0
Lab. for Energy-Related Health Research	FLAM-MW-1b	MLLW-CH	Organic Liquids	Toxic Organics	0.0	0.0
LANL	2066	MLLW-CH	Aqueous Liquid	Corrosive	5.1	1.3
LANL	2067	MLLW-CH	Aqueous Liquid	Corrosive	1.2	2.3
LANL	2095	MLLW-CH	Aqueous Liquid	Toxic Metals w/o Mercury	8.0	11.5
LANL	2088	MLLW-CH	Aqueous Liquid	Toxic Metals w/o Mercury	4.6	0.8
LANL	2030	MLLW-CH	Aqueous Liquid	Toxic Metals w/o Mercury	2.5	4.0
LANL	2076	MLLW-CH	Aqueous Liquid	Toxic Metals w/o Mercury	0.7	0.6
LANL	2140	MLLW-CH	Aqueous Liquid	Toxic Metals w/o Mercury	0.5	0.8
LANL	2142	MLLW-CH	Aqueous Liquid	Toxic Metals w/o Mercury	0.5	0.8
LANL	2085	MLLW-CH	Aqueous Liquid	Toxic Metals w/o Mercury	0.3	0.2
LANL	gascylD	MLLW-CH	Compressed Gases	Corrosive	0.2	0.5
LANL	gascylG	MLLW-CH	Compressed Gases	Corrosive	0.1	0.0
LANL	gascylB	MLLW-CH	Compressed Gases	Ignitable	20.1	10.5
LANL	gascylI	MLLW-CH	Compressed Gases	Ignitable	0.2	0.5
LANL	2188	MLLW-CH	Compressed Gases	Toxic Organics	0.8	2.1
LANL	2194C	MLLW-CH	Compressed Gases	Toxic Organics	0.1	0.0
LANL	gascylI	MLLW-CH	Compressed Gases	Toxic Organics and Metals w/ Mercury	1.0	0.0
LANL	gascylIN	MLLW-CH	Compressed Gases	Toxic Organics and Metals w/ Mercury	0.1	0.0
LANL	gascylL	MLLW-CH	Compressed Gases	Toxic Organics and Metals w/ Mercury	0.0	0.0
LANL	2094	MLLW-CH	Elemental Lead	Toxic Metals w/o Mercury	183.3	243.1
LANL	2135	MLLW-CH	Heterogeneous Debris	Toxic Metals w/ Mercury	2.1	2.5
LANL	2075	MLLW-CH	Heterogeneous Debris	Toxic Metals w/o Mercury	0.2	0.4
LANL	2175	MLLW-CH	Heterogeneous Debris	Toxic Organics	21.8	28.3
LANL	2179	MLLW-CH	Heterogeneous Debris	Toxic Organics	2.0	3.0
LANL	2079	MLLW-CH	Inorganic Debris	Toxic Metals w/o Mercury	5.9	9.8
LANL	2084	MLLW-CH	Inorganic Debris	Toxic Metals w/o Mercury	3.3	4.9
LANL	2087	MLLW-CH	Inorganic Sludges/Particulates	Toxic Metals w/o Mercury	0.4	0.7
LANL	2136	MLLW-CH	Liquid Mercury	Toxic Metals w/ Mercury	10.5	11.1
LANL	2194H	MLLW-CH	Liquid Mercury	Toxic Organics and Metals w/ Mercury	0.1	0.0
LANL	2194M	MLLW-CH	Organic Liquids	Corrosive	0.0	0.0
LANL	2055	MLLW-CH	Organic Liquids	Ignitable	79.3	87.7
LANL	2194G	MLLW-CH	Organic Liquids	Toxic Metals w/o Mercury	0.0	0.0
LANL	2180	MLLW-CH	Organic Liquids	Toxic Organics	16.2	21.1
LANL	2176	MLLW-CH	Organic Liquids	Toxic Organics	12.7	18.5
LANL	2184	MLLW-CH	Organic Liquids	Toxic Organics	10.8	15.7
LANL	2145	MLLW-CH	Organic Liquids	Toxic Organics	8.8	13.3
LANL	2194K	MLLW-CH	Organic Liquids	Toxic Organics	0.0	0.0
LANL	2194A	MLLW-CH	Organic Liquids	Toxic Organics	0.0	0.0
LANL	2194N	MLLW-CH	Organic Liquids	Toxic Organics and Metals w/ Mercury	3.5	0.0
LANL	2194E	MLLW-CH	Organic Liquids	Toxic Organics and Metals w/ Mercury	0.0	0.0
LANL	2193	MLLW-CH	Organic Sludges/Particulates	Ignitable	16.9	27.9
LANL	2069	MLLW-CH	Other	Reactive	2.0	3.1
LANL	2187	MLLW-CH	Other	Toxic Metals w/o Mercury	0.0	0.0
LANL	2194I	MLLW-CH	Other	Toxic Metals w/o Mercury	0.0	0.0
LANL	2186	MLLW-CH	Other	Toxic Metals w/o Mercury	0.0	0.0
LANL	2194J	MLLW-CH	Other	Toxic Organics and Metals w/ Mercury	0.0	0.0

APPEND-B.XLS

SITE	Waste Stream Number	Radiation Category	Waste Matrix	Contaminant Type	Current Inventory (m3)	Five Year Generation (m3)
LANL	2068	MLLW-CH	Reactive Metals	Reactive	11.3	5.9
LANL	2103	MTRU-CH	Cemented Solids	Toxic Metals w/o Mercury	15.2	21.2
LANL	2186	MTRU-CH	Cemented Solids	Toxic Metals w/o Mercury	14.0	38.3
LANL	2100	MTRU-CH	Elemental Lead	Toxic Metals w/o Mercury	2051.4	304.1
LANL	2195	MTRU-CH	Heterogeneous Debris	Toxic Metals w/o Mercury	15.1	0.0
LANL	2159	MTRU-CH	Heterogeneous Debris	Toxic Organics	276.8	236.9
LANL	2089	MTRU-CH	Inorganic Debris	Reactive	110.1	3.1
LANL	2091	MTRU-CH	Inorganic Sludges/Particulates	Toxic Metals w/o Mercury	115.9	0.3
LANL	2160	MTRU-CH	Inorganic Sludges/Particulates	Toxic Organics	1088.6	0.0
Lawrence Berkeley Laboratory	1112	MLLW-CH	Elemental Lead	Toxic Metals w/o Mercury	0.2	0.2
Lawrence Berkeley Laboratory	1110	MLLW-CH	Liquid Mercury	Toxic Metals w/ Mercury	0.1	0.2
Lawrence Berkeley Laboratory	1111	MLLW-CH	Organic Liquids	Toxic Organics	3.4	10.0
Lawrence Berkeley Laboratory	1103	MLLW-CH/AL	Aqueous Liquid	Corrosive	0.7	1.0
Lawrence Berkeley Laboratory	1102	MLLW-CH/AL	Aqueous Liquid	Corrosive	0.5	2.5
Lawrence Berkeley Laboratory	1104	MLLW-CH/AL	Aqueous Liquid	Reactive	0.1	0.2
Lawrence Berkeley Laboratory	1107	MLLW-CH/AL	Elemental Lead	Toxic Metals w/o Mercury	0.3	1.0
Lawrence Berkeley Laboratory	2421	MLLW-CH/AL	Heterogeneous Debris	Ignitable	0.8	20.0
Lawrence Berkeley Laboratory	1109	MLLW-CH/AL	Lab Packs with Metals	Toxic Organics and Metals w/ Mercury	2.3	9.0
Lawrence Berkeley Laboratory	1105	MLLW-CH/AL	Organic Liquids	Toxic Organics	1.8	2.0
Livermore NL	2403	MLLW-CH	Aqueous Liquid	Toxic Organics and Metals w/ Mercury	25.0	50.0
Livermore NL	2453	MLLW-CH	Cemented Solids	Toxic Organics and Metals w/ Mercury	30.0	70.0
Livermore NL	2407	MLLW-CH	Elemental Lead	Toxic Metals w/o Mercury	0.5	1000.0
Livermore NL	2435	MLLW-CH	Heterogeneous Debris	Toxic Organics and Metals w/ Mercury	25.0	50.0
Livermore NL	2405	MLLW-CH	Inorganic Debris	Toxic Organics and Metals w/ Mercury	6.0	12.0
Livermore NL	2424	MLLW-CH	Inorganic Debris	Toxic Organics and Metals w/ Mercury	1.0	2.0
Livermore NL	2402	MLLW-CH	Inorganic Debris	Toxic Organics and Metals w/ Mercury	0.4	0.8
Livermore NL	2430	MLLW-CH	Inorganic Debris	Toxic Organics and Metals w/ Mercury	3.0	6.0
Livermore NL	2401	MLLW-CH	Inorganic Sludges/Particulates	Toxic Organics and Metals w/ Mercury	38.0	77.0
Livermore NL	2404	MLLW-CH	Inorganic Sludges/Particulates	Toxic Organics and Metals w/ Mercury	4.0	9.0
Livermore NL	2449	MLLW-CH	Lab Packs with Metals	Toxic Metals w/ Mercury	0.3	0.6
Livermore NL	2400	MLLW-CH	Lab Packs without Metals	Toxic Organics	3.0	6.0
Livermore NL	2452	MLLW-CH	Liquid Mercury	Toxic Metals w/ Mercury	0.0	0.0
Livermore NL	2419	MLLW-CH	Organic Debris	Toxic Organics and Metals w/o Mercury	0.0	0.0
Livermore NL	2409	MLLW-CH	Organic Liquids	Toxic Organics and Metals w/ Mercury	50.0	100.0
Livermore NL	2408	MLLW-CH	Organic Liquids	Toxic Organics and Metals w/ Mercury	10.0	20.0
Livermore NL	2433	MLLW-CH	Organic Liquids	Toxic Organics and Metals w/ Mercury	1.8	2.7
Livermore NL	2427	MLLW-CH	Organic Liquids	Toxic Organics and Metals w/o Mercury	6.0	12.0
Livermore NL	2450	MLLW-CH	Organic Sludges/Particulates	Toxic Organics	3.0	2.5
Livermore NL	2454	MLLW-CH	Organic Sludges/Particulates	Toxic Organics and Metals w/ Mercury	0.3	0.2
Livermore NL	2412	MLLW-CH	Reactive Metals	Toxic Metals w/o Mercury	0.5	1000.0
Livermore NL	2451	MLLW-CH	Soil with <50% Debris	Toxic Organics and Metals w/ Mercury	0.2	0.1
Livermore NL	2410	MLLW-CH	Soils	Toxic Organics and Metals w/ Mercury	4.0	8.0
Livermore NL	2448	MTRU-RH	Aqueous Liquid	Toxic Metals w/o Mercury	0.6	1.2
Livermore NL	2444	MTRU-RH	Inorganic Debris	Toxic Metals w/o Mercury	74.0	3.0
Livermore NL	2446	MTRU-RH	Organic Liquids	Toxic Organics	136.0	0.6
Mare Island Naval Shipyard	0000000006	MLLW-CH	Cemented Solids	Toxic Metals w/o Mercury	0.9	0.0
Mare Island Naval Shipyard	0000000009	MLLW-CH	Inorganic Debris	Toxic Metals w/o Mercury	0.4	0.0
Mare Island Naval Shipyard	0000000012	MLLW-CH	Inorganic Debris	Toxic Organics and Metals w/ Mercury	0.0	28.3
Mare Island Naval Shipyard	0000000008	MLLW-CH	Inorganic Sludges/Particulates	Toxic Metals w/o Mercury	0.0	15.0
Mare Island Naval Shipyard	0000000005	MLLW-CH	Organic Debris	Toxic Metals w/o Mercury	0.9	12.0
Mare Island Naval Shipyard	0000000011	MLLW-CH	Organic Debris	Toxic Organics	5.3	2.5
Middlesex Sampling Plant	001	MLLW-CH	Soils	Toxic Metals w/o Mercury	23900.0	0.0
MOUND	2064	MLLW-CH	Batteries	Toxic Metals w/o Mercury	0.9	0.8
MOUND	836	MLLW-CH	Elemental Lead	Toxic Metals w/o Mercury	5.0	0.7
MOUND	2066	MLLW-CH	Heterogeneous Debris	Ignitable	0.2	0.0
MOUND	New MW	MLLW-CH	Heterogeneous Debris	Toxic Organics and Metals w/ Mercury	0.0	1.1
MOUND	2067	MLLW-CH	Lab Packs with Metals	Toxic Metals w/o Mercury	0.0	0.0
MOUND	2068	MLLW-CH	Lab Packs without Metals	Toxic Organics and Metals w/ Mercury	0.1	0.0
MOUND	837	MLLW-CH	Liquid Mercury	Toxic Metals w/ Mercury	0.1	0.0
MOUND	2065	MLLW-CH	Organic Liquids	Ignitable	1.1	0.0
MOUND	2063	MLLW-CH	Organic Liquids	Ignitable	0.0	0.0
MOUND	Waste Oil	MLLW-CH	Organic Liquids	Toxic Metals w/ Mercury	0.0	0.0
MOUND	497	MLLW-CH	Organic Liquids	Toxic Organics	43.2	0.0
MOUND	835	MLLW-CH/AL	Heterogeneous Debris	Toxic Metals w/o Mercury	0.0	0.4
MOUND	833	MTRU-CH	Cemented Solids	Corrosive	2.0	0.0
MOUND	835a	MTRU-CH	Elemental Lead	Toxic Metals w/o Mercury	1.1	0.0
MURR	1	MLLW-CH/AL	Heterogeneous Debris	Toxic Metals w/o Mercury	0.2	1.3
MURR	2	MTRU-CH	Heterogeneous Debris	Toxic Metals w/o Mercury	0.0	1.6
Nevada Test Site	NV-1	MTRU-RH	Heterogeneous Debris	Toxic Organics and Metals w/ Mercury	612.0	0.0
Norfolk Naval Shipyard	0000000004	MTRU-CH	Inorganic Sludges/Particulates	Toxic Metals w/o Mercury	0.0	1.0
Norfolk Naval Shipyard	0000000005	MLLW-CH	Organic Debris	Toxic Metals w/o Mercury	0.0	0.5
Oak Ridge Reservation	304	MLLW-CH	Aqueous Liquid	Toxic Organics and Metals w/ Mercury	9.7	19.4
Oak Ridge Reservation	2098	MLLW-CH	Aqueous Liquid	Toxic Organics and Metals w/ Mercury	7.5	44.0
Oak Ridge Reservation	2100	MLLW-CH	Aqueous Liquid	Toxic Organics and Metals w/ Mercury	4.0	40.0
Oak Ridge Reservation	2115	MLLW-CH	Aqueous Liquid	Toxic Organics and Metals w/ Mercury	0.0	1.0
Oak Ridge Reservation	2105	MLLW-CH	Batteries	Toxic Organics and Metals w/ Mercury	51.0	1263.0

APPEND-B.XLS

SITE	Waste Stream Number	Radiation Category	Waste Matrix	Contaminant Type	Current Inventory (m3)	Five Year Generation (m3)
Oak Ridge Reservation	300	MLLW-CH	Inorganic Sludges/Particulates	Toxic Metals w/ Mercury	0.3	0.2
Oak Ridge Reservation	2101	MLLW-CH	Inorganic Sludges/Particulates	Toxic Organics and Metals w/ Mercury	3.6	9.3
Oak Ridge Reservation	2111	MLLW-CH	Inorganic Sludges/Particulates	Toxic Organics and Metals w/ Mercury	1.6	9.0
Oak Ridge Reservation	2494	MLLW-CH	Lab Packs with Metals	Toxic Organics and Metals w/ Mercury	51.9	31.8
Oak Ridge Reservation	2498	MLLW-CH	Lab Packs with Metals	Toxic Organics and Metals w/ Mercury	23.2	6.2
Oak Ridge Reservation	2495	MLLW-CH	Lab Packs with Metals	Toxic Organics and Metals w/ Mercury	6.6	16.1
Oak Ridge Reservation	2488	MLLW-CH	Lab Packs with Metals	Toxic Organics and Metals w/ Mercury	2.6	6.8
Oak Ridge Reservation	2118	MLLW-CH	Lab Packs with Metals	Toxic Organics and Metals w/ Mercury	0.0	15.7
Oak Ridge Reservation	2502	MLLW-CH	Lab Packs with Metals	Toxic Organics and Metals w/o Mercury	0.7	0.0
Oak Ridge Reservation	752	MLLW-CH	Lab Packs with Metals	Toxic Organics and Metals w/o Mercury	0.1	0.1
Oak Ridge Reservation	2503	MLLW-CH	Lab Packs without Metals	Toxic Organics and Metals w/ Mercury	72.1	0.0
Oak Ridge Reservation	2142	MLLW-CH	Lab Packs without Metals	Toxic Organics and Metals w/ Mercury	37.8	80.4
Oak Ridge Reservation	2097	MLLW-CH	Lab Packs without Metals	Toxic Organics and Metals w/ Mercury	14.2	1.8
Oak Ridge Reservation	2094	MLLW-CH	Lab Packs without Metals	Toxic Organics and Metals w/ Mercury	9.0	130.0
Oak Ridge Reservation	2095	MLLW-CH	Lab Packs without Metals	Toxic Organics and Metals w/ Mercury	7.5	13.0
Oak Ridge Reservation	2110	MLLW-CH	Lab Packs without Metals	Toxic Organics and Metals w/ Mercury	0.1	4.7
Oak Ridge Reservation	2108	MLLW-CH	Lab Packs without Metals	Toxic Organics and Metals w/o Mercury	142.0	199.0
Oak Ridge Reservation	2096	MLLW-CH	Lab Packs without Metals	Toxic Organics and Metals w/o Mercury	35.0	20.0
Oak Ridge Reservation	2497	MLLW-CH	Lab Packs without Metals	Toxic Organics and Metals w/o Mercury	0.1	0.6
Oak Ridge Reservation	2114	MLLW-CH	Liquid Mercury	Toxic Metals w/ Mercury	1006.0	0.0
Oak Ridge Reservation	2499	MLLW-CH	Liquid Mercury	Toxic Organics and Metals w/ Mercury	1.0	2.7
Oak Ridge Reservation	2116	MLLW-CH	Organic Liquids	Toxic Organics	0.0	0.8
Oak Ridge Reservation	2104	MLLW-CH	Organic Liquids	Toxic Organics and Metals w/ Mercury	84.7	0.0
Oak Ridge Reservation	2106	MLLW-CH	Organic Liquids	Toxic Organics and Metals w/ Mercury	71.0	3650.0
Oak Ridge Reservation	2496	MLLW-CH	Organic Liquids	Toxic Organics and Metals w/ Mercury	23.2	99.8
Oak Ridge Reservation	2501	MLLW-CH	Organic Liquids	Toxic Organics and Metals w/o Mercury	19.8	77.2
Oak Ridge Reservation	2506	MLLW-CH	Organic Liquids	Toxic Organics and Metals w/o Mercury	14.0	0.0
Oak Ridge Reservation	2117	MLLW-CH	Organic Liquids	Toxic Organics and Metals w/o Mercury	0.0	0.8
Oak Ridge Reservation	2109	MLLW-CH	Organic Sludges/Particulates	Toxic Organics and Metals w/ Mercury	4880.0	3247.0
Oak Ridge Reservation	2113	MLLW-CH	Organic Sludges/Particulates	Toxic Organics and Metals w/ Mercury	24.8	0.0
Oak Ridge Reservation	2099	MLLW-CH	Organic Sludges/Particulates	Toxic Organics and Metals w/ Mercury	1.3	4.4
Oak Ridge Reservation	309	MLLW-CH	Organic Sludges/Particulates	Toxic Organics and Metals w/o Mercury	2.0	3.3
Oak Ridge Reservation	2103	MLLW-CH	Reactive Metals	Toxic Organics and Metals w/ Mercury	39.3	4.2
Oak Ridge Reservation	2102	MLLW-CH	Reactive Metals	Toxic Organics and Metals w/ Mercury	0.1	4.0
Oak Ridge Reservation	2119	MLLW-CH	Reactive Metals	Toxic Organics and Metals w/ Mercury	0.0	1.3
Oak Ridge Reservation	2112	MLLW-CH	Soils	Toxic Organics and Metals w/ Mercury	4722.0	0.0
Oak Ridge Reservation	2107	MLLW-CH	Soils	Toxic Organics and Metals w/ Mercury	25.5	0.0
Oak Ridge Reservation	2476	MLLW-CH/AL	Aqueous Liquid	Corrosive	25.1	20.3
Oak Ridge Reservation	2482	MLLW-CH/AL	Aqueous Liquid	Corrosive	6.1	7.7
Oak Ridge Reservation	2603	MLLW-CH/AL	Aqueous Liquid	Corrosive	0.0	0.6
Oak Ridge Reservation	2520	MLLW-CH/AL	Aqueous Liquid	Ignitable	0.2	0.7
Oak Ridge Reservation	2475	MLLW-CH/AL	Aqueous Liquid	Toxic Metals w/ Mercury	122.4	0.0
Oak Ridge Reservation	2512	MLLW-CH/AL	Aqueous Liquid	Toxic Metals w/ Mercury	20.2	40.2
Oak Ridge Reservation	2481	MLLW-CH/AL	Aqueous Liquid	Toxic Metals w/ Mercury	0.7	0.0
Oak Ridge Reservation	2551	MLLW-CH/AL	Aqueous Liquid	Toxic Metals w/o Mercury	0.0	0.0
Oak Ridge Reservation	2604	MLLW-CH/AL	Aqueous Liquid	Toxic Organics	1.3	57.1
Oak Ridge Reservation	1A-02	MLLW-CH/AL	Aqueous Liquid	Toxic Organics	0.0	91.0
Oak Ridge Reservation	2519	MLLW-CH/AL	Aqueous Liquid	Toxic Organics and Metals w/ Mercury	1.4	7.1
Oak Ridge Reservation	2525	MLLW-CH/AL	Batteries	Toxic Metals w/ Mercury	0.5	30.2
Oak Ridge Reservation	2549	MLLW-CH/AL	Compressed Gases	Toxic Organics	0.1	0.1
Oak Ridge Reservation	2555	MLLW-CH/AL	Compressed Gases	Toxic Organics	0.0	5.2
Oak Ridge Reservation	2540	MLLW-CH/AL	Compressed Gases	Toxic Organics and Metals w/ Mercury	0.5	0.0
Oak Ridge Reservation	1B-13	MLLW-CH/AL	Compressed Gases	Toxic Organics and Metals w/ Mercury	0.3	0.0
Oak Ridge Reservation	1B-42	MLLW-CH/AL	Compressed Gases	Toxic Organics and Metals w/ Mercury	0.0	0.0
Oak Ridge Reservation	1B-57	MLLW-CH/AL	Explosives	Toxic Organics and Metals w/ Mercury	0.0	0.0
Oak Ridge Reservation	2524	MLLW-CH/AL	Heterogeneous Debris	Toxic Metals w/o Mercury	3.8	15.1
Oak Ridge Reservation	2526	MLLW-CH/AL	Heterogeneous Debris	Toxic Organics	10.8	270.6
Oak Ridge Reservation	2522	MLLW-CH/AL	Heterogeneous Debris	Toxic Organics	10.8	54.1
Oak Ridge Reservation	2514	MLLW-CH/AL	Heterogeneous Debris	Toxic Organics	8.4	46.0
Oak Ridge Reservation	1B-90	MLLW-CH/AL	Heterogeneous Debris	Toxic Organics and Metals w/ Mercury	0.0	0.0
Oak Ridge Reservation	1B-89	MLLW-CH/AL	Heterogeneous Debris	Toxic Organics and Metals w/ Mercury	0.0	0.0
Oak Ridge Reservation	1B-91	MLLW-CH/AL	Heterogeneous Debris	Toxic Organics and Metals w/ Mercury	0.0	0.0
Oak Ridge Reservation	1B-92	MLLW-CH/AL	Heterogeneous Debris	Toxic Organics and Metals w/ Mercury	0.0	0.0
Oak Ridge Reservation	1B-93	MLLW-CH/AL	Heterogeneous Debris	Toxic Organics and Metals w/ Mercury	0.0	0.0
Oak Ridge Reservation	2566	MLLW-CH/AL	Inorganic Debris	Toxic Metals w/o Mercury	5.0	0.0
Oak Ridge Reservation	2504	MLLW-CH/AL	Inorganic Debris	Toxic Metals w/o Mercury	2.6	3.2
Oak Ridge Reservation	2568	MLLW-CH/AL	Inorganic Debris	Toxic Metals w/o Mercury	2.6	0.0
Oak Ridge Reservation	2546	MLLW-CH/AL	Inorganic Debris	Toxic Metals w/o Mercury	0.2	0.0
Oak Ridge Reservation	2602	MLLW-CH/AL	Inorganic Debris	Toxic Metals w/o Mercury	0.1	0.2
Oak Ridge Reservation	2561	MLLW-CH/AL	Inorganic Debris	Toxic Organics and Metals w/ Mercury	114.0	0.0
Oak Ridge Reservation	1B-88	MLLW-CH/AL	Inorganic Debris	Toxic Organics and Metals w/ Mercury	0.0	0.0
Oak Ridge Reservation	1B-87	MLLW-CH/AL	Inorganic Debris	Toxic Organics and Metals w/ Mercury	0.0	0.0
Oak Ridge Reservation	2528	MLLW-CH/AL	Inorganic Sludges/Particulates	Corrosive	12.9	65.8
Oak Ridge Reservation	2521	MLLW-CH/AL	Inorganic Sludges/Particulates	Ignitable	0.1	0.2
Oak Ridge Reservation	2471	MLLW-CH/AL	Inorganic Sludges/Particulates	Toxic Metals w/ Mercury	36.8	32.4
Oak Ridge Reservation	2478	MLLW-CH/AL	Inorganic Sludges/Particulates	Toxic Metals w/ Mercury	1.8	2.3

APPEND-B.XLS

SITE	Waste Stream Number	Radiation Category	Waste Matrix	Contaminant Type	Current Inventory (m3)	Five Year Generation (m3)
Oak Ridge Reservation	2457	MLLW-CH/AL	Inorganic Sludges/Particulates	Toxic Metals w/o Mercury	26488.0	0.0
Oak Ridge Reservation	2578	MLLW-CH/AL	Inorganic Sludges/Particulates	Toxic Metals w/o Mercury	34.5	0.0
Oak Ridge Reservation	2567	MLLW-CH/AL	Inorganic Sludges/Particulates	Toxic Metals w/o Mercury	18.8	0.0
Oak Ridge Reservation	2541	MLLW-CH/AL	Inorganic Sludges/Particulates	Toxic Metals w/o Mercury	3.9	39.4
Oak Ridge Reservation	2562	MLLW-CH/AL	Inorganic Sludges/Particulates	Toxic Organics and Metals w/ Mercury	351.0	0.0
Oak Ridge Reservation	2552	MLLW-CH/AL	Inorganic Sludges/Particulates	Toxic Organics and Metals w/ Mercury	0.0	0.0
Oak Ridge Reservation	2474	MLLW-CH/AL	Inorganic Sludges/Particulates	Toxic Organics and Metals w/o Mercury	574.2	440.1
Oak Ridge Reservation	2480	MLLW-CH/AL	Inorganic Sludges/Particulates	Toxic Organics and Metals w/o Mercury	115.5	177.8
Oak Ridge Reservation	2508	MLLW-CH/AL	Inorganic Sludges/Particulates	Toxic Organics and Metals w/o Mercury	36.2	87.2
Oak Ridge Reservation	2534	MLLW-CH/AL	Lab Packs with Metals	Toxic Metals w/o Mercury	0.6	8.7
Oak Ridge Reservation	2554	MLLW-CH/AL	Lab Packs with Metals	Toxic Metals w/o Mercury	0.4	1.1
Oak Ridge Reservation	2460	MLLW-CH/AL	Lab Packs with Metals	Toxic Metals w/o Mercury	0.4	0.0
Oak Ridge Reservation	2535	MLLW-CH/AL	Lab Packs with Metals	Toxic Metals w/o Mercury	0.1	0.8
Oak Ridge Reservation	2537	MLLW-CH/AL	Lab Packs with Metals	Toxic Metals w/o Mercury	0.0	0.7
Oak Ridge Reservation	2536	MLLW-CH/AL	Lab Packs with Metals	Toxic Metals w/o Mercury	0.0	0.1
Oak Ridge Reservation	2507	MLLW-CH/AL	Lab Packs with Metals	Toxic Organics	1.3	3.3
Oak Ridge Reservation	2542	MLLW-CH/AL	Lab Packs with Metals	Toxic Organics and Metals w/ Mercury	0.0	0.1
Oak Ridge Reservation	2563	MLLW-CH/AL	Lab Packs with Metals	Toxic Organics and Metals w/o Mercury	0.2	1.0
Oak Ridge Reservation	2527	MLLW-CH/AL	Lab Packs with Metals	Toxic Organics and Metals w/o Mercury	0.1	0.0
Oak Ridge Reservation	2538	MLLW-CH/AL	Lab Packs with Metals	Toxic Organics and Metals w/o Mercury	0.0	1.0
Oak Ridge Reservation	2510	MLLW-CH/AL	Lab Packs without Metals	Ignitable	4.4	36.2
Oak Ridge Reservation	2533	MLLW-CH/AL	Lab Packs without Metals	Toxic Organics	0.7	5.8
Oak Ridge Reservation	2539	MLLW-CH/AL	Lab Packs without Metals	Toxic Organics	0.1	2.0
Oak Ridge Reservation	2543	MLLW-CH/AL	Lab Packs without Metals	Toxic Organics and Metals w/ Mercury	0.2	0.3
Oak Ridge Reservation	2550	MLLW-CH/AL	Lab Packs without Metals	Toxic Organics and Metals w/ Mercury	0.0	1.1
Oak Ridge Reservation	1B-37	MLLW-CH/AL	Lab Packs without Metals	Toxic Organics and Metals w/ Mercury	0.0	0.3
Oak Ridge Reservation	1B-49	MLLW-CH/AL	Lab Packs without Metals	Toxic Organics and Metals w/ Mercury	0.0	0.0
Oak Ridge Reservation	1B-30	MLLW-CH/AL	Lab Packs without Metals	Toxic Organics and Metals w/ Mercury	0.0	0.0
Oak Ridge Reservation	2565	MLLW-CH/AL	Liquid Mercury	Toxic Metals w/ Mercury	18.0	0.0
Oak Ridge Reservation	2544	MLLW-CH/AL	Liquid Mercury	Toxic Metals w/ Mercury	0.1	0.6
Oak Ridge Reservation	2513	MLLW-CH/AL	Organic Debris	Toxic Organics and Metals w/ Mercury	15.3	88.7
Oak Ridge Reservation	2479	MLLW-CH/AL	Organic Debris	Toxic Organics and Metals w/ Mercury	8.0	8.3
Oak Ridge Reservation	1B-94	MLLW-CH/AL	Organic Debris	Toxic Organics and Metals w/ Mercury	0.0	0.0
Oak Ridge Reservation	2576	MLLW-CH/AL	Organic Liquids	Toxic Metals w/ Mercury	0.4	0.0
Oak Ridge Reservation	2574	MLLW-CH/AL	Organic Liquids	Toxic Metals w/o Mercury	0.1	0.0
Oak Ridge Reservation	2564	MLLW-CH/AL	Organic Liquids	Toxic Organics	32.9	0.0
Oak Ridge Reservation	2556	MLLW-CH/AL	Organic Liquids	Toxic Organics	18.5	0.0
Oak Ridge Reservation	2511	MLLW-CH/AL	Organic Liquids	Toxic Organics	9.2	15.7
Oak Ridge Reservation	2570	MLLW-CH/AL	Organic Liquids	Toxic Organics	9.0	0.0
Oak Ridge Reservation	2575	MLLW-CH/AL	Organic Liquids	Toxic Organics	1.1	0.0
Oak Ridge Reservation	1B-34	MLLW-CH/AL	Organic Liquids	Toxic Organics	0.0	0.0
Oak Ridge Reservation	1A-01	MLLW-CH/AL	Organic Liquids	Toxic Organics	0.0	123.1
Oak Ridge Reservation	2470	MLLW-CH/AL	Organic Liquids	Toxic Organics and Metals w/ Mercury	579.6	1741.4
Oak Ridge Reservation	2472	MLLW-CH/AL	Organic Liquids	Toxic Organics and Metals w/ Mercury	91.1	1558.1
Oak Ridge Reservation	2509	MLLW-CH/AL	Organic Liquids	Toxic Organics and Metals w/ Mercury	24.1	64.5
Oak Ridge Reservation	2577	MLLW-CH/AL	Organic Liquids	Toxic Organics and Metals w/ Mercury	17.4	0.0
Oak Ridge Reservation	2523	MLLW-CH/AL	Organic Liquids	Toxic Organics and Metals w/ Mercury	0.9	175.7
Oak Ridge Reservation	2563	MLLW-CH/AL	Organic Liquids	Toxic Organics and Metals w/o Mercury	68.4	0.0
Oak Ridge Reservation	2571	MLLW-CH/AL	Organic Liquids	Toxic Organics and Metals w/o Mercury	16.3	0.0
Oak Ridge Reservation	2572	MLLW-CH/AL	Organic Liquids	Toxic Organics and Metals w/o Mercury	10.7	0.0
Oak Ridge Reservation	2456	MLLW-CH/AL	Organic Liquids	Toxic Organics and Metals w/o Mercury	5.9	0.0
Oak Ridge Reservation	2573	MLLW-CH/AL	Organic Liquids	Toxic Organics and Metals w/o Mercury	0.9	0.0
Oak Ridge Reservation	1A-26	MLLW-CH/AL	Organic Liquids	Toxic Organics and Metals w/o Mercury	0.0	0.0
Oak Ridge Reservation	1A-28	MLLW-CH/AL	Organic Liquids	Toxic Organics and Metals w/o Mercury	0.0	0.0
Oak Ridge Reservation	1A-29	MLLW-CH/AL	Organic Liquids	Toxic Organics and Metals w/o Mercury	0.0	0.0
Oak Ridge Reservation	2473	MLLW-CH/AL	Organic Sludges/Particulates	Ignitable	8.0	0.0
Oak Ridge Reservation	2458	MLLW-CH/AL	Organic Sludges/Particulates	Toxic Organics	42.1	0.0
Oak Ridge Reservation	2569	MLLW-CH/AL	Organic Sludges/Particulates	Toxic Organics	1.0	0.0
Oak Ridge Reservation	2477	MLLW-CH/AL	Organic Sludges/Particulates	Toxic Organics and Metals w/ Mercury	31.2	37.3
Oak Ridge Reservation	1B-86	MLLW-CH/AL	Organic Sludges/Particulates	Toxic Organics and Metals w/ Mercury	0.0	0.0
Oak Ridge Reservation	1B-33	MLLW-CH/AL	Other	Reactive	0.0	0.0
Oak Ridge Reservation	1B-03	MLLW-CH/AL	Other	Reactive	0.0	0.0
Oak Ridge Reservation	2505	MLLW-RH	Aqueous Liquid	Toxic Metals w/ Mercury	1250.0	249.0
Oak Ridge Reservation	332	MLLW-RH	Aqueous Liquid	Toxic Metals w/ Mercury	1088.0	0.0
Oak Ridge Reservation	333	MLLW-RH	Organic Sludges/Particulates	Toxic Metals w/ Mercury	62.4	0.0
Oak Ridge Reservation	2500	MTRU-CH	Elemental Lead	Toxic Metals w/ Mercury	662.0	48.0
Oak Ridge Reservation	331	MTRU-RH	Lab Packs with Metals	Toxic Metals w/ Mercury	130.5	0.0
Oak Ridge Reservation	317	MTRU-RH	Organic Sludges/Particulates	Toxic Metals w/ Mercury	390.0	33.0
Oak Ridge Reservation	307	MTRU-RH	Organic Sludges/Particulates	Toxic Metals w/ Mercury	220.0	33.0
Oak Ridge Reservation	330	MTRU-RH	Organic Sludges/Particulates	Toxic Metals w/ Mercury	110.0	0.0
Paducah Gaseous Diffusion Plant	11	MLLW-CH	Aqueous Liquid	Toxic Metals w/ Mercury	0.7	0.0
Paducah Gaseous Diffusion Plant	9	MLLW-CH	Aqueous Liquid	Toxic Metals w/ Mercury	0.0	0.0
Paducah Gaseous Diffusion Plant	10	MLLW-CH	Aqueous Liquid	Toxic Metals w/ Mercury	0.0	0.0
Paducah Gaseous Diffusion Plant	50	MLLW-CH	Aqueous Liquid	Toxic Metals w/ Mercury	0.0	0.0
Paducah Gaseous Diffusion Plant	8	MLLW-CH	Aqueous Liquid	Toxic Metals w/ Mercury	0.0	0.0
Paducah Gaseous Diffusion Plant	17	MLLW-CH	Aqueous Liquid	Toxic Metals w/o Mercury	3.5	0.0

APPEND-B.XLS

SITE	Waste Stream Number	Radiation Category	Waste Matrix	Contaminant Type	Current Inventory (m3)	Five Year Generation (m3)
Paducah Gaseous Diffusion Plant	32	MLLW-CH	Aqueous Liquid	Toxic Metals w/o Mercury	1.8	0.0
Paducah Gaseous Diffusion Plant	36	MLLW-CH	Aqueous Liquid	Toxic Metals w/o Mercury	1.3	0.0
Paducah Gaseous Diffusion Plant	16	MLLW-CH	Aqueous Liquid	Toxic Metals w/o Mercury	0.4	0.0
Paducah Gaseous Diffusion Plant	12	MLLW-CH	Aqueous Liquid	Toxic Metals w/o Mercury	0.0	0.0
Paducah Gaseous Diffusion Plant	7	MLLW-CH	Aqueous Liquid	Toxic Metals w/o Mercury	0.0	0.0
Paducah Gaseous Diffusion Plant	4	MLLW-CH	Batteries	Toxic Metals w/ Mercury	15.2	0.0
Paducah Gaseous Diffusion Plant	51	MLLW-CH	Compressed Gases	Ignitable	9.2	0.0
Paducah Gaseous Diffusion Plant	20	MLLW-CH	Heterogeneous Debris	Toxic Metals w/ Mercury	33.2	0.0
Paducah Gaseous Diffusion Plant	30	MLLW-CH	Inorganic Debris	Toxic Metals w/ Mercury	17.1	0.0
Paducah Gaseous Diffusion Plant	25	MLLW-CH	Inorganic Debris	Toxic Metals w/o Mercury	3.3	0.0
Paducah Gaseous Diffusion Plant	35	MLLW-CH	Inorganic Debris	Toxic Metals w/o Mercury	1.1	0.0
Paducah Gaseous Diffusion Plant	22	MLLW-CH	Inorganic Sludges/Particulates	Toxic Metals w/o Mercury	9.2	0.0
Paducah Gaseous Diffusion Plant	21	MLLW-CH	Inorganic Sludges/Particulates	Toxic Metals w/o Mercury	7.3	0.0
Paducah Gaseous Diffusion Plant	13	MLLW-CH	Inorganic Sludges/Particulates	Toxic Metals w/o Mercury	4.3	0.0
Paducah Gaseous Diffusion Plant	31	MLLW-CH	Inorganic Sludges/Particulates	Toxic Metals w/o Mercury	1.7	0.0
Paducah Gaseous Diffusion Plant	26	MLLW-CH	Inorganic Sludges/Particulates	Toxic Metals w/o Mercury	0.3	0.0
Paducah Gaseous Diffusion Plant	29	MLLW-CH	Inorganic Sludges/Particulates	Toxic Metals w/o Mercury	0.2	0.0
Paducah Gaseous Diffusion Plant	28	MLLW-CH	Inorganic Sludges/Particulates	Toxic Metals w/o Mercury	0.2	0.0
Paducah Gaseous Diffusion Plant	27	MLLW-CH	Inorganic Sludges/Particulates	Toxic Metals w/o Mercury	0.1	0.0
Paducah Gaseous Diffusion Plant	23	MLLW-CH	Inorganic Sludges/Particulates	Toxic Metals w/o Mercury	0.0	0.0
Paducah Gaseous Diffusion Plant	1	MLLW-CH	Lab Packs with Metals	Ignitable	21.6	0.0
Paducah Gaseous Diffusion Plant	19	MLLW-CH	Lab Packs with Metals	Toxic Metals w/o Mercury	0.0	0.0
Paducah Gaseous Diffusion Plant	5	MLLW-CH	Lab Packs with Metals	Toxic Organics	0.1	0.0
Paducah Gaseous Diffusion Plant	46	MLLW-CH	Lab Packs with Metals	Toxic Organics and Metals w/o Mercury	0.1	0.0
Paducah Gaseous Diffusion Plant	38	MLLW-CH	Organic Debris	Toxic Organics	17.5	0.0
Paducah Gaseous Diffusion Plant	3	MLLW-CH	Organic Liquids	Ignitable	6.8	0.0
Paducah Gaseous Diffusion Plant	2	MLLW-CH	Organic Liquids	Ignitable	0.6	0.0
Paducah Gaseous Diffusion Plant	37	MLLW-CH	Organic Liquids	Toxic Organics	19.4	0.0
Paducah Gaseous Diffusion Plant	39	MLLW-CH	Organic Liquids	Toxic Organics	3.1	0.0
Paducah Gaseous Diffusion Plant	45	MLLW-CH	Organic Liquids	Toxic Organics	1.2	0.0
Paducah Gaseous Diffusion Plant	44	MLLW-CH	Organic Liquids	Toxic Organics	1.2	0.0
Paducah Gaseous Diffusion Plant	43	MLLW-CH	Organic Liquids	Toxic Organics	0.0	0.0
Paducah Gaseous Diffusion Plant	42	MLLW-CH	Organic Liquids	Toxic Organics	0.0	0.0
Paducah Gaseous Diffusion Plant	40/41	MLLW-CH	Organic Liquids	Toxic Organics and Metals w/o Mercury	260.2	0.0
Paducah Gaseous Diffusion Plant	47	MLLW-CH	Organic Sludges/Particulates	Toxic Organics	10.1	0.0
Paducah Gaseous Diffusion Plant	6	MLLW-CH	Other	Corrosive	22.4	0.0
Paducah Gaseous Diffusion Plant	18	MLLW-CH	Other	Reactive	0.0	0.0
Paducah Gaseous Diffusion Plant	33	MLLW-CH	Other	Toxic Metals w/ Mercury	0.5	0.0
Paducah Gaseous Diffusion Plant	34	MLLW-CH	Other	Toxic Metals w/o Mercury	0.0	0.0
Paducah Gaseous Diffusion Plant	49	MLLW-CH	Other	Toxic Organics and Metals w/ Mercury	16.2	0.0
Paducah Gaseous Diffusion Plant	48	MLLW-CH	Other	Toxic Organics and Metals w/ Mercury	0.9	0.0
Paducah Gaseous Diffusion Plant	24	MLLW-CH	Other	Toxic Organics and Metals w/o Mercury	11.3	0.0
Paducah Gaseous Diffusion Plant	14	MTRU-CH	Aqueous Liquid	Toxic Metals w/o Mercury	7.5	0.0
Paducah Gaseous Diffusion Plant	15	MTRU-CH	Aqueous Liquid	Toxic Metals w/o Mercury	6.0	0.0
PANTEX	30	MLLW-CH	Aqueous Liquid	Toxic Metals w/ Mercury	0.2	1.0
PANTEX	18	MLLW-CH	Aqueous Liquid	Toxic Metals w/o Mercury	0.2	2.0
PANTEX	19	MLLW-CH	Aqueous Liquid	Toxic Organics and Metals w/ Mercury	3.7	17.0
PANTEX	15	MLLW-CH	Aqueous Liquid	Toxic Organics and Metals w/ Mercury	0.2	0.0
PANTEX	20	MLLW-CH	Batteries	Toxic Metals w/ Mercury	1.8	9.0
PANTEX	31	MLLW-CH	Compressed Gases	Toxic Organics	0.4	1.0
PANTEX	13	MLLW-CH	Elemental Lead	Toxic Metals w/o Mercury	0.2	2.0
PANTEX	7	MLLW-CH	Explosives	Toxic Metals w/ Mercury	0.8	3.0
PANTEX	21	MLLW-CH	Explosives	Toxic Organics	0.2	1.0
PANTEX	10	MLLW-CH	Heterogeneous Debris	Toxic Metals w/ Mercury	1.0	3.0
PANTEX	4	MLLW-CH	Heterogeneous Debris	Toxic Organics and Metals w/ Mercury	23.5	62.0
PANTEX	6	MLLW-CH	Inorganic Debris	Toxic Metals w/ Mercury	10.7	39.0
PANTEX	9	MLLW-CH	Inorganic Debris	Toxic Metals w/ Mercury	2.4	6.0
PANTEX	8	MLLW-CH	Inorganic Debris	Toxic Metals w/o Mercury	3.1	2.0
PANTEX	44	MLLW-CH	Inorganic Sludges/Particulates	Toxic Organics and Metals w/ Mercury	0.0	0.5
PANTEX	3	MLLW-CH	Lab Packs with Metals	Toxic Organics and Metals w/ Mercury	2.3	6.0
PANTEX	mercury	MLLW-CH	Liquid Mercury	Toxic Metals w/ Mercury	0.0	0.0
PANTEX	2	MLLW-CH	Organic Debris	Toxic Organics	29.5	24.0
PANTEX	32	MLLW-CH	Organic Liquids	Toxic Metals w/ Mercury	0.2	1.0
PANTEX	55	MLLW-CH	Organic Liquids	Toxic Organics	5.4	0.0
PANTEX	5	MLLW-CH	Organic Liquids	Toxic Organics	1.6	8.0
PANTEX	33	MLLW-CH	Organic Liquids	Toxic Organics	0.2	2.0
PANTEX	O. Solids	MLLW-CH	Organic Liquids	Toxic Organics	0.0	0.0
PANTEX	16	MLLW-CH	Organic Liquids	Toxic Organics and Metals w/ Mercury	0.5	1.0
Pearl Harbor Naval Shipyard	0000000003	MLLW-CH	Cemented Solids	Toxic Metals w/o Mercury	1.4	0.0
Pearl Harbor Naval Shipyard	0000000008	MLLW-CH	Elemental Lead	Toxic Metals w/o Mercury	0.1	0.0
Pearl Harbor Naval Shipyard	0000000007	MLLW-CH	Heterogeneous Debris	Toxic Metals w/o Mercury	0.0	0.1
Pearl Harbor Naval Shipyard	0000000005	MLLW-CH	Inorganic Sludges/Particulates	Toxic Metals w/o Mercury	0.0	0.5
Pearl Harbor Naval Shipyard	0000000006	MLLW-CH	Organic Debris	Toxic Metals w/o Mercury	0.0	0.3
Pearl Harbor Naval Shipyard	0000000004	MLLW-CH	Organic Liquids	Toxic Organics	0.0	0.0
Pinellas	2	MLLW-CH	Liquid Mercury	Toxic Metals w/ Mercury	0.0	0.0
Portsmouth GDP	192	MLLW-CH	Aqueous Liquid	Corrosive	1.1	2.1

APPEND-B.XLS

SITE	Waste Stream Number	Radiation Category	Waste Matrix	Contaminant Type	Current Inventory (m3)	Five Year Generation (m3)
Portsmouth GDP	193	MLLW-CH	Aqueous Liquid	Corrosive	1.0	0.9
Portsmouth GDP	10107	MLLW-CH	Aqueous Liquid	Corrosive	0.9	1.6
Portsmouth GDP	10081	MLLW-CH	Aqueous Liquid	Toxic Metals w/ Mercury	10.7	12.5
Portsmouth GDP	10108	MLLW-CH	Aqueous Liquid	Toxic Metals w/o Mercury	3.2	5.0
Portsmouth GDP	197	MLLW-CH	Aqueous Liquid	Toxic Metals w/o Mercury	2.1	0.0
Portsmouth GDP	10109	MLLW-CH	Aqueous Liquid	Toxic Metals w/o Mercury	1.4	1.1
Portsmouth GDP	10058	MLLW-CH	Aqueous Liquid	Toxic Metals w/o Mercury	0.8	0.2
Portsmouth GDP	10078	MLLW-CH	Aqueous Liquid	Toxic Organics	0.0	83.6
Portsmouth GDP	10083	MLLW-CH	Aqueous Liquid	Toxic Organics and Metals w/ Mercury	24.3	30.0
Portsmouth GDP	10069	MLLW-CH	Aqueous Liquid	Toxic Organics and Metals w/o Mercury	52.7	25.5
Portsmouth GDP	189	MLLW-CH	Aqueous Liquid	Toxic Organics and Metals w/o Mercury	9.1	8.0
Portsmouth GDP	10057	MLLW-CH	Batteries	Toxic Metals w/o Mercury	58.3	57.5
Portsmouth GDP	10095	MLLW-CH	Compressed Gases	Toxic Metals w/o Mercury	2.2	1.0
Portsmouth GDP	10068	MLLW-CH	Compressed Gases	Toxic Organics and Metals w/ Mercury	0.1	0.6
Portsmouth GDP	2074	MLLW-CH	Heterogeneous Debris	Toxic Metals w/ Mercury	0.2	0.5
Portsmouth GDP	2073	MLLW-CH	Heterogeneous Debris	Toxic Metals w/o Mercury	93.0	75.0
Portsmouth GDP	10101	MLLW-CH	Heterogeneous Debris	Toxic Metals w/o Mercury	5.3	12.5
Portsmouth GDP	10079	MLLW-CH	Heterogeneous Debris	Toxic Metals w/o Mercury	4.9	3.2
Portsmouth GDP	2070	MLLW-CH	Heterogeneous Debris	Toxic Metals w/o Mercury	4.7	5.0
Portsmouth GDP	10100	MLLW-CH	Heterogeneous Debris	Toxic Organics	2.3	5.0
Portsmouth GDP	10099	MLLW-CH	Heterogeneous Debris	Toxic Organics	0.8	1.7
Portsmouth GDP	10080	MLLW-CH	Heterogeneous Debris	Toxic Organics and Metals w/ Mercury	2945.0	1500.0
Portsmouth GDP	10097	MLLW-CH	Heterogeneous Debris	Toxic Organics and Metals w/ Mercury	167.0	195.0
Portsmouth GDP	10088	MLLW-CH	Heterogeneous Debris	Toxic Organics and Metals w/ Mercury	155.0	3125.0
Portsmouth GDP	10093	MLLW-CH	Heterogeneous Debris	Toxic Organics and Metals w/ Mercury	7.3	5.0
Portsmouth GDP	2071	MLLW-CH	Heterogeneous Debris	Toxic Organics and Metals w/ Mercury	6.2	12.0
Portsmouth GDP	10071	MLLW-CH	Heterogeneous Debris	Toxic Organics and Metals w/o Mercury	10.7	10.0
Portsmouth GDP	175	MLLW-CH	Inorganic Debris	Toxic Metals w/ Mercury	148.0	470.0
Portsmouth GDP	10089	MLLW-CH	Inorganic Debris	Toxic Metals w/ Mercury	10.5	10.0
Portsmouth GDP	2076	MLLW-CH	Inorganic Debris	Toxic Metals w/o Mercury	41.4	13.5
Portsmouth GDP	2069	MLLW-CH	Inorganic Debris	Toxic Metals w/o Mercury	41.3	25.0
Portsmouth GDP	10092	MLLW-CH	Inorganic Debris	Toxic Metals w/o Mercury	6.3	6.3
Portsmouth GDP	10096	MLLW-CH	Inorganic Debris	Toxic Metals w/o Mercury	2.1	11.5
Portsmouth GDP	10060	MLLW-CH	Inorganic Debris	Toxic Metals w/o Mercury	1.3	2.7
Portsmouth GDP	10077	MLLW-CH	Inorganic Debris	Toxic Metals w/o Mercury	0.1	0.1
Portsmouth GDP	10103	MLLW-CH	Inorganic Sludges/Particulates	Toxic Metals w/o Mercury	0.2	0.3
Portsmouth GDP	10094	MLLW-CH	Inorganic Sludges/Particulates	Toxic Organics	4.8	12.0
Portsmouth GDP	2077	MLLW-CH	Inorganic Sludges/Particulates	Toxic Organics and Metals w/o Mercury	1.5	0.0
Portsmouth GDP	10074	MLLW-CH	Lab Packs with Metals	Toxic Organics and Metals w/o Mercury	10.0	15.0
Portsmouth GDP	2082	MLLW-CH	Lab Packs with Metals	Toxic Organics and Metals w/ Mercury	3.9	1.5
Portsmouth GDP	2081	MLLW-CH	Lab Packs with Metals	Toxic Organics and Metals w/ Mercury	1.3	0.5
Portsmouth GDP	176	MLLW-CH	Lab Packs with Metals	Toxic Organics and Metals w/o Mercury	1.0	1.1
Portsmouth GDP	183	MLLW-CH	Liquid Mercury	Toxic Metals w/ Mercury	1.0	1.1
Portsmouth GDP	10087	MLLW-CH	Organic Debris	Toxic Metals w/ Mercury	0.6	0.5
Portsmouth GDP	10072	MLLW-CH	Organic Debris	Toxic Metals w/o Mercury	10.7	1.5
Portsmouth GDP	10090	MLLW-CH	Organic Debris	Toxic Metals w/o Mercury	7.5	2.1
Portsmouth GDP	10062	MLLW-CH	Organic Debris	Toxic Organics	110.0	25.5
Portsmouth GDP	31	MLLW-CH	Organic Debris	Toxic Organics	6.7	10.5
Portsmouth GDP	10084	MLLW-CH	Organic Liquids	Ignitable	0.4	0.0
Portsmouth GDP	10104	MLLW-CH	Organic Liquids	Reactive	0.1	0.2
Portsmouth GDP	194	MLLW-CH	Organic Liquids	Toxic Metals w/ Mercury	1.5	1.1
Portsmouth GDP	2080	MLLW-CH	Organic Liquids	Toxic Metals w/o Mercury	11.3	13.0
Portsmouth GDP	196	MLLW-CH	Organic Liquids	Toxic Metals w/o Mercury	0.8	52.0
Portsmouth GDP	10085	MLLW-CH	Organic Liquids	Toxic Organics	44.0	18.5
Portsmouth GDP	10105	MLLW-CH	Organic Liquids	Toxic Organics	2.9	9.0
Portsmouth GDP	2078	MLLW-CH	Organic Liquids	Toxic Organics	1.5	4.2
Portsmouth GDP	2068	MLLW-CH	Organic Liquids	Toxic Organics and Metals w/ Mercury	171.0	105.0
Portsmouth GDP	10075	MLLW-CH	Organic Liquids	Toxic Organics and Metals w/ Mercury	18.5	12.5
Portsmouth GDP	759	MLLW-CH	Organic Liquids	Toxic Organics and Metals w/o Mercury	23.3	31.5
Portsmouth GDP	10106	MLLW-CH	Organic Liquids	Toxic Organics and Metals w/o Mercury	20.6	31.0
Portsmouth GDP	185	MLLW-CH	Organic Liquids	Toxic Organics and Metals w/o Mercury	7.9	14.0
Portsmouth GDP	10065	MLLW-CH	Organic Liquids	Toxic Organics and Metals w/o Mercury	1.1	3.5
Portsmouth GDP	10064	MLLW-CH	Organic Liquids	Toxic Organics and Metals w/o Mercury	0.1	0.0
Portsmouth GDP	10102	MLLW-CH	Organic Sludges/Particulates	Reactive	0.6	0.5
Portsmouth GDP	485	MLLW-CH	Organic Sludges/Particulates	Toxic Metals w/ Mercury	324.0	75.0
Portsmouth GDP	829	MLLW-CH	Organic Sludges/Particulates	Toxic Metals w/ Mercury	53.3	42.0
Portsmouth GDP	10067	MLLW-CH	Organic Sludges/Particulates	Toxic Metals w/ Mercury	21.1	48.0
Portsmouth GDP	10068	MLLW-CH	Organic Sludges/Particulates	Toxic Metals w/ Mercury	5.3	3.2
Portsmouth GDP	758	MLLW-CH	Organic Sludges/Particulates	Toxic Metals w/o Mercury	82.0	75.0
Portsmouth GDP	2072	MLLW-CH	Organic Sludges/Particulates	Toxic Metals w/o Mercury	23.9	2.5
Portsmouth GDP	172	MLLW-CH	Organic Sludges/Particulates	Toxic Metals w/o Mercury	3.0	3.2
Portsmouth GDP	10061	MLLW-CH	Organic Sludges/Particulates	Toxic Metals w/o Mercury	0.8	2.1
Portsmouth GDP	10086	MLLW-CH	Organic Sludges/Particulates	Toxic Organics	86.6	105.0
Portsmouth GDP	35	MLLW-CH	Organic Sludges/Particulates	Toxic Organics	0.5	0.5
Portsmouth GDP	10059	MLLW-CH	Organic Sludges/Particulates	Toxic Organics and Metals w/o Mercury	5.9	13.0
Portsmouth GDP	10056	MLLW-CH	Organic Sludges/Particulates	Toxic Organics and Metals w/o Mercury	3.0	1.8

APPEND-B.XLS

SITE	Waste Stream Number	Radiation Category	Waste Matrix	Contaminant Type	Current Inventory (m3)	Five Year Generation (m3)
Portsmouth GDP	10091	MLLW-CH	Soils	Toxic Metals w/o Mercury	18.7	5.0
Portsmouth GDP	10063	MLLW-CH	Soils	Toxic Organics	4114.0	100.0
Portsmouth Naval Shipyard	0000000002	MLLW-CH	Heterogeneous Debris	Toxic Metals w/o Mercury	0.1	0.0
Portsmouth Naval Shipyard	0000000003	MLLW-CH	Inorganic Sludges/Particulates	Toxic Metals w/o Mercury	0.0	0.2
Princeton Plasma Physics Laboratory	0001	MLLW-CH	Organic Liquids	Toxic Organics	0.0	0.5
Puget Sound Naval Shipyard	0000000014	MLLW-CH	Cemented Solids	Toxic Metals w/o Mercury	36.8	0.0
Puget Sound Naval Shipyard	0000000010	MLLW-CH	Cemented Solids	Toxic Organics	1.1	0.0
Puget Sound Naval Shipyard	0000000003	MLLW-CH	Heterogeneous Debris	Toxic Metals w/o Mercury	11.8	14.8
Puget Sound Naval Shipyard	0000000005	MLLW-CH	Heterogeneous Debris	Toxic Metals w/o Mercury	2.4	3.7
Puget Sound Naval Shipyard	0000000012	MLLW-CH	Heterogeneous Debris	Toxic Metals w/o Mercury	1.1	5.4
Puget Sound Naval Shipyard	0000000015	MLLW-CH	Heterogeneous Debris	Toxic Organics	0.2	0.0
Puget Sound Naval Shipyard	0000000019	MLLW-CH	Heterogeneous Debris	Toxic Organics and Metals w/o Mercury	0.2	0.0
Puget Sound Naval Shipyard	0000000004	MLLW-CH	Inorganic Sludges/Particulates	Toxic Metals w/o Mercury	0.4	3.7
Puget Sound Naval Shipyard	0000000020	MLLW-CH	Inorganic Sludges/Particulates	Toxic Metals w/o Mercury	0.0	2.0
Puget Sound Naval Shipyard	0000000008	MLLW-CH	Organic Debris	Toxic Organics	3.9	3.7
Puget Sound Naval Shipyard	0000000016	MLLW-CH	Organic Debris	Toxic Organics and Metals w/ Mercury	1.5	3.7
Puget Sound Naval Shipyard	0000000007	MLLW-CH	Organic Liquids	Toxic Organics	0.4	0.0
RMI EXTRUSION / DOE	D040	MLLW-CH	Aqueous Liquid	Toxic Organics and Metals w/ Mercury	1.6	4.5
RMI EXTRUSION / DOE	D008-1	MLLW-CH	Aqueous Liquid	Toxic Organics and Metals w/ Mercury	0.5	0.2
RMI EXTRUSION / DOE	D005-1	MLLW-CH	Inorganic Debris	Toxic Organics and Metals w/ Mercury	5.6	0.2
RMI EXTRUSION / DOE	D005-5	MLLW-CH	Inorganic Debris	Toxic Organics and Metals w/ Mercury	1.8	0.2
RMI EXTRUSION / DOE	D005-3	MLLW-CH	Inorganic Debris	Toxic Organics and Metals w/ Mercury	1.4	0.2
RMI EXTRUSION / DOE	D005-2	MLLW-CH	Inorganic Debris	Toxic Organics and Metals w/ Mercury	0.2	0.2
RMI EXTRUSION / DOE	D005-4	MLLW-CH	Inorganic Debris	Toxic Organics and Metals w/ Mercury	0.0	0.2
RMI EXTRUSION / DOE	D005-6	MLLW-CH	Inorganic Sludges/Particulates	Toxic Organics and Metals w/ Mercury	1.6	0.2
RMI EXTRUSION / DOE	D005-7	MLLW-CH	Inorganic Sludges/Particulates	Toxic Organics and Metals w/ Mercury	0.0	234.0
RMI EXTRUSION / DOE	F001	MLLW-CH	Organic Debris	Toxic Organics and Metals w/ Mercury	2.9	0.2
RMI EXTRUSION / DOE	D008-2	MLLW-CH	Organic Debris	Toxic Organics and Metals w/ Mercury	1.2	0.2
RMI EXTRUSION / DOE	D009	MLLW-CH	Organic Debris	Toxic Organics and Metals w/ Mercury	0.2	0.2
RMI EXTRUSION / DOE	F002	MLLW-CH	Organic Liquids	Toxic Organics and Metals w/ Mercury	5.6	0.2
RMI EXTRUSION / DOE	D001/F001	MLLW-CH	Organic Liquids	Toxic Organics and Metals w/ Mercury	1.4	0.2
RMI EXTRUSION / DOE	D008-3	MLLW-CH	Organic Liquids	Toxic Organics and Metals w/ Mercury	0.5	0.2
Rocky Flats Plant	2401 SOLAR	MLLW-CH	Aqueous Liquid	Toxic Organics and Metals w/o Mercury	45425.0	100.0
Rocky Flats Plant	337 ACIDS	MLLW-CH/AL	Aqueous Liquid	Toxic Metals w/o Mercury	7.8	0.0
Rocky Flats Plant	2054 CYANI	MLLW-CH/AL	Aqueous Liquid	Toxic Metals w/o Mercury	1.1	0.0
Rocky Flats Plant	2050 SILVE	MLLW-CH/AL	Aqueous Liquid	Toxic Metals w/o Mercury	0.8	0.0
Rocky Flats Plant	1066 ANALY	MLLW-CH/AL	Aqueous Liquid	Toxic Metals w/o Mercury	0.6	0.6
Rocky Flats Plant	341 BERYLL	MLLW-CH/AL	Beryllium Dust	Toxic Metals w/o Mercury	1.5	0.7
Rocky Flats Plant	108 CEMENT	MLLW-CH/AL	Cemented Solids	Toxic Organics	90.6	0.0
Rocky Flats Plant	2396 SOLID	MLLW-CH/AL	Cemented Solids	Toxic Organics	0.2	0.4
Rocky Flats Plant	1062 SOLID	MLLW-CH/AL	Cemented Solids	Toxic Organics and Metals w/o Mercury	4.8	0.0
Rocky Flats Plant	344 LEAD	MLLW-CH/AL	Elemental Lead	Toxic Metals w/o Mercury	31.9	9.0
Rocky Flats Plant	357 GLOVEB	MLLW-CH/AL	Inorganic Debris	Toxic Metals w/o Mercury	6.8	10.6
Rocky Flats Plant	351 LEADED	MLLW-CH/AL	Inorganic Debris	Toxic Metals w/o Mercury	2.7	2.8
Rocky Flats Plant	404 HEAVY	MLLW-CH/AL	Inorganic Debris	Toxic Metals w/o Mercury	1.3	0.0
Rocky Flats Plant	352 LEADED	MLLW-CH/AL	Inorganic Debris	Toxic Metals w/o Mercury	0.2	0.0
Rocky Flats Plant	111 COMBUS	MLLW-CH/AL	Inorganic Debris	Toxic Organics	410.4	263.1
Rocky Flats Plant	2044 SOIL	MLLW-CH/AL	Inorganic Debris	Toxic Organics	43.6	57.5
Rocky Flats Plant	1063 INSUL	MLLW-CH/AL	Inorganic Debris	Toxic Organics	1.9	2.8
Rocky Flats Plant	109 FILTER	MLLW-CH/AL	Inorganic Debris	Toxic Organics and Metals w/o Mercury	2.8	32.9
Rocky Flats Plant	110 METAL	MLLW-CH/AL	Inorganic Debris	Toxic Organics and Metals w/o Mercury	18.1	40.2
Rocky Flats Plant	1061 GLASS	MLLW-CH/AL	Inorganic Debris	Toxic Organics and Metals w/o Mercury	4.4	4.5
Rocky Flats Plant	2391 MISC	MLLW-CH/AL	Inorganic Sludges/Particulates	Reactive	0.2	0.0
Rocky Flats Plant	342 ECM SL	MLLW-CH/AL	Inorganic Sludges/Particulates	Toxic Metals w/o Mercury	1.5	0.0
Rocky Flats Plant	1068 SAND	MLLW-CH/AL	Inorganic Sludges/Particulates	Toxic Metals w/o Mercury	0.2	0.0
Rocky Flats Plant	112 ROASTE	MLLW-CH/AL	Inorganic Sludges/Particulates	Toxic Organics	82.7	0.0
Rocky Flats Plant	2246 TURNI	MLLW-CH/AL	Inorganic Sludges/Particulates	Toxic Organics	1.5	2.1
Rocky Flats Plant	346 USED A	MLLW-CH/AL	Inorganic Sludges/Particulates	Toxic Organics	0.2	0.0
Rocky Flats Plant	343 INCINE	MLLW-CH/AL	Inorganic Sludges/Particulates	Toxic Organics and Metals w/ Mercury	8.8	0.0
Rocky Flats Plant	339 PONDCCR	MLLW-CH/AL	Inorganic Sludges/Particulates	Toxic Organics and Metals w/o Mercury	5905.2	259.2
Rocky Flats Plant	340 SALTGR	MLLW-CH/AL	Inorganic Sludges/Particulates	Toxic Organics and Metals w/o Mercury	3279.3	1745.0
Rocky Flats Plant	115 SOLIDI	MLLW-CH/AL	Inorganic Sludges/Particulates	Toxic Organics and Metals w/o Mercury	457.8	89.0
Rocky Flats Plant	355 PARTIC	MLLW-CH/AL	Inorganic Sludges/Particulates	Toxic Organics and Metals w/o Mercury	4.9	0.0
Rocky Flats Plant	ACIDIC OILS	MLLW-CH/AL	Organic Liquids	Toxic Metals w/o Mercury	1.7	0.0
Rocky Flats Plant	1065 ORGAN	MLLW-CH/AL	Organic Liquids	Toxic Organics	30.9	2.8
Rocky Flats Plant	1070 MISC	MLLW-CH/AL	Organic Liquids	Toxic Organics	19.1	0.0
Rocky Flats Plant	338 PCB LI	MLLW-CH/AL	Organic Liquids	Toxic Organics	1.1	0.0
Rocky Flats Plant	336 FBI OI	MLLW-CH/AL	Organic Liquids	Toxic Organics and Metals w/ Mercury	109.6	0.0
Rocky Flats Plant	348 PAINTS	MLLW-CH/AL	Organic Sludges/Particulates	Ignitable	0.4	0.4
Rocky Flats Plant	345 GROUND	MLLW-CH/AL	Other	Toxic Metals w/o Mercury	4.4	9.7
Rocky Flats Plant	107 PCB SO	MLLW-CH/AL	Other	Toxic Organics	10.5	0.0
Rocky Flats Plant	120 CUTOFF	MLLW-CH/AL	Other	Toxic Organics	8.0	0.0
Rocky Flats Plant	2047 EXCES	MLLW-CH/AL	Other	Toxic Organics and Metals w/ Mercury	5.7	9.0
Rocky Flats Plant	361 SOLIDI	MLTRU-CH	Cemented Solids	Toxic Metals w/o Mercury	1.3	26.3
Rocky Flats Plant	349 LEAD	MLTRU-CH	Elemental Lead	Toxic Metals w/o Mercury	3.8	3.1
Rocky Flats Plant	353 GROUND	MLTRU-CH	Inorganic Debris	Toxic Metals w/ Mercury	2.1	5.9

APPEND-B.XLS

SITE	Waste Stream Number	Radiation Category	Waste Matrix	Contaminant Type	Current Inventory (m3)	Five Year Generation (m3)
Rocky Flats Plant	384 LEADED	MTRU-CH	Inorganic Debris	Toxic Metals w/o Mercury	27.7	9.4
Rocky Flats Plant	380 LEADED	MTRU-CH	Inorganic Debris	Toxic Metals w/o Mercury	20.8	11.9
Rocky Flats Plant	380 HEAVY	MTRU-CH	Inorganic Debris	Toxic Metals w/o Mercury	5.5	0.0
Rocky Flats Plant	118 COMBUS	MTRU-CH	Inorganic Debris	Toxic Organics	372.0	124.4
Rocky Flats Plant	2378 INSUL	MTRU-CH	Inorganic Debris	Toxic Organics	0.8	0.4
Rocky Flats Plant	382 FILTER	MTRU-CH	Inorganic Debris	Toxic Organics and Metals w/o Mercury	132.1	21.4
Rocky Flats Plant	117 METAL	MTRU-CH	Inorganic Debris	Toxic Organics and Metals w/o Mercury	83.1	43.0
Rocky Flats Plant	2048 GLASS	MTRU-CH	Inorganic Debris	Toxic Organics and Metals w/o Mercury	21.1	3.5
Rocky Flats Plant	114 SOIL &	MTRU-CH	Inorganic Debris	Toxic Organics and Metals w/o Mercury	2.1	0.0
Rocky Flats Plant	2379 SAND	MTRU-CH	Inorganic Sludges/Particulates	Toxic Metals w/o Mercury	54.7	0.0
Rocky Flats Plant	2247 MG OX	MTRU-CH	Inorganic Sludges/Particulates	Toxic Metals w/o Mercury	46.3	0.0
Rocky Flats Plant	2388 COARS	MTRU-CH	Inorganic Sludges/Particulates	Toxic Metals w/o Mercury	0.4	0.0
Rocky Flats Plant	347 USED A	MTRU-CH	Inorganic Sludges/Particulates	Toxic Organics	0.2	0.2
Rocky Flats Plant	383 INCINE	MTRU-CH	Inorganic Sludges/Particulates	Toxic Organics and Metals w/ Mercury	234.3	0.0
Rocky Flats Plant	116 AQUEOU	MTRU-CH	Inorganic Sludges/Particulates	Toxic Organics and Metals w/o Mercury	143.4	2.8
Rocky Flats Plant	354 PARTIC	MTRU-CH	Inorganic Sludges/Particulates	Toxic Organics and Metals w/o Mercury	43.7	0.0
Rocky Flats Plant	358 FIREBR	MTRU-CH	Inorganic Sludges/Particulates	Toxic Organics and Metals w/o Mercury	11.1	1.1
Rocky Flats Plant	2377 MISC	MTRU-CH	Other	Toxic Metals w/o Mercury	186.3	0.0
Rocky Flats Plant	119 SOLIDI	MTRU-CH	Other	Toxic Organics	111.3	19.5
Rocky Flats Plant	106 PCB SO	MTRU-CH	Other	Toxic Organics	0.2	0.0
Savannah River Site	918	MLLW-CH	Aqueous Liquid	Toxic Metals w/ Mercury	9.6	0.0
Savannah River Site	2892	MLLW-CH	Aqueous Liquid	Toxic Metals w/ Mercury	0.2	0.0
Savannah River Site	2890	MLLW-CH	Aqueous Liquid	Toxic Metals w/o Mercury	5.0	0.0
Savannah River Site	2889	MLLW-CH	Aqueous Liquid	Toxic Metals w/o Mercury	0.4	0.0
Savannah River Site	917	MLLW-CH	Aqueous Liquid	Toxic Metals w/o Mercury	0.4	0.0
Savannah River Site	2706	MLLW-CH	Aqueous Liquid	Toxic Metals w/o Mercury	0.1	0.0
Savannah River Site	132	MLLW-CH	Aqueous Liquid	Toxic Organics and Metals w/ Mercury	25.6	4627.0
Savannah River Site	2698	MLLW-CH	Aqueous Liquid	Toxic Organics and Metals w/ Mercury	0.0	1892.0
Savannah River Site	2702	MLLW-CH	Heterogeneous Debris	Toxic Metals w/ Mercury	0.8	0.0
Savannah River Site	417	MLLW-CH	Inorganic Debris	Toxic Metals w/ Mercury	19.8	19.3
Savannah River Site	2700	MLLW-CH	Inorganic Debris	Toxic Metals w/ Mercury	0.0	1.0
Savannah River Site	412	MLLW-CH	Inorganic Debris	Toxic Metals w/o Mercury	46.6	0.0
Savannah River Site	883	MLLW-CH	Inorganic Debris	Toxic Organics and Metals w/ Mercury	0.0	0.9
Savannah River Site	129	MLLW-CH	Inorganic Sludges/Particulates	Toxic Metals w/o Mercury	246.0	380.0
Savannah River Site	894	MLLW-CH	Liquid Mercury	Toxic Metals w/ Mercury	1.0	9.3
Savannah River Site	416	MLLW-CH	Liquid Mercury	Toxic Metals w/ Mercury	0.2	0.0
Savannah River Site	413	MLLW-CH	Organic Debris	Toxic Metals w/ Mercury	0.2	1.0
Savannah River Site	425	MLLW-CH	Organic Debris	Toxic Metals w/o Mercury	267.5	30.0
Savannah River Site	125	MLLW-CH	Organic Debris	Toxic Organics and Metals w/ Mercury	4.0	0.5
Savannah River Site	2687	MLLW-CH	Organic Liquids	Toxic Metals w/ Mercury	12.7	2.0
Savannah River Site	916	MLLW-CH	Organic Liquids	Toxic Metals w/o Mercury	0.2	0.0
Savannah River Site	407	MLLW-CH	Organic Liquids	Toxic Organics	3.8	1.0
Savannah River Site	2319	MLLW-CH	Organic Liquids	Toxic Organics	1.9	1.0
Savannah River Site	124	MLLW-CH	Organic Liquids	Toxic Organics	1.0	3.0
Savannah River Site	123	MLLW-CH	Organic Liquids	Toxic Organics	0.4	2.0
Savannah River Site	884	MLLW-CH	Organic Liquids	Toxic Organics and Metals w/ Mercury	0.0	756.0
Savannah River Site	2693	MLLW-CH	Organic Sludges/Particulates	Toxic Organics and Metals w/ Mercury	0.0	1.0
Savannah River Site	2318	MLLW-CH	Reactive Metals	Reactive	0.8	0.0
Savannah River Site	915	MLLW-CH/AL	Cemented Solids	Toxic Metals w/o Mercury	0.2	1.0
Savannah River Site	2703	MLLW-CH/AL	Inorganic Debris	Toxic Metals w/o Mercury	0.0	0.0
Savannah River Site	2688	MLLW-CH/AL	Inorganic Sludges/Particulates	Toxic Metals w/o Mercury	928.0	0.0
Savannah River Site	130	MLLW-CH/AL	Inorganic Sludges/Particulates	Toxic Metals w/o Mercury	15.4	0.0
Savannah River Site	914	MLLW-CH/AL	Organic Debris	Toxic Metals w/o Mercury	0.8	0.0
Savannah River Site	910	MLLW-CH/AL	Organic Debris	Toxic Organics and Metals w/ Mercury	2791.1	0.0
Savannah River Site	919	MLLW-CH/AL	Organic Debris	Toxic Organics and Metals w/ Mercury	8.0	25.0
Savannah River Site	2696	MLLW-CH/AL	Organic Liquids	Toxic Organics and Metals w/ Mercury	89.6	0.0
Savannah River Site	2699	MLLW-CH/AL	Solids	Toxic Organics and Metals w/ Mercury	18.1	0.0
Savannah River Site	133	MLLW-RH	Aqueous Liquid	Toxic Organics and Metals w/ Mercury	71.1	800.0
Savannah River Site	414	MLLW-RH	Elemental Lead	Toxic Metals w/o Mercury	280.0	30.0
Savannah River Site	885	MLLW-RH	Inorganic Debris	Toxic Metals w/o Mercury	0.3	0.0
Savannah River Site	882	MLLW-RH	Inorganic Debris	Toxic Organics and Metals w/ Mercury	0.0	4.3
Savannah River Site	2697	MLLW-RH	Inorganic Sludges/Particulates	Toxic Organics and Metals w/ Mercury	0.0	374.0
Savannah River Site	405	MLLW-RH	Other	Toxic Metals w/o Mercury	9.7	4.9
Savannah River Site	2704	MTRU-CH	Inorganic Sludges/Particulates	Toxic Organics and Metals w/ Mercury	0.0	0.0
Savannah River Site	912	MTRU-CH	Organic Debris	Toxic Organics and Metals w/ Mercury	4955.5	0.0
Savannah River Site	911	MTRU-CH	Organic Debris	Toxic Organics and Metals w/ Mercury	45.3	140.0
Savannah River Site	131	MTRU-CH	Organic Liquids	Ignitable	0.0	0.0
Savannah River Site	2695	MTRU-CH	Organic Liquids	Toxic Metals w/ Mercury	1.3	0.0
SNL/CA	496	MLLW-CH	Lab Packs with Metals	Toxic Metals w/ Mercury	0.4	0.5
SNL/CA	498	MLLW-CH	Organic Liquids	Toxic Metals w/o Mercury	0.5	1.5
SNL/CA	497	MLLW-CH	Organic Liquids	Toxic Organics	0.5	1.5
SNL/CA	495	MLLW-CH	Organic Liquids	Toxic Organics	0.0	0.5
SNL/NM	2228	MLLW-CH	Aqueous Liquid	Corrosive	0.0	0.0
SNL/NM	2195	MLLW-CH	Aqueous Liquid	Toxic Organics	0.0	0.0
SNL/NM	2185	MLLW-CH	Elemental Lead	Toxic Organics and Metals w/ Mercury	0.0	0.0
SNL/NM	2156	MLLW-CH	Heterogeneous Debris	Toxic Organics and Metals w/o Mercury	28.0	0.0

APPEND-B.XLS

SITE	Waste Stream Number	Radiation Category	Waste Matrix	Contaminant Type	Current Inventory (m3)	Five Year Generation (m3)
SNL/NM	2171	MLLW-CH	Inorganic Debris	Reactive	1.8	0.2
SNL/NM	2185	MLLW-CH	Inorganic Debris	Reactive	0.8	0.2
SNL/NM	2183	MLLW-CH	Inorganic Debris	Toxic Metals w/o Mercury	7.0	9.0
SNL/NM	2194	MLLW-CH	Liquid Mercury	Toxic Organics and Metals w/ Mercury	1.0	0.0
SNL/NM	2182	MLLW-CH	Organic Debris	Toxic Organics and Metals w/ Mercury	29.0	1.0
SNL/NM	2130	MLLW-CH	Organic Liquids	Ignitable	0.0	0.0
SNL/NM	2259	MLLW-CH	Other	Toxic Metals w/o Mercury	0.0	0.0
SNL/NM	2197	MLLW-CH	Reactive Metals	Reactive	0.0	0.0
SNL/NM	2123	MLLW-CH	Soil with <50% Debris	Toxic Organics and Metals w/ Mercury	0.2	120.0
SNL/NM	2258	MTRU-RH	Other	Toxic Metals w/o Mercury	1.0	0.0
Weldon Spring	467	MLLW-CH	Aqueous Liquid	Corrosive	1.8	0.0
Weldon Spring	2265	MLLW-CH	Aqueous Liquid	Corrosive	1.0	0.0
Weldon Spring	2248	MLLW-CH	Aqueous Liquid	Toxic Metals w/ Mercury	0.8	0.0
Weldon Spring	2242	MLLW-CH	Aqueous Liquid	Toxic Metals w/o Mercury	0.8	0.0
Weldon Spring	2260	MLLW-CH	Aqueous Liquid	Toxic Metals w/o Mercury	0.2	0.0
Weldon Spring	2249	MLLW-CH	Aqueous Liquid	Toxic Metals w/o Mercury	0.2	0.0
Weldon Spring	2261	MLLW-CH	Aqueous Liquid	Toxic Metals w/o Mercury	0.2	0.0
Weldon Spring	2089	MLLW-CH	Aqueous Liquid	Toxic Organics	8.7	0.0
Weldon Spring	2080	MLLW-CH	Aqueous Liquid	Toxic Organics	2.5	0.0
Weldon Spring	NW1	MLLW-CH	Aqueous Liquid	Toxic Organics and Metals w/o Mercury	0.0	0.0
Weldon Spring	2238	MLLW-CH	Batteries	Toxic Metals w/o Mercury	1.3	0.0
Weldon Spring	2256	MLLW-CH	Elemental Lead	Toxic Metals w/o Mercury	1.2	0.0
Weldon Spring	477	MLLW-CH	Heterogeneous Debris	Toxic Metals w/o Mercury	0.4	0.0
Weldon Spring	NW9	MLLW-CH	Inorganic Debris	Toxic Metals w/ Mercury	0.0	0.0
Weldon Spring	2266	MLLW-CH	Inorganic Debris	Toxic Metals w/o Mercury	0.2	0.0
Weldon Spring	NW8	MLLW-CH	Inorganic Debris	Toxic Metals w/o Mercury	0.0	0.0
Weldon Spring	NW10	MLLW-CH	Inorganic Debris	Toxic Metals w/o Mercury	0.0	0.0
Weldon Spring	2232	MLLW-CH	Inorganic Sludges/Particulates	Ignitable	1.1	0.0
Weldon Spring	2236	MLLW-CH	Inorganic Sludges/Particulates	Toxic Metals w/o Mercury	6.5	0.0
Weldon Spring	468	MLLW-CH	Inorganic Sludges/Particulates	Toxic Metals w/o Mercury	2.5	0.0
Weldon Spring	2239	MLLW-CH	Inorganic Sludges/Particulates	Toxic Metals w/o Mercury	0.8	0.0
Weldon Spring	2062	MLLW-CH	Inorganic Sludges/Particulates	Toxic Metals w/o Mercury	0.1	0.0
Weldon Spring	NW7	MLLW-CH	Inorganic Sludges/Particulates	Toxic Metals w/o Mercury	0.0	0.0
Weldon Spring	NW5	MLLW-CH	Inorganic Sludges/Particulates	Toxic Metals w/o Mercury	0.0	0.0
Weldon Spring	NW4	MLLW-CH	Inorganic Sludges/Particulates	Toxic Metals w/o Mercury	0.0	0.0
Weldon Spring	NW6	MLLW-CH	Inorganic Sludges/Particulates	Toxic Metals w/o Mercury	0.0	0.0
Weldon Spring	2257	MLLW-CH	Lab Packs with Metals	Toxic Metals w/o Mercury	0.0	0.0
Weldon Spring	2240	MLLW-CH	Liquid Mercury	Toxic Organics and Metals w/ Mercury	0.2	0.0
Weldon Spring	781	MLLW-CH	Organic Debris	Toxic Organics	0.2	0.0
Weldon Spring	474	MLLW-CH	Organic Liquids	Ignitable	3.7	0.0
Weldon Spring	2246	MLLW-CH	Organic Liquids	Toxic Organics	6.2	0.0
Weldon Spring	2243	MLLW-CH	Organic Liquids	Toxic Organics	0.8	0.0
Weldon Spring	479	MLLW-CH	Organic Liquids	Toxic Organics	0.4	0.0
Weldon Spring	2229	MLLW-CH	Organic Liquids	Toxic Organics	0.2	0.0
Weldon Spring	2252	MLLW-CH	Organic Liquids	Toxic Organics	0.2	0.0
Weldon Spring	2244	MLLW-CH	Organic Liquids	Toxic Organics	0.2	0.0
Weldon Spring	NW2	MLLW-CH	Organic Liquids	Toxic Organics	0.0	0.0
Weldon Spring	473	MLLW-CH	Organic Liquids	Toxic Organics and Metals w/ Mercury	35.8	0.0
Weldon Spring	2250	MLLW-CH	Organic Liquids	Toxic Organics and Metals w/o Mercury	1.3	0.0
Weldon Spring	471	MLLW-CH	Organic Liquids	Toxic Organics and Metals w/o Mercury	1.2	0.0
Weldon Spring	2237	MLLW-CH	Organic Liquids	Toxic Organics and Metals w/o Mercury	0.4	0.0
Weldon Spring	2230	MLLW-CH	Organic Liquids	Toxic Organics and Metals w/o Mercury	0.4	0.0
Weldon Spring	2258	MLLW-CH	Organic Liquids	Toxic Organics and Metals w/o Mercury	0.2	0.0
Weldon Spring	2247	MLLW-CH	Organic Liquids	Toxic Organics and Metals w/o Mercury	0.2	0.0
Weldon Spring	2234	MLLW-CH	Organic Sludges/Particulates	Toxic Metals w/o Mercury	0.4	0.0
Weldon Spring	2253	MLLW-CH	Organic Sludges/Particulates	Toxic Organics	0.4	0.0
Weldon Spring	472	MLLW-CH	Organic Sludges/Particulates	Toxic Organics	0.2	0.0
Weldon Spring	2245	MLLW-CH	Organic Sludges/Particulates	Toxic Organics	0.2	0.0
Weldon Spring	NW3	MLLW-CH	Organic Sludges/Particulates	Toxic Organics	0.0	0.0
Weldon Spring	475	MLLW-CH	Organic Sludges/Particulates	Toxic Organics and Metals w/ Mercury	0.9	0.0
Weldon Spring	2259	MLLW-CH	Organic Sludges/Particulates	Toxic Organics and Metals w/ Mercury	0.3	0.0
Weldon Spring	2254	MLLW-CH	Organic Sludges/Particulates	Toxic Organics and Metals w/ Mercury	0.2	0.0
Weldon Spring	2251	MLLW-CH	Organic Sludges/Particulates	Toxic Organics and Metals w/o Mercury	1.0	0.0
Weldon Spring	2241	MLLW-CH	Organic Sludges/Particulates	Toxic Organics and Metals w/o Mercury	0.4	0.0
Weldon Spring	2255	MLLW-CH	Other	Toxic Metals w/o Mercury	0.0	0.0
Weldon Spring	2058	MLLW-CH	Reactive Metals	Toxic Metals w/o Mercury	3.7	0.0
Weldon Spring	1057	MLLW-CH	Reactive Metals	Toxic Metals w/o Mercury	0.2	0.0
West Valley Demonstration Project	1040	MLLW-CH	Aqueous Liquid	Corrosive	0.3	0.0
West Valley Demonstration Project	2403	MLLW-CH	Aqueous Liquid	Corrosive	0.0	0.0
West Valley Demonstration Project	0005	MLLW-CH	Aqueous Liquid	Toxic Organics	0.0	0.1
West Valley Demonstration Project	0003	MLLW-CH	Batteries	Toxic Metals w/o Mercury	0.0	0.1
West Valley Demonstration Project	2400	MLLW-CH	Heterogeneous Debris	Toxic Metals w/ Mercury	0.0	0.0
West Valley Demonstration Project	2409	MLLW-CH	Organic Liquids	Corrosive	0.0	0.0
West Valley Demonstration Project	2086	MLLW-CH	Organic Liquids	Ignitable	0.0	0.0
West Valley Demonstration Project	2398	MLLW-CH	Organic Liquids	Ignitable	0.0	0.0
West Valley Demonstration Project	2401	MLLW-CH	Organic Liquids	Ignitable	0.0	0.0

APPEND-B.XLS

SITE	Waste Stream Number	Radiation Category	Waste Matrix	Contaminant Type	Current Inventory (m3)	Five Year Generation (m3)
West Valley Demonstration Project	2085	MLLW-CH	Organic Liquids	Ignitable	0.0	0.0
West Valley Demonstration Project	2397	MLLW-CH	Organic Liquids	Toxic Metals w/o Mercury	0.0	0.0
West Valley Demonstration Project	1037	MLLW-CH	Organic Liquids	Toxic Organics	0.0	0.1
West Valley Demonstration Project	2402	MLLW-CH	Organic Liquids	Toxic Organics	0.0	0.0
West Valley Demonstration Project	0002	MLLW-CH	Organic Liquids	Toxic Organics	0.0	0.1
West Valley Demonstration Project	1048	MLLW-CH	Organic Liquids	Toxic Organics	0.0	0.0
West Valley Demonstration Project	1046	MLLW-CH	Organic Liquids	Toxic Organics	0.0	0.0
West Valley Demonstration Project	0004	MLLW-CH	Organic Liquids	Toxic Organics	0.0	0.0
West Valley Demonstration Project	2084	MLLW-CH	Organic Liquids	Toxic Organics and Metals w/ Mercury	0.0	0.0
West Valley Demonstration Project	2399	MLLW-CH	Organic Liquids	Toxic Organics and Metals w/o Mercury	2.4	3.0
West Valley Demonstration Project	1061	MLLW-CH	Organic Liquids	Toxic Organics and Metals w/o Mercury	0.0	0.0
West Valley Demonstration Project	PCB 2	MLLW-CH	Other	Toxic Organics	1.7	0.0
West Valley Demonstration Project	PCB 1	MLLW-CH	Other	Toxic Organics	0.0	0.0
West Valley Demonstration Project	2406	MLLW-CH/AL	Aqueous Liquid	Corrosive	0.1	0.0
West Valley Demonstration Project	0001	MLLW-CH/AL	Aqueous Liquid	Toxic Metals w/o Mercury	0.0	0.1
West Valley Demonstration Project	1036	MLLW-CH/AL	Elemental Lead	Toxic Metals w/o Mercury	9.2	1.3
West Valley Demonstration Project	2404	MTRU-CH	Elemental Lead	Toxic Metals w/o Mercury	0.5	0.0

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