

APPENDIX G

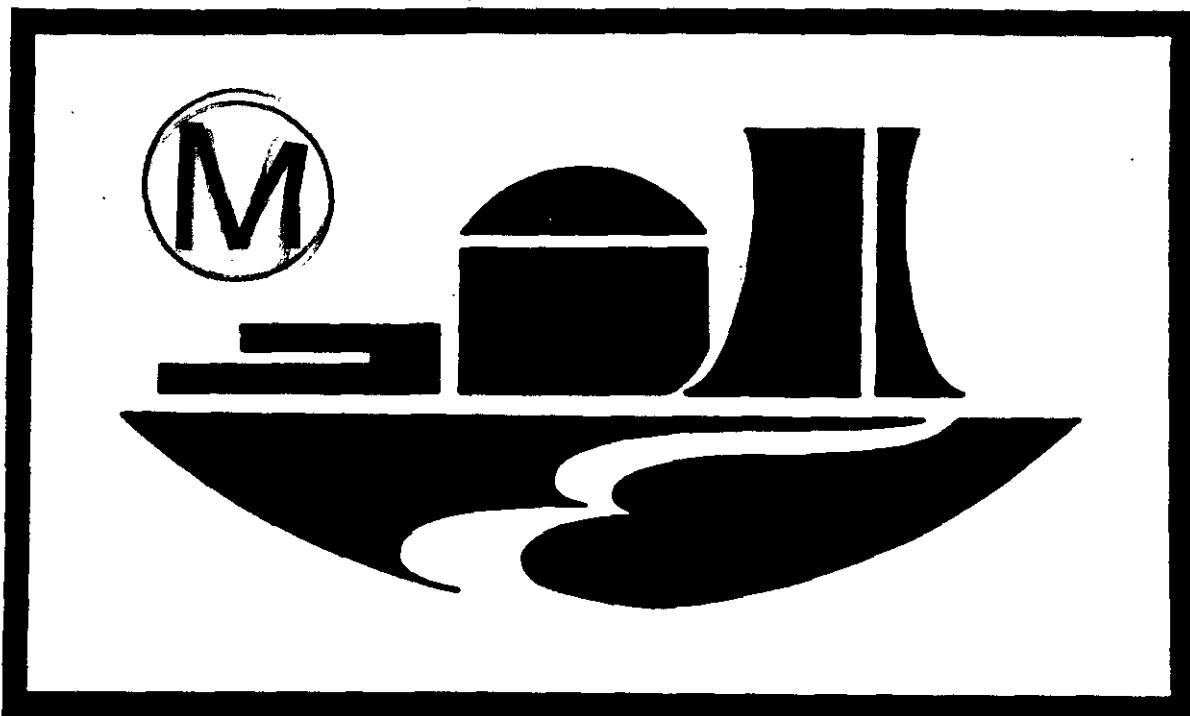


APPENDIX G

DOE/RW-0006, Rev. 11

September 1995

**Integrated Data Base Report—1994:
U.S. Spent Nuclear Fuel and Radioactive Waste
Inventories, Projections, and Characteristics**



Prepared for

**U.S. Department of Energy
Office of Civilian Radioactive Waste Management
Office of Environmental Management
Washington, D.C. 20585**

Prepared by

**Oak Ridge National Laboratory
Managed by Lockheed Martin Energy Systems, Inc., for the
U.S. Department of Energy under contract DE-AC05-84OR21400**



PREFACE

The information in this report summarizes the U.S. Department of Energy (DOE) data base for inventories, projections, and characteristics of domestic spent nuclear fuel and radioactive waste. This report is updated annually to keep abreast of continual waste inventory and projection changes in both the government and commercial sectors. Baseline information is provided for DOE program planning purposes and to support DOE program decisions. Although the primary purpose of this document is to provide background information for program planning within the DOE community, it has also been found useful by state and local governments, the academic community, and some private citizens. To sustain the objectives of this program in providing accurate and complete data in this field of operation, comments and suggestions to improve the quality and coverage are encouraged. Such comments and any general inquiries should be directed to the U.S. Department of Energy at either of the following:

Office of Civilian Radioactive Waste
Management
Route Symbol RW-44
1000 Independence Avenue, SW
Washington, DC 20585-0001

Office of Environmental Management
Route Symbol EM-332 or 432
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Washington, DC 20585-0002

This report was prepared by the Integrated Data Base Program, which is jointly sponsored by the DOE Office of Civilian Radioactive Waste Management and the DOE Office of Environmental Management. Suggestions, questions, and requests for information may be directed to any of the following:

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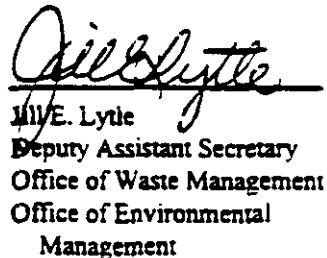
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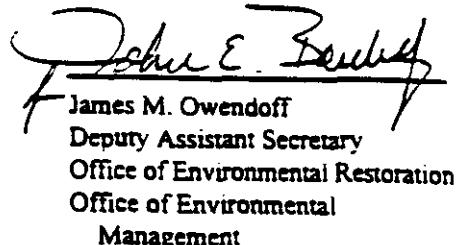
An important part of the Integrated Data Base Program is the Steering Committee, whose members provide both generic guidance and technical input. The membership of this committee, shown on the following page, represents all of the major DOE sites and programs for spent nuclear fuel and radioactive waste management. Each support committee member is assisted by a technical liaison as needed. The participation and assistance of these individuals are acknowledged with appreciation.



Samuel Rousso, Director
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3. TRANSURANIC WASTE

3.1 INTRODUCTION

This chapter presents information on the inventories and characteristics of transuranic waste (TRUW) at various DOE waste generator and/or storage sites in the United States. TRUW is a waste category specific to DOE; it does not apply to wastes regulated by the U.S. Nuclear Regulatory Commission. DOE Order 5820.2A defines TRUW as waste that (1) is contaminated with alpha-emitting transuranic (TRU) (i.e., atomic numbers greater than 92) radionuclides with half-lives greater than 20 years and (2) contains a total concentration of such radionuclides in excess of 100 nCi/g of waste at the time of assay.¹

DOE Order 5820.2A also states that heads of field elements can determine that other alpha-contaminated waste at the site(s) may be managed as TRUW.¹ As a consequence of this provision, wastes containing radionuclides such as ²³³U, ²⁴¹Pu, and ²⁴⁴Cm, which do not meet the strict definition of TRU radionuclides because of their respective atomic numbers or half-lives, may be managed as TRUW at some sites.

Most TRUW exists in solid form (e.g., items such as protective clothing, paper, rags, glass, miscellaneous tools, and equipment that have become contaminated with TRU radionuclides).² Some TRUW is in the form of sludges or liquids resulting from chemical processing for recovery of plutonium or other TRU elements.² Some of the liquids have been solidified, and some sludges have been dewatered. All sludge and liquid wastes scheduled for disposal in the Waste Isolation Pilot Plant (WIPP) will be solidified prior to shipment to meet the current WIPP waste acceptance criteria.³

Before 1970, TRUW was disposed of on-site in shallow, landfill-type, DOE-owned burial sites. TRUW disposed of in this manner is referred to as "buried" TRUW. In 1970, DOE's predecessor agency, the U.S. Atomic Energy Commission, concluded that waste containing long-lived alpha-emitting radionuclides should have greater confinement from the environment. Thus, TRUW generated since the early 1970s has been segregated from other waste types and placed in retrievable storage pending shipment and final disposal in a permanent

geologic repository.⁴ This waste is referred to as "retrievably stored" TRUW.

Retrievably stored waste is contained in a variety of packagings (e.g., metal drums and wooden and metal boxes) and is stored in various facilities such as earth-mounded berms, concrete culverts, buildings, and on outdoor pads. Many of these facilities have been upgraded and are now in compliance with applicable hazardous waste storage regulations.

TRUW packages are classified as either "contact handled" (CH) or "remote handled" (RH), depending on the radiation level at the surface of the package at the time of packaging. If this level exceeds 200 mrem/h, the package is classified as RH TRUW.

CH TRUW contains relatively small quantities of fission and activation products that produce highly penetrating radiation; typically, its emissions consists mostly of alpha particles and some neutrons and primarily low-energy gamma and X-rays. RH TRUW typically contains a greater proportion of fission and activation products that produce highly penetrating radiation and produce a higher level of radiation at the surface of the package.

TRUW waste which contains, in addition to radioactive constituents, hazardous constituents defined and regulated in accordance with the Resource Conservation and Recovery Act (RCRA) is defined as mixed TRUW. Examples of mixed TRUW are radionuclide-contaminated sludges from plutonium recovery, discarded materials contaminated with both solvents and radioactive materials, scintillation fluids, and discarded contaminated lead shielding. Mixed TRUW must be managed to comply with both the applicable hazardous waste regulations (e.g., RCRA), as well as the regulations applying only to radioactive TRUW.

Some TRUW may also be contaminated with hazardous materials defined by regulations other than RCRA (e.g., Toxic Substances Control Act and state regulations). Once identified, DOE continues to manage these wastes appropriately to meet all other hazardous waste regulations in addition to RCRA (if applicable).

Under existing arrangements, retrievably stored TRUW is the responsibility of the DOE Office of Waste



Management (EM-30). It is planned that the retrievably stored TRUW and newly generated TRUW from routine site operational activities will be shipped to WIPP for disposal; whereas, buried TRUW and TRUW generated from site remediation activities and decontamination and decommissioning (D&D) activities are the responsibility of the Office of Environmental Restoration (EM-40). (See Chapter 6 of this document for a discussion of environmental restoration wastes.)

3.2 TRUW INVENTORIES

3.2.1 Sources of Data

Quantitative information contained in this chapter is derived from data furnished by the DOE sites in response to the integrated data call issued for Rev. 10 of this report⁵ and Rev. 1 of the *Waste Isolation Pilot Plant Transuranic Waste Baseline Inventory Report* (WTWBIR)² (Sect. 3.2.3.1). As programs and plans evolve or are changed, modifications or additions will be made to the data and other information in this chapter. It is expected that the quality and accuracy of the data will improve with each annual revision of this document, thus improving the usefulness of the data for program planning and decision purposes.

Early TRUW inventory practices were not as stringent as current ones with regard to requirements for waste identification, categorization, and segregation. Consequently, early inventory data are based largely on process knowledge and on various studies and summaries related to site-specific practices.⁶ As these efforts continue and TRUW is further characterized, there may be revisions in the estimated overall quantities of TRUW.

3.2.2 Site Locations—Summarized Volumes and Radioactivity

TRUW management activities (generation, retrievable storage, etc.) are performed at 10 major sites and 13 small-quantity sites (SQS). Figure 3.1 shows the locations of the DOE's TRUW generator and/or storage sites. Tables 3.1–3.10 and Figs. 3.2–3.5, which are discussed later in this chapter, summarize the distribution of retrievably stored and projected TRUW in its final form at various DOE generator and storage sites. Unlike previous versions of this report, the volumes reported in this revision are final-form volumes (i.e., after the sites process, treat, or repack the waste). Tables 3.11 and 3.12 provide a breakdown of the major TRUW radionuclides by radioactivity. These tables display the decayed radioactivities that have been estimated from the data

reported by the sites for retrievably stored CH and RH TRUW, as of December 31, 1993. A breakdown for CH and RH TRUW in terms of decayed mass is provided in Tables 3.13 and 3.14, respectively.

3.2.3 Development of Detailed Inventory Data

To optimize its resources and to enhance data quality, DOE integrated the TRUW data needs of the IDB report (Rev. 10)⁵ with those of the WTBIR, Rev. 1,² in forming a joint data call to the sites.⁷ The information contained in this chapter is a summary of the detailed data gathered through this integrated data-call process and is based on the TRUW final-form-volume projections, as reported in the WTBIR, Rev. 1.² For a complete set of the information collected, refer to the source documents.

The WTBIR, Rev. 1,² describes the disposal inventory of TRUW to be emplaced in WIPP, as defined by the DOE TRUW generator and/or storage sites. This information will be used to support the development of various compliance applications for the operations and postclosure phases of the WIPP repository. To meet the needs of the WTBIR, site data were collected at the waste-stream level in both their initial and final forms. The data were grouped by similar physical and chemical properties and aggregated to produce estimated total volumes of the waste.

To maintain continuity with the previous revision of the IDB, Table 3.1 presents the changes in reported retrievably stored volumes between the IDB and the WTBIR. The first column in this table presents the volumes at the end of 1993 that were reported in the previous revision of the IDB (Rev. 10).⁵ The next two columns present updated estimates of this same volume (i.e., end of 1993 data) in terms of both initial and final forms, respectively, as reported in the WTBIR, Rev. 1.² The data derived from the WTBIR, Rev. 1,² and reported in subsequent tables in this chapter include the final-form volumes at the end of 1993, and the projected increase in these final-form volumes from 1994 through 2022. In addition, the volumes reported in the attached tables are higher for some sites than those reported in the WTBIR, Rev. 1,² because these volumes include some TRUW regulated under TSCA that was not included in the WIPP inventory defined in WTBIR, Rev. 1.²

Because the radionuclide inventory is not yet available for each waste stream, the radionuclide data in this chapter are derived from the data submittal in support of Rev. 10 of the IDB report.⁵ Also taken from the IDB report are the volume data for buried TRUW (Table 3.15), TRU-contaminated soil (Table 3.16), and the retrievably stored TRUW (as of the end of 1993) that is shown in Table 3.1.



The remaining data are compiled from data presented earlier in Rev. 1 of the WTWBIR.²

3.2.3.1 Site data submittal process

As stated previously, all of the quantitative TRUW information presented in this chapter was derived from the data received from the sites in response to the integrated WTWBIR-IDB data call. In response to the data call, the sites provided waste stream profiles for each waste stream in their respective current and projected inventories through 2022. The waste stream profiles included such information as waste stream description, initial- and final-form volumes, specific container data, and estimates of the amount of various materials present in the waste (e.g., iron-based metals and alloys, cellulastics, plastics, etc.). In addition, the sites were provided with a list of acceptable final waste forms for disposal at WIPP and asked to assign the appropriate final waste form to each waste stream. The assignment of final waste form helps to identify the general physical and chemical properties of the final form for each waste stream.

The sites provided radionuclide compositions and curies of each radionuclide added in each year of TRUW accumulation. The annual radioactivities in the site submittals were on an as-stored basis; that is, they represent the curies of each radionuclide added each year at the end of the year in which the waste was placed in storage. Only the cumulative site radioactivities have been included in this chapter. For a complete set of references for the TRUW site data submittals, see ref. 7 of Sect. 3.5.

3.2.3.2 Site data review and modification

The site data submittals for TRUW were reviewed to make certain, to the greatest extent possible, that the data supplied met the requirements of completeness and consistency. The data review process included modifying the formats of the data so that they could be easily converted to input data files.

In support of the WTWBIR, waste streams at each TRUW generator and/or storage site that were assigned the same final waste form were grouped together to form site-specific waste profiles. These profiles provide a condensed summary of the volume and waste material information found in the waste stream profiles for each site. Site-specific waste profiles with the same final waste form were then combined for all the TRUW generator and/or storage sites to produce WIPP waste profiles. The summary tables and figures presented in this chapter are based on the detailed waste stream profile data reported in the WTWBIR, Rev. 1.²

3.2.3.3 As-stored TRUW volumes

Tables 3.2-3.14 and Figs. 3.2-3.5 summarize a small portion of the information in the WTWBIR site submittals. These tables show the volumes and decayed radioactivities of retrievably stored CH and RH TRUW at each site at the end of 1993, projected generation from 1994 through 2022, and the ending volume inventory amounts at the end of 2022. Each table is constructed to highlight a different aspect of TRUW characteristics.

Table 3.2 shows the total estimated TRUW inventory in storage at the end of 1993 and projected through 2022 for each DOE site, and Tables 3.3-3.8 show the breakup of this total inventory into total CH TRUW (Table 3.3), mixed CH TRUW (Table 3.4), nonmixed CH TRUW (Table 3.5), total RH TRUW (Table 3.6), mixed RH TRUW (Table 3.7), and nonmixed RH TRUW (Table 3.8). The information in these tables is also presented graphically in Figs. 3.2-3.5.

Tables 3.9 and 3.10 show the volumes of TRUW at each site distributed among the 11 final waste forms (plus unknown) defined in the WTWBIR, Rev. 1.² Table 3.9 shows the final waste form distribution for the major sites, whereas Table 3.10 presents the same for the SQS.

3.2.3.4 Calculation of annual decayed radioactivities

Decayed radioactivities shown in Rev. 10 of the IDB report³ were calculated by the ORNL computer code RADAC, using the end-of-1993 data submitted to the IDB by the sites. This code converts the annual as-stored radioactivities to annual decayed radioactivities and accumulates these quantities to produce tables showing decayed grams, curies, and watts on a year-by-year, site-by-site, and radionuclide-by-radionuclide basis. Annual added volumes and cumulative volumes are also calculated. Volumes are assumed to be unaffected by decay.

In some cases, the site data were not sufficiently detailed to permit the desired decay calculations. The difficulty most frequently encountered was that radionuclide compositions were not adequately specified on a radionuclide-by-radionuclide basis. In such cases, data conversion codes were used to convert site input data to the radionuclide-specific forms required for decay calculations. The procedures followed in making these adjustments follow accepted precedents set in previous IDB editions and are described in Rev. 9 of the IDB report.³

3.2.4 Results of Radionuclide Inventory Calculations

For the purposes of this report, primary radionuclides are those that cumulatively contribute 98% of either the total radionuclide activity or mass.

3.2.4.1 Retrievably stored wastes

Tables 3.11–3.14 show the distribution of the primary TRUW radionuclides for all the DOE sites (decayed to the end of 1993) for both CH TRUW and RH TRUW both by radioactivity and by mass. As shown in these tables, ^{239}Pu , ^{241}Pu , ^{238}Pu , ^{241}Am , and ^{240}Pu cumulatively contribute more than 98% of the total activity for the CH TRUW (Table 3.11), whereas ^{235}U , ^{226}Th , ^{232}Pu , ^{235}U , and ^{232}Pu contribute more than 98% of the total radionuclide mass for CH TRUW (Table 3.13). Similar information on RH TRUW and on the relative distribution of both the radioactivity and mass of the primary radionuclides for the various DOE sites can also be derived from Tables 3.12 and 3.14.

3.2.4.2 Buried TRUW

Table 3.15 summarizes the buried TRUW volumes and associated radioactivity, both as-stored and as-decayed. Buried TRUW volumes and radioactivities shown in Table 3.15 are based on data provided in the site submittals. The form of the site-submitted data for buried waste is identical to that of the retrievably stored waste except that no distinction is made between CH and RH buried wastes. Table 3.15 shows both cumulative as-stored and as-decayed radioactivities for all nuclides, as well as for TRU nuclides only.

3.2.4.3 Contaminated soil

Over the years, many of the older buried waste containers have developed leaks and contaminated the adjacent soil. Also, at some sites, soil has become contaminated by liquid spills or has been used as an ion-exchange medium for dilute liquid waste streams. It is difficult to make accurate estimates of the actual quantity of the contaminated soil. The data reported by the sites are shown in Table 3.16. Additional characterization efforts will be required to reduce the uncertainties of this data.

3.3 PROJECTED FUTURE QUANTITIES OF TRUW

Tables 3.2–3.10 show the data submitted by the sites for estimated future volumes of TRUW generation. The sites were not requested to estimate the radioactivities or isotopic compositions of these wastes because it was believed that there would be little basis for such estimates. The estimated volumes are given in terms of average annual rates (m^3/year) for four time periods from 1994 to 1997 and for two cumulative time periods (1998–2002 and 2003–2022).

3.4 TRUW DISPOSAL

The goals of the DOE TRUW Program are to terminate interim storage and achieve permanent disposal of DOE TRUW.⁹ As stated in Public Law 96-164,¹⁰ WIPP was to be constructed "... as a defense activity of the DOE for the purpose of providing a research and development facility to demonstrate the safe disposal of radioactive waste resulting from defense activities and programs of the United States." Construction of the facility is essentially complete, and WIPP is now the only facility specifically designed for isolation of TRUW. It is designed to contain about 175,000 m^3 (6.2 million ft^3)¹¹ of TRUW 650 m below ground in a mined salt formation.

Waste received at WIPP must meet the WIPP waste acceptance criteria and associated quality assurance requirements specified in WIPP/DOE-069.³ A number of other approvals remain to be completed before DOE can begin disposal operations at the facility. DOE is committed to demonstrating compliance with all applicable regulations before the permanent disposal of TRUW in the WIPP repository. These regulations are the environmental standards for management and disposal of TRU wastes, as mandated in 40 CFR Part 191 (ref. 12) and Part 194 (ref. 13), and the RCRA regulations. Compliance will be demonstrated through performance assessment calculations based on the inventory of existing and currently projected waste streams as reported by the DOE TRUW generator and/or storage sites in the WTWBIR, Rev. 1.²

In 1992 the WIPP Legislative Land Withdrawal Act¹¹ was passed, confirming congressional intent to have DOE continue with development and permitting of the facility. Since then, DOE has stated its intent to accelerate processes leading to the start of waste disposal operations at the WIPP.



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3.5 REFERENCES

1. U.S. Department of Energy, *Radioactive Waste Management*, DOE Order 5820.2A, Washington, D.C. (Sept. 26, 1988).
2. U.S. Department of Energy, *Waste Isolation Pilot Plant Transuranic Waste Baseline Inventory Report*, CAO-94-1005, Rev. 1, Carlsbad, New Mexico (February 1995).
3. U.S. Department of Energy, *TRU Waste Acceptance Criteria for the Waste Isolation Pilot Plant*, WIPP/DOE-069, Rev. 4, Carlsbad, New Mexico (December 1991).
4. K. S. Hollingsworth, *Policy Statement Regarding Solid Waste Burial*, AEC Directive IAD No. 0511-21, Washington, D.C. (Mar. 20, 1970).
5. U.S. Department of Energy, *Integrated Data Base Report—1993: U.S. Spent Nuclear Fuel and Radioactive Waste Inventories, Projections, and Characteristics*, DOE/RW-0006, Rev. 10, Oak Ridge National Laboratory, Oak Ridge, Tennessee (December 1994).
6. U.S. Department of Energy, *Defense Waste Management Plan for Buried Transuranic-Contaminated Waste, Transuranic-Contaminated Soil, and Difficult-to-Certify Transuranic Waste*, DOE/DP-0044, Washington, D.C. (June 1987).
7. DOE site TRUW data submittal attachments, submitted to the IDB Program and WTWBIR Project. The following TRUW submittals were received and reviewed by the IDB Program and WTWBIR Project before analysis and integration. Preceding each submittal is the site (in parentheses) to which it refers.
 - a. (Ames) Kay M. Lampe Hannasch, Ames Laboratory, Ames, Iowa, correspondence to James E. Fletcher, DOE Chicago Operations Office, Argonne, Illinois, "Data Requests for TRU Waste, WIPP Baseline Inventory, IDB Request," dated Sept. 28, 1994.
 - b. (ANL-E) Michael Sodaro, Argonne National Laboratory, Argonne, Illinois, correspondence to Jeff Williams, DOE Carlsbad Area Office, Carlsbad, New Mexico, "WIPP TRU Baseline Inventory Report and Integrated Database Forecasts," dated Sept. 30, 1994.
 - c. (ANL-W) Nancy Stewart and Roy Grant, Argonne National Laboratory-West, Idaho Falls, Idaho, correspondence to E. W. Krieger, MAC Technical Services Company, Albuquerque, New Mexico, transmitting site data for inclusion into the IDB report (Rev. 10) and WTWBIR (Rev. 1), dated Jan. 17, 1995.
 - d. (BAPL) E. D. Shollenberger, DOE Pittsburgh Naval Reactors Office, West Mifflin, Pennsylvania, correspondence to Mark L. Matthews, DOE Carlsbad Area Office, Carlsbad, New Mexico, "Waste Isolation Pilot Project Transuranic Waste (TRU) Baseline Inventory Report and Updated Integrated Database TRU Information for the Bettis Atomic Power Laboratory," dated Oct. 21, 1994.
 - e. (BAPL) Jim Sage, DOE Pittsburgh Naval Reactors Office, West Mifflin, Pennsylvania, correspondence to E. W. Krieger, MAC Technical Services Company, Albuquerque, New Mexico, "WTWBIR Input for the Bettis Atomic Power Laboratory," dated Oct. 21, 1994.
 - f. (BCL) No cover letter provided with site data submittal.
 - g. (ETEC) G. G. Gaylord, Rockwell International Corporation, Canoga Park, California, correspondence to Mark L. Matthews, DOE Carlsbad Area Office, Carlsbad, New Mexico, "TRU Inventory at ETEC," 94ETEC-DRF-1667, dated Oct. 31, 1994.



- h. (ETEC) Alan Von Arx, Energy Technology Engineering Center, Canoga Park, California, correspondence to E W. Krieger, MAC Technical Services Company, Albuquerque, New Mexico, "Updated Tables 2, 3, 5, 9, & 11," dated Nov. 17, 1994.
- i. (Hanford) R. D. Wojtasek, Westinghouse Hanford Company, Richland, Washington, correspondence to Lise Wachter, Martin Marietta Energy Systems, Inc., HAZWRAP, Oliver Springs, Tennessee, "Request for Office of Waste Management, Waste Information Update," 9305688B R1, dated Aug. 30, 1993.
- j. (Hanford) F. M. Coony, Westinghouse Hanford Company, Richland, Washington, correspondence to E. W. Krieger, MAC Technical Services Company, Albuquerque, New Mexico, transmitting information on TRUW added to Hanford inventory during CY 1993, dated Dec. 7, 1994.
- k. (Hanford) F. M. Coony, Westinghouse Hanford Company, Richland, Washington, correspondence to Jim Teak, Advanced Sciences, Inc., Albuquerque, New Mexico, "Memorandum, Mark L. Matthews, P.E., National TRU Program Office, to Distribution, Extension of Data Package Review, dated Oct. 13, 1994," dated Nov. 1, 1994.
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- m. (INEL) Joel T. Case, DOE Idaho Operations Office, Idaho Falls, Idaho, correspondence to Mark L. Matthews, DOE Carlsbad Area Office, Carlsbad, New Mexico, "Integrated Data Base (IDB) TRU Waste 1994 Data Call," OPE-WM-94-307, dated Oct. 6, 1994.
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- p. (ITRI) Bruce B. Boecker, Inhalation Toxicology Research Institute, Albuquerque, New Mexico, correspondence to Jeff Williams, DOE Carlsbad Area Office, Carlsbad, New Mexico, "Response to the Waste Isolation Pilot Plant (WIPP) Transuranic Waste Baseline Inventory Report (WTWBIR) Data Package," dated Nov. 29, 1994.
- q. (KAPL) M. Monaco, Knolls Atomic Power Laboratory, Schenectady, New York, correspondence to E. W. Krieger, MAC Technical Services Company, Albuquerque, New Mexico, transmitting data for inclusion into the IDB report (Rev. 10) and WTWBIR (Rev. 1), dated Jan. 16, 1995.
- r. (LANL) Davis Christensen, Los Alamos National Laboratory, Los Alamos, New Mexico, correspondence to Mark L. Matthews, DOE Carlsbad Area Office, Carlsbad, New Mexico, "WIPP Transuranic Waste Baseline Inventory Report," CST14-94-061, Nov. 1, 1994.
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- t. (LBL) Tim Wan, University of California, Berkeley, California, correspondence to Jeff Williams, DOE Carlsbad Area Office, Carlsbad, New Mexico, "Data Package for the Waste Isolation Pilot Plant TRU Waste Baseline Inventory Report," HW-94-342, dated Sept. 13, 1994.



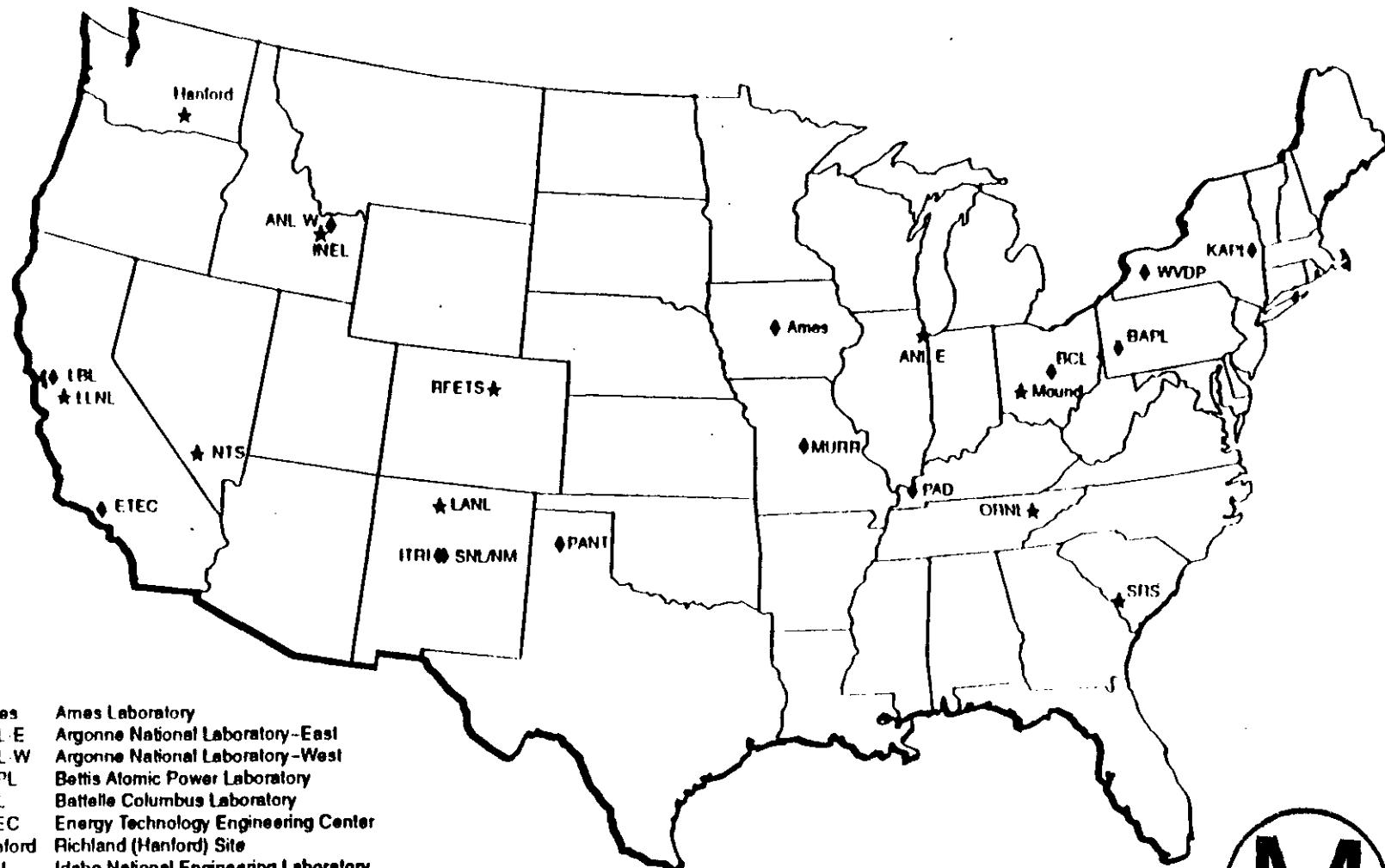
- u. (LLNL) Roy Kearns, DOE Oakland Operations Office, Oakland, California, correspondence to Jeff Williams, DOE Carlsbad Area Office, Carlsbad, New Mexico, "Waste Isolation Pilot Plant Transuranic Waste Baseline Inventory Report and 1994 Integrated Database for Lawrence Livermore National Laboratory," 94W399/5484.a.13, dated Oct. 18, 1994.
- v. (LLNL) Kem Hainebach, Lawrence Livermore National Laboratory, Livermore, California, correspondence to Roy Kearns, DOE Oakland Operations Office, Oakland, California, "Corrections to WIPP TRU Waste Baseline Inventory Report," dated Dec. 5, 1994.
- w. (Mound) Raymond J. Finney, EG&G Mound Applied Technologies, Miamisburg, Ohio, correspondence to Robert S. Rothman, DOE Miamisburg Area Office, Miamisburg, Ohio, "Response to the Waste Isolation Pilot Plant (WIPP) Transuranic Waste Baseline Inventory Report (WTWBIR) Data Package," dated Sept. 27, 1994.
- x. (Mound) Raymond J. Finney, EG&G Mound Applied Technologies, Miamisburg, Ohio, correspondence to Robert S. Rothman, DOE Miamisburg Area Office, Miamisburg, Ohio, "Response to the Waste Isolation Pilot Plant (WIPP) Transuranic Waste Baseline Inventory Report (WTWBIR) Completed Data Package," dated Oct. 26, 1994.
- y. (MURR) W. Derek Pickett, University of Missouri, Columbia, Missouri, correspondence to Jim Teak, Advanced Sciences, Inc., Albuquerque, New Mexico, transmitting MURR TRUW information and data for the IDB report (Rev. 10) and WTBIR (Rev. 1), dated Sept. 29, 1994.
- z. (NTS) Joseph M. Gianni, DOE Nevada Operations Office, Las Vegas, Nevada, correspondence to Jerry Klein, Oak Ridge National Laboratory, Oak Ridge, Tennessee; Jim Teak, Advance Sciences, Inc., Albuquerque, New Mexico; and Jeff Williams, DOE Carlsbad Area Office, Carlsbad, New Mexico, "Nevada Test Site Transuranic and Mixed Transuranic Inventory Data for the 1994 Integrated Data Base Report (DOE/RW-0006, Rev. 10)," dated Oct. 14, 1994.
- aa. (ORNL) P. E. Arakawa, Oak Ridge National Laboratory, Oak Ridge, Tennessee, correspondence to Mac Roddy, DOE Oak Ridge Operations Office, Oak Ridge, Tennessee, "Complete Review and Revision of Data Package for the WIPP Transuranic Waste Baseline Inventory Report (WTWBIR)," dated Nov. 2, 1994.
- ab. (ORNL) Brad Farrar, S. M. Stoller Corporation, Oak Ridge, Tennessee, correspondence to Jim Teak, Advanced Sciences, Inc., Albuquerque, New Mexico, "1993 IDB Data Call," dated Oct. 3, 1994.
- ac. (ORNL) P. E. Arakawa, Oak Ridge National Laboratory, Oak Ridge, Tennessee, correspondence to M. G. Zimmerman, Consolidated Technical Services, Inc., Albuquerque, New Mexico, "Response to Comments on the ORNL WTBIR Data Submittal, Table 11," dated Nov. 21, 1994.
- ad. (ORNL) P. E. Arakawa, Oak Ridge National Laboratory, Oak Ridge, Tennessee, correspondence to E. W. Krieger, MAC Technical Services Company, Albuquerque, New Mexico, "Response to Second Set of Comments on the ORNL WTBIR Data Submittal," dated Dec. 16, 1994.
- ae. (ORNL) Kenneth P. Guay, Oak Ridge National Laboratory, Oak Ridge, Tennessee, correspondence to P. E. Arakawa, Oak Ridge National Laboratory, Oak Ridge, Tennessee, "Response to Comments on the ORNL WTBIR Data Submittal," dated Dec. 16, 1994.
- af. (PAD) Greg Shala, Paducah Gaseous Diffusion Plant, Paducah, Kentucky, correspondence to E. W. Krieger, MAC Technical Services Company, Albuquerque, New Mexico, "TRU/MTRU Data Request," dated Jan. 13, 1995.



- ag. (PANT) D. L. Heim, DOE Amarillo Area Office, Amarillo, Texas, correspondence to Jeff Williams, DOE Carlsbad Area Office, Carlsbad, New Mexico, "WIPP Transuranic (TRU) Waste Baseline Inventory Report and Integrated Database Report," dated Sept. 28, 1994.
- ah. (RFETS) G. A. O'Leary, EG&G Rocky Flats Inc., Golden, Colorado, correspondence to Paul Drez, Drez and Associates, Albuquerque, New Mexico, "Transmutal of the Rocky Flats Environmental Technology Site (RFETS) Data Forms for the Waste Isolation Pilot Plant (WIPP) Transuranic (TRU) Waste Baseline Inventory Report (WTWBIR), GAO-039-94," 94-RF-10526, dated Oct. 13, 1994.
- ai. (SNL/NM) E. D. Conway, Sandia National Laboratories, Albuquerque, New Mexico, correspondence to Jeff Williams, DOE Carlsbad Area Office, Carlsbad, New Mexico, transmitting data package for WTBIR (Rev. 1), dated Oct. 24, 1994.
- aj. (SNL/NM) Joe Jones, Sandia National Laboratories, Albuquerque, New Mexico, correspondence to E. W. Krieger, MAC Technical Services Company, Albuquerque, New Mexico, "WIPP TRU Waste Comments," dated Nov. 22, 1994.
- ak. (SRS) S. J. Mentrup, Westinghouse Savannah River Company, Aiken, South Carolina, correspondence to Stan Massingill, DOE Savannah River Operations Office, Aiken, South Carolina, "SRS Data Package for WIPP TRU Waste Baseline Inventory Report (U)," SWE-SWE-94-0550, dated Oct. 12, 1994.
- al. (WVDP) P. S. Klanian, West Valley Nuclear Services Company, Inc., West Valley, New York, correspondence to Jeff Williams, DOE Carlsbad Area Office, Carlsbad, New Mexico, "Data Package for WIPP Transuranic Waste Baseline Inventory Report (WTWBIR)," dated Oct. 14, 1994.
- am. (WVDP) Connie King, West Valley Nuclear Services Company, Inc., West Valley, New York, correspondence to Royes Salmon, Oak Ridge National Laboratory, Oak Ridge, Tennessee, transmitting input to IDB report (Rev. 10), dated Nov. 14, 1994.
- an. (WVDP) Connie King, West Valley Nuclear Services Company, Inc., West Valley, New York, correspondence to E. W. Krieger, MAC Technical Services Company, Albuquerque, New Mexico, transmitting responses to WTBIR Comments, dated Dec. 12, 1994.
8. U.S. Department of Energy, *Integrated Data Base for 1993: U.S. Spent Fuel and Radioactive Waste Inventories, Projections, and Characteristics*, DOE/RW-0006, Rev. 9, Oak Ridge National Laboratory, Oak Ridge, Tennessee (March 1994).
9. U.S. Department of Energy, *Long Range Master Plan for Defense Transuranic Waste Program*, DOE/WIPP 88-028, Carlsbad, New Mexico, (December 1988).
10. U.S. Congress, *Department of Energy National Security and Military Application of Nuclear Energy Authorization Act of 1980*, Pub. L. 96-164 (1980).
11. U.S. Congress, *Waste Isolation Pilot Plant Land Withdrawal Act*, Pub. L. 102-579 (1992).
12. U.S. Environmental Protection Agency, *Environmental Radiation Protection Standards for the Management and Disposal of Spent Nuclear Fuel, High-Level and Transuranic Radioactive Wastes*, 40 CFR Part 191, final rule, *Fed. Regist.* 58, 66398 (Dec. 20, 1993).
13. U.S. Environmental Protection Agency, *Criteria for Certification of Compliance with Environmental Radiation Protection Standards for the Management and Disposal of Spent Nuclear Fuel, High-Level, and Transuranic Wastes*, 40 CFR Part 194, notice of proposed rulemaking, *Fed. Regist.* 58, 792 (Jan. 30, 1995).

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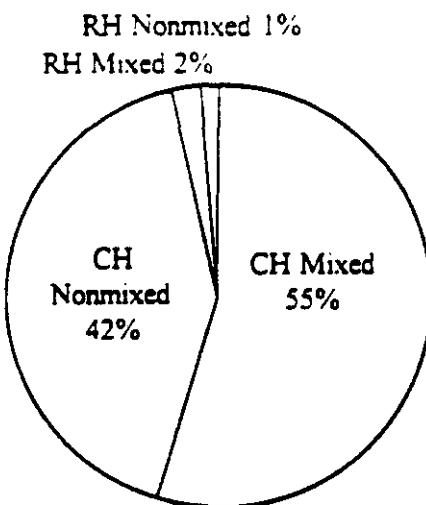
Ames Ames Laboratory
 ANL-E Argonne National Laboratory-East
 ANL-W Argonne National Laboratory-West
 BAPL Bettis Atomic Power Laboratory
 BCL Battelle Columbus Laboratory
 ETEC Energy Technology Engineering Center
 Hanford Richland (Hanford) Site
 INEL Idaho National Engineering Laboratory
 ITRI Inhalation and Toxicology Research Institute
 KAPL Knolls Atomic Power Laboratory - Schenectady
 LANL Los Alamos National Laboratory
 LBL Lawrence Berkley Laboratory
 LLNL Lawrence Livermore National Laboratory
 Mound Mound Plant
 MURR University of Missouri
 NTS Nevada Test Site
 ORNL Oak Ridge National Laboratory

PAD Paducah Gaseous Diffusion Plant
 PANT Pantex Plant
 RFETS Rocky Flats Environmental Technology Site
 SNL/NM Sandia National Laboratories/New Mexico
 SRS Savannah River Site
 WVDP West Valley Demonstration Project (Commercial Waste Only)

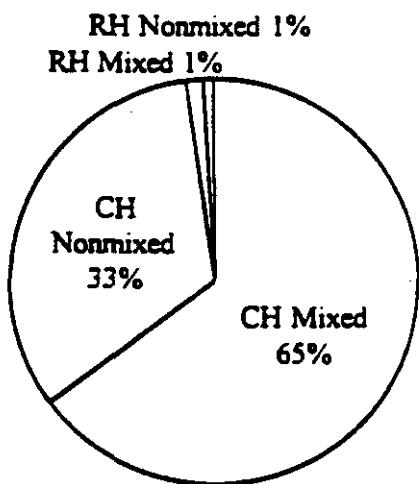
♦ Indicates Small Quantity Site
 * Indicates Major Site



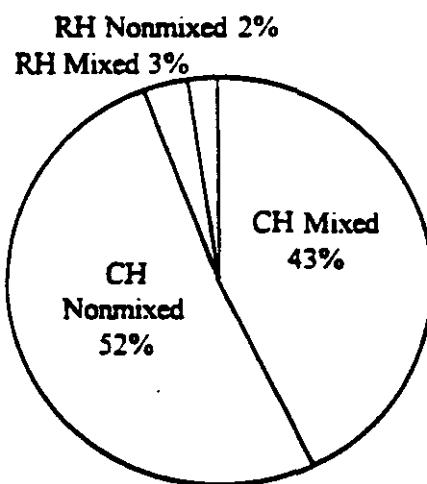
Fig. 3.1. U.S. Department of Energy transuranic waste generation/storage sites.



Total TRUW at End of 2022



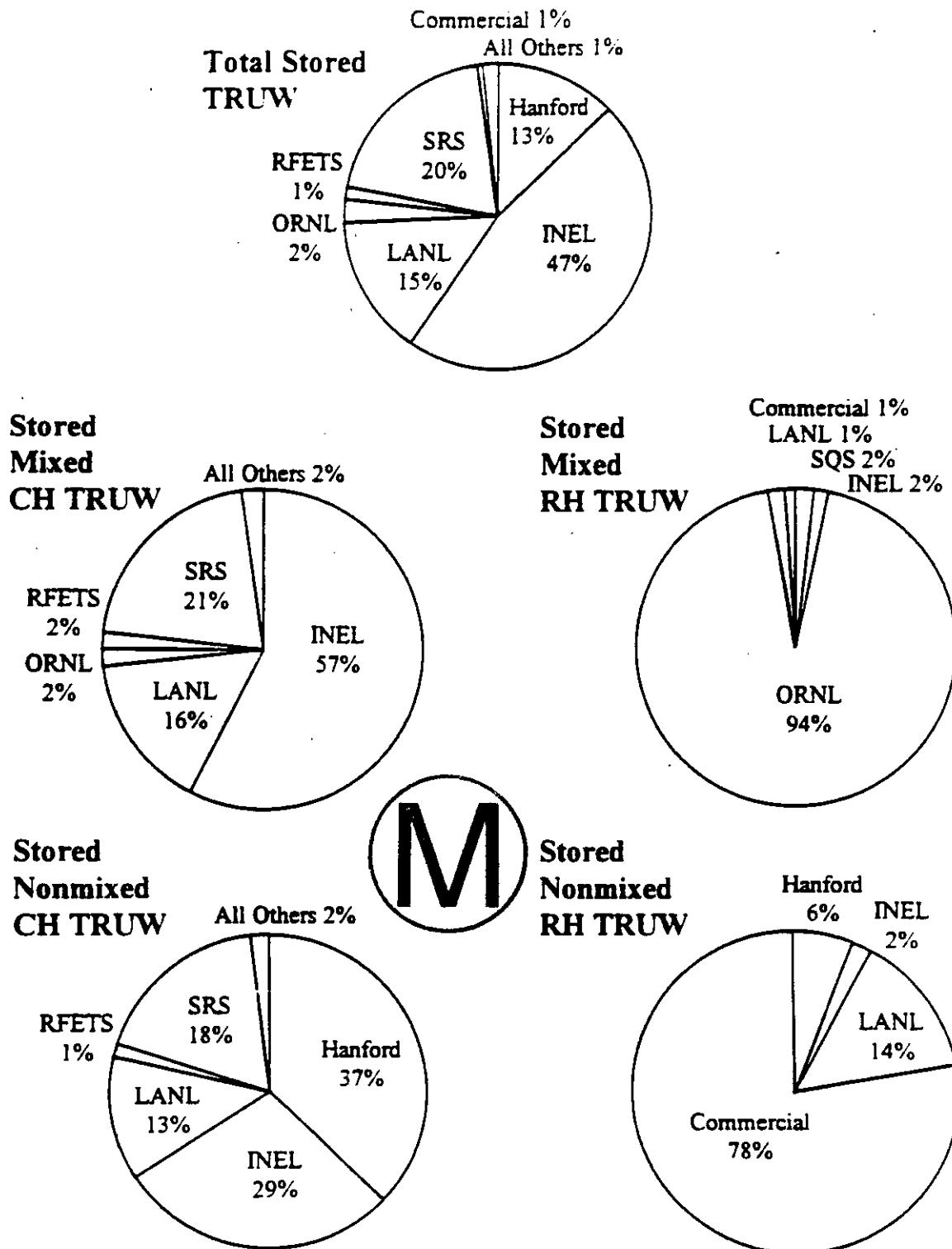
Total Stored
TRUW



Total Projected
TRUW

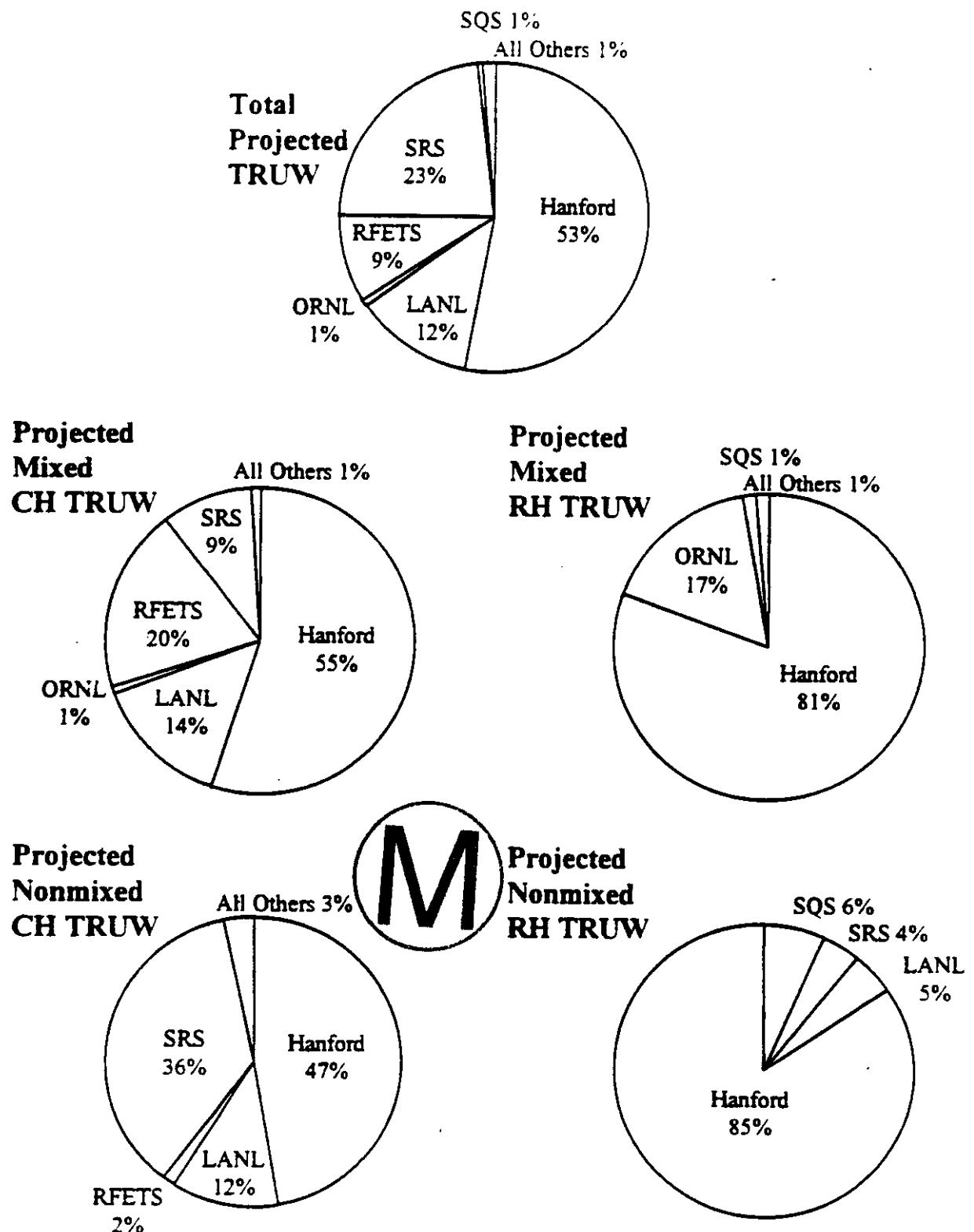
NOTE: All amounts shown are for final waste form

Fig. 3.2. Retrievably stored and projected TRUW volumes by radioactivity classification.



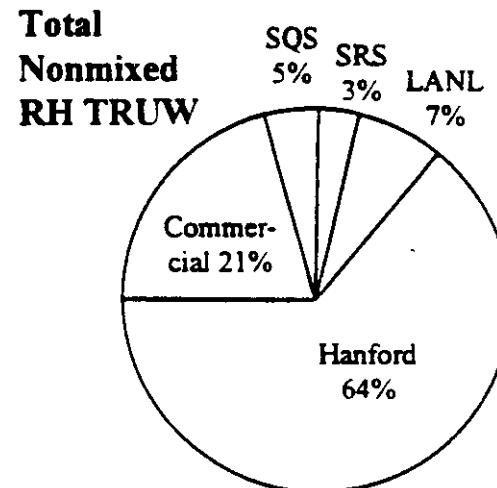
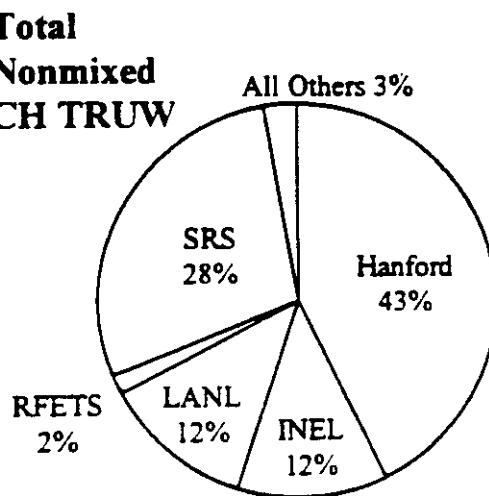
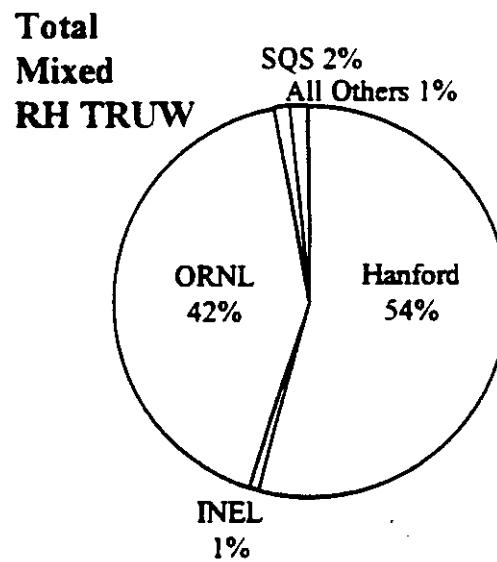
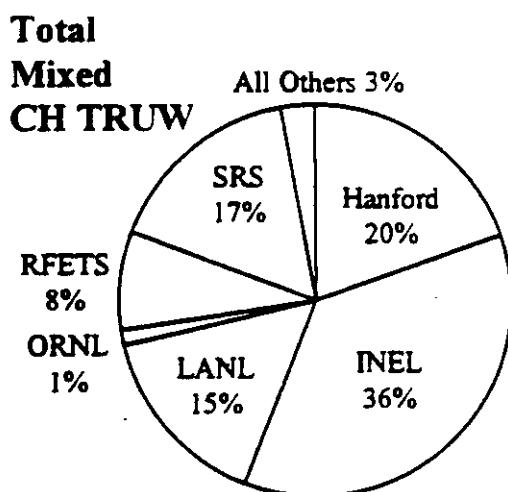
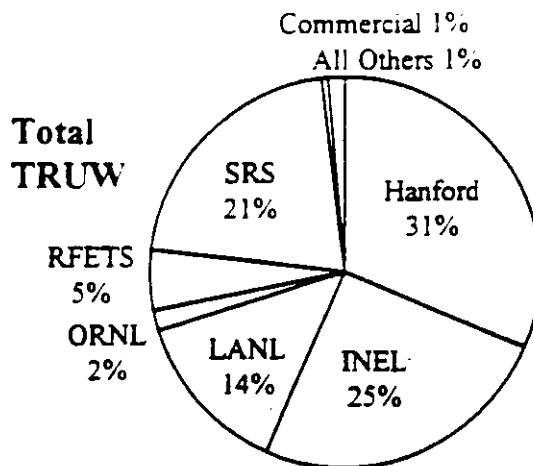
NOTE: All amounts shown are for final waste form

Fig. 3.3. Retrievably stored TRUW volumes by site.



NOTE: All amounts shown are for final waste form

Fig. 3.4. Projected TRUW volumes by site.



NOTE: All amounts shown are for final waste form

Fig. 3.5. Estimated TRUW volumes by end of year 2022.

Table 3.1. Comparison of IDB and WTWBIR retrievably stored volumes of TRUW^{a,b}
(Volumes are expressed in m³)

Site	Contact-handled TRUW			Remote-handled TRUW		
	As stored		In final form 1993 WTWBIR ^d	As stored		In final form 1993 WTWBIR ^d
	1993 IDB ^c	1993 WTWBIR ^d		1993 IDB ^c	1993 WTWBIR ^d	
Major sites						
ANL-E	2.91E+01	2.91E+01	2.91E+01	1.70E+00	0.00E+00 ^e	0.00E+00
Hanford	1.56E+04	8.06E+03 ^f	9.39E+03 ^g	2.01E+02	3.20E+01 ^h	3.32E+01 ^g
INEL	6.48E+04	3.92E+04 ⁱ	3.47E+04 ^g	7.98E+01	3.10E+01 ⁱ	3.10E+01
LANL	1.08E+04	1.09E+04	1.09E+04	9.13E+01	9.13E+01	9.13E+01
LNL	2.35E+02	2.24E+02	2.24E+02	0.00E+00	0.00E+00	0.00E+00
Mound	1.19E+01	2.63E+02 ⁱ	2.63E+02	0.00E+00	0.00E+00	0.00E+00
NTS	6.07E+02	6.13E+02	6.20E+02 ^g	5.30E+00	0.00E+00	0.00E+00
ORNL	2.02E+03	7.83E+02 ⁱ	7.83E+02	5.64E+02	9.94E+02 ⁱ	9.94E+02
RFETS	1.04E+03	1.06E+03	1.13E+03 ^g	0.00E+00	0.00E+00	0.00E+00
SRS	8.93E+03	9.34E+03 ⁱ	1.46E+04 ^g	0.00E+00	0.00E+00	0.00E+00
Subtotal	1.04E+05	7.04E+04	7.26E+04	9.43E+02	1.15E+03	1.15E+03
Small-quantity sites						
Ames	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ANL-W	0.00E+00	2.00E-02 ^j	2.00E-02	0.00E+00	8.65E+00 ^j	8.65E+00
BCL	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
BAPL	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ETEC	1.90E+00	1.87E+00	1.87E+00	0.00E+00	0.00E+00	0.00E+00
KAPL	0.00E+00	2.40E+00 ⁱ	2.40E+00	2.40E+00	1.12E+01 ⁱ	1.12E+01
LBL	9.00E-01	8.40E-01	8.40E-01	0.00E+00	0.00E+00	0.00E+00
MURR	1.00E-01	6.00E-02 ⁱ	6.00E-02	0.00E+00	0.00E+00	0.00E+00
PAD	4.30E+00	2.10E+00 ⁱ	3.45E+00 ^g	0.00E+00	0.00E+00	0.00E+00
PANT	6.00E-01	6.24E-01	6.24E-01	0.00E+00	0.00E+00	0.00E+00
SNL/NM	9.00E-01	8.04E+00 ⁱ	8.04E+00	9.00E-01	0.00E+00 ⁱ	0.00E+00
Subtotal	8.70E+00	1.60E+01	1.73E+01	3.30E+00	1.99E+01	1.99E+01

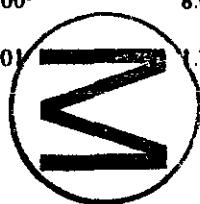


Table 3.1 (continued)

Site	Contact-handled TRUW			Remote-handled TRUW		
	As stored		In final form 1993 WTWBIR ^d	As stored		In final form 1993 WTWBIR ^d
	1993 IDB ^c	1993 WTWBIR ^d		1993 IDB ^c	1993 WTWBIR ^d	
Commercial site						
WVDP	4.91E+01	5.06E+01	5.06E+01	4.27E+02	4.27E+02	4.27E+02
Total	1.04E+05	7.05E+04	7.26E+04	1.37E+03	1.59E+03	1.60E+03

^aSmall changes between the 1993 IDB and 1993 WTWBIR (as stored) volumes are expected because of anticipated rounding methods and differences in reporting methodologies. Volumes reported by the IDB are the as-stored volumes shown by the sites in their data submittals to the IDB.

^bSome volumes of TSCA waste are included in this table that are not included in the WIPP inventory defined in WTWBIR, Rev. 1. See Tables 3.3, 3.4, and 3.5 for details.

^cSee ref. 5.

^dSee ref. 2.

^eVolume reported in Hanford submittal.

^fAdjusted to delete α-LLW volume included in previous IDB submittals.

^gDifference between "as-stored" and "final-form" volumes primarily caused by volume expansion from repackaging for WIPP waste acceptance criteria (WAC) compliance. INEL shows an overall decrease in volume because of thermal processing of some waste streams.

^hApproximately 200 m³ reported with CH-TRUW inventory are from waste streams containing both CH TRUW and RH TRUW (ref. 2, WTWBIR, Rev. 1).

Table 6-1).

ⁱVolume differences resulting from revised inventory assessment.

^jVolume previously included in INEL submittal.



Table 3.2. Summary of final waste-form volumes (m³) of retrievably stored and projected TRUW (mixed and nonmixed CH and RII wastes)^{a,b}

Site	EOY ^c 1993	Annual increase				Cumulative increase		Projected increase 1994-2022	Total EOY 2022
		1994	1995	1996	1997	1998-2002	2003-2022		
Major sites									
ANL-E	2.91E+01	1.68E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.68E+00	3.08E+01
Hanford	9.42E+03	1.71E+02	4.91E+02	6.19E+02	1.91E+02	1.29E+03	3.11E+04	3.38E+04	4.33E+04
INEL	3.47E+04	0.00E+00	6.00E-01	6.00E-01	1.60E+00	3.00E+00	1.20E+01	1.78E+01	3.47E+04
LANL	1.10E+04	2.66E+02	2.77E+02	2.77E+02	2.77E+02	1.34E+03	5.32E+03	7.76E+03	1.87E+04
LLNL	2.24E+02	2.11E+01	2.50E+01	2.50E+01	2.50E+01	1.25E+02	5.00E+02	7.21E+02	9.45E+02
Mound	2.63E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.63E+02
NTS	6.20E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.20E+02
ORNL	1.78E+03	2.14E+01	2.14E+01	2.14E+01	2.14E+01	1.07E+02	4.28E+02	6.21E+02	2.40E+03
RFETS	1.13E+03	6.64E+01	1.22E+02	9.31E+01	2.58E+01	1.40E+02	5.45E+03	5.90E+03	7.03E+03
SRS	1.46E+04	5.13E+02	5.11E+02	5.11E+02	5.11E+02	2.56E+03	1.02E+04	1.48E+04	2.94E+04
Subtotal	7.37E+04	1.06E+03	1.45E+03	1.55E+03	1.05E+03	5.56E+03	5.30E+04	6.37E+04	1.37E+05
Small-quantity sites									
Ames	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-01	1.00E-01	1.00E-01
ANL-W	8.67E+00	2.24E+00	8.60E-01	1.20E+00	1.76E+00	7.01E+00	2.04E+01	3.35E+01	4.21E+01
BCL	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.10E+01	0.00E+00	7.10E+01	7.10E+01
BAPL	0.00E+00	0.00E+00	7.28E-01	2.68E+01	1.74E+01	7.65E+01	3.90E+00	1.25E+02	1.25E+02
ETEC	1.87E+00	0.00E+00	5.20E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.20E+00	7.07E+00
KAPL	1.36E+01	8.70E-01	8.70E-01	8.70E-01	8.70E-01	4.35E+00	1.74E+01	2.52E+01	3.89E+01
LBL	8.40E-01	0.00E+00	4.20E-01	0.00E+00	0.00E+00	8.00E-01	3.20E+00	4.42E+00	5.26E+00
MURR	6.00E-02	8.00E-02	8.00E-02	8.00E-02	1.36E+00	0.00E+00	0.00E+00	1.60E+00	1.66E+00
PAD	3.45E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.45E+00
PANT	6.24E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.24E-01
SNL/NM	8.04E+00	0.00E+00	5.00E+00	0.00E+00	0.00E+00	1.00E+00	1.00E+00	7.00E+00	1.50E+01
Subtotal	3.72E+01	3.19E+00	1.32E+01	2.90E+01	2.14E+01	1.61E+02	4.60E+01	2.73E+02	3.11E+02
Commercial site									
WVDP	4.78E+02	5.46E+01	2.93E+01	6.33E+00	6.33E+00	9.04E+01	0.00E+00	1.87E+02	6.64E+02
Total	7.42E+04	1.12E+03	1.49E+03	1.58E+03	1.08E+03	5.81E+03	5.31E+04	6.41E+04	1.38E+05

^aAny small differences in volumes reported in this table and in WTWBIR, Rev. 1 (ref. 2) and in the numerical totals shown result from rounding.

^bSome volumes of TSCA-contaminated wastes are included in this table that are not included in WTWBIR, Rev. 1 (ref. 2). See Tables 3.3, 3.4, and 3.5 for details.

^cEOY = end of (calendar) year.



Table 3.3. Summary of final waste-form volumes (m³) of retrievably stored and projected mixed and nonmixed CH TRUW^a

Site	EOY ^b 1993	Annual increase				Cumulative increase		Projected increase	Total EOY 2022
		1994	1995	1996	1997	1998–2002	2003–2022		
Major sites									
ANL-E	2.91E+01	1.68E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.68E+00	3.08E+01
Hanford	9.39E+03 ^c	1.69E+02	3.88E+02	5.80E+02	1.82E+02	1.19E+03	2.83E+04	3.09E+04 ^d	4.02E+04
INEL	3.47E+04	0.00E+00	0.00E+00	0.00E+00	1.00E+00	0.00E+00	0.00E+00	1.00E+00	3.47E+04
LANL	1.09E+04	2.54E+02	2.65E+02	2.65E+02	2.65E+02	1.33E+03	5.30E+03	7.67E+03	1.85E+04
LNL	2.24E+02 ^e	2.11E+01	2.50E+01	2.50E+01	2.50E+01	1.25E+02	5.00E+02	7.21E+02 ^f	9.45E+02
Mound	2.63E+02 ^g	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.63E+02
NTS	6.20E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.20E+02
ORNL	7.83E+02	9.10E+00	9.10E+00	9.10E+00	9.10E+00	4.55E+01	1.82E+02	2.64E+02	1.05E+03
RFETS	1.13E+03	6.64E+01	1.22E+02	9.31E+01	2.58E+01	1.40E+02	5.45E+03	5.90E+03	7.03E+03
SRS	1.46E+04	5.09E+02	5.09E+02	5.09E+02	5.09E+02	2.55E+03	1.02E+04	1.48E+04	2.94E+04
Subtotal	7.26E+04	1.03E+03	1.32E+03	1.48E+03	1.02E+03	5.37E+03	5.00E+04	6.02E+04	1.33E+05
Small-quantity sites									
Ames	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-01	1.00E-01	1.00E-01
ANL-W	2.00E-02	1.92E+00	4.40E-01	4.40E-01	4.40E-01	2.20E+00	4.00E-01	5.84E+00	5.86E+00
BCL	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
BAPL	0.00E+00	0.00E+00	4.16E-01	2.66E+01	1.71E+01	7.59E+01	3.80E+00	1.24E+02	1.24E+02
ETEC	1.87E+00	0.00E+00	5.20E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.20E+00	7.07E+00
KAPL	2.40E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.40E+00
LBL	8.40E-01	0.00E+00	4.20E-01	0.00E+00	0.00E+00	8.00E-01	3.20E+00	4.42E+00	5.26E+00
MURR	6.00E-02	8.00E-02	8.00E-02	8.00E-02	1.36E+00	0.00E+00	0.00E+00	1.60E+00	1.66E+00
PAD	3.45E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.45E+00
PANT	6.24E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.24E-01
SNL/NM	8.04E+00	0.00E+00	5.00E+00	0.00E+00	0.00E+00	1.00E+00	1.00E+00	7.00E+00	1.50E+01
Subtotal	1.73E+01	2.00E+00	1.16E+01	2.71E+01	1.89E+01	7.99E+01	8.50E+00	1.48E+02	1.65E+02



Table 3.3 (continued)

Site	EOY ^b 1993	Annual increase				Cumulative increase		Projected increase 1994-2022	Total EOY 2022
		1994	1995	1996	1997	1998-2002	2003-2022		
Commercial site									
WVDP	5.06E+01	5.46E+01	2.93E+01	6.33E+00	6.33E+00	9.04E+01	0.00E+00	1.87E+02	2.37E+02
Total	7.26E+04	1.09E+03	1.36E+03	1.52E+03	1.04E+03	5.54E+03	5.00E+04	6.05E+04	1.33E+05

^aAny small differences in volumes reported in this table and in WTWBIR, Rev. 1 (ref. 2) and in the numerical totals shown result from rounding.

^bEOY = end of (calendar) year.

c7.42E+01 m³ (approximately) of TSCA waste included from Table 3-2, WTWBIR, Rev. 1 (ref. 2).

d9.67E+03 m³ (approximately) of TSCA waste included from Table 3-2, WTWBIR, Rev. 1 (ref. 2).

e1.68E+01 m³ (approximately) of TSCA waste included from Table 3-2, WTWBIR, Rev. 1 (ref. 2).

f3.26E+01 m³ (approximately) of TSCA waste included from Table 3-2, WTWBIR, Rev. 1 (ref. 2).

g8.00E-01 m³ (approximately) of TSCA waste included from Table 3-2, WTWBIR, Rev. 1 (ref. 2).



Table 3.4. Final waste-form volumes (m³) of retrievably stored and projected mixed CH TRUW^a

Site	EOY ^b 1993	Annual increase				Cumulative increase		Projected increase 1994-2022	Total EOY 2022
		1994	1995	1996	1997	1998-2002	2003-2022		
Major sites									
ANL-E	6.21E+00	5.60E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.60E-01	6.77E+00
Hanford	2.10E+02 ^c	1.41E+01	3.13E+01	4.60E+01	1.39E+01	1.39E+02	1.49E+04	1.51E+04 ^d	1.54E+04
INEL	2.76E+04	0.00E+00	0.00E+00	0.00E+00	1.00E+00	0.00E+00	0.00E+00	1.00E+00	2.76E+04
LANL	7.66E+03	1.24E+02	1.35E+02	1.35E+02	1.35E+02	6.75E+02	2.70E+03	3.90E+03	1.16E+04
LLNL	7.92E+00	6.24E-01	1.57E+00	1.57E+00	1.57E+00	7.87E+00	3.15E+01	4.47E+01	5.26E+01
Mound	2.70E+00 ^e	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.70E+00
NTS	6.20E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.20E+02
ORNL	7.83E+02	9.10E+00	9.10E+00	9.10E+00	9.10E+00	4.55E+01	1.82E+02	2.64E+02	1.05E+03
RFETS	8.28E+02	4.69E+01	7.49E+01	6.09E+01	2.21E+01	1.13E+02	5.07E+03	5.38E+03	6.21E+03
SRS	1.01E+04	8.84E+01	8.84E+01	8.84E+01	8.84E+01	4.42E+02	1.77E+03	2.56E+03	1.27E+04
Subtotal	4.79E+04	2.84E+02	3.40E+02	3.41E+02	2.71E+02	1.42E+03	2.47E+04	2.73E+04	7.52E+04
Small-quantity sites									
Ames	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.00E-01	1.00E-01	1.00E-01
ANL-W	2.00E-02	1.92E+00	2.00E-02	2.00E-02	2.00E-02	1.00E-01	4.00E-01	2.48E+00	2.50E+00
BCL	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
BAPL	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ETEC	2.10E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.10E-01
KAPL	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
LBL	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MURR	6.00E-02	8.00E-02	8.00E-02	8.00E-02	1.36E+00	0.00E+00	0.00E+00	1.60E+00	1.66E+00
PAD	3.45E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	3.45E+00
PANT	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
SNL/NM	1.04E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.04E+00
Subtotal	4.78E+00	2.00E+00	1.00E-01	1.00E-01	1.38E+00	1.00E-01	5.00E-01	4.18E+00	8.96E+00
Commercial site									
WVDP	3.19E+01	4.36E+01	2.38E+01	7.90E-01	7.90E-01	6.27E+01	0.00E+00	1.32E+02	1.64E+02
Total	4.79E+04	3.29E+02	3.64E+02	3.42E+02	2.73E+02	1.48E+03	2.47E+04	2.74E+04	7.54E+04

^aAny small differences in volumes reported in this table and in WTWBIR, Rev. 1 (ref. 2) and in the numerical totals shown result from rounding.
bEOY = end of (calendar) year.

^c7.40E+01 m³ (approximately) of TSCA waste included from Table 3-2, WTWBIR, Rev. 1 (ref. 2).

^d9.62E+03 m³ (approximately) of TSCA waste included from Table 3-2, WTWBIR, Rev. 1 (ref. 2).

^e2.00E-01 m³ (approximately) of TSCA waste included from Table 3-2, WTWBIR, Rev. 1 (ref. 2).

Table 3.5. Final waste-form volumes (m³) of retrievably stored and projected nonmixed CH TRUW^a

Site	EOY ^b 1993	Annual increase				Cumulative increase		Projected increase 1994–2022	Total EOY 2022
		1994	1995	1996	1997	1998–2002	2003–2022		
Major sites									
ANL-E	2.29E+01	1.12E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.12E+00	2.40E+01
Hanford	9.18E+03 ^c	1.55E+02	3.56E+02	5.34E+02	1.68E+02	1.05E+03	1.34E+04	1.57E+04 ^d	2.49E+04
INEL	7.02E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.02E+03
LANL	3.20E+03	1.30E+02	1.30E+02	1.30E+02	1.30E+02	6.50E+02	2.60E+03	3.77E+03	6.97E+03
LLNL	2.16E+02 ^c	2.05E+01	2.34E+01	2.34E+01	2.34E+01	1.17E+02	4.68E+02	6.76E+02 ^f	8.92E+02
Mound	2.61E+02 ^g	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.61E+02
NTS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ORNL	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
RFETS	3.05E+02	1.96E+01	4.67E+01	3.22E+01	3.67E+00	2.70E+01	3.88E+02	5.17E+02	8.22E+02
SRS	4.47E+03	4.21E+02	4.21E+02	4.21E+02	4.21E+02	2.10E+03	8.42E+03	1.22E+04	1.67E+04
Subtotal	2.47E+04	7.47E+02	9.77E+02	1.14E+03	7.46E+02	3.95E+03	2.53E+04	3.29E+04	5.76E+04
Small-quantity sites									
Ames	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ANL-W	0.00E+00	0.00E+00	4.20E-01	4.20E-01	4.20E-01	2.10E+00	0.00E+00	3.36E+00	3.36E+00
BCL	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
BAPL	0.00E+00	0.00E+00	4.16E-01	2.66E+01	1.71E+01	7.59E+01	3.80E+00	1.24E+02	1.24E+02
ETEC	1.66E+00	0.00E+00	5.20E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	5.20E+00	6.86E+00
KAPL	2.40E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.40E+00
LBL	8.40E-01	0.00E+00	4.20E-01	0.00E+00	0.00E+00	8.00E-01	3.20E+00	4.42E+00	5.26E+00
MURR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PAD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PANT	6.24E-01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.24E-01
SNL/NM	7.00E+00	0.00E+00	5.00E+00	0.00E+00	0.00E+00	1.00E+00	1.00E+00	7.00E+00	1.40E+01
Subtotal	1.25E+01	0.00E+00	1.15E+01	2.70E+01	1.75E+01	7.98E+01	8.00E+00	1.44E+02	1.56E+02

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Table 3.5 (continued)

Site	EOY ^b 1993	Annual increase				Cumulative increase		Projected increase 1994–2022	Total EOY 2022
		1994	1995	1996	1997	1998–2002	2003–2022		
Commercial site									
WVDP	1.87E+01	1.10E+01	5.54E+00	5.54E+00	5.54E+00	2.77E+01	0.00E+00	5.53E+01	7.40E+01
Total	2.47E+04	7.58E+02	9.94E+02	1.17E+03	7.69E+02	4.06E+03	2.53E+04	3.31E+04	5.78E+04

^aAny small differences in volumes reported in this table and in WTWBIR, Rev. 1 (ref. 2) and in the numerical totals shown result from rounding.

^bEOY = end of (calendar) year.

^c2.00E-01 m³ (approximately) of TSCA waste included from Table 3-2, WTWBIR, Rev. 1 (ref. 2).

^d2.70 E+00 m³ (approximately) of TSCA waste included from Table 3-2, WTWBIR, Rev. 1 (ref. 2).

^e1.68E+01 m³ (approximately) of TSCA waste included from Table 3-2, WTWBIR, Rev. 1 (ref. 2).

^f3.26E+01 m³ (approximately) of TSCA waste included from Table 3-2, WTWBIR, Rev. 1 (ref. 2).

^g6.00E-01 m³ (approximately) of TSCA waste included from Table 3-2, WTWBIR, Rev. 1 (ref. 2).

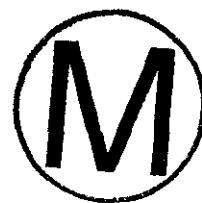


Table 3.6. Summary of final waste-form volumes (m³) of retrievably stored and projected mixed and nonmixed RH TRU/W^a

Site	EOY ^b 1993	Annual increase				Cumulative increase		Projected increase 1994-2022	Total EOY 2022
		1994	1995	1996	1997	1998-2002	2003-2022		
Major sites									
ANL-E	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Hanford	3.32E+01	2.00E+00	1.03E+02	3.90E+01	8.76E+00	1.00E+02	2.72E+03	2.97E+03	3.01E+03
INEL	3.10E+01	0.00E+00	6.00E-01	6.00E-01	6.00E-01	3.00E+00	1.20E+01	1.68E+01	4.78E+01
LNL	9.13E+01	1.17E+01	1.17E+01	1.17E+01	1.17E+01	1.19E+01	2.40E+01	8.27E+01	1.74E+02
LLNL	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Mound	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NTS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ORNL	9.94E+02	1.23E+01	1.23E+01	1.23E+01	1.23E+01	6.15E+01	2.46E+02	3.57E+02	1.35E+03
RFETS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
SRS	0.00E+00	4.00E+00	2.14E+00	2.14E+00	2.14E+00	1.05E+01	4.30E+01	6.39E+01	6.39E+01
Subtotal	1.15E+03	3.00E+01	1.30E+02	6.57E+01	3.55E+01	1.87E+02	3.05E+03	3.49E+03	4.64E+03
Small-quantity sites									
Ames	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ANL-W	8.65E+00	3.20E-01	4.20E-01	7.56E-01	1.32E+00	4.81E+00	2.00E+01	2.76E+01	3.63E+01
BCL	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.10E+01	0.00E+00	7.10E+01	7.10E+01
BAPL	0.00E+00	0.00E+00	3.12E-01	2.08E-01	3.12E-01	6.25E-01	1.00E-01	1.56E+00	1.56E+00
ETEC	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
KAPL	1.12E+01	8.70E-01	8.70E-01	8.70E-01	8.70E-01	4.35E+00	1.74E+01	2.52E+01	3.65E+01
LBL	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MURR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PAD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PANT	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
SNL/NM	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Subtotal	1.99E+01	1.19E+00	1.60E+00	1.83E+00	2.50E+00	8.08E+01	3.75E+01	1.25E+02	1.45E+02
Commercial site									
WVDP	4.27E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.27E+02
Total	1.60E+03	3.12E+01	1.31E+02	6.76E+01	3.80E+01	2.68E+02	3.08E+03	3.62E+03	5.22E+03

^aAny small differences in volumes reported in this table and in WTWBIR, Rev. 1 (ref. 2) and in the numerical totals shown result from rounding.

^bEOY = end of (calendar) year.

Table 3.7. Final waste-form volumes (m³) of retrievably stored and projected mixed RH TRUW^a

Site	EOY ^b 1993	Annual increase				Cumulative increase		Projected increase 1994-2022	Total EOY 2022
		1994	1995	1996	1997	1998-2002	2003-2022		
Major sites									
ANL-E	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Hanford	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.76E+00	2.02E+01	1.70E+03	1.73E+03	1.73E+03
INEL	2.12E+01	0.00E+00	6.00E-01	6.00E-01	6.00E-01	3.00E+00	1.20E+01	1.68E+01	3.80E+01
LANL	1.50E+01	1.00E+00	1.00E+00	1.00E+00	1.00E+00	1.00E+00	1.00E+01	1.50E+01	3.00E+01
LLNL	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Mound	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NTS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ORNL	9.94E+02	1.23E+01	1.23E+01	1.23E+01	1.23E+01	6.15E+01	2.46E+02	3.57E+02	1.35E+03
RFETS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
SRS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Subtotal	1.03E+03	1.33E+01	1.39E+01	1.39E+01	2.07E+01	8.57E+01	1.97E+03	2.12E+03	3.15E+03
Small-quantity sites									
Ames	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ANL-W	8.65E+00	3.20E-01	4.20E-01	4.20E-01	4.20E-01	3.10E-01	2.00E+00	3.89E+00	1.25E+01
BCL	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
BAPL	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ETEC	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
KAPL	1.12E+01	8.70E-01	8.70E-01	8.70E-01	8.70E-01	4.35E+00	1.74E+01	2.52E+01	3.65E+01
LBL	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MURR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PAD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PANT	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
SNL/NM	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Subtotal	1.99E+01	1.19E+00	1.29E+00	1.29E+00	1.29E+00	4.66E+00	1.94E+01	2.91E+01	4.90E+01
Commercial site									
WVDP	1.05E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.05E+01
Total	1.06E+03	1.45E+01	1.52E+01	1.52E+01	2.20E+01	9.03E+01	1.99E+03	2.15E+03	3.21E+03

^aAny small differences in volumes reported in this table and in WTWBIR, Rev. 1 (ref. 2) and in the numerical totals shown result from rounding.

^bEOY = end of (calendar) year.

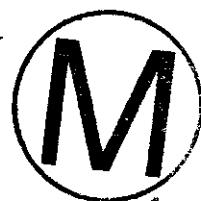


Table 3.8. Final waste-form volumes (m³) of retrievably stored and projected nonmixed RH TRUW^a

Site	EOY ^b 1993	Annual increase				Cumulative increase		Projected increase 1994 - 2022	Total EOY 2022
		1994	1995	1996	1997	1998 - 2002	2003 - 2022		
Major sites									
ANL-E	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Hanford	3.32E+01	2.00E+00	1.03E+02	3.90E+01	2.00E+00	8.00E+01	1.02E+03	1.25E+03	1.28E+03
INEL	9.76E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	9.76E+00
LANL	7.63E+01	1.07E+01	1.07E+01	1.07E+01	1.07E+01	1.09E+01	1.40E+01	6.77E+01	1.44E+02
LLNL	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Mound	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NTS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ORNL	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
RFETS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
SRS	0.00E+00	4.00E+00	2.14E+00	2.14E+00	2.14E+00	1.05E+01	4.30E+01	6.39E+01	6.39E+01
Subtotal	1.19E+02	1.67E+01	1.16E+02	5.18E+01	1.48E+01	1.01E+02	1.08E+03	1.38E+03	1.50E+03
Small-quantity sites									
Ames	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ANL-W	0.00E+00	0.00E+00	0.00E+00	3.36E-01	9.00E-01	4.50E+00	1.80E+01	2.37E+01	2.37E+01
BCL	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	7.10E+01	0.00E+00	7.10E+01	7.10E+01
BAPL	0.00E+00	0.00E+00	3.12E-01	2.08E-01	3.12E-01	6.25E-01	1.00E-01	1.56E+00	1.56E+00
ETEC	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
KAPL	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
LBL	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MURR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PAD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PANT	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
SNL/NM	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Subtotal	0.00E+00	0.00E+00	3.12E-01	5.44E-01	1.21E+00	7.61E+01	1.81E+01	9.63E+01	9.63E+01
Commercial site									
WVDP	4.16E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	4.16E+02
Total	5.36E+02	1.67E+01	1.16E+02	5.24E+01	1.61E+01	1.78E+02	1.10E+03	1.47E+03	2.01E+03

^aAny small differences in volumes reported in this table and in WTWBIR, Rev. 1 (ref. 2) and in the numerical totals shown result from rounding.

^bEOY = end of (calendar) year.



Table 3.9. Estimated final-form volume (m³) composition of retrievably stored and projected TRUW for major sites^b

Major sites	Category	Contact-handled			Remote-handled		
		Stored	Projected	Total	Stored	Projected	Total
ANL-E	Lead/cadmium metal waste	1.10	0.00	1.10	0.00	0.00	0.00
	Solidified inorganics	23.05	1.12	24.17	0.00	0.00	0.00
	Solidified organics	0.03	0.00	0.03	0.00	0.00	0.00
	Uncategorized metal	4.96	0.56	5.52	0.00	0.00	0.00
	Subtotal	29.14	1.68	30.82	0.00	0.00	0.00
	Combustible	530.07 ^a	12,698.57 ^b	13,228.64	0.00	0.00	0.00
	Heterogeneous	8,568.55	827.16	9,395.71	33.16	2,973.71	3,006.87
Hanford	Lead/cadmium metal waste	3.13	0.29	3.42	0.00	0.00	0.00
	Soils	111.69	309.27	420.96	0.00	0.00	0.00
	Solidified inorganics	2.93 ^c	3,153.57 ^d	3,156.50	0.00	0.00	0.00
	Solidified organics	4.48 ^e	31.44 ^f	35.92	0.00	0.00	0.00
	Uncategorized metal	170.17 ^g	13,837.04 ^h	14,007.21	0.00	0.00	0.00
	Subtotal	9,391.02	30,857.34	40,248.36	33.16	2,973.71	3,006.87
	Combustible	670.90	0.00	670.90	0.00	0.00	0.00
INEL	Filter	323.56	0.00	323.56	0.00	0.00	0.00
	Graphite	650.70	0.00	650.70	0.00	0.00	0.00
	Heterogeneous	9,649.50	1.00	9,650.50	13.63	2.80	16.43
	Inorganic nonmetal	1,052.89	0.00	1,052.89	0.00	0.00	0.00
	Lead/cadmium metal waste	0.00	0.00	0.00	0.00	5.60	5.60
	Salt Waste	22.91	0.00	22.91	0.00	2.80	2.80
	Soils	3.80	0.00	3.80	0.00	0.00	0.00
	Solidified inorganics	12,164.28	0.00	12,164.28	2.10	0.00	2.10
	Solidified organics	912.60	0.00	912.60	0.00	0.00	0.00
	Uncategorized metal	7,564.09	0.00	7,564.09	4.11	5.60	9.71
	Unknown	1,655.91	0.00	1,655.91	11.13	0.00	11.13
	Subtotal	34,671.14	1.00	34,672.14	30.97	16.80	47.77
LANL	Combustible	1,768.33	2,464.60	4,232.93	14.84	3.16	18.00
	Soils	109.37	144.60	253.97	0.00	0.00	0.00
	Solidified inorganics	4,848.38	2,059.03	6,907.41	0.00	0.00	0.00
	Uncategorized metals	4,134.80	3,006.17	7,140.97	76.46	79.50	155.96
	Subtotal	10,860.88	7,674.40	18,535.28	91.30	82.66	173.96
LLNL	Combustible	48.88	372.32	421.20	0.00	0.00	0.00
	Filter	16.63 ⁱ	32.63 ^j	49.26	0.00	0.00	0.00
	Salt waste	0.62	2.91	3.53	0.00	0.00	0.00
	Solidified inorganics	13.30	66.15	79.45	0.00	0.00	0.00
	Uncategorized metal	144.33	247.00	391.33	0.00	0.00	0.00
	Subtotal	223.76	721.01	944.77	0.00	0.00	0.00

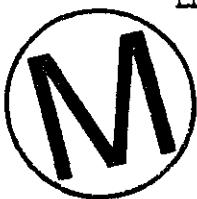


Table 3.9 (continued)

Major sites	Category	Contact-handled			Remote-handled		
		Stored	Projected	Total	Stored	Projected	Total
Mound	Combustible	5.61	0.00	5.61	0.00	0.00	0.00
	Heterogeneous	1.04 ^k	0.00	1.04	0.00	0.00	0.00
	Inorganic nonmetal	0.21 ^l	0.00	0.21	0.00	0.00	0.00
	Soils	146.88	0.00	146.88	0.00	0.00	0.00
	Solidified inorganics	7.28	0.00	7.28	0.00	0.00	0.00
	Uncategorized metal	102.28	0.00	102.28	0.00	0.00	0.00
	Subtotal	263.30	0.00	263.30	0.00	0.00	0.00
NTS	Heterogeneous	619.50	0.00	619.50	0.00	0.00	0.00
ORNL	Heterogeneous	672.98	263.90	936.88	382.81	182.70	565.51
	Solidified inorganics	110.00	0.00	110.00	611.00	174.00	785.00
	Subtotal	782.98	263.90	1,046.88	993.81	356.70	1,350.51
RFETS	Filter	103.96	1,087.59	1,191.55	0.00	0.00	0.00
	Graphite	18.06	43.40	61.46	0.00	0.00	0.00
	Heterogeneous	312.86	804.58	1,117.44	0.00	0.00	0.00
	Inorganic nonmetal	110.68	318.68	429.36	0.00	0.00	0.00
	Lead/cadmium metal waste	51.87	124.18	176.05	0.00	0.00	0.00
	Salt waste	9.45	56.60	66.05	0.00	0.00	0.00
	Solidified inorganics	228.63	2,988.11	3,216.74	0.00	0.00	0.00
	Solidified organics	132.80	48.82	181.62	0.00	0.00	0.00
	Uncategorized metal	164.82	429.50	594.32	0.00	0.00	0.00
	Subtotal	1,133.13	5,901.46	7,034.59	0.00	0.00	0.00
SRS	Combustible	4,066.80	11,962.50	16,029.30	0.00	0.00	0.00
	Heterogeneous	10,132.20	2,563.60	12,695.80	0.00	63.92	63.92
	Solidified inorganics	0.04	0.00	0.04	0.00	0.00	0.00
	Solidified organics	404.85	240.70	645.55	0.00	0.00	0.00
	Subtotal	14,603.89	14,766.80	29,370.69	0.00	63.92	63.92
Major sites total		72,578.74	60,187.59	132,766.33	1,149.24	3,493.79	4,643.03

^aIncludes 3.59 m³ of TSCA waste not shown in the WTWBIR, Rev. 1 (ref. 2).^bIncludes 429.54 m³ of TSCA waste not shown in the WTWBIR, Rev. 1 (ref. 2).^cIncludes 1.47 m³ of TSCA waste not shown in the WTWBIR, Rev. 1 (ref. 2).^dIncludes 228.81 m³ of TSCA waste not shown in the WTWBIR, Rev. 1 (ref. 2).^eIncludes 2.31 m³ of TSCA waste not shown in the WTWBIR, Rev. 1 (ref. 2).^fIncludes 16.19 m³ of TSCA waste not shown in the WTWBIR, Rev. 1 (ref. 2).^gIncludes 66.82 m³ of TSCA waste not shown in the WTWBIR, Rev. 1 (ref. 2).^hIncludes 8,946.09 m³ of TSCA waste not shown in the WTWBIR, Rev. 1 (ref. 2).ⁱIncludes 16.63 m³ of TSCA waste not shown in the WTWBIR, Rev. 1 (ref. 2).^jIncludes 32.63 m³ of TSCA waste not shown in the WTWBIR, Rev. 1 (ref. 2).^kIncludes 0.62 m³ of TSCA waste not shown in the WTWBIR, Rev. 1 (ref. 2).^lIncludes 0.21 m³ of TSCA waste not shown in the WTWBIR, Rev. 1 (ref. 2).



Table 3.10. Estimated final-form volume (m³) composition of retrievably stored and projected TRUW for small-quantity and commercial sites^a

Major sites	Category	Contact-handled			Remote-handled		
		Stored	Projected	Total	Stored	Projected	Total
<i>Small-quantity sites (SQS)</i>							
Ames	Solidified inorganics	0.00	0.10	0.10	0.00	0.00	0.00
ANL-W	Filter	0.00	0.00	0.00	0.89	2.09	2.98
	Heterogeneous	0.00	3.36	3.36	0.59	0.08	0.67
	Lead/cadmium metal waste	0.02	2.48	2.50	0.00	0.36	0.36
	Uncategorized metal	0.00	0.00	0.00	7.17	1.36	8.53
	Unknown	0.00	0.00	0.00	0.00	23.74	23.74
	Subtotal	0.02	5.84	5.86	8.65	27.63	36.28
BCL	Heterogeneous	0.00	0.00	0.00	0.00	71.00	71.00
BAPL	Heterogeneous	0.00	123.82	123.82	0.00	1.56	1.56
ETEC	Heterogeneous	1.66	5.20	6.86	0.00	0.00	0.00
	Lead/cadmium metal waste	0.21	0.00	0.21	0.00	0.00	0.00
	Subtotal	1.87	5.20	7.07	0.00	0.00	0.00
KAPL	Heterogeneous	2.40	0.00	2.40	11.23	25.23	36.46
LBL	Heterogeneous	0.84	4.42	5.26	0.00	0.00	0.00
MURR	Heterogeneous	0.06	1.60	1.66	0.00	0.00	0.00
PAD	Solidified inorganics	3.45	0.00	3.45	0.00	0.00	0.00
PANT	Heterogeneous	0.62	0.00	0.62	0.00	0.00	0.00
SNL/NM	Heterogeneous	8.04	7.00	15.04	0.00	0.00	0.00
	SQS subtotal ^a	17.30	147.98	165.28	19.88	125.41	145.30
<i>Commercial site</i>							
WVDP	Filter	18.97	131.63	150.60	0.00	0.00	0.00
	Heterogeneous	14.76	55.28	70.04	0.00	0.00	0.00
	Lead/cadmium metal waste	0.21	0.00	0.21	0.00	0.00	0.00
	Solidified inorganics	4.57	0.00	4.57	0.00	0.00	0.00
	Solidified organics	0.42	0.00	0.42	0.00	0.00	0.00
	Uncategorized metal	0.42	0.00	0.42	416.46	0.00	416.46
	Unknown	11.23	0.00	11.23	10.49	0.00	10.49
	Commercial site subtotal ^a	50.57	186.91	237.48	426.95	0.00	426.95
	Total	72,646.61	60,522.48	133,169.09	1,596.08	3,619.20	5,215.28

^aAny small differences in volumes reported in this table and in WTWBIR, Rev. 1 (ref. 2) and in the numerical totals shown result from rounding.

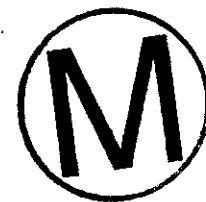


Table 3.11. Summary of decayed radioactivity isotopic content of retrievably stored CH TRUW^a

Site	²³⁹ Pu	²⁴⁰ Pu	²³⁸ Pu	¹⁰ Am	²⁴¹ Pu	¹³⁷ Cs	Sum of curies	Curies (%)
<i>Major sites</i>								
ANL-E	2.14E+00	5.98E+01	3.28E+01	5.73E+00	9.42E+00		1.10E+02	0.01
Hanford	8.18E+04	9.43E+04	2.70E+04	2.98E+03	6.06E+03	7.03E+02	2.13E+05	14.11
INEL	6.07E+04	1.65E+05	4.01E+04	8.98E+04	9.82E+03	6.32E+01	3.65E+05	24.19
LANL	1.15E+05	1.77E+00	7.33E+04	8.70E+03	1.52E-01	5.32E+01	1.97E+05	13.08
LINL	1.97E+01	1.67E+03	1.46E+02	1.26E+02	6.06E+01	1.99E-06	2.03E+03	0.13
Mound	7.16E+02		1.99E+02				9.14E+02	0.06
NTS	1.98E+02	2.64E+02	2.76E+03	2.84E+02	1.87E+01	3.97E-01	3.53E+03	0.23
ORNL	6.78E+03	5.52E+04	7.95E+02	2.33E+03	7.25E+02	2.17E+03	6.80E+04	4.51
RFETS	3.47E+02	5.72E+04	9.93E+03	1.08E+04	7.21E+03		8.55E+04	5.66
SRS	4.71E+05	6.30E+04	8.56E+03	1.60E+04	2.12E+03	6.77E-01	5.61E+05	37.16
Subtotal	7.37E+05	4.36E+05	1.63E+05	1.31E+05	2.60E+04	2.99E+03	1.50E+06	99.14
<i>Small-quantity sites (SQS)</i>								
Ames								
ANL-W								
BCL								
BAPL								
ETEC	1.12E-01	8.06E+00	1.76E+00	4.43E-01	6.01E-01	2.40E-01	1.12E+01	0.00
KAPL								
LBL	2.36E-04	2.89E-07	7.70E-03	9.20E-02	5.07E-03		1.05E-01	0.00
MURR							6.85E-02	0.00
PAD							5.56E+01	0.00
PANT							5.55E-02	0.00
SNL/NM							1.00E-02	0.00
Subtotal	1.12E-01	8.06E+00	5.75E+01	5.93E-01	6.06E-01	2.40E-01	6.71E+01	0.00
<i>Commercial site</i>								
WVDP		3.43E+01		2.15E+00		1.95E+00	3.84E+01	0.00
Total (all sites)	7.37E+05	4.37E+05	1.63E+05	1.31E+05	2.60E+04	3.00E+03	1.50E+06	99.15
Total Ci, %	48.84	28.92	10.79	8.68	1.72	0.20		
Cumulative, %	48.84	77.76	88.55	97.23	98.95	99.15		

^aAny small differences in volumes reported in this table and in WTWBIR, Rev. 1 (ref. 2) and in the numerical totals shown result from rounding.



Table 3.12. Summary of decayed radioactivity (Ci) isotopic content of retrievably stored RH TRUW^a

Site	⁹⁰ Sr	⁹⁰ Y	¹³⁷ Cs	^{137m} Ba	¹⁵² Eu	⁶⁰ Co	¹⁵⁴ Eu	²³⁹ Pu	¹⁴⁰ Cm	¹⁵⁵ Eu	Sum of curies	Curies (%)
<i>Major sites</i>												
ANL-E			1.18E+01	1.12E+01				8.23E-01			2.38E+01	0.01
Hanford	5.74E+03	5.74E+03	6.67E+03	6.31E+03	2.83E+02	4.77E+03	1.43E+03	4.58E+03		5.76E+02	3.61E+04	10.37
INEL	1.78E+03	1.78E+03	1.99E+03	1.88E+03	2.07E-02	1.68E+01	8.20E-01	5.30E+01		3.32E-01	7.49E+03	2.15
LANL	2.69E+03	2.69E+03	2.95E+03	2.79E+03	5.96E-04	5.43E+00	4.34E-02			5.45E+01	1.12E+04	3.21
LNL Mound												
NTS								7.26E-05	1.68E+02		1.68E+02	0.05
ORNL	9.71E+04	9.71E+04	3.90E+04	3.69E+04	8.75E+03	1.73E+03	4.57E+03	1.03E-07	1.78E+03	9.37E+02	2.88E+05	82.69
RFETS												
SRS												
Subtotal	1.07E+05	1.07E+05	5.07E+04	4.79E+04	9.04E+03	6.52E+03	6.01E+03	4.63E+03	1.95E+03	1.57E+03	3.43E+05	98.48
<i>Small-quantity sites (SQS)</i>												
Ames												
ANL-W												
BCL												
BAPL												
ETEC												
KAPL	2.46E+01	2.46E+01	2.47E+01	2.33E+01	3.62E-06	1.14E-01	3.56E-04	2.00E-01		8.11E-03	9.76E+01	0.03
LBL												
MURR												
PAD												
PANT												
SNL/NM												
Subtotal	2.46E+01	2.46E+01	2.47E+01	2.33E+01	3.62E-06	1.14E-01	3.56E-04	2.00E-01		8.11E-03	9.76E+01	0.03
<i>Commercial site</i>												
WVDP												
Total (all sites)	1.07E+05	1.07E+05	5.07E+04	4.79E+04	9.04E+03	6.52E+03	6.01E+03	4.63E+03	1.95E+03	1.57E+03	3.43E+05	98.51
Total Ci, %	30.82	30.82	14.56	13.77	2.60	1.87	1.72	1.33	0.56	0.45		
Cumulative, %	30.82	61.65	76.20	89.98	92.57	94.44	96.17	97.50	98.06	98.51		

^aAny small differences in volumes reported in this table and in WTWBIR, Rev. 1 (ref. 2) and in the numerical totals shown result from rounding.

Table 3.13. Summary of decayed mass (g) Isotopic content of retrievably stored CH TRUW^a

Site	²³⁸ U	²³² Th	²³⁹ Pu	²³⁵ U	²⁴⁰ Pu	²³³ U	²⁴¹ Pu	Sum of mass	Mass (%)
<i>Major sites</i>									
ANL-E	1.59E+02	1.48E-09	5.27E+02	2.75E+02	2.62E+00	3.10E+00	4.13E+01	1.01E+03	0.00
Hanford	1.80E+07	5.82E+05	4.35E+05	2.63E+05	9.70E+01	8.18E+03	2.66E+04	1.93E+07	73.79
INEL	3.44E+05	3.01E+06	6.45E+05	2.85E+04	2.47E+02	9.28E+04	4.31E+04	4.16E+06	15.90
LANL	1.20E+04	2.19E+04	1.18E+06	1.93E+05	1.33E+05	4.61E+03	6.65E-01	1.54E+06	5.90
LLNL	1.05E+03	3.37E-09	2.34E+03	6.10E+01	5.04E+00	2.26E-07	2.66E+02	3.72E+03	0.01
Mound			3.20E+03	9.51E-01				3.20E+03	0.01
NTS	1.66E+02	4.19E-09	4.44E+04	2.60E+01	2.28E+01	1.87E+02	8.21E+01	4.49E+04	0.17
ORNL	1.05E+05	3.12E+05	1.28E+04	3.04E+03	1.43E+03	9.22E+03	3.18E+03	4.47E+05	1.71
RFETS		2.97E-07	1.60E+03	1.30E+01		7.78E-06	3.16E+04	1.91E+05	0.73
SRS	1.56E+04	9.41E+04	1.38E+05	2.52E+03	9.82E+01	9.14E-01	9.29E+03	2.59E+05	0.99
Subtotal	1.85E+07	4.02E+06	2.62E+06	4.91E+05	1.35E+05	1.15E+05	1.14E+05	2.60E+07	99.22
<i>Small-quantity sites (SQS)</i>									
Ames									
ANL-W									
BCL									
BAPL									
ETEC			2.83E+01		1.05E-02		2.64E+00	3.10E+01	0.00
KAPL									
LBL	4.55E-05	3.37E-12	1.24E-01	1.75E-05	2.64E+00	4.97E-01	2.23E-02	3.28E+00	0.00
MURR	2.97E-04		3.29E-01					3.30E-01	0.00
PAD			8.95E+02					8.95E+02	0.00
PANT			8.93E-01					8.93E-01	0.00
SNL/NM			3.22E-05	2.73E-09		5.99E-13		3.22E-05	0.00
Subtotal	3.43E-04	3.37E-12	9.24E+02	1.75E-05	2.65E+00	4.97E-01	2.66E+00	9.30E+02	0.00
<i>Commercial site</i>									
WVDP						7.77E-09		7.77E-09	0.00
Total (all sites)	1.85E+07	4.02E+06	2.62E+06	4.91E+05	1.35E+05	1.15E+05	1.14E+05	2.60E+07	99.22
Total mass, %	70.59	15.35	10.01	1.87	0.52	0.44	0.44		
Cumulative, %	70.59	85.95	95.96	97.83	98.35	98.79	99.22		

^aAny small differences in volumes reported in this table and in WTWBIR, Rev. 1 (ref. 2) and in the numerical totals shown result from rounding

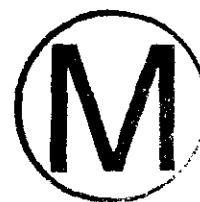


Table 3.14. Summary of decayed mass (g) isotopic content of retrievably stored RH TRUW^a

Site	^{238}U	^{235}U	Sum of mass	Mass (%)
ANL-E				
Hanford	3.07E+04		3.07E+04	0.33
INEL	4.11E+03		4.11E+03	0.04
LANL	5.95E+01		5.95E+01	0.00
LLNL				
Mound				
NTS	4.25E-12		4.25E-12	0.00
ORNL	6.46E+06	2.62E+06	9.08E+06	98.98
RFETS				
SRS				
Subtotal	6.49E+06	2.62E+06	9.11E+06	99.36
<i>Small-quantity sites (SQS)</i>				
Ames				
ANL-W				
BCL				
BAPL				
ETEC				
KAPL	2.95E-09		2.95E-09	0.00
LBL				
MURR				
PAD				
PANT				
SNL/NM				
Subtotal	2.95E-9		2.95E-09	0.00
<i>Commercial site</i>				
WVDP				
Total	6.49E+06	2.62E+06	9.11E+06	99.36
Total mass, %	70.80	28.57		
Cumulative, %	70.80	99.36		

^aAny small differences in volumes reported in this table and WTWBIR, Rev. 1 (ref. 2) and in the numerical totals shown result from rounding.



Table 3.15. Summary of buried TRUW volume and radioactivity
as of December 31, 1993^a

Site	Cumulative volume (m ³)	Cumulative as-stored radioactivity		Decayed radioactivity	
		All nuclides (10 ³ Ci)	TRU only (10 ³ Ci)	All nuclides (10 ³ Ci)	TRU only (10 ³ Ci)
<i>Major sites</i>					
ANL-E	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Hanford	6.36E+04	6.02E+02	1.14E+02	1.73E+02	9.38E+01
INEL	5.71E+04	2.49E+02	b	b	b
LANL	1.40E+04	c	d	c	c
LLNL	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Mound	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
NTS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ORNL	1.76E+02	2.40E-01	1.00E-01	5.43E+02	2.00E-01
RFETS	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
SRS	4.87E+03	3.37E+01	3.37E+01	3.05E+01	3.05E+01
Subtotal	1.40E+05	8.84E+02	1.48E+02	7.47E+02	1.25E+02
<i>Small-quantity sites (SQS)</i>					
Ames	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ANL-W	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
BCL	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
BAPL	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
ETEC	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
KAPL	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
LBL	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
MURR	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PAD	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
PANT	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
SNL/NM	1.33E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Subtotal	1.33E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
<i>Commercial site</i>					
WVDP	1.35E+03	6.52E+02	6.52E+02	0.00E+00	0.00E+00
Total	1.41E+05	1.54E+03	8.00E+02	7.47E+02	1.25E+02

^aAny small differences in volumes reported in this table and in WTWBIR, Rev. 1 (ref. 2) and in the numerical totals shown result from rounding. See ref. 5.

^bINEL data did not include any isotopic compositions, so no TRU isotope or decay calculations could be made.

^cInformation not available.

^dAn estimate of 9230 Ci was reported for LANL as-stored TRU alpha radioactivity (as of the end of CY 1991) in *Integrated Data Base for 1992: U.S. Spent Fuel and Radioactive Waste Inventories, Projections, and Characteristics*, DOE/RW-0006, Rev. 8 (October 1992).

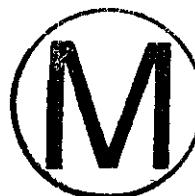


Table 3.16. Volumes and radioactivities of TRU-contaminated soils^a

Site	Soil contaminated with TRUW					
	Solid	Liquid	Volume (m ³)	Radioactivity (Ci)	Volume (m ³)	Radioactivity (Ci)
<i>Major sites</i>						
ANL-E	0	0	0	0	0	0
Hanford	b	b	32,000		80.591	
INEL	c	c	c		c	
LANL	d	e	d		e	
LLNL	0	0	0		0	
Mound	d	d	d		d	
NTS	d	d	c		c	
ORNL	d	d	d		d	
RFETS	2	40	c		c	
SRS	0	0	0		0	
<i>Small-quantity sites (SQS)</i>						
Ames	f	f	f		f	
ANL-W	f	f	f		f	
BCL	f	f	f		f	
BAPL	f	f	f		f	
ETEC	0	0	0		0	
ITRI	f	f	f		f	
KAPL	0	0	0		0	
LBL	0	0	0		0	
MURR	f	f	f		f	
PAD	c	c	c		c	
PANT	f	f	f		f	
SNL/NM	d	d	d		d	
<i>Commercial site</i>						
WVDP	f	f	f		f	

^aSee ref. 5 of this chapter.^bIncluded in buried TRUW.^cListed in submittal as not applicable.^dUnknown.^ePartial data submitted.^fNo data submitted.