

ANNUAL TRANSURANIC WASTE INVENTORY REPORT – 2010  
(Data Cutoff Date 12/31/2009)

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## ACRONYMS AND ABBREVIATIONS

For a list of Site Identifiers, refer to Figure 1-1.

AK	Acceptable Knowledge
ANL	Argonne National Laboratory
ANL-E	Argonne National Laboratory – East (now known as Argonne National Laboratory)
Army	U.S. Army Materiel Command
ATWIR	Annual Transuranic Waste Inventory Report
BAPL	Bettis Atomic Power Laboratory
BCL	Battelle Columbus Laboratories
CBFO	Carlsbad Field Office
CCA	Compliance Certification Application
CFR	Code of Federal Regulations
CH	Contact-handled
Ci	Curie
Ci/m <sup>3</sup>	Curies per cubic meter
CID	Comprehensive Inventory Database
CIT	CID Import Template
CPR	Cellulosics, plastic, and rubber
CRA	Compliance Recertification Application
CY	Calendar year
D&D	Decontamination and decommissioning
DOE	U.S. Department of Energy
DT	Data template
EDTA	Ethylenediaminetetraacetic acid
EPA	U.S. Environmental Protection Agency
GEVNC	General Electric Vallecitos Nuclear Center
Hanford-RL	Hanford (Richland Operations) Site
Hanford-RP	Hanford (Office of River Protection) Site
INL	Idaho National Laboratory
KAPL-S	Knolls Atomic Power Laboratory-Schenectady
KAPL-NFS	Knolls Atomic Power Laboratory – Nuclear Fuels Services
kg	Kilogram or kilograms
kg/m <sup>3</sup>	Kilograms per cubic meter

LANL	Los Alamos National Laboratory
LANL-CO	Los Alamos National Laboratory – Carlsbad Operations
LBL	Lawrence Berkeley National Laboratory
LLNL	Lawrence Livermore National Laboratory
LQS	Large quantity site
LWA	Land Withdrawal Act
m	Meter
MFC	Material and Fuels Complex (formerly Argonne National Laboratory – West)
MFP	Mixed fission product
mrem	Millirem
NEPA	National Environmental Policy Act
NQA	Nuclear quality assurance
NTS	Nevada Test Site
NRD	Nuclear Radiation Development Site
OSRP	Off-Site Source Recovery Program
ORIGEN	Oak Ridge Isotope Generation and Depletion Code
ORNL	Oak Ridge National Laboratory
PA	Performance assessment
PABC	Performance assessment baseline calculation
PAIR	Performance Assessment Inventory Report
PCR	Planned change request
PM	Packaging material
PVC	Polyvinyl chloride
QA	Quality assurance
QAPD	Quality Assurance Program Document
RCRA	Resource Conservation and Recovery Act
RFETS	Rocky Flats Environmental Technology Site
RH	Remote-handled
SNL-A	Sandia National Laboratories – Albuquerque
SNL-CPG	Sandia National Laboratories – Carlsbad Programs Group
SQS	Small quantity site
SPRU	Separations Process Research Unit
SRS	Savannah River Site
SWB	Standard waste box
TDOP	Ten-drum overpack
TRU	Transuranic
TWBIR	Transuranic Waste Baseline Inventory Report



U.S.	United States
USAMC	U.S. Army Materiel Command
WAC	Waste Acceptance Criteria
WAP	Waste Analysis Plan
WDS	Waste Data System
WIPP	Waste Isolation Pilot Plant
WMP	Waste material parameter
WSP	Waste stream profile
WTWBIR	WIPP Transuranic Waste Baseline Inventory Report
WVDP	West Valley Demonstration Project

## EXECUTIVE SUMMARY

The U.S. Department of Energy's (DOE's) Waste Isolation Pilot Plant (WIPP) began accepting defense-related transuranic (TRU) waste on March 26, 1999, becoming the nation's first deep geologic repository for the permanent disposal of defense-generated TRU waste. TRU waste generation has occurred at both large-quantity and small-quantity sites (LQs and SQs) across the country. Many of these sites have emplaced their waste at WIPP, found other disposition pathways for the waste, or transferred the waste to other sites for further disposition. As of December 31, 2009, there have been 8,079 shipments (7,776 contact-handled [CH] and 303 remote-handled [RH]) of TRU waste to WIPP for emplacement since WIPP's opening (DOE 2010a).

This *Annual Transuranic Waste Inventory Report – 2010* (ATWIR-2010) (hereafter referred to as “this report” or “ATWIR-2010”) was prepared by the Los Alamos National Laboratory – Carlsbad Operations (LANL-CO) TRU Waste Inventory Team. This report reflects the changes that have occurred and provides an update to the defense-related TRU waste inventory data since the last published report, the *Annual Transuranic Waste Inventory Report – 2009* (ATWIR-2009) (DOE 2009a). This report was developed from an annual inventory data update campaign involving the TRU waste sites and the WIPP Waste Data System (WDS) (Young 2010a) using an inventory cutoff date of December 31, 2009. The information gathered from these sources was entered into the Comprehensive Inventory Database (CID) Version 1, Schema Version S1.00, Data Version D.9.02 (hereafter referred to as the CID) (LANL-CO 2010a). The information contained in the CID that supports this report is the best estimate of TRU waste inventory information as of December 31, 2009, and includes waste that is emplaced in the WIPP as reported in the WDS.

The CID is a DOE Carlsbad Field Office (CBFO) database qualified in accordance with LANL-CO's Quality Assurance (QA) Program, which is driven by the CBFO *Quality Assurance Program Document* (QAPD) (DOE 2010b). The CID includes estimates for: 1) waste volumes (stored, projected, and emplaced); 2) radionuclides (decayed to common years 2009 and 2033 [WIPP proposed closure date]); 3) waste material parameters (WMPs); 4) complexing agents; 5) oxyanions; 6) solidified cements; and 7) packaging materials (PMs). The information in the CID provides the basis for performance assessment (PA) analysis performed by Sandia National Laboratories-Carlsbad Program Group (SNL-CPG), although the scaling of the information in the CID for PA analysis is not discussed in this report. For specific container information, the WDS contains information on containers in waste streams that are emplaced or in the process of being emplaced at WIPP.

The main purpose of this report is to update the best estimate of the TRU waste inventory, which is the basis of information provided to SNL-CPG for PA modeling calculations. In addition, TRU waste inventory data provide the CBFO with updated information for planning and provide current TRU waste inventory information for the DOE complex, WIPP stakeholders, and regulators. The TRU waste inventory also supports CBFO compliance with National Environmental Policy Act (NEPA) analyses, the development

of new containers or shipping packages, and planned change requests (PCRs) for containers and other design changes that may take place in the repository.

There has been some confusion in the past regarding the designation of waste streams as either “WIPP-bound” or “potential.” A waste stream with the designation of “WIPP-bound” simply means that the waste stream data will be modeled in the PA calculations. A waste stream with the designation of “potential” will not be modeled in the PA calculations. (See DOE/CBFO’s memorandum (Patterson 2010) in Appendix F.) These designations in no way are intended to presuppose the outcome of the waste certification process. All TRU waste must meet all of the WIPP requirements (e.g., WIPP Waste Acceptance Criteria [WAC]; the WIPP Hazardous Waste Facility Permit Waste Analysis Plan [WAP]) before it can be disposed of at WIPP, regardless of its designation in this inventory report.

The following tables are provided to summarize the TRU waste anticipated inventory volume (stored + projected), total WMPs, and radionuclide (anticipated and emplaced) estimates as of December 31, 2009:

- Table ES-1      Anticipated WIPP CH-TRU Waste Inventory by Site
- Table ES-2      Anticipated WIPP RH-TRU Waste Inventory by Site
- Table ES-3      Total WIPP CH-TRU Waste and Packaging Material Inventory
- Table ES-4      Total WIPP RH-TRU Waste and Packaging Material Inventory
- Table ES-5      Total WIPP CH and RH Total Curies by Site Decayed through 2009

**Table ES-1. Anticipated WIPP CH-TRU Waste Inventory Volume by Site**

TRU Waste Site	Stored Volumes (m <sup>3</sup> )	Projected Volumes (m <sup>3</sup> )	Anticipated Volumes (m <sup>3</sup> )
Argonne National Laboratory – East	6.91E+01	0.00E+00	6.91E+01
Material and Fuels Complex	1.31E+01	6.49E+01	7.80E+01
Bettis Atomic Power Laboratory	1.89E+01	0.00E+00	1.89E+01
General Electric Vallecitos Nuclear Center	1.46E+00	0.00E+00	1.46E+00
Hanford (Richland Operations) Site	2.20E+04	0.00E+00	2.20E+04
Idaho National Laboratory	3.66E+04	0.00E+00	3.66E+04
Knolls Atomic Power Laboratory – Nuclear Fuel Services	3.22E+02	0.00E+00	3.22E+02
Lawrence Berkeley Laboratory	8.32E-01	8.32E-01	1.66E+00
Lawrence Livermore National Laboratory	2.99E+02	4.53E+02	7.52E+02
Los Alamos National Laboratory	1.02E+04	6.96E+02	1.09E+04
Nevada Test Site	3.78E+01	4.91E+01	8.69E+01
Nuclear Radiation Development Site	2.85E+01	5.41E+00	3.39E+01
Oak Ridge National Laboratory	9.04E+02	9.98E+01	1.00E+03
Paducah Gaseous Diffusion Plant	4.99E+00	0.00E+00	4.99E+00
Sandia National Laboratories – Albuquerque	1.21E+01	5.62E+00	1.77E+01
Savannah River Site	4.17E+03	5.64E+02	4.73E+03
Separations Process Research Unit	4.18E+01	0.00E+00	4.18E+01
U.S. Army Materiel Command	2.08E-01	0.00E+00	2.08E-01
<b>Grand Total</b>	<b>7.47E+04</b>	<b>1.94E+03</b>	<b>7.66E+04</b>

Data Source: CID Data Version D.9.02, LANL-CO 2010a

Note: This table contains data for WIPP-bound waste streams reported by site only; it does not include data for potential waste streams.

**Table ES-2. Anticipated WIPP RH-TRU Waste Inventory Volume by Site**

TRU Waste Site	Stored Volumes (m <sup>3</sup> )	Projected Volumes (m <sup>3</sup> )	Anticipated Volumes (m <sup>3</sup> )
Argonne National Laboratory – East	1.17E+02	0.00E+00	1.17E+02
Material and Fuels Complex	2.23E+01	7.83E+01	1.01E+02
Bettis Atomic Power Laboratory	5.34E+00	0.00E+00	5.34E+00
Hanford (Richland Operations) Site	3.67E+03	8.81E+01	3.76E+03
Idaho National Laboratory	3.27E+02	0.00E+00	3.27E+02
Knolls Atomic Power Laboratory – Schenectady	3.03E+01	8.01E+01	1.10E+02
Los Alamos National Laboratory	8.19E+01	0.00E+00	8.19E+01
Oak Ridge National Laboratory	5.18E+02	2.94E+01	5.47E+02
Sandia National Laboratories – Albuquerque	4.45E+00	0.00E+00	4.45E+00
Savannah River Site	7.30E+01	1.16E+01	8.46E+01
Separations Process Research Unit	1.25E+01	0.00E+00	1.25E+01
<b>Grand Total</b>	<b>4.86E+03</b>	<b>2.87E+02</b>	<b>5.15E+03</b>

Data Source: CID Data Version D.9.02, LANL-CO 2010a

Note: This table contains data for WIPP-bound waste streams reported by site only; it does not include data for potential waste streams.

**Table ES-3. Total WIPP CH-TRU Waste and Packaging Material Inventory**

<b>Waste Material</b>	<b>Average Density (kg/m<sup>3</sup>)</b>
Aluminum-based Metals/Alloys	1.33E+00
Cellulosics	2.86E+01
Cements	5.14E+01
Inorganic Matrix	7.24E+01
Iron-based Metals/Alloys	7.33E+01
Organic Matrix	3.75E+01
Other Inorganic Materials	2.23E+01
Other Metals	4.00E+00
Plastics	3.42E+01
Rubber	5.30E+00
Soils/gravel	1.58E+01
Vitrified	0.00E+00
<b>Package Material</b>	
Packaging Material, Cellulosics	5.08E+00
Packaging Material, Plastic	1.48E+01
Packaging Material, Steel	1.85E+02
Packaging Material, Lead	0.00E+00

Data Source: CID Data Version D.9.02, LANL-CO 2010a

Note: This table contains data for WIPP-bound and emplaced waste streams reported by site only; it does not include data for potential waste streams.

**Table ES-4. Total WIPP RH-TRU Waste and Packaging Material Inventory**

<b>Waste Material</b>	<b>Average Density (kg/m<sup>3</sup>)</b>
Aluminum-based Metals/Alloys	1.16E+00
Cellulosics	1.90E+01
Cements	1.29E+02
Inorganic Matrix	1.75E+01
Iron-based Metals/Alloys	1.33E+02
Organic Matrix	3.16E+01
Other Inorganic Materials	2.08E+02
Other Metals	9.10E+01
Plastics	4.19E+01
Rubber	1.65E+01
Soils/gravel	3.42E+01
Vitrified	2.51E-02
<b>Package Material</b>	
Packaging Material, Cellulosics	
Packaging Material, Plastic	2.29E+01
Packaging Material, Steel	6.49E+02
Packaging Material, Lead	1.45E+00

Data Source: CID Data Version D.9.02, LANL-CO 2010a

Note: This table contains data for WIPP-bound and emplaced waste streams reported by site only; it does not include data for potential waste streams.

**Table ES-5. Total WIPP CH and RH Curies by Site Decayed through 2009**

<b>TRU Waste Site</b>	<b>Total CH Activity (Ci)</b>	<b>Total RH Activity (Ci)</b>	<b>Total CH/RH Activity (Ci)</b>
Argonne National Laboratory – East	6.55+02	1.06E+03	1.72E+03
Material and Fuels Complex	8.07E+02	1.38E+05	1.39E+05
U.S. Army Materiel Command	5.13E-03	0.00E+00	5.13E-03
Bettis Atomic Power Laboratory	7.89E+01	6.80E+04	6.80E+04
General Electric Vallecitos Nuclear Center	3.4E-00	2.27E+02	2.30E+02
Hanford (Richland Operations) Site	1.08 E+06	1.13E+06	2.21E+06
Idaho National Laboratory	3.77E+05	5.38E+04	4.31E+05
Knolls Atomic Power Laboratory – Nuclear Fuel Services	6.24E+02	0.00E+00	6.24E+02
Knolls Atomic Power Laboratory – Schenectady	0.00E+00	2.97E+02	2.97E+02
Los Alamos National Laboratory	5.34E+05	2.51E+03	5.36E+05
Lawrence Berkeley Laboratory	1.74E+00	0.00E+00	1.74E+00
Lawrence Livermore National Laboratory	1.17E+04	0.00E+00	1.17E+04
Nevada Test Site	2.96E+03	0.00E+00	2.96E+03
Nuclear Radiation Development Site	1.50E+03	0.00E+00	1.50E+03
Oak Ridge National Laboratory	6.26E+03	4.54E+03	1.08E+04
Paducah Gaseous Diffusion Plant	1.11E+01	0.00E+00	1.11E+01
Rocky Flats Environmental Technology Site	9.38E+05	0.00E+00	9.38E+05
Sandia National Laboratories – Albuquerque	4.20E+01	1.41E+03	1.46E+03
Savannah River Site	4.55E+05	1.20E+04	4.67E+05
Separations Process Research Unit	7.10E+00	2.12E+03	2.12E+03
<b>Grand Total</b>	<b>3.41E+06</b>	<b>1.41E+06</b>	<b>4.82E+06</b>

Data Source: CID Data Version D.9.02, LANL-CO 2010a

Note: This table contains data for WIPP-bound and emplaced waste streams; it does not include data for potential waste streams.

## 1.0 INTRODUCTION

This *Annual Transuranic Waste Inventory Report – 2010* (ATWIR-2010) was prepared by the Los Alamos National Laboratory – Carlsbad Operations (LANL-CO) Transuranic (TRU) Waste Inventory Team (Inventory Team). This inventory report is intended for general information and will be used as the basis for performance assessment (PA) analyses for the Waste Isolation Pilot Plant (WIPP), as well as a tool for National TRU Program strategic planning purposes, such as the development of TRU waste site-specific project plans or National Environmental Policy Act (NEPA) analyses. This report includes the background and history of the TRU waste inventory, the information sources used to collect and prepare the inventory, descriptions of the ways inventory information is used, methodology used to develop the inventory, TRU waste inventory estimates, and comparisons to the *Annual Transuranic Waste Inventory Report – 2009* (ATWIR-2009)(DOE 2009a).

There has been some confusion in the past regarding the designation of waste streams as either “WIPP-bound” or “potential.” A waste stream with the designation of “WIPP-bound” simply means that the waste stream data will be modeled in the PA calculations, but a waste stream with the designation of “potential” will not be modeled in the PA calculations, as directed by U.S. Department of Energy (DOE) Carlsbad Field Office (CBFO) in a memorandum (Patterson 2010), which is provided in Appendix F. These designations in no way are intended to presuppose the outcome of the waste certification process. All TRU waste must meet all of the WIPP requirements (e.g., WIPP Waste Acceptance Criteria [WAC]; WIPP Hazardous Waste Facility Permit Waste Analysis Plan [WAP]) before it can be disposed of at WIPP.

The background and history section of this report explains how the TRU waste inventory was collected and used for the initial certification of WIPP (Section 1.1). Currently, the inventory is collected on an annual basis to monitor how the TRU waste inventory is changing. Section 1.2 includes a description of all information sources used to update the Comprehensive Inventory Database (CID). Examples of sources include: Acceptable Knowledge (AK) reports, TRU waste site information, and the WIPP Waste Data System (WDS) database. Section 1.3 includes uses of TRU waste inventory such as inventory information to support PA modeling calculations needed for WIPP recertification, NEPA analyses, and strategic planning.

Section 2.0 describes the processes and activities undertaken by the Inventory Team in order to prepare this report. These include:

- Collection, screening, and analyses of raw inventory data from the TRU waste sites
- Analysis of emplaced inventory data reported from the WDS
- Verification and validation of data entered into the CID
- Decay correction of radionuclide data using the Oak Ridge Isotope Generation and Depletion Code (ORIGEN2), Version 2.2

- Calculations performed within the CID
- Analyses of chemical component and cement data

Section 3.0 discusses the TRU waste inventory estimates and consists of summaries of the inventory information collected from the TRU waste sites. Section 3.1 presents rolled-up TRU waste volume estimates of contact-handled (CH) and remote-handled (RH) TRU waste reported as stored, projected, anticipated (stored + projected), and emplaced by site (see Glossary for definitions of these categories). Section 3.2 presents the inventory of TRU waste material parameters (WMPs), packaging materials (PMs), and chemical and cement components. Section 3.3 presents the TRU waste radionuclide activity inventory from each site, rolled up and decayed through the end of calendar year (CY) 2009.

Section 4.0 discusses the potential TRU waste streams which, at this time, are not included in the PA calculations. The distinction between “WIPP-bound” and “potential” was discussed earlier. DOE/CBFO provided the Inventory Team with a “screening memo” (Patterson 2010) that described criteria used to screen TRU waste streams for exclusion from the WIPP-bound inventory (will be excluded from PA modeling calculations). The screening memorandum is provided in Appendix F. Also found in Section 4.0 is a table showing waste streams that have been moved from potential to WIPP-bound during this collection period.

This report includes comprehensive data from each TRU waste site. All data are validated by the DOE TRU waste site representative to ensure accuracy.

## **1.1 Background and History**

On May 18, 1998, the U.S. Environmental Protection Agency (EPA) certified that the WIPP complied with the final disposal regulations and criteria of Title 40 Code of Federal Regulations (CFR) Parts 191 and 194 (EPA 1993; EPA 1996). DOE opened the WIPP on March 26, 1999, as the nation’s first deep geologic repository for the permanent disposal of defense-generated TRU waste.

The WIPP Land Withdrawal Act (LWA)<sup>1</sup> (U.S. Congress 1992, as amended in 1996) required EPA to issue final disposal regulations, Title 40 CFR Part 194 (40 CFR 194) (EPA 1996) to first certify WIPP and then periodically recertify WIPP in accordance with those regulatory requirements. For the original certification and each subsequent recertification, updated TRU waste inventory estimates including volumes, WMPs, radionuclides, and chemical components important to WIPP PA were developed in accordance with the requirements published in Title 40 CFR 194.24. Under the LWA, five years after the initial receipt of TRU waste at WIPP and every five years thereafter, DOE must submit a compliance recertification application (CRA) to the EPA documenting continued compliance. Once the EPA determines the application is

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<sup>1</sup>See Pub. L. No. 102-579, § 8, 106 Stat. 4777, 4786-4788 (U.S. Congress 1992), as amended, Waste Isolation Pilot Plant Land Withdrawal Act Amendments, Pub. L. No. 104-201, § 3187, 110 Stat. 2422, 2852 (U.S. Congress 1996).



complete, in accordance with the regulatory requirements, the EPA has six months to make a decision to approve or deny the application. DOE submitted the first recertification application, CRA-2004 (DOE 2004), to the EPA in March 2004, and the EPA recertified WIPP in March 2006. DOE submitted the second recertification application, CRA-2009 (DOE 2009b), to EPA in March 2009. EPA reached a completeness determination on the CRA-2009 application on June 29, 2010, and at the time of writing this report, the EPA is working within the regulatory six-month timeframe to determine if WIPP should be recertified.

Since 1994, DOE complex-wide TRU waste inventory information has been collected, analyzed, and published in several reports for WIPP certification and compliance purposes. The potential waste streams have never been included in any of the analyses or included in PA calculations for the WIPP Compliance Certification Application (CCA) (DOE 1996b) or any subsequent CRAs.

The *WIPP Transuranic Waste Baseline Inventory Report* (WTWBIR), Revision 0, published in June 1994 (DOE 1994), was the first attempt made by the DOE complex to report all of its TRU waste at the waste-stream level. The TRU waste data reported in Revision 0 were considered preliminary until the TRU waste sites completed quality checks of the data. Data changes resulting from the quality checks were contained in the WTWBIR, Revision 1 (DOE 1995a). The *Transuranic Waste Baseline Inventory Report* (TWBIR), Revisions 2 and 3 (DOE 1995b; DOE 1996a), included WIPP-bound and potential TRU waste streams, along with waste stream information. Data from Revisions 2 and 3 provided the TRU waste inventory that Sandia National Laboratories–Carlsbad Programs Group (SNL-CPG) used to perform the necessary modeling calculations for the PA for the initial certification of the WIPP (DOE 1996b).

The EPA requested that an update to the CCA TRU waste inventory be included in the *WIPP Compliance Recertification Application 2004* (CRA-2004) (DOE 2004) based on the availability of new inventory estimates and characterization data. In response to this request the TRU waste inventory update was provided, which contained summary data and supplemental information required for the CRA-2004. This updated TRU waste inventory was published in the CRA-2004 as Appendix DATA, Attachment F.

The primary purpose of the *Transuranic Waste Baseline Inventory Report – 2004* (TWBIR-2004) (DOE 2006), a revision of Appendix DATA, Attachment F of the CRA-2004, was to support the Performance Assessment Baseline Calculation (PABC) for the CRA-2004. The TWBIR-2004 provided the summary data required for the PA modeling calculations that were used in the PABC (Leigh et al. 2005), including two inventory changes, one at Idaho National Laboratory (INL) and the other at the Hanford (Richland Operations) Site (Hanford-RL), that occurred during the EPA’s review of the CRA-2004.

The *Annual Transuranic Waste Inventory Report – 2007* (ATWIR-2007) (DOE 2008a) was the first annual inventory report prepared by the Inventory Team after TWBIR-2004 and contained both scaled (see the Glossary for definition of scaling) and unscaled

inventory data. The *Annual Transuranic Waste Inventory Report – 2008* (ATWIR-2008) (DOE 2008b) was published in December 2008 and contained only unscaled data.

A separate report, the *Performance Assessment Inventory Report-2008* (PAIR-2008), (Crawford et al. 2009) was published in 2009. The PAIR-2008 was prepared using the data from the ATWIR-2008 so that a scaled inventory would be available for use in the PA. The PAIR-2008 included data as of December 31, 2007. The table below lists the inventory reports that were used in the WIPP certification and recertification applications.

<b>Certification/Recertification</b>	<b>Inventory Report Used</b>
CCA	TWBIR, Revisions 2 and 3
CRA-2004	Compliance Recertification Application 2004, Appendix DATA, Attachment F
CRA-2004 PABC	TWBIR-2004
CRA-2009	TWBIR-2004
CRA-2009 PABC	PAIR-2008

The *Annual Transuranic Waste Inventory Report – 2009* (ATWIR-2009) (DOE 2009a) provided the update to the TRU waste inventory data presented in the ATWIR-2008 (DOE 2008b).

Depending on programmatic and site waste management decisions and characterization data, TRU waste inventory information changes frequently. Therefore, the TRU waste inventory is updated annually. This report, ATWIR-2010, is an update based on known inventory as of December 31, 2009. This report includes only TRU waste information on the known and projected inventory at this cut-off date and has not been scaled to model a full repository for PA purposes. If required, a separate report, known as the PAIR, containing the pertinent information needed for PA, will be prepared upon CBFO's request.

Since the ATWIR-2009 (DOE 2009a) was published, a number of changes have occurred that affected the volume, waste material, and radiological characteristics of TRU waste streams. Also, 41 waste streams have been moved from potential to WIPP-bound to be in alignment with the DOE/CBFO screening memorandum (Patterson 2010) provided in Appendix F. The list of these waste streams presented in Table 4.3 also includes the reasons for the moves. The other primary differences observed and addressed in this report are attributed to the following:

- TRU waste emplaced between the 1999 opening of the WIPP and December 31, 2009 (the inventory data cut-off date) is addressed in this report.
- Packaging of TRU waste was completed in December 2009 at the General Electric Vallecitos Nuclear Center (GEVNC).
- CH estimates from the Hanford-RL Plutonium Finishing Plant increased.

- Twelve new waste streams were added to the inventory. This includes both potential and WIPP-bound waste streams (see Table E-1 in Appendix E).
- Intersite shipments continue between small quantity sites (SQSs) and the INL.

TRU waste generation has occurred at both SQSs and large quantity sites (LQSs) across the country, as seen in Figure 1-1. The figure represents data as of December 31, 2009. Circles identify LQSs, boxes identify SQSs, yellow indicates active sites, red indicates sites that have been de-inventoried of their TRU waste, and blue indicates sites containing only potential TRU waste.

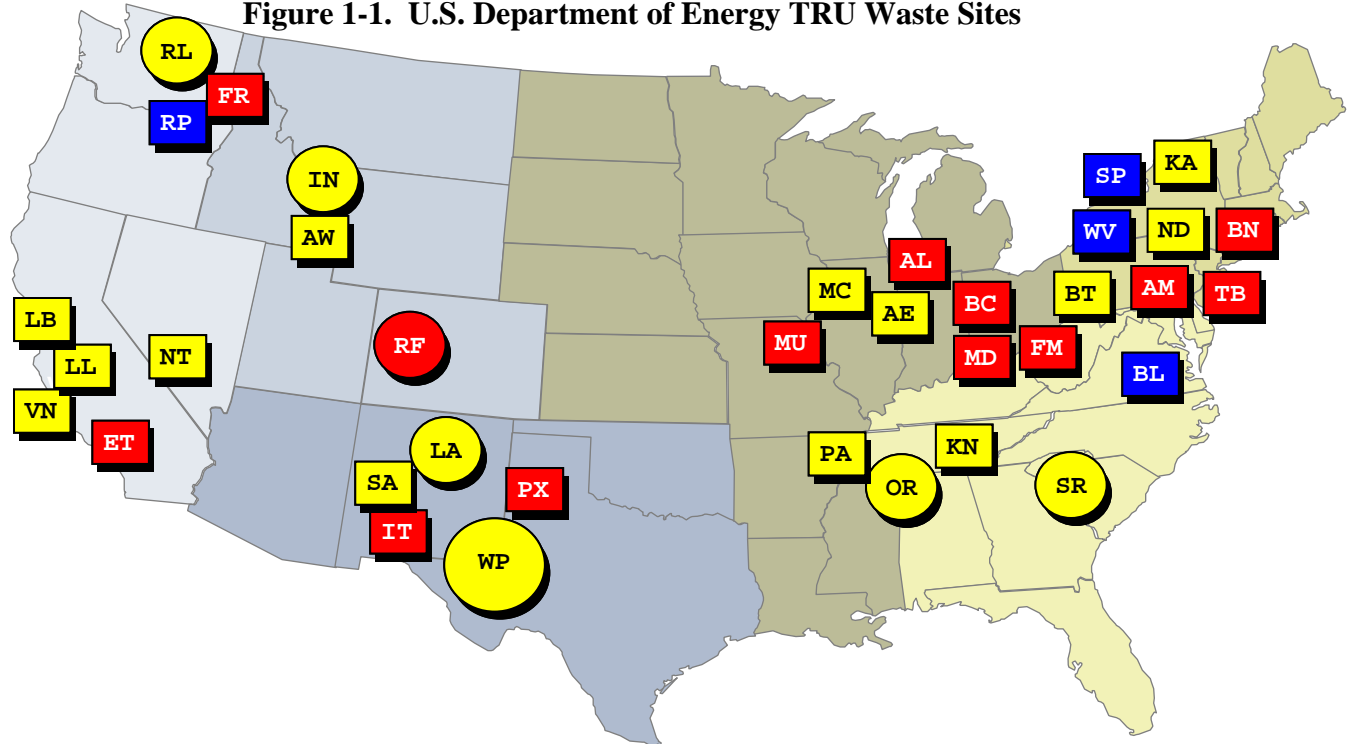
From WIPP's opening on March 26, 1999, through December 31, 2009, 7,776 shipments of CH-TRU waste and 303 shipments of RH-TRU waste were safely characterized, transported, and disposed at WIPP (DOE 2010a).

The work for this report was performed under the CBFO *Quality Assurance Program Document* (QAPD) (DOE 2010b). The processes used by the LANL-CO TRU Waste Inventory Team to collect, maintain, and report inventory information are graded and implemented to Nuclear Quality Assurance-1 (NQA-1) standards under the LANL-CO Quality Assurance (QA) Program. This includes the software QA procedures used to qualify the CID and other software used to analyze TRU waste inventory information. LANL-CO software QA is documented in LCO-QPD-02, *Software Quality Assurance Plan* (LANL-CO 2007), and LCO-QP19-1, *Software Quality Assurance* (LANL-CO 2008).

## 1.2 Sources of Transuranic Waste Information

This report includes information taken from: 1) the ATWIR-2009 (DOE 2009a), 2) updated information provided by the TRU waste sites, 3) AK reports, and 4) the WIPP WDS database. For each subsequent year, the sites are asked to update their data from the previous year. As an example, the sites used the ATWIR-2009 data to update the data used for this report. TRU waste sites may use information obtained from site-specific AK reports that provide the most current information on waste streams being characterized and shipped to WIPP, such as chemical lists and radionuclides. All TRU waste inventory information for emplaced waste is obtained from the WDS administrator.

Figure 1-1. U.S. Department of Energy TRU Waste Sites



**Yellow – Active TRU Waste Sites** **Red –De-inventoried TRU Waste Sites** **Blue – Potential TRU Waste Sites**

AE	Argonne National Laboratory
AL	Ames Laboratory
AM	ARCO Medical Products—shipped to OSRP
AW	Material and Fuels Complex
BC	Battelle Columbus Laboratories—shipped to RL and SR
BL	Babcock and Wilcox Nuclear Energy Services (Potential)—(*de-inventoried but has identified new TRU waste)
BN	Brookhaven National Laboratory—shipped to OSRP
BT	Bettis Atomic Power Laboratory
ET	Energy Technology Engineering Center—shipped to RL
FM	Fernald Environmental Management Project—shipped to OSRP
FR	Framatome—shipped to Hanford Richland Operations
IN	Idaho National Laboratory
IT	Inhalation Toxicology Research Institute (known as Lovelace Respiratory Research Institute)—shipped to SA
KA	Knolls Atomic Power Laboratory
KN	Knolls Atomic Power Laboratory-Nuclear Fuels Services—(*de-inventoried but has identified additional TRU waste)
LA	Los Alamos National Laboratory
LB	Lawrence Berkeley Laboratory—(*de-inventoried but has identified additional TRU waste)
LL	Lawrence Livermore National Laboratory
MC	U.S. Army Materiel Command (Army)—(*de-inventoried but has identified additional TRU waste)
MD	Mound Plant – shipped to SR
MU	University of Missouri Research Reactor—shipped to AE, then to WIPP
ND	Nuclear Radiation Development Site, Inc.
NT	Nevada Test Site
OR	Oak Ridge National Laboratory
PA	Paducah Gaseous Diffusion Plant
PX	Pantex Plant—shipped to LA
RF	Rocky Flats Environmental Technology Site—shipped to WIPP
RL	Hanford Site (Richland Operations Office)
RP	Hanford Site (Office of River Protection) (Potential)
SA	Sandia National Laboratories
SP	Separations Process Research Unit
SR	Savannah River Site
TB	Teledyne Brown Engineering—shipped to RFETS, then to WIPP
VN	General Electric Vallecitos Nuclear Center
WV	West Valley Demonstration Project (Potential)
WP	Waste Isolation Pilot Plant

### 1.3 Uses of Transuranic Waste Inventory Information

SNL-CPG uses the TRU waste inventory information as input to WIPP PA modeling calculations. When these data are needed, DOE/CBFO will request a PAIR be prepared that provides the latest inventory data available that are scaled using a defined methodology in order to model a full repository. In addition to supporting WIPP PA, the TRU waste inventory information in this report is used as a basis for strategic planning decisions for processing waste that has already been generated and is stored at the TRU waste sites. Inventory waste stream volumes are accounted for in both “current form” (current packaging) and “final form” (planned WIPP-compliant packaging) configurations. These configurations are useful in various waste management planning scenarios. DOE/CBFO management used this information to plan waste retrieval, treatment, repackaging, characterization, shipment, and disposal for both stored and projected wastes in past years. Also, site-specific project plans and schedules, which detail approaches for moving TRU waste to WIPP, have been developed and are updated based on current TRU waste inventory information.

In addition to radiological information, DOE has many reasons for obtaining and tracking non-radiological information about the TRU waste destined for WIPP. For example, DOE tracks the waste materials that go into the WIPP repository, such as cellulose, plastic, and rubber (CPR), because they may affect gas generation in the repository. In addition, DOE needs to know the non-radiological properties of the waste to support PA, safe transportation of TRU waste, and operation of the WIPP facility.

TRU waste inventory information has also been used to:

- Provide data for DOE/CBFO analyses that support compliance with the NEPA.
- Support the development of new containers or shipping packages and planned change requests (PCRs) for other design changes in the repository.
- Create strategic plans for future waste management.
- Provide data on stored and emplaced waste to support tracking of shipments to WIPP, intersite shipments, and emplacement progress.
- Provide data for project plans and schedules for de-inventorying TRU waste from the SQSs.
- Provide data for actinide chemistry studies that involve the interactions of the emplaced TRU waste and other expected chemical components in the repository environment and the effects on actinide speciation and solubility.

## 2.0 METHODOLOGY

This report was generated using documented processes and methodologies that are qualified under the LANL-CO QA Program (see Section 1.1). The Inventory Team completed the following steps in order to generate this report:

1. Collected TRU waste stream information from the TRU waste sites and then entered and verified the updated information in the CID (see Figure 2.1).
2. Utilized the CID to generate required data tables.
3. Performed analyses, where appropriate, to supplement CID data for publication within this report.

The following sections describe the three basic process steps leading to the issuance of this report. Section 2.1 discusses collection, compilation, verification, and validation of TRU waste inventory information. Section 2.2 describes the calculations used in the CID reports, including the decay correction of radionuclide concentrations. Section 2.3 describes the supplemental analyses performed on inventory data, including transformation activities performed on the WDS emplaced waste data prior to input in the CID and the analysis of the chemical and cement components used to support this report.

### 2.1 Collection, Compilation, Verification, and Validation of Inventory Information

The process used to collect information from the TRU waste sites is captured in LANL-CO Procedure INV-SP-01, *Data Collection, Data Management and Control for the Comprehensive Inventory* (LANL-CO 2009a). On November 2, 2009, in accordance with this procedure, a letter (Patterson 2009) was sent to TRU waste sites requesting the annual TRU waste inventory update. The Inventory Team then notified each site of the upcoming site visit. Included in the notification was an Excel data template (DT) workbook containing last year's validated data and a guidance letter explaining the steps required to update the DT with their new information. The Inventory Team visited each site as it updated its DT, and worked with site personnel to resolving any issues that arose.

After the DTs were complete, the team checked them for accuracy and consistency. During these data checks, the Inventory Team verified that the inventory updates included all the requested information. The Inventory Team contacted the sites if there were discrepancies in the data. Examples of the data checks were:

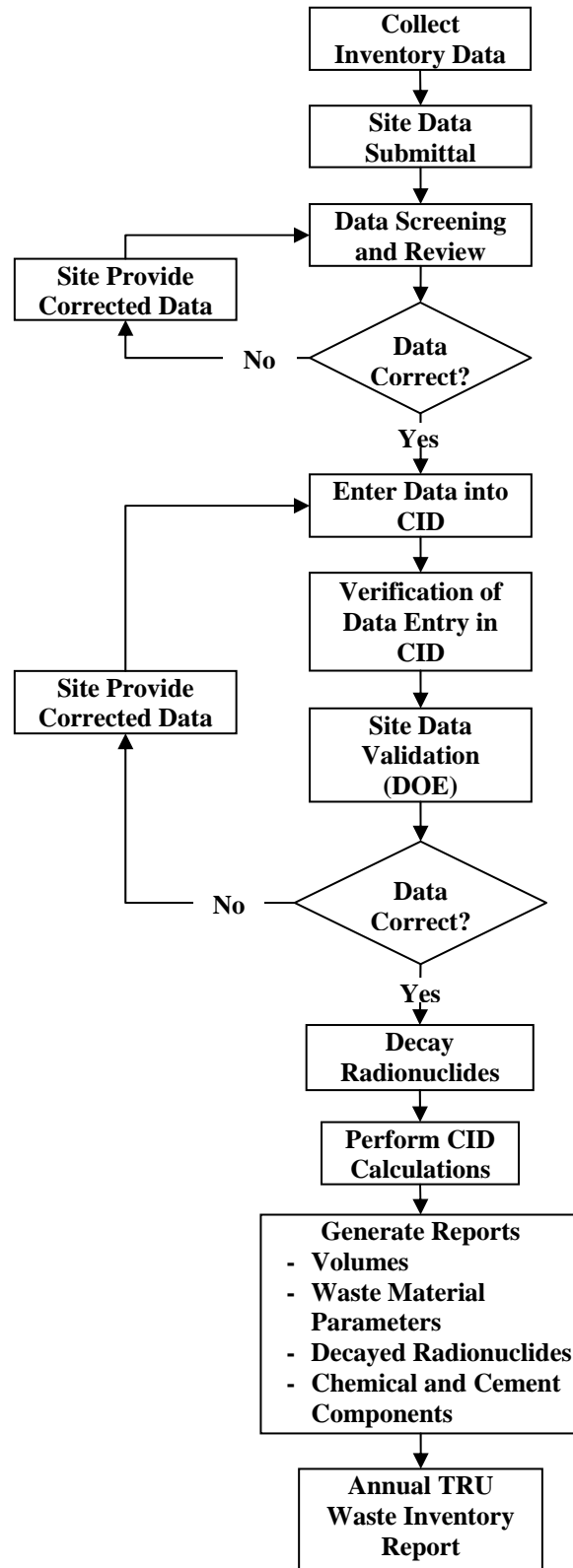
- Verification of radionuclide isotopic inputs (i.e., checked for presence of all fission products, radionuclides expected in secular equilibrium with those reported, and decay daughters);
- Verification of isotopic distribution for material type codes (e.g., Pu-52 and mixed fission products [MFPs]);

- Verification that Cs-137 activity is less than 0.29 curies per cubic meter (Ci/m<sup>3</sup>) for CH-TRU waste streams and greater than 0.29 Ci/m<sup>3</sup> for RH-TRU waste streams;
- Verification that reported activity concentration for RH-TRU waste did not exceed the LWA limits (i.e., waste streams reported with greater than 23,000 Ci/m<sup>3</sup> averaged over the volume of the RH-TRU canister were screened out of the WIPP-bound inventory);
- Verification that if cement was reported in a comment field, it was also reported as a WMP in kilograms per cubic meter (kg/m<sup>3</sup>);
- Verification that final form hazardous waste numbers are not prohibited at WIPP;
- Verification that U does not exceed half of any container volume (i.e., U-238 activity does not exceed 0.65 Ci/m<sup>3</sup>);
- Check to ensure oxyanions, complexing agents, radionuclide activity concentrations, and WMP densities have been recalculated, if the final container count has changed significantly for a waste stream.
- Compare the ATWIR-2010 waste stream data to the ATWIR-2009 waste stream data to identify any large differences, determine the reasons for such differences if found, and identify erroneous data.

The process followed for entering TRU waste inventory information into the CID is captured in LANL-CO Procedure INV-SP-02, *Entry, Verification, and Validation of Inventory Information in the Comprehensive Inventory Database* (LANL-CO 2009c). In accordance with this procedure, the TRU waste inventory information was uploaded from the Excel DT or entered manually into the CID and was reviewed and verified by an Inventory Team member who had not been involved with entry of the data into the database. If discrepancies were found during this verification, the data were corrected in accordance with INV-SP-02.

After this internal, independent verification was complete, validation reports were prepared and sent to the DOE TRU waste managers at the sites. A validation letter signed by the DOE site representative and site contractor (contractor signature is optional) documented the correctness of the information as reported in the CID. Hard copies of the validation report and signed validation letters were then submitted to the LANL-CO Record Center (see Figure 2-1 for a flow chart of the TRU waste inventory process). The CID data were then labeled as data version D.9.02 and protected from further revision.

Figure 2-1. TRU Waste Inventory Process Flowchart





## 2.2 Calculations Used for CID Reports

Data tables included in this report were generated using the CID. The CID is a database developed by LANL-CO and qualified for use under the LANL-CO QA Program in accordance with *LANL-CO Software Quality Assurance Plan* (LANL-CO 2007), and *Software Quality Assurance* (LANL-CO 2008).

The CID is used to manage, maintain, and perform specific qualified calculations using inventory data. The data are then used to generate qualified data reports and tables. The following sections describe how the data were prepared for this report.

### 2.2.1 Volume Reporting

As part of the data call for this report, the TRU waste sites were asked to update the container information for their stored (already generated and stored at the site) and projected (future generation) TRU waste. For each waste stream, the sites provided the WIPP-compliant final form container type(s) that would ultimately be used to ship waste to the WIPP and determined the respective stored and projected counts for each container type based on the volume of waste either already stored in containers resident on site or expected to be generated in the future. Emplaced container counts by waste stream were obtained from the WDS administrator (see Section 2.3) and reported as separate entries.

A standard final form container type list, which includes the volume that each container type occupies within the WIPP repository (i.e., the payload container volume) is maintained in the CID. Waste stream volumes were calculated within the CID using the reported counts and the respective container volumes for the container types, as shown in equation 1.

$$v_i = \sum_j ((s_{ij} + p_{ij} + e_{ij}) \cdot cv_j) \quad (1)$$

where:

$v_i$	is the total volume (stored + projected + emplaced) in waste stream $i$ in $m^3$
$s_{ij}$	is the stored count for container type $j$ in waste stream $i$
$p_{ij}$	is the projected count for container type $j$ in waste stream $i$
$e_{ij}$	is the emplaced count for container type $j$ in waste stream $i$
$cv_j$	is the final form volume per container for container type $j$ in $m^3$
$\sum_j$	is the summation of all container type $j$ volumes for waste stream $i$

Site- and WIPP-level roll-up reports were produced for each handling category (CH- and RH-TRU) by summing the final form volumes (stored + projected + emplaced) of the applicable waste streams by site, as shown in equation 2, and by summing over all sites as shown in equation 3.

$$V_s = \sum_i v_{is} \quad (2)$$

$$V_w = \sum_s V_s \quad (3)$$

where:

- $V_s$  is the total volume (stored + projected + emplaced) for site  $s$  in  $m^3$
- $V_{is}$  is the total volume (stored + projected + emplaced) in waste stream  $i$  for site  $s$  in  $m^3$
- $V_w$  is the total volume in all (stored + projected + emplaced) waste streams in  $m^3$
- $\sum_i$  is the summation of all the waste streams  $i$  volumes for site  $s$
- $\sum_s$  is the summation of all the sites  $s$  total volume

### 2.2.2 Waste Material Parameter and Packaging Materials Reporting

As part of the data call for this report, the TRU waste sites were asked to update the information about the materials contained in the waste (Patterson 2009). For each waste stream, they were asked to revisit the final waste forms and to update, if necessary, the density of each of the WMPs for the waste stream. See Section 3.2.1 for a description of these WMPs.

In many cases, waste streams are comprised of more than one container type (e.g., 55-gallon drums and standard waste boxes [SWBs]). In these instances, the TRU waste site provided only one set of WMPs in  $kg/m^3$ , which was uniformly applied to the entire waste stream, regardless of how many container types were reported. Conversely, the packaging materials (PMs) are specific to each of the individual container types and were proportional contributors based upon the respective container counts reported. These PMs were based on packaging densities in  $kg/m^3$ , determined for standard container types reported in INV-SAR-03, *Analysis of Container Material Densities* (McInroy 2008). The CID contains a single WMP list for every waste stream. However, the waste profiles in Appendices A through C include a weighted average of the packaging material densities for all of the WIPP-approved container types reported in the waste stream, calculated as shown in equations 4, 5, and 6.

$${}^{PM}m_{ij} = {}^{PM}d_j \cdot tv_{ij} \quad (4)$$

$${}^{PM}M_i = \sum_j {}^{PM}m_{ij} \quad (5)$$

$${}^{PM}D_i = {}^{PM}M_i / V_{is} \quad (6)$$

where:

- ${}^{PM}m_{ij}$  is the mass  $m$  of the packaging material PM for container type  $j$  in waste stream  $i$  in kg
- ${}^{PM}d_j$  is the density  $d$  of the packaging material PM for container type  $j$  in  $kg/m^3$
- $tv_{ij}$  is the total volume  $((s_{ij} + p_{ij} + e_{ij}) \cdot cv_j)$  (see equation 1) for container type  $j$  in waste stream  $i$  in  $m^3$
- ${}^{PM}M_i$  is the total mass  $M$  of packaging material PM in waste stream  $i$  in kg

- ${}^{\text{PM}}D_i$  is the average density  $D$  of the packaging material  $\text{PM}$  in waste streams  $i$  in  $\text{kg}/\text{m}^3$
- $v_{is}$  is the total volume (stored + projected + emplaced) in waste stream  $i$  for site  $s$  in  $\text{m}^3$  (see equation 1)
- $\Sigma_j$  is the summation of all container types  $j$  packaging material mass for waste stream  $i$

The roll-up of WMP average densities for each handling category (CH and RH) required combining data from all of the WIPP-bound and emplaced waste streams reported for the respective category. A weighted average value for the WMP based on the individual waste stream volumes in the total inventory was calculated in the CID from the WMP average densities provided by the sites as shown in equations 7, 8, and 9.

$${}^{\text{WM}}m_i = {}^{\text{WM}}d_i \cdot v_i \quad (7)$$

$${}^{\text{WM}}M = \Sigma_i {}^{\text{WM}}m_i \quad (8)$$

$${}^{\text{WM}}D = {}^{\text{WM}}M / V_w \quad (9)$$

where:

- ${}^{\text{WM}}m_i$  is the mass  $m$  of the waste material  $\text{WM}$  in waste stream  $i$  in  $\text{kg}$
- ${}^{\text{WM}}d_i$  is the average density  $d$  of the waste material  $\text{WM}$  in waste stream  $i$  in  $\text{kg}/\text{m}^3$
- $v_i$  is the total volume (stored + projected + emplaced) in waste stream  $i$  in  $\text{m}^3$  (see equation 1)
- ${}^{\text{WM}}M$  is the total mass  $M$  of the waste material  $\text{WM}$  in all (stored + projected + emplaced) waste streams in  $\text{kg}$
- ${}^{\text{WM}}D$  is the average density  $D$  of the waste material  $\text{WM}$  in all (stored + projected + emplaced) waste streams in  $\text{kg}/\text{m}^3$
- $V_w$  is the total volume in all (stored + projected + emplaced) waste streams in  $\text{m}^3$  (see equation 3)
- $\Sigma_j$  is the summation of all waste streams  $i$  waste material mass

### 2.2.3 Radionuclide Reporting

The TRU waste sites were asked to update information about the radiological components in their TRU waste. For each waste stream, they were asked to assess and update, when necessary, radionuclides and their associated activity concentrations in  $\text{Ci}/\text{m}^3$ . Where new radiological information was provided, the TRU waste sites provided the generation or last assay date for the updated waste stream to provide the starting date for decay calculations.

Since radionuclide data provided by the TRU waste sites consisted of radionuclide activity concentrations at the date of assay (generation or as calculated), radionuclide activity concentrations reported on a waste stream basis were decay-corrected to a common date to facilitate comparison of data. Therefore, all radionuclide data provided in this report in

Tables ES-5, 3-11, 3-12, and 3-13 and in Appendices A and B are decay-corrected to the end of the common base CY 2009. In order to facilitate comparison to previous TRU waste inventory reports, radionuclide concentrations are also decay-corrected to the WIPP proposed closure year, CY 2033, and are presented in Appendix D of this report.

Prior to generating radionuclide tables from the CID, the radionuclide activity concentrations reported by the TRU waste sites were exported from the CID, processed through an external application, Oak Ridge National Laboratory (ORNL) Radiation Safety Information Computational Center *RSICC Computer Code Collection: ORIGEN 2.2, Isotope Generation and Depletion Code Matrix Exponential Method* (ORNL 2002), where the radionuclide decay calculations were performed and then imported back into the CID. ORIGEN 2.2 uses a matrix exponential method to solve a large system of coupled, linear, first-order ordinary differential equations with constant coefficients. ORIGEN 2.2 is qualified for use under the LANL-CO QA Program in accordance with *LANL-CO Software Quality Assurance Plan* (LANL-CO 2007), and *Software Quality Assurance* (LANL-CO 2008). TransOrigen, a pre- and post-processor, is an Excel workbook application used to export data from the CID to ORIGEN 2.2 and then import the data back into the CID. This workbook provides a user-friendly interface to process radionuclide data from ORIGEN 2.2 by facilitating the creation of input files, executing ORIGEN 2.2 in a sequential fashion for each input file, and post-processing the output files. A separate analysis, *TransOrigen Unit Conversion and Data Transfer for the 2009 TRU Waste Inventory* (Van Soest 2010), is performed that validates the data transfer operations of the TransOrigen workbook.

Waste stream volumes were used to calculate waste stream radionuclide activity from the decay-corrected activity concentrations as shown in equation 10.

$${}^{\text{RN}}a_i = {}^{\text{RN}}ac_i \cdot v_i \quad (10)$$

where:

- ${}^{\text{RN}}a_i$  is the activity a of the radionuclide RN in waste stream i in Ci
- ${}^{\text{RN}}ac_i$  is the decay-corrected activity concentration ac from ORIGEN 2.2 for radionuclide RN in waste stream i in Ci/m<sup>3</sup>
- $v_i$  is the total volume (stored + projected + emplaced) in waste stream i in m<sup>3</sup> (see equation 1)

The site-level roll-up radionuclide activities were calculated for both CH- and RH-TRU waste as shown in equation 11.

$${}^{\text{RN}}A_s = \sum_i {}^{\text{RN}}a_{is} \quad (11)$$

where:

- ${}^{\text{RN}}A_s$  is the total activity A for a radionuclide in CH- or RH-TRU waste for site s in Ci
- ${}^{\text{RN}}a_{is}$  is the activity a for a radionuclide RN in waste stream i for site s in Ci
- $\sum_i$  is the summation of all the waste streams i activity for site s

## 2.3 Supplemental Analyses Supporting the Annual Transuranic Waste Inventory Report

In addition to collecting and processing information from the DOE TRU waste sites and securing the site information in a qualified database for future use, analyses were performed on the information to support the preparation of this report. For example, information on emplaced waste was obtained from the WDS administrator and migrated into standardized CID Import Template (CIT) files and analyses were performed to determine the estimated masses of complexing agents, oxyanions, and cement. These analyses were performed and documented in accordance with LANL-CO QA Procedure LCO-QP9-1, *Analyses* (LANL-CO 2010b).

### 2.3.1 Analysis of WIPP Waste Data System/Emplaced Data

In order to account for TRU waste emplaced in the WIPP repository from January 1, 2009, through December 31, 2009 (the ATWIR-2010 “reporting period”), a documented request was made of the WDS database administrator to supply data for the waste emplaced as of December 31, 2009. To update the TRU waste emplaced inventory data within the CID, the WDS data submittal was first migrated into standardized CIT files. This migration required that the original WDS data submittal undergo various transformations, including but not limited to calculations, aggregations, and data mapping. These activities and calculations are documented in INV-SAR-22, *WDS Data Transformation for Insertion in the 2009 Inventory CID Import Template* (Young 2010a). The CIT files were subsequently used to update the CID. The emplaced inventory information is included in Sections 3.1 through 3.3 and Appendix B of this report.

### 2.3.2 Analysis of Chemical and Cement Components

As part of the annual data call for TRU waste inventory information, the TRU waste sites were asked to provide information about the chemical components of the waste. Data version D.9.02 of the CID (LANL-CO 2010a) contains a weight percent for complexing agents (acetic acid, citric acid, oxalic acid, acetate, citrate, oxalate, ethylenediaminetetraacetic acid [EDTA]), and oxyanions (nitrates, phosphates, and sulfates) on a waste stream basis. Cement information is reported as part of the WMPs on a waste stream density basis in  $\text{kg/m}^3$ .

In order to determine the masses of the various complexing agents, oxyanions, and cements, the CID administrator was requested to develop and perform a query to be executed using the CID, data version D.9.02. The CID administrator developed the query using the Microsoft SQL Server 2008 Management Studio. The query contains the unscaled mass of these components that are currently stored and what is projected to be generated at the sites. In order to conservatively estimate complexing agents, oxyanions, and cements, and validate the data generated by the query, an analysis was performed and documented in INV-SAR-24, *Chemical and Cement Components 2009 Inventory*

*Estimates* (Young 2010b). The resulting masses of the various complexing agents, oxyanions, and cements are presented in Section 3.2.3 of this report.

### **3.0 TRANSURANIC WASTE INVENTORY ESTIMATES**

This section presents the TRU waste inventory data that were collected and entered into the CID, internally reviewed and verified, validated by the TRU waste sites, and labeled as data version D.9.02 (LANL-CO 2010a ), as discussed in Section 2.1.

This report of the TRU waste inventory consists of summaries of the inventory information collected from the TRU waste sites and information calculated from the data submitted by the sites. Section 3.1 presents the final form TRU waste volume information provided by the sites for CH- and RH-TRU waste and the volume of emplaced waste in the WIPP repository. Data for emplaced waste were obtained from the WDS administrator, transformed and formatted for import (Young 2010a), and imported to the CID, and are included in the inventory tables below. Section 3.2 presents the non-radiological properties of the TRU waste inventory as reported by the sites and contained in the WDS. This includes roll-ups of the WMPs (Section 3.2.1), PMs (Section 3.2.2), and complexing agents, oxyanions and cements (Section 3.2.3). Section 3.3 presents the TRU waste radionuclide activities reported by the sites and the data taken from the WDS that have been decayed through common year 2009. It should be noted that all values presented in the tables are to three significant figures for presentation purposes.

Additional TRU waste inventory estimates are provided in the appendices of this report. The TRU waste inventory, as collected from the TRU waste sites, is presented by waste stream in Appendices A, B, and C. Appendix A presents individual waste stream profiles (WSPs) for all TRU waste streams that will be included in PA calculations. Appendix B presents individual WSPs for all TRU waste streams that were emplaced at WIPP, and will be included in PA calculations. Appendix C presents individual WSPs for potential WIPP TRU waste streams that will not be included in PA calculations, as discussed in Section 4.0 of this report. Appendix D presents comparisons of the data from the ATWIR-2009 report to the data in this report for volume, WMPs and PMs, radionuclide data, and chemical components. Appendix E presents the crosswalk of waste streams between the ATWIR-2009 report and this report. Appendix F is the CBFO Screening Memorandum that was used to determine if a waste stream was designated as WIPP-bound or potential (Patterson 2010).

#### **3.1 TRU Waste Volume Estimates**

This section presents the TRU waste inventory final form volume estimates that were collected for this report.

The TRU waste volume estimates were generated from the container type and count provided by the TRU waste sites and the WDS administrator. The sites provided both stored and projected container types and counts for both current form and final form containers. The WDS administrator provided emplaced container types and counts. The final form volume was calculated using established container volumes for WIPP-approved

containers so that there is consistency in the final form volume from site to site. Section 3.1.1 discusses TRU waste inventory volume information for emplaced waste by TRU waste site. Section 3.1.2 discusses stored, projected, and anticipated TRU waste final form volumes by TRU waste site.

### 3.1.1 Emplaced Volumes by Site

Data for waste emplaced in the WIPP repository were obtained from the WDS administrator and uploaded to the CID after conversion using the analysis discussed in Section 2.3.1. The WDS data were provided by container types and their respective counts per waste stream. The CID generates volumes for the emplaced waste using the same methodology and standard container volumes used for the final form containers from the TRU waste sites. This ensures consistency among all WIPP-approved containers in the inventory.

The CID differs from the WDS in volume calculation methodology. Because of this difference, emplaced waste volumes reported by the two systems will not exactly agree. Examples of the main differences in methodology are described below.

CID	WDS
All 55-gallon drum configurations are 0.208 m <sup>3</sup>	All 55-gallon drum configurations are 0.21 m <sup>3</sup>
All RH containers are tallied according to the volume of the outer container (e.g., RH canisters overpacking drums are 0.89 m <sup>3</sup> )	All RH containers are tallied according to the volume of the inner containers (e.g., three 30-gallon drums are 0.339 m <sup>3</sup> )

In the first difference, the slight variation seen between these two drum volumes is attributed to rounding of the container volume. This results in a small difference in all CH-TRU waste containers and subsequent emplacement volumes between the two systems. The CID emplaced volume calculated for this report is 64,232 m<sup>3</sup> (LANL-CO 2010a), while the official emplaced volume calculated in the WDS is 64,354 m<sup>3</sup> (DOE 2010a).

The second difference is more significant. The CID and past inventory databases have always calculated the volume of RH-TRU waste based on the outer container volume (the canister) that will be emplaced at WIPP (which is consistent with CH-TRU volume calculation methodology). However, with the first receipt of RH waste in 2007, the WDS (formerly the WIPP Waste Information System [WWIS]) began tracking the emplaced volume of RH-TRU waste based on the container volume (the inner container). In the most extreme example of variation, a given RH canister containing three 30-gallon drums will be counted as 0.89 m<sup>3</sup> in the CID and 0.339 m<sup>3</sup> in the WDS. For this report, the CID calculates a total of 270 m<sup>3</sup> of emplaced RH-TRU waste (LANL-CO 2010a), while the RH-TRU waste volume calculated by the WDS is 149 m<sup>3</sup> (DOE 2010a).

It should be noted that the WDS is the database of record for emplaced waste. Plans are currently in place for a number of modifications to the CID, one of which will address the way the database stores and reports the volume of emplaced waste, which will bring it into alignment with the WDS methodology. These modifications are targeted for completion

in the first quarter of CY 2011. Until this is accomplished, this annual report will continue to report emplaced volume using methodology consistent with previous inventory reports. The last columns of Table 3-1 and Table 3-2 reflect the total emplaced CH- and RH-TRU waste volume, respectively, by site, as calculated by the CID.

### 3.1.2 Stored, Projected, and Anticipated Volumes by Site

TRU waste volume information requested from the TRU waste sites falls into two categories: stored waste (waste that currently exists at the site, regardless of whether it is in its final form) and projected waste (waste that will be generated in the future at the site, including decontamination and decommissioning (D&D) waste). The total waste stream volume information collected from the sites included stored and projected components as applicable for each TRU waste stream. The sites also reported both current form and final form waste volumes for their waste streams. The current form accounts for the current packaging configuration of the waste, while the final form volume accounts for the eventual packaging configuration suitable for WIPP emplacement. Volumes calculated in this report are reflective of the final form outer container volume (the volume the waste container occupies in the WIPP repository, e.g., 4.50 m<sup>3</sup> for a ten-drum overpack).

Table 3-1 shows the total CH-TRU waste stored, projected, and anticipated (stored + projected) and emplaced by TRU waste site, using final form volumes estimated to be shipped to WIPP. An estimated total of approximately 76,634 m<sup>3</sup> of CH-TRU waste could be shipped to WIPP in the future, if all the requirements are met. Approximately 98% of the anticipated CH-TRU waste is stored or will be generated at LQSS: Hanford-RL, INL, Los Alamos National Laboratory (LANL), ORNL, and the Savannah River Site (SRS). At the time of inventory data cut-off, INL, LANL, SRS, and ORNL had shipped CH-TRU waste to WIPP (see Appendix D for comparisons to CH-TRU waste volumes reported in ATWIR-2009).

Table 3-2 shows the total RH-TRU waste stored, projected, and anticipated (stored + projected) and emplaced by TRU waste site, using final form payload volumes estimated to be shipped to WIPP. An estimated total of approximately 5,147 m<sup>3</sup> of RH-TRU waste could be shipped to WIPP in the future, if all the requirements are met. Approximately 93% of the anticipated RH-TRU waste is stored or will be generated at LQSS: Hanford-RL, INL, ORNL, LANL, and SRS. At the time of inventory data cut-off, GEVNC, INL, LANL, ORNL, SRS, and Argonne National Laboratory – East (ANL-E) had shipped RH-TRU waste to WIPP (see Appendix D for comparisons to RH-TRU waste volumes reported in ATWIR-2009).



**Table 3-1. WIPP CH-TRU Waste Inventory Volumes by Site**

TRU Waste Site	Stored Volumes (m <sup>3</sup> )	Projected Volumes (m <sup>3</sup> )	Anticipated Volumes (m <sup>3</sup> )	Emplaced Volumes (m <sup>3</sup> )
Argonne National Laboratory – East	6.91E+01	0.00E+00	6.91E+01	1.20E+02
Material and Fuels Complex	1.31E+01	6.49E+01	7.80E+01	0.00E+00
Bettis Atomic Power Laboratory	1.89E+01	0.00E+00	1.89E+01	0.00E+00
General Electric Vallecitos Nuclear Center	1.46E+00	0.00E+00	1.46E+00	0.00E+00
Hanford (Richland Operations) Site	2.20E+04	0.00E+00	2.20E+04	3.75E+03
Idaho National Laboratory	3.66E+04	0.00E+00	3.66E+04	2.86E+04
Knolls Atomic Power Laboratory – Nuclear Fuel Services	3.22E+02	0.00E+00	3.22E+02	0.00E+00
Lawrence Berkeley Laboratory	8.32E-01	8.32E-01	1.66E+00	0.00E+00
Lawrence Livermore National Laboratory	2.99E+02	4.53E+02	7.52E+02	1.45E+02
Los Alamos National Laboratory	1.02E+04	6.96E+02	1.09E+04	3.73E+03
Nevada Test Site	3.78E+01	4.91E+01	8.69E+01	4.02E+02
Nuclear Radiation Development Site	2.85E+01	5.41E+00	3.39E+01	0.00E+00
Oak Ridge National Laboratory	9.04E+02	9.98E+01	1.00E+03	4.80E+01
Paducah Gaseous Diffusion Plant	4.99E+00	0.00E+00	4.99E+00	0.00E+00
Rocky Flats Environmental Technology Site	0.00E+00	0.00E+00	0.00E+00	1.50E+04
Sandia National Laboratories– Albuquerque	1.21E+01	5.62E+00	1.77E+01	0.00E+00
Savannah River Site	4.17E+03	5.64E+02	4.73E+03	1.25E+04
Separations Process Research Unit	4.18E+01	0.00E+00	4.18E+01	0.00E+00
U.S. Army Materiel Command	2.08E-01	0.00E+00	2.08E-01	0.00E+00
<b>Grand Total</b>	<b>7.47E+04</b>	<b>1.94E+03</b>	<b>7.66E+04</b>	<b>6.42E+04</b>

Data Source: CID Data Version D.9.02, LANL-CO 2010a

Note: This table contains data for WIPP-bound and emplaced waste streams only; it does not include data for potential waste streams.**Table 3-2. WIPP RH-TRU Waste Inventory Volumes by Site**

TRU Waste Site	Stored Volumes (m <sup>3</sup> )	Projected Volumes (m <sup>3</sup> )	Anticipated Volumes (m <sup>3</sup> )	Emplaced Volumes (m <sup>3</sup> )
Argonne National Laboratory – East	1.17E+02	0.00E+00	1.17E+02	2.49E+01
Material and Fuels Complex	2.23E+01	7.83E+01	1.01E+02	0.00E+00
Bettis Atomic Power Laboratory	5.34E+00	0.00E+00	5.34E+00	0.00E+00
General Electric Vallecitos Nuclear Center	0.00E+00	0.00E+00	0.00E+00	1.87E+01
Hanford (Richland Operations) Site	3.67E+03	8.81E+01	3.76E+03	0.00E+00
Idaho National Laboratory	3.27E+02	0.00E+00	3.27E+02	1.77E+02
Knolls Atomic Power Laboratory – Schenectady	3.03E+01	8.01E+01	1.10E+02	0.00E+00
Los Alamos National Laboratory	8.19E+01	0.00E+00	8.19E+01	1.42E+01
Oak Ridge National Laboratory	5.18E+02	2.94E+01	5.47E+02	9.79E+00
Sandia National Laboratories – Albuquerque	4.45E+00	0.00E+00	4.45E+00	0.00E+00
Savannah River Site	7.30E+01	1.16E+01	8.46E+01	2.49E+01
Separations Process Research Unit	1.25E+01	0.00E+00	1.25E+01	0.00E+00
<b>Grand Total</b>	<b>4.86E+03</b>	<b>2.87E+02</b>	<b>5.15E+03</b>	<b>2.70E+02</b>

Data Source: CID Data Version D.9.02, LANL-CO 2010a

Note: This table contains data for WIPP-bound and emplaced waste streams only; it does not include data for potential waste streams.

## 3.2 Waste and Packaging Materials

DOE has many reasons for obtaining and tracking non-radiological information about the TRU waste inventory destined for WIPP. For example, DOE tracks waste materials that are emplaced in the repository (i.e., CPR materials) because they may affect gas generation in the repository. DOE needs to know the non-radiological properties of the waste not only for PA but also to support safe and economical transportation of the waste and operation of the WIPP facility.

This section presents the non-radiological properties of the TRU waste inventory collected for this report. Section 3.2.1 presents the inventory of WMPs, Section 3.2.2 presents packaging materials, and Section 3.2.3 presents the chemical and cement components.

### 3.2.1 Waste Material Parameters

As part of the data call for this report, the TRU waste sites were asked to provide the average density ( $\text{kg/m}^3$ ) of each of the WMPs in each waste stream at their sites.

The following WMP descriptions are used for this report:

- Iron-based metal/alloys – Includes iron and steel alloys in the waste, but does not include the waste container materials. Also includes an iron-based metallic phase associated with any vitrification process, if applicable.
- Aluminum-based metal/alloys – Aluminum or aluminum-based alloys in the waste materials.
- Other metal – All other metal/alloys (e.g., copper, zirconium, and tantalum) found in the waste materials, including the lead portion of leaded rubber gloves/aprons.
- Other inorganic material – Inorganic non-metal waste materials such as concrete, glass, firebrick, ceramics, graphite, sand, and inorganic sorbents.
- Vitrified – Waste that has been melted or fused at high temperatures with glass-forming additives, such as soil or silica, in appropriate proportions to result in a homogeneous glass-like matrix. (Note that any unoxidized metallic phases, if present, are included in the iron-based metal/alloys WMP.)
- Cellulosic – Materials generally derived from high-polymer plant carbohydrates such as paper, cardboard, Kimwipes<sup>®</sup>, wood, cellophane, and cloth.
- Plastic – Generally man-made, often derived from petroleum feedstock. Examples are polyethylene, polyvinyl chloride (PVC), Lucite<sup>®</sup>, and Teflon<sup>®</sup>.
- Rubber – Natural or manmade elastic latex materials such as Hypalon<sup>®</sup>, neoprene, surgical gloves, and leaded-rubber gloves (rubber part only).

- Solidified Inorganic Material (Inorganic Matrix) – Any homogeneous materials consisting of sludge or aqueous-based liquids that have been solidified. Examples are wastewater treatment sludge and inorganic particulates.
- Solidified Organic Material (Organic Matrix) – Organic resins, solidified organic liquids, and sludges.
- Cement – An agent used to solidify liquids, particulates, and sludge. Cement may be reacted, unreacted, or both.
- Soil/gravel – Generally consists of naturally occurring soils that have been contaminated with radioactive waste materials at a high enough level to be considered TRU waste.

The estimated WMP average densities and associated masses for CH- and RH-TRU waste are presented in Tables 3-3 and 3-4, respectively.

### **3.2.2 Packaging Materials**

PMs, such as steel, plastic, cellulose, and lead, are the materials used to construct the containers that hold TRU waste. PM densities have historically been reported by the TRU waste sites. The PM densities for the WIPP-approved payload containers are fixed values in the CID. The sites report the final form container type, and the CID generates the PM densities using consistent values associated with the container type. An analysis was performed (McInroy 2008) to calculate the PM densities to be assigned to the various WIPP-approved container types in the CID. The purpose of that analysis was to document calculations that provided the PM densities for steel, plastic, cellulose, and lead used in the containers that package CH- and RH-TRU waste for shipment to WIPP. The PM densities ( $\text{kg/m}^3$ ) and associated masses for CH- and RH-TRU waste are presented in Tables 3-3 and 3-4, respectively.

**Table 3-3. Total WIPP CH-TRU Waste and Packaging Material Inventory**

<b>Waste Material</b>	<b>Density (kg/m<sup>3</sup>)</b>	<b>Mass (kg)</b>
Aluminum-based Metals/Alloys	1.33E+00	1.87E+05
Cellulosics	2.86E+01	4.03E+06
Cements	5.14E+01	7.24E+06
Inorganic Matrix	7.24E+01	1.02E+07
Iron-based Metals/Alloys	7.33E+01	1.03E+07
Organic Matrix	3.75E+01	5.28E+06
Other Inorganic Materials	2.23E+01	3.14E+06
Other Metals	4.00E+00	5.64E+05
Plastics	3.42E+01	4.82E+06
Rubber	5.30E+00	7.47E+05
Soils/gravel	1.58E+01	2.23E+06
Vitrified	0.00E+00	0.00E+00
<b>Package Material</b>		
Packaging Material, Cellulosics	5.08E+00	7.15E+05
Packaging Material, Plastic	1.48E+01	2.08E+06
Packaging Material, Steel	1.85E+02	2.61E+07
Packaging Material, Lead	0.00E+00	0.00E+00

Data Source: CID Data Version D.9.02, LANL-CO 2010a

Note: This table contains data for WIPP-bound and emplaced waste streams only; it does not include data for potential waste streams.

**Table 3-4. Total WIPP RH-TRU Waste and Packaging Material Inventory**

<b>Waste Material</b>	<b>Density (kg/m<sup>3</sup>)</b>	<b>Mass (kg)</b>
Aluminum-based Metals/Alloys	1.16E+00	6.29E+03
Cellulosics	1.90E+01	1.03E+05
Cements	1.29E+02	6.96E+05
Inorganic Matrix	1.75E+01	9.46E+04
Iron-based Metals/Alloys	1.33E+02	7.23E+05
Organic Matrix	3.16E+01	1.71E+05
Other Inorganic Materials	2.08E+02	1.12E+06
Other Metals	9.10E+01	4.93E+05
Plastics	4.19E+01	2.27E+05
Rubber	1.65E+01	8.95E+04
Soils/gravel	3.42E+01	1.85E+05
Vitrified	2.51E-02	1.36E+02
<b>Package Material</b>		
Packaging Material, Cellulosics	0.00E+00	0.00E+00
Packaging Material, Plastic	2.29E+01	1.24E+05
Packaging Material, Steel	6.49E+02	3.52E+06
Packaging Material, Lead	1.45E+00	7.85E+03

Data Source: CID Data Version D.9.02, LANL-CO 2010a

Note: This table contains data for WIPP-bound and emplaced waste streams only; it does not include data for potential waste streams.

### 3.2.3 Chemical and Cement Components

DOE tracks the mass (kg) of complexing agents, oxyanions, and cement as part of the non-radiological components used for PA. The masses reported in Tables 3-5 through 3-10 present unscaled masses that represent only the amount of these components currently stored and projected at the sites. These masses do not include emplaced waste stream data since these components are not tracked in the WDS. An analysis is performed on an annual basis to account for these masses that have been emplaced at WIPP (Young 2010b).

Each year, containers may be moved among waste streams in preparation for characterization. These movements make it difficult to compare waste streams from year to year. To remedy this difficulty, an analysis was performed, *Chemical and Cement Components 2009 Inventory Estimates* (Young 2010b), that contains a mapping of the ATWIR-2009 waste stream chemical and cement components to those in this year's report.

#### 3.2.3.1 Complexing Agents

DOE tracks the mass (kg) of complexing agents destined for emplacement in the WIPP repository because of their potential impact on solubilities of actinides in the waste. For this inventory report, the TRU waste sites were asked to update their estimates of complexing agents in the waste streams (Patterson 2009). The sites reported the estimates of complexing agents in waste streams as a weight percent. These weight percent data were converted to masses via a query using CID data, documented in an analysis (Young 2010b). Table 3-5 presents all WIPP-bound waste streams containing complexing agents and identifies new waste streams reporting complexing agents for the first time. Table 3-6 presents a summary of the estimated masses of complexing agents by site.

**Table 3-5. CH/RH Complexing Agent Mass by Waste Stream**

Waste Stream ID	Acetic Acid (kg)	Citric Acid (kg)	Oxalic Acid (kg)	Sodium Acetate (kg)	Sodium Citrate (kg)	Sodium EDTA (kg)	Sodium Oxalate (kg)
IN-AE-AGHC-01	5.45E-03	5.45E-03	5.45E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00
IN-AW-161	1.27E-03	0.00E+00	1.27E-03	1.27E-02	1.27E-02	1.27E-03	0.00E+00
IN-BN004	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	1.33E+02	0.00E+00
IN-BN409	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	2.15E+00	0.00E+00
IN-BNINW218	6.00E+01	4.15E+01	4.15E+01	5.07E+02	1.77E+02	0.00E+00	0.00E+00
IN-ID-INL-152*	1.42E-02	0.00E+00	1.42E-02	1.42E-02	1.42E-02	1.42E-02	0.00E+00
IN-ID-INL-152M*	2.22E-02	0.00E+00	2.22E-02	2.22E-02	2.22E-02	2.22E-02	0.00E+00
IN-ID-RF-S5300-A	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	6.24E+00	0.00E+00
IN-ID-SDA-Debris	2.12E+02	4.45E+00	4.24E-01	0.00E+00	0.00E+00	2.12E-01	0.00E+00
IN-ID-SDA-Sludge	2.89E+03	6.07E+01	5.78E+00	0.00E+00	0.00E+00	2.89E+00	0.00E+00
IN-ID-SDA-Soil	1.20E+03	2.53E+01	2.41E+00	0.00E+00	0.00E+00	1.20E+00	0.00E+00
IN-TRA-150	2.17E-03	2.17E-03	2.17E-03	0.00E+00	0.00E+00	2.17E-03	2.17E-03

Table 3-5. CH/RH Complexing Agent Mass by Waste Stream

Continued

Waste Stream ID	Acetic Acid (kg)	Citric Acid (kg)	Oxalic Acid (kg)	Sodium Acetate (kg)	Sodium Citrate (kg)	Sodium EDTA (kg)	Sodium Oxalate (kg)
LA-CIN01.001	1.01E+00	1.12E+02	1.73E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
LA-CIN02.001	1.74E+00	1.92E+02	1.08E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00
LA-MHD01.001	4.28E+00	4.92E+01	6.14E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00
LA-MIN02-V.001	6.44E-02	7.09E+00	8.82E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
LA-MIN03-NC.001	2.44E-01	2.68E+01	3.35E+02	0.00E+00	0.00E+00	0.00E+00	0.00E+00
LL-M001	3.25E+00	3.25E+00	3.25E+00	0.00E+00	0.00E+00	3.25E+00	0.00E+00
LL-W018-S5100	1.73E+00	1.73E+00	1.73E+00	0.00E+00	0.00E+00	1.73E+00	0.00E+00
LL-W019	5.70E-01	5.70E-01	5.70E-01	0.00E+00	0.00E+00	5.70E-01	0.00E+00
RL200-01	0.00E+00	2.84E+00	3.92E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
RL216Z-02	0.00E+00	0.00E+00	1.54E+01	0.00E+00	0.00E+00	0.00E+00	0.00E+00
RL222S-01	0.00E+00	0.00E+00	8.72E+00	8.72E+00	0.00E+00	4.28E-03	0.00E+00
RL233S-01	5.50E-02	1.18E+00	5.50E-02	0.00E+00	0.00E+00	0.00E+00	0.00E+00
RL300-01	0.00E+00	5.31E-02	1.85E+01	3.81E+01	1.53E+01	1.53E-03	8.84E+00
RL300-03	0.00E+00	5.24E-04	5.24E-04	2.10E-03	5.24E-04	1.57E-03	5.24E-04
RL308-01	0.00E+00	9.73E-02	9.73E-02	1.99E-01	8.05E-01	9.03E-01	9.05E-01
RL325-01	4.85E-01	2.88E+00	2.88E+00	5.76E+00	2.37E+01	3.65E-05	9.12E+00
RLBAT-01	3.01E+00	1.05E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
RLBW-01	7.46E-01	4.50E-01	0.00E+00	2.87E+00	0.00E+00	0.00E+00	0.00E+00
RLBW-03	3.07E-05	1.84E-05	0.00E+00	9.14E-05	0.00E+00	2.98E-05	0.00E+00
RLBW-08	1.62E-05	1.04E-05	0.00E+00	3.46E-05	0.00E+00	1.62E-05	0.00E+00
RLESG-01	0.00E+00	1.85E+00	1.80E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
RLESG-08	0.00E+00	6.48E-03	6.29E-03	0.00E+00	0.00E+00	3.58E-04	0.00E+00
RLGEV-01	0.00E+00	3.90E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
RLGEV-03	0.00E+00	5.86E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
RLHAN-01	8.01E-02	0.00E+00	1.26E-01	5.49E-01	1.57E-01	1.56E+00	3.12E-01
RLPFP-01	3.38E+03	2.47E+00	1.33E+01	6.99E+03	0.00E+00	1.92E+00	1.92E+00
RLPFP-02	2.29E+00	1.67E-03	9.03E-03	4.74E+00	0.00E+00	1.30E-03	1.30E-03
RLPFP-08	1.34E-03	0.00E+00	4.62E-06	2.97E-03	0.00E+00	0.00E+00	0.00E+00
RLSWO-01	6.28E-01	1.65E+01	2.60E-03	0.00E+00	0.00E+00	0.00E+00	0.00E+00
RLSWO-08	2.55E-03	6.71E-02	1.06E-05	0.00E+00	0.00E+00	0.00E+00	0.00E+00
RLWAR-01	0.00E+00	9.84E+02	3.40E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00
RLWAR-03	0.00E+00	1.22E-01	4.10E-01	6.12E-02	0.00E+00	0.00E+00	0.00E+00

Data Source: *Analysis of Chemical and Cement Components 2009 Inventory Estimates*, Young 2010b

\*New waste streams containing complexing agents that are reported for the first time or consolidated under a new waste stream ID.

Note: This table contains data for WIPP-bound waste streams only; it does not include data for emplaced or potential waste streams.

**Table 3-6. CH/RH Complexing Agent Mass by Site**

TRU Waste Site	Acetic Acid (kg)	Citric Acid (kg)	Oxalic Acid (kg)	Sodium Acetate (kg)	Sodium Citrate (kg)	Sodium EDTA (kg)	Sodium Oxalate (kg)
Idaho National Laboratory	4.37E+03	1.32E+02	5.01E+01	5.07E+02	1.78E+02	1.46E+02	2.17E-03
Los Alamos National Laboratory	7.35E+00	3.87E+02	2.13E+03	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Lawrence Livermore National Laboratory	5.55E+00	5.55E+00	5.55E+00	0.00E+00	0.00E+00	5.55E+00	0.00E+00
Hanford (Richland Operations) Site	3.39E+03	1.02E+03	3.47E+03	7.06E+03	4.00E+01	4.39E+00	2.11E+01
<b>Grand Total</b>	<b>7.77E+03</b>	<b>1.54E+03</b>	<b>5.65E+03</b>	<b>7.56E+03</b>	<b>2.18E+02</b>	<b>1.55E+02</b>	<b>2.11E+01</b>

Data Source: *Analysis of Chemical and Cement Components 2009 Data Inventory Estimates*, Young 2010b

Note: This table contains data for WIPP-bound waste streams only; it does not include data for replaced or potential waste streams.

### 3.2.3.2 Oxyanions

Estimates of the masses of nitrates, phosphates, and sulfates expected in the TRU waste were also requested from the TRU waste sites. The weight percent data reported by the sites were converted to masses via a query using CID data (Young 2010b). Table 3-7 presents all the WIPP-bound waste streams containing oxyanions, including waste streams containing oxyanions that the TRU waste sites are reporting for the first time, and updated values from previously reported waste streams. Table 3-8 presents a summary of the estimated masses of oxyanions, by site.

**Table 3-7. CH/RH Oxyanion Mass by Waste Stream**

Waste Stream ID	Nitrate (kg)	Phosphate (kg)	Sulfate (kg)
IN-AE-AGHC-01	5.45E-03	5.45E-03	5.45E-03
IN-AW-161	1.27E-03	1.27E-03	1.27E-03
IN-BN004	0.00E+00	2.76E+03	2.66E+03
IN-BN005	3.25E+04	0.00E+00	0.00E+00
IN-BNINW216	2.23E+05	0.00E+00	3.03E+03
IN-BNINW218	3.89E+04	0.00E+00	9.91E+01
IN-ID-INL-152*	1.42E-02	1.42E-02	1.42E-02
IN-ID-INL-152M*	2.22E-02	2.22E-02	2.22E-02
IN-ID-RF-S3150-A	0.00E+00	0.00E+00	3.57E+01
IN-ID-SDA-Debris	4.45E+03	1.69E+00	4.45E+03
IN-ID-SDA-Sludge	6.36E+04	3.18E+04	8.97E+04
IN-ID-SDA-Soil	1.32E+04	7.22E+03	1.92E+04
IN-INTEC-SFS-01	4.43E-02	0.00E+00	0.00E+00
IN-TRA-150	2.17E-03	2.17E-03	2.17E-03
IN-W228R*	2.36E+02	0.00E+00	2.36E+02
LA-CIN01.001	5.79E+02	0.00E+00	1.96E+03

**Table 3-7. CH/RH Oxyanion Mass by Waste Stream  
Continued**

<b>Waste Stream ID</b>	<b>Nitrate (kg)</b>	<b>Phosphate (kg)</b>	<b>Sulfate (kg)</b>
LA-CIN02.001	4.88E+02	0.00E+00	7.76E+01
LA-CIN03.001	9.55E+02	0.00E+00	1.52E+02
LA-MHD01.001	1.01E+05	0.00E+00	1.96E+04
LA-MHD03.001	3.47E+02	0.00E+00	3.23E+02
LA-MHD04.001	3.46E+03	0.00E+00	6.67E+02
LA-MHD08.001	1.47E+02	0.00E+00	2.83E+01
LA-MIN02-V.001	1.00E+02	0.00E+00	1.94E+01
LA-MIN03-NC.001	1.43E+04	0.00E+00	1.34E+04
LA-TA-21-13	2.01E+05	0.00E+00	3.20E+04
LA-TA-21-15	1.22E+02	0.00E+00	2.36E+01
LA-TA-21-16	6.98E+03	0.00E+00	6.50E+03
LB-T001	9.49E-05	1.97E-02	3.66E-04
LB-T002	5.25E-03	6.20E-04	0.00E+00
LL-M001	3.25E+00	3.25E+00	3.25E+00
LL-W018-S5100	1.73E+00	1.73E+00	1.73E+00
LL-W019	5.70E-01	5.70E-01	5.70E-01
RL200-01	2.74E+02	2.64E+02	0.00E+00
RL200-02	1.20E+01	4.43E+01	9.23E+00
RL201-01	0.00E+00	0.00E+00	2.16E+00
RL202S-01	4.68E-01	0.00E+00	0.00E+00
RL209E-01	2.26E+02	6.80E+01	5.39E+02
RL209E-08	8.61E-02	0.00E+00	1.23E-02
RL216Z-02	1.42E+03	1.57E+03	6.33E+01
RL221U-01	0.00E+00	1.97E-03	0.00E+00
RL222S-01	1.31E+02	1.96E+02	1.84E+01
RL231Z-01	4.18E+01	3.03E+03	5.39E+03
RL231Z-03	7.17E-02	3.37E+01	7.54E-01
RL233S-01	2.57E+02	2.00E+00	5.58E-01
RL300-01	9.54E+02	2.26E+02	1.93E+00
RL300-03	1.36E-02	3.67E-03	7.85E-03
RL308-01	4.50E+00	9.88E-01	1.73E+03
RL325-01	2.31E+02	6.56E+01	1.75E+02
RL325-03	7.16E+01	0.00E+00	0.00E+00
RL325-09	1.06E-01	0.00E+00	0.00E+00
RLBAT-01	0.00E+00	4.97E+00	4.37E+00
RLBW-01	1.06E+00	5.99E-01	2.87E+02
RLBW-03	2.72E-05	0.00E+00	1.15E-02
RLBW-08	1.50E-05	0.00E+00	6.16E-03
RLESG-01	1.80E+00	1.14E+02	4.21E+03
RLESG-08	6.29E-03	0.00E+00	0.00E+00
RLEXX-01	6.29E-02	2.08E-02	0.00E+00
RLGEV-01	3.54E+00	3.54E+00	4.00E+02
RLGEV-03	5.32E-05	5.32E-05	6.00E-03
RLHAN-01	4.12E+00	1.24E+00	2.53E+00



**Table 3-7. CH/RH Oxyanion Mass by Waste Stream**  
Continued

Waste Stream ID	Nitrate (kg)	Phosphate (kg)	Sulfate (kg)
RLPFP-01	1.28E+05	1.26E+05	5.47E+03
RLPFP-02	8.64E+01	8.51E+01	3.70E+00
RLPFP-03	1.73E+03	1.11E+02	0.00E+00
RLPFP-04	2.53E-03	2.16E-02	0.00E+00
RLPFP-08	4.92E-02	3.72E-02	1.97E-03
RLPURX-01	2.43E+01	0.00E+00	0.00E+00
RLSWO-01	2.67E+01	3.25E+02	5.21E+00
RLSWO-08	1.08E-01	1.32E+00	2.12E-02
RLWAR-01	2.95E+03	0.00E+00	5.04E+02
RLWAR-03	3.67E-01	0.00E+00	6.12E-02

Data Source: *Analysis of Chemical and Cement Components 2009 Inventory Estimates*, Young 2010b

\*New waste streams containing oxyanions that are reported for the first time or consolidated under a new waste stream ID.

Note: This table contains data for WIPP-bound waste streams only; it does not include data for emplaced or potential waste streams.

**Table 3-8. CH/RH Oxyanion Mass by Site**

TRU Waste Site	Nitrate (kg)	Phosphate (kg)	Sulfate (kg)
Idaho National Laboratory	3.76E+05	4.18E+04	1.19E+05
Los Alamos National Laboratory	3.30E+05	0.00E+00	7.47E+04
Lawrence Berkeley Laboratory	5.35E-03	2.04E-02	3.66E-04
Lawrence Livermore National Laboratory	5.55E+00	5.55E+00	5.55E+00
Hanford (Richland Operations) Site	1.36E+05	1.32E+05	1.88E+04
<b>Grand Total</b>	<b>8.42E+05</b>	<b>1.74E+05</b>	<b>2.13E+05</b>

Data Source: *Analysis of Chemical and Cement Components 2009 Inventory Estimates*, Young 2010b

Note: This table contains data for WIPP-bound waste streams only; it does not include data for emplaced or potential waste streams.

### 3.2.3.3 Cement

For the inventory data call for the ATWIR-2010 TRU waste inventory, the TRU waste sites were instructed to report their cements, along with other WMPs. The waste material densities ( $\text{kg}/\text{m}^3$ ) for cements were subsequently converted to masses via a query using CID data (Young 2010b). Table 3-9 presents all the WIPP-bound waste streams containing cements that are expected for WIPP disposal, including waste streams containing cements that the TRU waste sites are reporting for the first time and updated values from previously reported waste streams. Table 3-9 also reports whether the state of the cements is reacted, unreacted, or both. In this report, a cement state “reacted” means cement that is hydrated by setting up under aqueous conditions; a cement state “unreacted” means that dry cement was added as an absorbent or neutralizer to a waste stream, but under dry, non-aqueous conditions. Table 3-10 presents a summary of the estimated masses of cements, by site.

**Table 3-9. CH/RH Cement Mass and State by Waste Stream**

<b>Waste Stream ID</b>	<b>Cement (kg)</b>	<b>Cement State</b>
AW-N026.82	2.44E+02	Reacted
AW-W020.13*	1.78E+03	Reacted
IN-BN004	1.60E+05	Both
IN-BN095	1.38E+04	Reacted
IN-BN222	2.44E+04	Reacted
IN-BN432	1.56E+04	Reacted
IN-BN806	8.44E+02	Reacted
IN-BN817	7.86E+02	Reacted
IN-BN823	4.12E+02	Reacted
IN-BN836	4.42E+04	Both
IN-BN976	3.29E+04	Reacted
IN-BN978	6.04E+03	Reacted
IN-BNINW216	2.97E+05	Both
IN-BNINW218	1.39E+04	Both
IN-GEM-01	8.49E+02	Both
IN-ID-BTO-030	6.68E+01	Reacted
IN-ID-RF-S3150-A	1.71E+02	Reacted
IN-ID-SDA-Debris	5.56E+02	Both
IN-ID-SDA-Sludge	3.93E+02	Both
IN-ID-SDA-Soil	2.51E+02	Both
IN-W208R*	4.63E+00	Reacted
IN-W228R*	6.17E+02	Both
IN-W317R*	3.17E+02	Reacted
KN-B234TRU	4.62E+05	Reacted
LA-CIN01.001	5.60E+05	Reacted
LA-CIN02.001	1.18E+05	Reacted
LA-CIN03.001	2.09E+03	Reacted
LA-TA-03-28	1.06E+03	Reacted
LA-TA-03-31	2.26E+02	Reacted
LA-TA-21-13	5.36E+06	Reacted
LA-TA-21-16	1.18E+04	Reacted
LA-TA-50-18	6.93E+03	Reacted
LA-TA-55-38	3.43E+02	Reacted
LL-M001	3.18E+03	Reacted
LL-W018-S5100	4.04E+02	Reacted
NT-W021	1.20E+01	Reacted
OR-NFS-CH-HOM	9.78E+02	Reacted
OR-RF-CH-HOM	2.50E+02	Reacted
PA-W014	5.68E+03	Reacted
RL105-03	6.50E+04	Reacted
RL105-09	6.93E+05	Reacted
RL300-03	1.59E+03	Reacted
RL325-03	7.77E+03	Reacted
RLWAR-03	2.92E+03	Reacted

**Table 3-9. CH/RH Cement Mass and State by Waste Stream**  
Continued

Waste Stream ID	Cement (kg)	Cement State
SA-T001	9.36E+01	Both
SR-AGNS-HOM	3.92E+03	Reacted
SR-BCLCH-MT01	7.08E+02	Reacted
SR-BCLDP.001.001	7.86E+01	Reacted
SR-BCLDP.001.002	1.74E+01	Reacted
SR-BCLDP.002	1.50E+01	Reacted
SR-BCLDP.003	7.56E+02	Reacted
SR-BCLDP.004.002	4.50E+01	Reacted
SR-BCLDP.004.003	6.41E+01	Reacted
SR-MD-HOM-B*	1.33E+01	Reacted
SR-NIST-HET*	3.05E+01	Reacted
SR-RH-FBL.01*	1.05E+02	Reacted
SR-SDD-800UGT-HET*	2.19E+01	Reacted
SR-SDD-800UGT-HOM-A	3.01E+03	Reacted
SR-SDD-800UGT-HOM-B	4.20E+03	Reacted
SR-W026-CIF-HOM	1.66E+03	Reacted
SR-W027-221H-HET-D*	5.32E+02	Reacted

Data Source: *Analysis of Chemical and Cement Components 2009 Inventory Estimates*, Young 2010b

\*New waste streams containing cements that are reported the first time or consolidated under a new waste stream ID.

Note: This table contains data for WIPP-bound waste streams only; it does not include data for emplaced or potential waste streams.

**Table 3-10. CH/RH Cement Mass by Site**

TRU Waste Site	Mass of Cement (kg)
Material and Fuels Complex	2.02E+03
Idaho National Laboratory	6.12E+05
Knolls Atomic Power Laboratory - Nuclear Fuel Services	4.62E+05
Los Alamos National Laboratory	6.06E+06
Lawrence Livermore National Laboratory	3.58E+03
Nevada Test Site	1.20E+01
Oak Ridge National Laboratory	1.23E+03
Paducah Gaseous Diffusion Plant	5.68E+03
Hanford (Richland Operations) Site	7.70E+05
Sandia National Laboratory - Albuquerque	9.36E+01
Savannah River Site	1.52E+04
<b>Grand Total</b>	<b>7.94E+06</b>

Data Source: *Analysis of Chemical and Cement Components 2009 Inventory Estimates*, Young 2010b

Note: This table contains data for WIPP-bound waste streams only; it does not include data for emplaced or potential waste streams.

### 3.3 TRU Waste Radionuclide Inventory

This section presents the TRU waste radionuclide activity inventory collected for this report. The sites' TRU waste stream radionuclides and WIPP-emplaced waste stream radionuclides are decayed through the end of CY 2009 and the data are aggregated and placed into tables by site for CH- and RH-TRU wastes. Also reported are total curies by site.

#### 3.3.1 Radionuclide Inventory by Site

Tables 3-11 and 3-12 provide the comprehensive WIPP-bound and emplaced TRU waste activity (Ci) inventory estimates for CH- and RH-TRU waste, respectively. The TRU waste sites report their radionuclides in activity concentration (Ci/m<sup>3</sup>) by waste stream. The CID converts this concentration to Ci by multiplying the activity concentration by the waste stream final form volume. The radionuclides are decayed to a common base year of 2009 (as described in Section 2.2.3) from the reported waste stream assay or generation year.

The waste profiles in Appendix A (WIPP-bound Waste) and Appendix B (Emplaced Waste) are reported in activity concentrations for each waste stream. These radionuclide activity concentrations (Ci/m<sup>3</sup>) have been decayed from the waste stream assay/generation year through the end of CY 2009. Radionuclide activity concentrations presented in Appendix C (Potential WIPP Waste) are as reported by the TRU waste sites (i.e., not decay-corrected).







Table 3-11. Total CH Radionuclides (Ci) on a Site Basis Decayed through 2009  
Continued

Radionuclide	ANLE	MFC	Army	BAPL	GEVNC	Hanford	INL	KAPL-NFS	LANL	LBL	LLNL	NRD	NTS	ORNL	Paducah	RFETS	SNL-A	SPRU	SRS	Grand Total
Tl-204	--	--	--	--	--	--	--	--	--	9.74E-12	--	--	--	6.64E-07	--	7.48E-07	--	--	--	<b>1.41E-06</b>
Tl-207	1.69E-07	1.08E-07	1.19E-14	3.99E-10	--	1.02E-06	3.87E-05	1.88E-06	3.39E+00	1.01E-04	4.00E-03	--	7.85E-06	1.02E-01	4.75E-07	1.27E-06	1.65E-08	4.00E-13	2.82E-02	<b>3.52E+00</b>
Tl-208	5.29E-02	1.69E-07	--	4.27E-06	--	8.65E-02	1.48E-01	1.39E-02	4.88E+00	1.55E-09	9.08E-04	--	8.30E-16	6.30E-02	--	5.71E-10	1.06E-03	--	8.58E-01	<b>6.11E+00</b>
Tl-209	2.21E-04	3.02E-05	1.59E-13	1.24E-14	--	4.49E-05	1.79E-05	9.50E-06	2.84E-03	2.06E-09	2.45E-04	5.79E-15	4.97E-06	2.28E-03	3.56E-09	1.94E-06	1.22E-08	3.71E-16	1.29E-04	<b>5.82E-03</b>
Tm-171	--	--	--	--	--	--	--	--	1.39E-03	--	--	--	--	--	--	--	--	--	--	<b>1.39E-03</b>
U-232	1.44E-01	--	--	1.27E-05	--	4.60E-01	1.30E+00	--	3.97E+01	--	2.05E-03	--	--	1.71E-01	--	--	9.88E-05	--	2.82E+00	<b>4.46E+01</b>
U-233	8.15E-02	1.33E+00	5.15E-09	1.72E-09	5.82E-07	8.55E+00	2.90E+00	6.59E-01	4.32E+01	1.25E-04	2.15E+00	4.22E-09	4.84E-01	1.81E+01	1.82E-04	1.07E-01	3.95E-04	2.70E-11	3.82E+00	<b>8.15E+01</b>
U-234	8.84E-02	8.84E-02	--	2.04E-03	1.51E-04	6.22E+00	7.05E+00	6.59E-01	2.39E+01	2.65E-07	8.50E-02	--	8.76E-02	9.89E+00	8.82E-02	2.29E+00	1.03E-02	--	6.56E+01	<b>1.16E+02</b>
U-235	2.69E-03	3.23E-03	1.49E-10	2.65E-05	5.39E-06	2.16E-01	3.27E+00	1.25E-01	8.27E-02	5.50E-07	3.55E-03	--	1.00E+00	3.27E-03	4.74E-03	8.43E-02	3.84E-04	1.05E-08	2.00E-02	<b>4.82E+00</b>
U-236	4.66E-05	6.80E-04	--	3.02E-04	2.47E-06	5.76E-03	1.71E-03	1.25E-01	4.26E-03	1.14E-09	4.84E-05	--	3.06E-05	1.59E-01	--	1.47E-02	1.96E-04	--	4.39E-03	<b>3.17E-01</b>
U-237	3.53E-03	7.53E-03	--	2.82E-06	--	1.84E+01	2.57E+00	4.78E-03	4.75E+00	4.25E-07	1.48E-01	--	4.23E-02	3.86E-02	--	1.30E+01	2.49E-04	--	1.41E+00	<b>4.03E+01</b>
U-238	6.62E-02	1.66E-03	--	1.22E-07	2.62E-06	3.43E+00	3.25E+02	1.61E-02	1.51E+00	1.09E-05	1.30E-02	--	3.61E-02	4.49E-02	1.28E-01	1.42E+00	9.91E-04	--	1.05E-01	<b>3.32E+02</b>
U-240	6.42E-17	2.26E-06	--	6.66E-13	--	2.04E-10	--	--	2.88E-04	2.43E-05	1.05E-10	--	--	2.11E-07	--	3.85E-16	--	--	3.99E-13	<b>3.14E-04</b>
Y-90	6.90E+00	2.02E+00	--	1.82E+01	3.00E-01	5.79E+03	1.91E-02	--	5.39E+00	--	4.02E-01	--	3.56E-04	1.08E+01	--	3.08E-02	1.59E-01	2.00E+00	3.53E+00	<b>5.84E+03</b>
Zn-65	2.22E-05	--	--	--	--	--	--	--	1.36E-08	--	--	--	--	--	--	--	--	--	--	<b>2.22E-05</b>
Zr-93	--	--	--	1.14E-03	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	<b>1.14E-03</b>
Zr-95	--	--	--	--	--	--	--	--	8.03E-08	--	--	--	--	1.81E-01	--	--	--	--	--	<b>1.81E-01</b>
<b>Grand Total</b>	<b>6.55E+02</b>	<b>8.07E+02</b>	<b>5.13E-03</b>	<b>7.89E+01</b>	<b>3.40E+00</b>	<b>1.08E+06</b>	<b>3.77E+05</b>	<b>6.24E+02</b>	<b>5.34E+05</b>	<b>1.74E+00</b>	<b>1.17E+04</b>	<b>1.50E+03</b>	<b>2.96E+03</b>	<b>6.26E+03</b>	<b>1.11E+01</b>	<b>9.38E+05</b>	<b>4.20E+01</b>	<b>7.10E+00</b>	<b>4.55E+05</b>	<b>3.41E+06</b>

Data Source: CID Data Version D.9.02, LANL-CO 2010a

Note: This table contains data for WIPP-bound and emplaced waste streams only; it does not include data for potential waste streams.



Table 3-12. Total RH Radionuclides (Ci) on a Site Basis Decayed through 2009

Radionuclide	ANLE	MFC	BAPL	GEVNC	Hanford	INL	KAPL-S	LANL	ORNL	SNL-A	SPRU	SRS	Grand Total
Ac-225	5.71E-07	1.51E-05	5.11E-02	--	9.13E-02	4.74E-04	1.42E-09	2.08E-05	3.45E-01	2.10E-11	5.03E-12	1.24E-05	<b>4.87E-01</b>
Ac-227	4.26E-08	3.81E-06	1.75E-01	--	1.76E-06	1.59E-06	6.92E-08	1.84E-06	2.41E-03	1.70E-08	1.21E-10	6.89E-09	<b>1.77E-01</b>
Ac-228	1.84E-15	2.19E-11	4.00E-03	--	3.37E-02	8.01E-05	4.41E-11	8.68E-15	3.27E-03	2.11E-17	--	4.45E-14	<b>4.11E-02</b>
Ag-109m	--	--	--	--	--	--	--	--	7.61E-08	--	--	--	<b>7.61E-08</b>
Ag-110	--	--	--	--	3.86E-10	--	--	--	4.50E-14	--	--	--	<b>3.86E-10</b>
Ag-110m	--	--	--	--	2.93E-08	--	--	--	3.42E-12	--	--	--	<b>2.93E-08</b>
Am-241	1.90E+01	2.29E+01	6.44E+00	5.95E+01	2.52E+03	3.31E+03	3.81E-02	3.56E+01	7.87E+01	1.40E+01	2.80E+01	4.10E+02	<b>6.50E+03</b>
Am-242	--	1.09E-03	1.00E-02	--	2.13E+00	2.56E-04	--	--	--	2.21E-04	--	9.89E-02	<b>2.24E+00</b>
Am-242m	--	1.11E-03	1.02E-02	--	2.16E+00	2.60E-04	--	--	--	2.25E-04	--	1.01E-01	<b>2.28E+00</b>
Am-243	3.09E-05	1.18E-04	3.90E-02	--	7.39E+00	6.89E-04	6.14E-05	--	1.24E+00	3.04E-05	--	2.18E+00	<b>1.08E+01</b>
Am-245	--	--	--	--	--	--	--	--	8.64E-16	--	--	--	<b>8.64E-16</b>
At-217	5.71E-07	1.52E-05	5.12E-02	--	9.13E-02	4.74E-04	1.42E-09	2.08E-05	3.45E-01	2.10E-11	5.03E-12	1.25E-05	<b>4.88E-01</b>
Ba-133	--	--	5.73E-07	--	--	--	--	--	--	--	--	--	<b>5.73E-07</b>
Ba-137m	2.31E+02	2.71E+04	1.60E+04	5.05E+01	3.08E+05	9.08E+03	7.15E+01	5.11E+02	1.06E+03	3.60E+02	3.52E+02	1.40E+03	<b>3.64E+05</b>
Bi-210	1.63E-10	2.09E-07	1.46E-05	--	4.36E-09	1.64E-09	5.02E-09	7.15E-10	3.20E+00	1.66E-10	--	6.76E-09	<b>3.20E+00</b>
Bi-211	4.21E-08	3.76E-06	1.73E-01	--	1.73E-06	1.57E-06	6.85E-08	1.81E-06	2.38E-03	1.67E-08	1.20E-10	6.80E-09	<b>1.75E-01</b>
Bi-212	1.85E-15	1.64E-11	1.92E+01	--	6.51E+03	6.11E-02	3.57E-05	8.71E-15	6.60E-01	4.35E-07	--	4.03E-05	<b>6.53E+03</b>
Bi-213	5.70E-07	1.51E-05	5.11E-02	--	9.12E-02	4.73E-04	1.42E-09	2.08E-05	3.44E-01	2.09E-11	5.02E-12	1.24E-05	<b>4.87E-01</b>
Bi-214	7.73E-10	1.44E-06	2.56E-05	--	5.62E-08	1.37E-08	1.64E-08	3.80E-09	6.06E+00	1.46E-09	--	4.34E-08	<b>6.06E+00</b>
Bk-249	--	--	--	--	--	--	--	--	5.97E-11	--	--	--	<b>5.97E-11</b>
Bk-250	--	--	--	--	--	--	--	--	5.32E-13	--	--	--	<b>5.32E-13</b>
C-14	--	--	4.98E-06	--	7.31E-04	7.25E+01	2.16E-03	--	4.28E-04	--	--	1.33E-04	<b>7.26E+01</b>
Cd-109	--	--	--	--	--	--	--	--	7.71E-08	--	--	--	<b>7.71E-08</b>
Cd-113	2.62E-18	--	--	--	1.62E-18	--	--	--	--	--	--	--	<b>4.24E-18</b>
Cd-113m	4.15E-01	--	--	--	2.23E+00	--	--	--	--	--	--	--	<b>2.65E+00</b>
Ce-144	3.84E-12	1.70E+00	--	--	3.53E-05	5.05E-03	--	--	6.28E-10	--	--	1.03E-03	<b>1.71E+00</b>
Cf-249	--	--	--	--	--	--	4.58E-12	--	1.01E-01	--	--	2.76E-06	<b>1.01E-01</b>
Cf-250	--	--	--	--	--	--	--	--	3.06E-01	--	--	3.92E-05	<b>3.06E-01</b>
Cf-251	--	--	--	--	--	--	5.84E-14	--	1.51E-02	--	--	1.08E-06	<b>1.51E-02</b>
Cf-252	--	--	--	--	--	--	3.44E-16	--	5.58E-02	--	--	9.28E-02	<b>1.49E-01</b>
Cm-242	--	9.12E-04	8.40E-03	--	1.78E+00	2.15E-04	--	--	8.93E-11	1.85E-04	--	8.30E-02	<b>1.88E+00</b>
Cm-243	--	2.97E-05	1.62E-02	--	4.42E+01	7.04E-03	1.48E-05	--	8.27E-03	3.30E-05	--	6.29E-02	<b>4.43E+01</b>
Cm-244	1.39E-01	9.69E-04	7.60E-01	--	1.11E+03	3.16E+00	1.35E-03	--	4.68E+02	--	--	2.38E+02	<b>1.82E+03</b>
Cm-245	--	--	1.33E-06	--	1.60E-01	--	5.68E-07	--	2.11E-02	--	--	2.85E-02	<b>2.09E-01</b>
Cm-246	--	--	--	--	7.14E-02	--	7.39E-08	--	2.69E+00	--	--	3.52E-02	<b>2.80E+00</b>
Cm-247	--	--	--	--	2.26E-10	--	1.74E-13	--	1.63E-08	--	--	6.43E-08	<b>8.08E-08</b>
Cm-248	--	--	--	--	3.41E-06	2.68E-16	3.45E-13	--	6.34E-03	--	--	2.61E-06	<b>6.34E-03</b>
Cm-250	--	--	--	--	--	--	--	--	9.68E-12	--	--	--	<b>9.68E-12</b>
Co-58	--	--	--	--	--	9.07E-17	--	--	--	--	--	--	<b>9.07E-17</b>
Co-60	8.71E-02	2.25E+01	--	--	9.29E+01	5.24E+02	--	5.99E+01	1.33E+00	1.64E-02	--	1.92E+01	<b>7.20E+02</b>
Cs-134	8.19E-06	5.18E+01	5.08E-01	--	2.04E+02	3.31E+00	--	--	1.05E-02	1.13E+00	--	6.06E-01	<b>2.61E+02</b>
Cs-135	--	--	1.35E-02	--	1.13E-03	4.84E-03	4.69E-04	--	--	--	--	--	<b>1.99E-02</b>
Cs-137	2.47E+02	2.90E+04	1.71E+04	5.34E+01	3.29E+05	9.70E+03	7.64E+01	5.47E+02	1.13E+03	3.84E+02	3.77E+02	1.49E+03	<b>3.89E+05</b>
Eu-150	--	--	--	--	3.30E-06	--	--	--	--	--	--	--	<b>3.30E-06</b>
Eu-152	1.18E-04	--	5.44E-02	--	3.30E-01	1.85E-06	--	--	2.97E+00	--	--	6.02E-03	<b>3.36E+00</b>

Table 3-12. Total RH Radionuclides (Ci) on a Site Basis Decayed through 2009  
Continued

Radionuclide	ANLE	MFC	BAPL	GEVNC	Hanford	INL	KAPL-S	LANL	ORNL	SNL-A	SPRU	SRS	Grand Total
Eu-154	4.56E-03	1.72E+02	1.50E+02	--	9.13E+02	6.39E+00	--	--	3.08E+00	5.62E-01	--	1.40E+00	<b>1.25E+03</b>
Eu-155	3.76E-03	1.43E+02	2.63E-01	--	4.02E+02	1.46E+01	--	--	5.84E-02	--	--	3.06E-02	<b>5.59E+02</b>
Fe-55	2.29E-07	--	--	--	1.50E-02	8.78E+00	--	--	--	--	--	--	<b>8.80E+00</b>
Fr-221	5.70E-07	1.51E-05	5.11E-02	--	9.12E-02	4.74E-04	1.42E-09	2.08E-05	3.44E-01	2.10E-11	5.02E-12	1.24E-05	<b>4.87E-01</b>
Fr-223	5.81E-10	5.20E-08	2.38E-03	--	2.40E-08	2.18E-08	9.45E-10	2.51E-08	3.29E-05	2.31E-10	1.65E-12	9.40E-11	<b>2.42E-03</b>
Gd-152	1.88E-17	--	4.20E-16	--	5.52E-15	5.93E-20	--	--	2.43E-13	--	--	7.35E-17	<b>2.49E-13</b>
Gd-153	--	--	--	--	2.35E-10	--	--	--	--	--	--	--	<b>2.35E-10</b>
H-3	--	1.04E+02	2.79E+01	--	1.71E+03	4.79E-01	--	--	--	--	--	2.67E-01	<b>1.84E+03</b>
Ho-166m	--	--	3.05E-07	--	--	--	--	--	--	--	--	--	<b>3.05E-07</b>
I-129	--	--	8.65E-03	--	4.40E-03	3.52E-02	4.28E-05	--	8.37E-07	--	--	3.02E-02	<b>7.85E-02</b>
Kr-81	--	--	2.71E-07	--	--	--	--	--	--	--	--	--	<b>2.71E-07</b>
Kr-85	2.54E-01	--	2.68E+02	--	5.52E+02	1.12E+01	--	--	--	--	--	1.67E+00	<b>8.33E+02</b>
Mn-54	8.37E-12	1.51E-04	--	--	3.01E-01	2.75E-01	--	--	--	--	--	--	<b>5.76E-01</b>
Mo-93	--	--	--	--	1.56E-04	1.62E-02	--	--	--	--	--	--	<b>1.64E-02</b>
Na-22	--	1.13E-03	--	--	4.48E-06	2.36E-08	--	--	6.22E-09	--	--	--	<b>1.13E-03</b>
Nb-93m	8.32E-04	--	9.10E-01	--	6.40E-04	3.87E-09	8.10E-04	--	--	--	--	--	<b>9.13E-01</b>
Nb-94	--	--	2.83E-05	--	1.53E-01	4.04E-03	--	--	--	--	--	--	<b>1.58E-01</b>
Nb-95	--	--	--	--	3.70E-16	--	--	--	1.74E-20	--	--	--	<b>3.70E-16</b>
Nb-95m	--	--	--	--	1.24E-18	--	--	--	5.82E-23	--	--	--	<b>1.24E-18</b>
Nd-144	1.81E-14	1.42E-12	2.01E-26	--	1.55E-14	1.79E-13	--	--	4.01E-16	--	--	6.84E-17	<b>1.63E-12</b>
Ni-59	--	--	--	--	1.08E-03	7.24E+02	2.03E-04	--	--	--	--	4.02E-04	<b>7.24E+02</b>
Ni-63	--	5.89E+00	--	--	5.26E-02	7.31E+00	2.09E-02	--	--	--	--	--	<b>1.33E+01</b>
Np-237	1.64E-03	6.93E-02	5.40E-02	--	3.93E-01	2.48E-02	9.93E-04	3.44E-05	9.26E-03	7.45E-04	1.84E-04	2.04E+00	<b>2.59E+00</b>
Np-238	--	5.46E-06	5.03E-05	--	1.07E-02	1.29E-06	--	--	--	1.11E-06	--	4.97E-04	<b>1.12E-02</b>
Np-239	3.05E-05	1.16E-04	3.85E-02	--	7.29E+00	6.80E-04	6.06E-05	--	6.01E-01	3.00E-05	--	2.15E+00	<b>1.01E+01</b>
Np-240m	--	--	--	--	2.35E-06	2.70E-23	2.02E-12	--	4.16E-09	--	--	7.46E-14	<b>2.35E-06</b>
Pa-231	1.20E-07	1.78E-05	2.62E-01	--	1.48E-05	8.37E-06	1.26E-07	5.46E-06	4.03E-03	1.00E-07	6.65E-10	4.65E-08	<b>2.66E-01</b>
Pa-233	1.63E-03	6.87E-02	5.34E-02	--	3.89E-01	2.46E-02	9.84E-04	3.41E-05	9.17E-03	7.38E-04	1.83E-04	2.02E+00	<b>2.57E+00</b>
Pa-234	8.20E-07	1.21E-05	1.19E-07	--	2.52E-04	1.76E-05	4.74E-10	6.90E-07	6.16E-06	1.74E-07	--	9.80E-06	<b>2.99E-04</b>
Pa-234m	6.30E-04	9.29E-03	9.14E-05	--	1.94E-01	1.36E-02	3.65E-07	5.31E-04	4.73E-03	1.34E-04	--	7.53E-03	<b>2.30E-01</b>
Pb-209	5.71E-07	1.52E-05	5.11E-02	--	9.12E-02	4.74E-04	1.42E-09	2.08E-05	3.44E-01	2.10E-11	5.03E-12	1.24E-05	<b>4.87E-01</b>
Pb-210	1.65E-10	2.12E-07	1.47E-05	--	4.41E-09	1.66E-09	5.07E-09	7.23E-10	3.24E+00	1.68E-10	--	6.84E-09	<b>3.24E+00</b>
Pb-211	4.21E-08	3.77E-06	1.73E-01	--	1.74E-06	1.58E-06	6.86E-08	1.82E-06	2.39E-03	1.68E-08	1.20E-10	6.81E-09	<b>1.75E-01</b>
Pb-212	1.85E-15	1.64E-11	1.92E+01	--	6.49E+03	6.09E-02	3.56E-05	8.69E-15	6.58E-01	4.34E-07	--	4.01E-05	<b>6.51E+03</b>
Pb-214	7.75E-10	1.44E-06	2.57E-05	--	5.63E-08	1.37E-08	1.64E-08	3.81E-09	6.07E+00	1.47E-09	--	4.35E-08	<b>6.07E+00</b>
Pd-107	--	--	4.14E-04	--	1.56E-04	--	1.96E-05	--	--	--	--	--	<b>5.89E-04</b>
Pm-146	--	--	4.39E-07	--	--	--	--	--	--	--	--	--	<b>4.39E-07</b>
Pm-147	4.65E-03	8.13E+01	8.85E+00	--	1.64E+01	1.39E+01	1.08E-02	--	1.67E-02	8.84E-01	--	8.04E-01	<b>1.22E+02</b>
Po-210	1.64E-10	2.12E-07	1.47E-05	--	4.39E-09	1.64E-09	5.07E-09	7.13E-10	3.24E+00	1.68E-10	--	6.84E-09	<b>3.24E+00</b>
Po-211	1.28E-10	1.15E-08	5.27E-04	--	5.29E-09	4.81E-09	2.09E-10	5.53E-09	7.27E-06	5.11E-11	3.65E-13	2.08E-11	<b>5.35E-04</b>
Po-212	1.18E-15	1.05E-11	1.23E+01	--	4.15E+03	3.89E-02	2.28E-05	5.55E-15	4.20E-01	2.77E-07	--	2.56E-05	<b>4.16E+03</b>
Po-213	5.58E-07	1.48E-05	5.00E-02	--	8.92E-02	4.64E-04	1.39E-09	2.03E-05	3.37E-01	2.05E-11	4.92E-12	1.22E-05	<b>4.77E-01</b>
Po-214	7.74E-10	1.44E-06	2.57E-05	--	5.63E-08	1.37E-08	1.64E-08	3.81E-09	6.07E+00	1.47E-09	--	4.35E-08	<b>6.07E+00</b>
Po-215	4.21E-08	3.77E-06	1.73E-01	--	1.74E-06	1.58E-06	6.86E-08	1.82E-06	2.39E-03	1.68E-08	1.20E-10	6.81E-09	<b>1.76E-01</b>
Po-216	1.84E-15	1.64E-11	1.92E+01	--	6.48E+03	6.08E-02	3.56E-05	8.68E-15	6.57E-01	4.33E-07	--	4.01E-05	<b>6.50E+03</b>

Table 3-12. Total RH Radionuclides (Ci) on a Site Basis Decayed through 2009  
Continued

Radionuclide	ANLE	MFC	BAPL	GEVNC	Hanford	INL	KAPL-S	LANL	ORNL	SNL-A	SPRU	SRS	Grand Total
Po-218	7.61E-10	1.41E-06	2.52E-05	--	5.53E-08	1.35E-08	1.61E-08	3.74E-09	5.97E+00	1.44E-09	--	4.28E-08	<b>5.97E+00</b>
Pr-144	3.77E-12	1.67E+00	--	--	3.46E-05	4.95E-03	--	--	6.15E-10	--	--	1.01E-03	<b>1.67E+00</b>
Pu-236	--	--	7.67E-08	--	3.05E-06	1.77E-02	--	--	--	--	--	--	<b>1.77E-02</b>
Pu-238	2.34E+01	2.41E+03	4.22E+02	6.18E-01	1.03E+03	7.83E+01	3.13E+00	2.20E+01	6.76E+01	3.24E+00	--	3.13E+03	<b>7.18E+03</b>
Pu-239	2.24E+01	8.50E+02	7.53E-01	4.38E+00	1.13E+03	9.79E+02	8.82E-03	1.57E+02	1.04E+01	2.91E+00	1.59E+02	4.29E+01	<b>3.36E+03</b>
Pu-240	7.32E+00	3.57E+02	8.44E-01	2.03E+00	3.60E+02	2.66E+02	2.21E-03	3.10E+01	1.01E+01	6.49E-01	--	2.72E+01	<b>1.06E+03</b>
Pu-241	2.19E+02	5.93E+01	4.84E+01	2.33E+01	1.61E+04	2.13E+03	2.24E-01	3.91E+02	7.98E+01	4.35E-02	--	3.34E+03	<b>2.24E+04</b>
Pu-242	7.75E-03	2.67E-03	5.98E-03	1.19E-03	6.49E-01	9.28E-01	8.42E-06	1.91E-02	7.30E-02	7.16E-05	--	5.17E-01	<b>2.20E+00</b>
Pu-243	--	--	--	--	2.23E-10	--	1.72E-13	--	1.61E-08	--	--	6.36E-08	<b>7.99E-08</b>
Pu-244	--	--	--	--	2.33E-06	2.67E-23	2.00E-12	--	4.12E-09	--	--	7.39E-14	<b>2.33E-06</b>
Ra-223	4.26E-08	3.81E-06	1.75E-01	--	1.76E-06	1.59E-06	6.93E-08	1.84E-06	2.41E-03	1.69E-08	1.21E-10	6.89E-09	<b>1.77E-01</b>
Ra-224	1.84E-15	1.63E-11	1.91E+01	--	6.47E+03	6.08E-02	3.56E-05	8.67E-15	6.56E-01	4.33E-07	--	4.00E-05	<b>6.49E+03</b>
Ra-225	5.71E-07	1.52E-05	5.12E-02	--	9.13E-02	4.74E-04	1.42E-09	2.08E-05	3.45E-01	2.10E-11	5.03E-12	1.24E-05	<b>4.88E-01</b>
Ra-226	7.83E-10	1.46E-06	2.60E-05	--	5.69E-08	1.39E-08	1.66E-08	3.85E-09	6.14E+00	1.48E-09	--	4.40E-08	<b>6.14E+00</b>
Ra-228	2.18E-15	2.58E-11	4.73E-03	--	3.98E-02	9.46E-05	5.21E-11	1.02E-14	3.86E-03	2.49E-17	--	5.25E-14	<b>4.85E-02</b>
Rb-87	--	--	1.45E-06	--	--	--	--	--	--	--	--	--	<b>1.45E-06</b>
Rh-106	2.83E-09	7.35E-03	2.87E-06	--	2.15E-03	4.83E-03	--	5.33E-11	5.13E-07	--	--	6.73E-03	<b>2.11E-02</b>
Rn-219	4.21E-08	3.76E-06	1.73E-01	--	1.73E-06	1.57E-06	6.85E-08	1.81E-06	2.38E-03	1.67E-08	1.20E-10	6.80E-09	<b>1.75E-01</b>
Rn-220	1.84E-15	1.64E-11	1.92E+01	--	6.48E+03	6.08E-02	3.56E-05	8.68E-15	6.57E-01	4.33E-07	--	4.01E-05	<b>6.50E+03</b>
Rn-222	7.75E-10	1.44E-06	2.57E-05	--	5.64E-08	1.37E-08	1.64E-08	3.81E-09	6.08E+00	1.47E-09	--	4.36E-08	<b>6.08E+00</b>
Ru-106	2.86E-09	7.43E-03	2.90E-06	--	2.75E-03	4.87E-03	--	5.38E-11	5.18E-07	--	--	6.79E-03	<b>2.19E-02</b>
Sb-125	6.23E-04	1.37E+01	3.81E-01	--	8.26E+01	2.20E+00	--	--	1.06E-03	--	--	6.19E-04	<b>9.89E+01</b>
Sb-126	1.19E-04	--	6.92E-03	--	1.24E-01	--	5.48E-05	--	--	--	--	2.00E-07	<b>1.31E-01</b>
Sb-126m	8.48E-04	--	4.94E-02	--	8.83E-01	--	3.91E-04	--	--	--	--	1.43E-06	<b>9.33E-01</b>
Se-79	--	--	1.38E-01	--	2.50E-01	--	1.20E-04	--	--	--	--	1.62E-03	<b>3.89E-01</b>
Sm-146	--	--	5.72E-15	--	--	--	--	--	--	--	--	--	<b>5.72E-15</b>
Sm-147	9.09E-10	7.74E-09	4.08E-10	--	3.42E-09	1.03E-08	1.94E-12	--	2.32E-10	4.94E-10	--	5.42E-11	<b>2.35E-08</b>
Sm-148	4.07E-32	--	8.60E-32	--	2.31E-30	--	--	--	3.46E-28	--	--	2.29E-32	<b>3.48E-28</b>
Sm-151	1.85E+00	7.69E+00	7.51E+01	--	4.42E+01	1.20E+01	1.28E+00	--	--	--	--	4.27E-01	<b>1.42E+02</b>
Sn-119m	--	--	--	--	9.43E-10	--	--	--	--	--	--	--	<b>9.43E-10</b>
Sn-121m	--	--	6.37E-02	--	6.48E-04	--	3.17E-03	--	--	--	--	--	<b>6.75E-02</b>
Sn-126	8.50E-04	--	4.95E-02	--	8.84E-01	--	3.92E-04	--	--	--	--	1.43E-06	<b>9.35E-01</b>
Sr-90	1.46E+02	3.91E+04	1.69E+04	1.64E+01	2.07E+05	1.34E+04	7.24E+01	3.78E+02	7.79E+02	3.25E+02	6.04E+02	9.46E+02	<b>2.80E+05</b>
Ta-182	--	--	--	--	--	1.43E-13	--	--	--	--	--	--	<b>1.43E-13</b>
Tc-99	1.04E-02	1.27E+01	4.52E+00	--	1.19E+01	1.61E+02	2.46E-02	--	3.26E-03	--	--	1.59E-01	<b>1.90E+02</b>
Te-125m	1.51E-04	3.32E+00	9.22E-02	--	2.00E+01	5.32E-01	--	--	2.56E-04	--	--	1.50E-04	<b>2.39E+01</b>
Th-227	4.15E-08	3.71E-06	1.70E-01	--	1.71E-06	1.55E-06	6.75E-08	1.79E-06	2.35E-03	1.65E-08	1.18E-10	6.70E-09	<b>1.73E-01</b>
Th-228	1.87E-15	1.66E-11	1.94E+01	--	6.56E+03	6.16E-02	3.60E-05	8.78E-15	6.65E-01	4.36E-07	--	4.06E-05	<b>6.58E+03</b>
Th-229	5.72E-07	1.52E-05	5.12E-02	--	9.14E-02	4.75E-04	1.42E-09	2.08E-05	3.45E-01	2.10E-11	5.04E-12	1.25E-05	<b>4.88E-01</b>
Th-230	3.04E-07	4.31E-04	1.98E-03	--	3.48E-05	7.92E-06	1.97E-06	2.65E-06	5.81E-04	5.73E-07	--	1.36E-05	<b>3.06E-03</b>
Th-231	6.84E-04	5.53E-02	1.31E-02	--	8.68E-03	3.39E-02	8.30E-05	1.28E-02	8.18E-04	3.91E-04	3.11E-06	5.78E-04	<b>1.26E-01</b>
Th-232	3.18E-15	4.40E-11	4.53E-03	--	6.06E-02	9.88E-05	4.84E-11	1.33E-14	5.88E-03	6.85E-17	--	1.63E-13	<b>7.12E-02</b>
Th-234	6.31E-04	9.30E-03	9.15E-05	--	1.94E-01	1.36E-02	3.65E-07	5.32E-04	4.74E-03	1.34E-04	--	7.54E-03	<b>2.30E-01</b>
Tl-207	4.19E-08	3.75E-06	1.72E-01	--	1.73E-06	1.57E-06	6.82E-08	1.81E-06	2.37E-03	1.67E-08	1.19E-10	6.77E-09	<b>1.74E-01</b>
Tl-208	6.64E-16	5.90E-12	6.90E+00	--	2.33E+03	2.19E-02	1.28E-05	3.12E-15	2.37E-01	1.56E-07	--	1.44E-05	<b>2.34E+03</b>

Table 3-12. Total RH Radionuclides (Ci) on a Site Basis Decayed through 2009  
Continued

Radionuclide	ANLE	MFC	BAPL	GEVNC	Hanford	INL	KAPL-S	LANL	ORNL	SNL-A	SPRU	SRS	Grand Total
Tl-209	1.26E-08	3.33E-07	1.12E-03	--	2.01E-03	1.04E-05	3.13E-11	4.57E-07	7.58E-03	4.61E-13	1.11E-13	2.73E-07	<b>1.07E-02</b>
U-232	--	--	2.49E+01	--	6.77E+03	6.13E-02	3.72E-05	--	6.79E-01	--	--	4.48E-05	<b>6.80E+03</b>
U-233	1.81E-04	1.01E-02	1.64E+01	3.72E-05	1.22E+02	4.38E-01	4.83E-07	1.11E-01	1.26E+01	3.75E-08	8.04E-09	8.41E-02	<b>1.52E+02</b>
U-234	1.81E-02	3.21E+00	2.31E+00	8.55E-03	5.70E-01	2.49E-01	5.68E-03	1.23E-01	3.73E-02	5.37E-03	--	1.63E-01	<b>6.69E+00</b>
U-235	6.93E-04	5.60E-02	1.33E-02	3.10E-04	8.79E-03	3.45E-02	8.40E-05	1.29E-02	8.28E-04	3.96E-04	3.14E-06	5.86E-04	<b>1.28E-01</b>
U-236	3.88E-06	5.84E-02	1.51E-01	--	2.03E-01	1.20E-03	7.97E-04	1.20E-05	4.28E-04	2.31E-07	--	5.38E-04	<b>4.15E-01</b>
U-237	5.37E-03	1.46E-03	1.19E-03	--	3.96E-01	5.21E-02	5.50E-06	9.59E-03	1.19E-03	1.07E-06	--	8.21E-02	<b>5.49E-01</b>
U-238	6.37E-04	9.39E-03	9.24E-05	1.56E-04	1.96E-01	1.37E-02	3.69E-07	5.37E-04	4.79E-03	1.35E-04	--	7.62E-03	<b>2.33E-01</b>
U-240	--	--	--	--	2.30E-06	2.65E-23	1.98E-12	--	4.08E-09	--	--	7.31E-14	<b>2.31E-06</b>
Y-90	1.44E+02	3.86E+04	1.67E+04	1.64E+01	2.05E+05	1.33E+04	7.16E+01	3.73E+02	7.71E+02	3.21E+02	5.97E+02	9.35E+02	<b>2.77E+05</b>
Y-91	--	1.04E-12	--	--	--	--	--	--	--	--	--	--	<b>1.04E-12</b>
Zn-65	--	--	--	--	5.55E-06	--	--	--	2.36E-14	--	--	--	<b>5.55E-06</b>
Zr-93	1.26E-03	--	1.15E+00	--	1.18E-03	--	3.01E-03	--	--	--	--	--	<b>1.15E+00</b>
Zr-95	--	--	--	--	1.68E-16	--	--	--	7.92E-21	--	--	--	<b>1.68E-16</b>
<b>Grand Total</b>	<b>1.06E+03</b>	<b>1.38E+05</b>	<b>6.80E+04</b>	<b>2.27E+02</b>	<b>1.13E+06</b>	<b>5.38E+04</b>	<b>2.97E+02</b>	<b>2.51E+03</b>	<b>4.54E+03</b>	<b>1.41E+03</b>	<b>2.12E+03</b>	<b>1.20E+04</b>	<b>1.41E+06</b>

Data Source: CID Data Version D.9.02, LANL-CO 2010a

Note: This table contains data for WIPP-bound and emplaced waste streams only; it does not include data for potential waste streams.

### 3.3.2 WIPP Radionuclide Inventory

Four radionuclides, Am-241, Pu-238, Pu-239, and Pu-241, comprise about 95% of the total CH-TRU waste activity. Seven radionuclides, Ba-137m, Cs-137, Pu-238, Pu-241, Sr-90, U-232, and Y-90 comprise about 95% of the total RH-TRU waste activity. Table 3-13 lists the total curies by site, decayed to the end of CY 2009.

**Table 3-13. Total Curies by Site Decayed through 2009**

TRU Waste Site	Total CH Activity (Ci)	Total RH Activity (Ci)	Total CH/RH Activity (Ci)
Argonne National Laboratory – East	6.55E+02	1.06E+03	1.72E+03
Material and Fuels Complex	8.07E+02	1.38E+05	1.39E+05
U.S. Army Materiel Command	5.13E-03	0.00E+00	5.13E-03
Bettis Atomic Power Laboratory	7.89E+01	6.80E+04	6.80E+04
General Electric Vallecitos Nuclear Center	3.40E+00	2.27E+02	2.30E+02
Hanford (Richland Operations) Site	1.08E+06	1.13E+06	2.21E+06
Idaho National Laboratory	3.77E+05	5.38E+04	4.31E+05
Knolls Atomic Power Laboratory – Nuclear Fuel Services	6.24E+02	0.00E+00-	6.24E+02
Knolls Atomic Power Laboratory – Schenectady	0.00E+00	2.97E+02	2.97E+02
Los Alamos National Laboratory	5.34E+05	2.51E+03	5.36E+05
Lawrence Berkeley Laboratory	1.74E+00	0.00E+00	1.74E+00
Lawrence Livermore National Laboratory	1.17E+04	0.00E+00	1.17E+04
Nevada Test Site	2.96E+03	0.00E+00	2.96E+03
Nuclear Radiation Development, LLC	1.50E+03	0.00E+00	1.50E+03
Oak Ridge National Laboratory	6.26E+03	4.54E+03	1.08E+04
Paducah Gaseous Diffusion Plant	1.11E+01	0.00E+00	1.11E+01
Rocky Flats Environmental Technology Site	9.38E+05	0.00E+00	9.38E+05
Sandia National Laboratories – Albuquerque	4.20E+01	1.41E+03	1.46E+03
Savannah River Site	4.55E+05	1.20E+04	4.67E+05
Separations Process Research Unit	7.10E+00	2.12E+03	2.12E+03
<b>Grand Total</b>	<b>3.41E+06</b>	<b>1.41E+06</b>	<b>4.82E+06</b>

Data Source: CID Data Version D.9.02, LANL-CO 2010a

Note: This table contains data for WIPP-bound and emplaced waste streams only; it does not include data for potential waste streams.

To facilitate comparing the radionuclide activities in this report to those of the ATWIR-2009 (DOE 2009a), the radionuclides have been decay-corrected to WIPP site closure (2033). The comparison is provided in Appendix D.

## 4.0 POTENTIAL WIPP TRU WASTE

There has been some confusion in the past regarding the designation of waste streams as either “WIPP-bound” or “potential.” TRU waste streams are split into two designations, “WIPP-bound” and “potential,” as directed by DOE/CBFO memorandum (Patterson 2010) provided in Appendix F. A waste stream with the designation of “WIPP-bound” simply means that the waste stream data will be modeled in the PA calculations. A waste

stream with the designation of “potential” will not be modeled in the PA calculations. These designations in no way are intended to presuppose the outcome of the waste certification process. All TRU waste must meet all of the WIPP requirements (e.g., WIPP WAC; WIPP Hazardous Waste Facility Permit WAP) before it can be disposed of at WIPP.

Approximately 21% of the final form TRU waste volume reported by the TRU waste sites during this year’s data collection has been identified as potential TRU waste. While a site may designate waste streams as potential for many different reasons, it is usually because of regulatory or physical constraints. Section 4.1 identifies the most significant reasons why waste might be designated as potential TRU waste.

#### **4.1 Categories of Potential WIPP TRU Waste**

DOE has listed the criteria (Patterson 2010) for categorizing waste streams as potential. Below are some of the categories for which TRU waste sites would consider their waste stream as potential TRU waste.

- TRU Determination – Any waste that is categorized as “undetermined” will remain potential until the waste stream has been officially determined to be TRU. If the waste stream is determined to be non-TRU, it will be removed from the inventory.
- Defense Determination – WIPP can only accept TRU waste resulting from defense-related activities, as outlined in a memorandum from Robert R. Nordhaus, General Counsel, to Al Alm, Assistant Secretary for Environmental Management (DOE 1996c). The Nuclear Waste Policy Act of 1982, 42 USC§ 10101, provides the definition of the term, “atomic energy defense activity” (U.S. Congress 1982). Any waste that has an “unknown” defense determination will remain potential until the waste stream has been officially determined to be defense waste. If the waste stream is determined to be non-defense, it will be removed from the inventory.
- Regulatory Restrictions – There are numerous regulatory restrictions that would prevent waste in its current form from coming to WIPP. Examples include limits on curies and dose rates on RH canisters, limits for total emplacement curies on RH waste, prohibited Resource Conservation and Recovery Act (RCRA) hazardous waste, etc. Sites must treat, repackage, or remove any restricted items before such waste can be accepted for disposal at WIPP.
- Incomplete Data – Waste that has missing or incomplete data, such as radionuclide concentrations, waste material parameter densities, final form container data, or unknown waste stream information is deemed potential until required data are obtained.
- Directed by DOE to Move to Potential – Waste will be moved to potential at the direction of DOE.

Waste streams categorized as “potential” may become eligible for disposal at WIPP if all of the requirements, as noted above, are met and the waste meets all of the WIPP requirements (e.g., WIPP WAC, Hazardous Waste Facility Permit WAP), not because they are designated “WIPP-bound or “potential” in this report.

Table 4-1 identifies the current potential WIPP CH-TRU waste streams and Table 4-2 identifies the current potential WIPP RH-TRU waste streams. Table 4-3 identifies waste streams that were moved from potential to WIPP-bound during this reporting period.

**Table 4-1. Potential WIPP CH-TRU Waste Streams**

<b>Waste Stream ID<sup>1</sup></b>	<b>Final Form Anticipated Volume (m<sup>3</sup>)</b>	<b>Categories of Potential WIPP CH-TRU Waste</b>
BL-Parks	9.62E+00	Incomplete Data
BT-T006	5.09E+01	Regulatory Restrictions
IN-BN050	2.08E-01	Defense Determination
IN-BN811	1.89E+00	Incomplete Data
IN-W269	2.87E+01	Incomplete Data
IN-W322	5.67E+00	Defense Determination
IN-W337	2.08E-01	Defense Determination
IN-W338	1.25E+00	Incomplete Data
IN-W339	8.53E+00	Incomplete Data
IN-W350	2.08E-01	Incomplete Data
LA-TA-00-04	2.08E-01	Regulatory Restrictions
LA-TA-03-17	2.08E+01	Incomplete Data
LA-TA-03-20	4.16E-01	Incomplete Data
LA-TA-03-21	9.45E+01	Incomplete Data
LA-TA-03-23	6.80E+01	Incomplete Data
LA-TA-21-11	2.08E+01	Incomplete Data
RLPFP-02A	2.46E+01	Incomplete Data
RLPRC-01	2.10E+00	Defense Determination
RP-TFC001	4.39E+02	Directed by DOE to Move to Potential
RP-W754	3.23E+02	Directed by DOE to Move to Potential
RP-W755	7.94E+02	Directed by DOE to Move to Potential
SR-T001-WSB-1	4.91E+03	Incomplete Data
SR-T001-WSB-3	1.44E+02	Incomplete Data
SR-W026-MFFF-1	3.50E+03	Incomplete Data
SR-W026-PDCF-1	2.15E+03	Incomplete Data
SR-W026-WSB-2	6.26E+02	Incomplete Data
SR-W027-221H-HET-B	1.85E+01	Incomplete Data
SR-W027-321-322M-HET	6.16E+00	Incomplete Data
SR-W027-773A-HET-CLAS	1.74E+01	Incomplete Data
SR-W027-HBL-Box-B	1.29E+02	Incomplete Data
SR-W027-UNK	2.65E+01	Incomplete Data
WV-M010a	9.45E+00	Directed by DOE to Move to Potential
WV-T004	8.32E-01	Directed by DOE to Move to Potential

**Table 4-1. Potential WIPP CH-TRU Waste Streams**  
Continued

Waste Stream ID <sup>1</sup>	Final Form Anticipated Volume (m <sup>3</sup> )	Categories of Potential WIPP CH-TRU Waste
WV-T006a	4.59E+02	Directed by DOE to Move to Potential
WV-T017a	7.56E+00	Directed by DOE to Move to Potential
WV-W024a	4.15E+01	Directed by DOE to Move to Potential
WV-Z001	1.35E+03	Directed by DOE to Move to Potential
<b>Grand Total</b>	<b>1.53E+04</b>	

<sup>1</sup>See Figure 1-1 for site designators.  
Data Source: CID Data Version D.9.02, LANL-CO 2010a

**Table 4-2. Potential WIPP RH-TRU Waste Streams**

Waste Stream ID <sup>1</sup>	Final Form Anticipated Volume (m <sup>3</sup> )	Categories of Potential WIPP RH-TRU Waste
AW-IN-TRA-BE-01	3.12E+01	Regulatory Restrictions
AW-W018	4.45E+00	Regulatory Restrictions
AW-W019	8.90E-01	Regulatory Restrictions
AW-W029	8.90E+00	Regulatory Restrictions
BL-Parks-A	8.90E-01	Incomplete Data
IN-ID-RTC-S5000	1.51E+01	Incomplete Data
IN-SBW-01A	5.99E+02	TRU Waste Determination
IN-SBW-01B	8.90E+01	TRU Waste Determination
IN-W342R	8.90E-01	Defense Determination
IN-W359R	8.90E-01	Incomplete Data
IN-W360R	8.90E-01	Regulatory Restrictions
RL221U-09	3.56E+00	Incomplete Data
RL300-11	1.07E+01	Regulatory Restrictions
RLCH2-08	4.17E+02	TRU Waste Determination
RLHAN-08	8.90E-01	Incomplete Data
RP-TFC002	1.92E+03	Directed by DOE to Move to Potential
RP-TFC003	2.58E+02	Directed by DOE to Move to Potential
RP-W013	4.10E+02	Directed by DOE to Move to Potential
RP-W016	1.28E+03	Directed by DOE to Move to Potential
WV-T006b	5.75E+02	Directed by DOE to Move to Potential
WV-T017b	3.38E+01	Directed by DOE to Move to Potential
WV-W024b	1.60E+02	Directed by DOE to Move to Potential
<b>Grand Total</b>	<b>5.82E+03</b>	

<sup>1</sup>See Figure 1-1 for site designators.  
Data Source: CID Data Version D.9.02, LANL-CO 2010a



**Table 4-3. Potential to WIPP-Bound Waste Streams**

<b>Waste Stream ID<sup>1</sup></b>	<b>Reason</b>
AW-W020.13	Received New Radionuclide Data
AW-W048	Received Complete Data
IN-BN204	Received Complete Data
IN-NRF-SPC	Received Complete Data
IN-W169R	Received Complete Data
IN-W170	Received Complete Data
IN-W171	Received Complete Data
IN-W197R	Received Complete Data
IN-W208R	Received Complete Data
IN-W216R	Received Complete Data
IN-W228R	Received Complete Data
IN-W243R	Received Complete Data
IN-W245R	Received Complete Data
IN-W247R	Received Complete Data
IN-W252R	Received Complete Data
IN-W254R	Received Complete Data
IN-W259	Received Complete Data
IN-W283	Received Complete Data
IN-W283R	Received Complete Data
IN-W287	Received Complete Data
IN-W294R	Received Complete Data
IN-W296R	Received Complete Data
IN-W298R	Received Complete Data
IN-W317R	Received Complete Data
IN-W323	Received Complete Data
IN-W345	Received Complete Data
IN-W347	Received Complete Data
IN-W351	Received Complete Data
IN-W358	Received Complete Data
IN-W364R	Received Complete Data
IN-W365R	Received Complete Data
LA-LA238HOR	Received Complete Data (Moved into LA-MHD01.001)
LB-T004	Received Complete Data
ND-T001	Defense Determination Complete
RL618-01	Received Complete Data
RL618-07	Received Complete Data
RLGEV-08	Received Complete Data
RLMLL-01	Received Complete Data
RLRFET-01	Received Complete Data
SP-T001	Received Complete Data
SP-T002	Received Complete Data

<sup>1</sup>See Figure 1-1 for site designators.

Data Source: CID Data Version D.9.02, LANL-CO 2010a

## 5.0 SUMMARY

This report is an update to the ATWIR-2009 (DOE 2009a). Like the ATWIR-2009, this report focuses on changes resulting from characterization, improved estimations, continued generation, and WIPP emplacement, and also identifies the waste streams that have been moved from the designation of “potential” waste streams to the designation of “WIPP-bound” waste streams. The cut-off date for data collection for this report (or ATWIR-2010) was December 31, 2009.

During the ATWIR-2010 reporting period, TRU waste was shipped from INL, LANL, ORNL, SRS, ANL-E, and GEVNC to WIPP; and intersite shipments continued from the Nevada Test Site (NTS) to INL.

As a result of these shipments, more characterization data have been reported by these TRU waste sites and better estimates have been provided for this inventory.

The information in this report was collected from the TRU waste sites, entered into the CBFO QAPD-compliant CID, and DOE TRU waste managers (or their designees) validated their sites’ data to ensure completeness and accuracy. The CID includes estimates for: 1) waste volumes (stored, projected, and emplaced); 2) radionuclides (decayed to a common year at the end of CY 2009 and the WIPP proposed closure date of 2033); 3) waste and packaging material parameters; and 4) chemical components. An analysis was performed on the chemical component and cement data from the CID, and an analysis was performed on the emplaced data from the WDS database.

This report includes WIPP-bound, emplaced, and potential waste stream profiles, inventory comparisons, a historic crosswalk of TRU waste streams, and the DOE/CBFO screening memorandum (Patterson 2010). These can be found in Appendices A, B, C, D, E, and F, respectively.

## GLOSSARY

**40 CFR Part 191, Protection of Environment** – EPA: Environmental Radiation Protection Standards for Management and Disposal of Spent Nuclear Fuel, High-Level and Transuranic Radioactive Wastes – The EPA’s environmental standards for the storage (Subpart A) and disposal (Subpart B) of spent nuclear fuel, and high-level and TRU radioactive wastes. This is the primary post-closure standard that applies to WIPP. Subpart C of Title 40 CFR Part 191 establishes the requirements that apply to the performance assessments and compliance assessments that will be used to demonstrate compliance with the requirements of the disposal regulations.

**Acceptable Knowledge** – Title 40 CFR 194.2 defines acceptable knowledge as any information about the process used to generate waste, material inputs to the process, and the time period during which the waste was generated, as well as data resulting from the analysis of waste, conducted prior to or separate from the waste certification process authorized by EPA’s certification decision, to show compliance with Condition 3 of the certification decision. (Appendix A of Title 40 CFR 194.2.)

**Anticipated Inventory** – As defined in this report, the sum of the total stored and total projected inventory volumes reported by the TRU waste sites.

**Complexing Agents** – Organic molecules that are capable of binding to metals. These organic molecules include, but are not limited to acetate, citrate, oxalate, and EDTA.

**Contact-Handled TRU Waste** – Packaged TRU waste with an external surface dose rate not greater than 200 millirem (mrem) per hour.

**Current Form Waste** – The chemical and physical state of waste when it is generated and as it is currently being stored on site.

**Defense Waste** – (1) Radioactive waste from any activity performed in whole or in part in support of DOE atomic energy defense activities. Excludes waste under the purview of the Nuclear Regulatory Commission or generated by the commercial nuclear power industry. (2) Nuclear waste derived mostly from the manufacturer of nuclear weapons, weapons-related research programs, the operation of naval reactors, and the decontamination of nuclear weapons production facilities.

**Department of Energy Site** – A DOE-owned or controlled tract used for DOE operations. Either a tract owned by DOE or a tract leased or otherwise made available to the federal government under terms that afford to DOE rights of access and control substantially equal to those that DOE would possess if it were the holder of the fee (or pertinent interest therein) as agent of and on behalf of the government. One or more DOE operations/program activities are carried out within the boundaries of the described tract.

**Disposal** – Emplacement of waste in a manner that assures isolation from the biosphere for the foreseeable future with no intent of retrieval and that requires deliberate action to

regain access to the waste. For example, disposal of waste in a mined geologic repository occurs when all of the shafts to the repository area are backfilled and sealed.

**Disposal or Scaled Inventory Volume** – The inventory volume to be used for performance assessment calculations is the “disposal inventory.” The LWA defines the total amount of TRU waste allowed at WIPP as 6,200,000 cubic feet (approximately 175,560 cubic meters).

**Emplaced Inventory** – Waste that has been disposed at WIPP as of the inventory date (December 31, 2009) for this report.

**Final Form Waste** – Form of waste in approved packaging that will be shipped to and emplaced at WIPP.

**Land Withdrawal Act** – The 1992 legislation passed by the U.S. Congress as Public Law 102-579, withdrawing the surface land and underlying minerals at the WIPP site from public use, transferring the property from the Bureau of Land Management to DOE, and enabling the start of the WIPP Test Phase. This act was amended in 1996 by Public Law 104-201.

**Mixed TRU Waste** – TRU waste that contains both radioactive and hazardous components as defined by the Atomic Energy Act (U.S. Congress 1954) and the RCRA as codified in Title 40 CFR 261.3. The RCRA test phase was removed by Public Law 104-201 in the 1996 LWA Amendments.

**Oxyanions** - Negatively charged ionic species containing oxygen, such as sulfate, nitrate, and phosphate.

**Payload Container Volume** – For the purpose of this document, the payload container volume is the volume that the final form package occupies at the time it is emplaced in the repository. Examples of payload container volume used in this context are ten-drum overpacks (TDOPs) with a volume of 4.50 m<sup>3</sup> and RH-TRU canister overpacks of three 55-gallon drums with a volume of 0.89 m<sup>3</sup>.

**Performance Assessment** – Performance assessment is an analysis that: (1) identifies the processes and events that might affect the disposal system; (2) examines the effects of these processes and events on the performance of the disposal system; and (3) estimates the cumulative releases of radionuclides, considering the associated uncertainties, caused by all significant processes and events. These estimates are incorporated into an overall probability distribution of cumulative release to the extent practicable.

**Performance Assessment Baseline Calculations** – A PA run during the recertification that incorporates EPA requested changes. The results of this PA become the WIPP regulatory performance baseline that demonstrates compliance with EPA's radioactive waste containment requirements.

**Potential Inventory** – For this report, a designation for a waste stream that will not be included in performance assessment calculations. This designation is not intended to identify whether the waste stream may or may not be emplaced at WIPP.

**Projected Inventory** – That part of the inventory that has not been generated (does not physically exist) but is estimated to be generated at some time in the future by the TRU waste sites. TRU waste in projected waste streams includes waste from programs that have not come on line at this time, as well as waste from ongoing projects and D&D waste.

**Radioactive** – Term used to refer to an unstable atomic nucleus that decays with the spontaneous emission of ionizing radiation (see also “radionuclide”).

**Radionuclide** – (1) A species of atom having an unstable nucleus that is subject to spontaneous decay or disintegration and usually accompanied by the emission of ionizing radiation. (2) Any nuclide that emits radiation. A nuclide is a species of atom characterized by the constitution of its nucleus and hence by the number of protons, the number of neutrons, and the energy content.

**Reacted Cement** – Cement that has been hydrated by setting up under aqueous conditions.

**Remote-Handled TRU Waste** – Packaged TRU waste with an external surface dose rate equal to or exceeding 200 mrem per hour.

**Retrievably Stored Waste** – Stored waste that includes waste stored in buildings or berms with earthen cover since 1970, but does not include waste buried prior to 1970. Retrievably stored waste also includes waste that is stored in underground storage tanks or ponds.

**Scaling** – The process for adjusting the CH- and RH-TRU waste volumes so that the stored, projected, and emplaced inventories at WIPP apply to the disposal inventory or regulatory limits for performance assessment modeling purposes. Only the projected waste stream volumes are scaled.

**Stored Inventory** – That part of the TRU waste inventory that is currently in retrievable storage at of the data cutoff date for inventory information. Stored inventory can be “current form waste” or “final form waste.”

**Total Inventory** – Inventory remaining at the TRU waste site and the inventory that is emplaced at WIPP (stored + projected + emplaced).

**Transuranic** – Pertaining to elements that have atomic numbers greater than 92, including neptunium, plutonium, americium, and curium. All are radioactive, are not naturally occurring, and are members of the actinide group.

**Transuranic Waste** – The LWA definition of transuranic waste is: “Transuranic waste is radioactive waste containing more than 100 nanocuries (3700 becquerels) of alpha-emitting transuranic isotopes per gram of waste, with half lives greater than 20 years, except for: (1) high-level radioactive waste; (2) waste that the Secretary of Energy has determined, with the concurrence of the Administration of the Environmental Protection Agency, does not need the degree of isolation required by 40 CFR Part 191 disposal

regulations; (3) waste that the Nuclear Regulatory Commission has approved for disposal on a case-by-case basis in accordance with 10 CFR Part 61.”

**TRU Waste Sites** – The five major DOE facilities and several smaller sites throughout the U.S. that generate and store TRU waste.

**Unreacted Cement** – Dry cement that was added as an absorbent or neutralizer to a waste stream, but under dry, non-aqueous conditions.

**Waste Acceptance Criteria** – The criteria used to determine if waste is acceptable for disposal at WIPP. For the purposes of this document, WAC refers to the WIPP WAC.

**Waste Form** – The physical form of the waste such as sludges, combustibles, metals.

**Waste Isolation Pilot Plant**– (1) The project authorized under Section 213 of the DOE National Security and Military Applications of Nuclear Energy Authorization Act of 1980 to demonstrate the safe and environmentally sound disposal of radioactive waste materials generated by atomic energy defense activities. (2) A research and development facility located near Carlsbad, New Mexico, to be used to demonstrate a practical, long-term solution to a complex problem: the safe disposal in deep geologic repositories of TRU waste resulting from DOE activities.

**WIPP-bound TRU Waste** – For this report, the designation for a waste stream that will be included in performance assessment calculations. This designation is not intended to identify whether or not the waste stream will be emplaced at WIPP.

**WIPP Waste Stream** – A waste stream that is being planned for shipment to WIPP or is currently certified and being shipped to WIPP.

**Waste Material Parameter**– A non-radiological material that is found in TRU waste. As an example, cellulose, plastic, and rubber (CPR) are monitored as contributors to the generation of gas at WIPP.

**Waste Stream** – Waste material generated from a single process or from an activity that is similar in material, physical form, and hazardous constituents.

**Waste Stream Profile** – A description of a CH- or RH-TRU waste stream that has been designated as WIPP-bound, potential, or has been emplaced. The waste profile is presented in tabular format and is intended to provide a summary of the important information about a particular waste stream.

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**APPENDIX A: WIPP-Bound Waste**

The following WSPs contain information on waste streams that are placed in the WIPP-bound category as of the inventory date, December 31, 2009.

The TRU waste sites that have reported WIPP-bound waste streams are:

Argonne National Laboratory – East	AE
Material and Fuels Complex	AW
Bettis Atomic Power Laboratory	BT
Idaho National Laboratory	IN
Knolls Atomic Power Laboratory – Schenectady	KA
Knolls Atomic Power Laboratory – Nuclear Fuels Service	KN
Los Alamos National Laboratory	LA
Lawrence Berkeley Laboratory	LB
Lawrence Livermore National Laboratory	LL
U. S. Army Materiel Command	MC
Nuclear Radiation Development Site	ND
Nevada Test Site	NT
Oak Ridge National Laboratory	OR
Paducah Gaseous Diffusion Plant	PA
Hanford (Richland Operations) Site	RL
Sandia National Laboratories (Albuquerque)	SA
Separations Process Research Unit	SP
Savannah River Site	SR
General Electric Vallecitos Nuclear Center	VN

Waste Stream ID: **AE-T001**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Argonne National Laboratory - East	Final Waste Form	Combustible	Waste Matrix Code	S5420	Handling	CH
Source Cat.	R&D/R&D Laboratory Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	ANL-E Contact-Handled Mixed Debris			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	58.9	0.0	58.9
<b>Current Form Total</b>	<b>58.9</b>	<b>0.0</b>	<b>58.9</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	58.9	0.0	58.9
<b>Final Form Total</b>	<b>58.9</b>	<b>0.0</b>	<b>58.9</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	77.00
Aluminum-based Metals/Alloys	8.68
Other Metals	23.30
Other Inorganic Materials	4.78
Cellulosics	5.99
Rubber	7.32
Plastics	63.40
Cements	0.00
Inorganic Matrix	1.64
Organic Matrix	0.42
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	3.67E-01
Cs-137	1.97E-02
Np-237	4.28E-03
Pu-238	7.34E-02
Pu-239	9.11E-01
Pu-240	5.38E-01
Pu-241	7.44E-01
Pu-242	4.37E-04
Sr-90	1.39E-02
Th-229	1.29E-06
Th-230	1.17E-08
Th-232	3.96E-07
U-233	6.00E-04
U-234	5.93E-05
U-235	1.80E-05
U-236	4.94E-07
U-238	3.18E-04

## Haz. Waste No(s).

D005, D006, D007,  
D008, D009, D011

## TRUCON Code(s)

116/216

## Waste Stream Description

Organic debris, plastic, rubber, paper, cloth. Waste stream identifiers previously referred to as AE-W041 and AE-W042 are now included with waste stream AE-T001.

Waste Stream ID: **AE-T003**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Argonne National Laboratory - East	Final Waste Form	Solidified Inorganics	Waste Matrix Code	S3110	Handling	CH
Source Cat.	R&D/R&D Laboratory Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	ANL-E Contact-Handled Mixed Homogenous Solids			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	10.2	0.0	10.2
<b>Current Form Total</b>	<b>10.2</b>	<b>0.0</b>	<b>10.2</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	10.2	0.0	10.2
<b>Final Form Total</b>	<b>10.2</b>	<b>0.0</b>	<b>10.2</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.00
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	101.00
Cellulosics	0.00
Rubber	0.00
Plastics	0.00
Cements	0.00
Inorganic Matrix	295.30
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.57E-01
Cs-137	2.40E-04
Np-237	6.22E-04
Pu-238	4.31E-02
Pu-239	1.24E+00
Pu-240	4.79E-01
Pu-241	1.80E+00
Pu-242	1.34E-05
Sr-90	4.31E-01
Th-229	8.05E-07
Th-230	3.19E-10
Th-232	1.55E-16
U-233	4.09E-04
U-234	3.05E-06
U-235	3.25E-06
U-236	2.98E-07
U-238	7.14E-05

## Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D021, D027, D028, D030, D035, D036, D037, F001, F002, F003, F004, F005

## TRUCON Code(s)

111/211

## Waste Stream Description

Solidified liquid waste from evaporator bottom and research activities. Waste stream identifiers previously referred to as AE-W038, AE-W039 and AE-W040 are now included with waste stream AE- T003.

Waste Stream ID: AE-T009

## Appendix A

## TRU Waste Inventory Profile Report

Site	Argonne National Laboratory - East	Final Waste Form	Heterogeneous	Waste Matrix Code	S5490	Handling	RH
Source Cat.	R&D/R&D Laboratory Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	RH TRU	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
30-gal Drum	38.8	0.0	38.8
55-gal Drum Dir Ld w/o Liner	10.2	0.0	10.2
<b>Current Form Total</b>	<b>49.0</b>	<b>0.0</b>	<b>49.0</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/o Liner	116.6	0.0	116.6
<b>Final Form Total</b>	<b>116.6</b>	<b>0.0</b>	<b>116.6</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	61.60
Aluminum-based Metals/Alloys	18.60
Other Metals	79.60
Other Inorganic Materials	10.80
Cellulosics	0.90
Rubber	9.00
Plastics	21.10
Cements	0.00
Inorganic Matrix	10.40
Organic Matrix	13.20
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	652.20
Packaging Material, Plastic	0.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	8.58E-02
Am-243	2.65E-07
Cm-244	1.20E-03
Cs-137	3.24E-01
Np-237	1.41E-05
Pu-238	7.27E-02
Pu-239	1.47E-01
Pu-240	3.21E-02
Pu-241	1.78E-01
Sr-90	8.24E-02
Th-229	4.91E-09
Th-230	1.28E-09
Th-232	2.72E-17
U-233	1.54E-06
U-234	8.05E-06
U-235	1.31E-06
U-236	3.24E-08
U-238	5.10E-07

No Hazardous Waste Numbers Provided

TRUCON Code(s)

325

## Waste Stream Description

This waste was generated primarily as a result of fuel research activities.

Comprehensive Inventory Database ver. 1.00

Data ver. D.9.02

NOTE: Actual numerical values have been rounded for presentation purposes.

Waste Stream ID: **AW-N026.82**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Argonne National Laboratory - West	Final Waste Form	Heterogeneous	Waste Matrix Code	S5440	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Defense Determination	Likely Defense-Related	Inventory Date	12/31/2009		
Stream Name	ALHC UPGRADE DECON DEBRIS	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
5-gal Drum	0.0	0.0	0.0
SWB w/ 4 - 55-gal Drums w/o Liners	3.8	0.0	3.8
<b>Current Form Total</b>	<b>3.8</b>	<b>0.0</b>	<b>3.8</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	1.9	0.0	1.9
<b>Final Form Total</b>	<b>1.9</b>	<b>0.0</b>	<b>1.9</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	103.89
Aluminum-based Metals/Alloys	18.49
Other Metals	3.08
Other Inorganic Materials	22.89
Cellulosics	35.66
Rubber	7.92
Plastics	29.93
Cements	130.48
Inorganic Matrix	2.20
Organic Matrix	0.44
Soils/gravel	1.32
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	0.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.64E-01
Cs-137	4.93E-01
Np-237	8.60E-07
Pu-239	5.10E-02
Sr-90	1.09E+00
Th-229	1.50E-14
Th-230	5.84E-15
U-233	2.99E-11
U-234	8.11E-11
U-235	1.04E-05
U-238	1.80E-06

## Haz. Waste No(s).

D006, D007, D008

## TRUCON Code(s)

125/225

## Waste Stream Description

Paint scraping debris from analytical lab hot cell refurbishment. Bags of lead-lined gloves were placed in the solidified CO<sub>2</sub> bead blasting waste drums to fill the void spaces. The leftover gloves were placed in a separate 30-gallon drum. 1710 lbs of waste are in two TRU SWBs; Container numbers MW-S-94-02 AND MW-S-94-03. The SWB contains a mixture of debris and solidified solids (paint dust from bead blasting). The majority of the waste is debris (over 50%) and will be processed at INTEC as debris.

Waste Stream ID: **AW-N027.531**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Argonne National Laboratory - West	Final Waste Form	Combustible	Waste Matrix Code	S5311	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Defense Determination	Likely Defense-Related	Inventory Date	12/31/2009		
Stream Name	LEAD CONTAMINATED WASTE			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	1.7	5.0	6.7
<b>Current Form Total</b>	<b>1.7</b>	<b>5.0</b>	<b>6.7</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	1.7	5.0	6.7
<b>Final Form Total</b>	<b>1.7</b>	<b>5.0</b>	<b>6.7</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	109.00
Aluminum-based Metals/Alloys	0.20
Other Metals	50.00
Other Inorganic Materials	15.00
Cellulosics	191.00
Rubber	30.00
Plastics	59.00
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	0.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	3.10E-03
Np-237	1.27E-08
Pu-238	3.91E+00
Pu-239	3.26E+00
Pu-240	1.97E-02
Pu-241	9.79E-03
Pu-242	2.48E-07
Th-229	3.69E-10
Th-230	1.16E-08
Th-232	2.44E-18
U-233	3.03E-07
U-234	1.73E-04
U-235	2.12E-06
U-236	7.59E-09
U-238	7.73E-09

## Haz. Waste No(s).

D008

## TRUCON Code(s)

125/225

## Waste Stream Description

This waste stream is typically lead-lined gloves removed from Casting Lab and Analytical Laboratory glove boxes.



Waste Stream ID: **AW-T031.1322**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Argonne National Laboratory - West	Final Waste Form	Heterogeneous	Waste Matrix Code	S5420	Handling	RH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Defense Determination	Likely Defense-Related	Inventory Date	12/31/2009		
Stream Name	FCF (RH) MISCELLANEOUS TRU WASTE			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
Canister - (MFC) o/p 45-gal Drums	2.0	16.3	18.4
Liner - RSWF	1.0	0.0	1.0
<b>Current Form Total</b>	<b>3.0</b>	<b>16.3</b>	<b>19.4</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid - Dir Ld	8.9	21.4	30.3
<b>Final Form Total</b>	<b>8.9</b>	<b>21.4</b>	<b>30.3</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	61.45
Aluminum-based Metals/Alloys	11.03
Other Metals	1.84
Other Inorganic Materials	13.66
Cellulosics	21.25
Rubber	4.68
Plastics	17.69
Cements	0.00
Inorganic Matrix	1.23
Organic Matrix	0.20
Soils/gravel	0.79
Vitrified	0.00
Packaging Material, Steel	560.60
Packaging Material, Plastic	0.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.01E-01
Am-243	3.89E-06
Cm-244	3.20E-05
Cs-137	1.01E+02
Np-237	1.28E-05
Pu-238	1.67E-01
Pu-239	1.48E+00
Pu-240	1.42E-01
Pu-241	2.36E-01
Pu-242	3.96E-06
Sr-90	7.43E+02
Th-229	1.99E-12
Th-230	4.30E-07
Th-232	4.13E-14
U-233	3.69E-09
U-234	7.96E-03
U-235	2.96E-05
U-236	1.39E-04
U-238	4.17E-05

No Hazardous Waste Numbers Provided

TRUCON Code(s)

325

## Waste Stream Description

Fuel Conditioning Facility (FCF) and Hot Fuel Examination Facility (HFEF) Remote-handled (RH) Radioactive Transuranic Miscellaneous waste: hot laboratory waste, filters, etc.

Waste Stream ID: **AW-T033.1325**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Argonne National Laboratory - West	Final Waste Form	Heterogeneous	Waste Matrix Code	S5490	Handling	CH
Source Cat.	Analytical Laboratory Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	ANL-752 TRU WASTE			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	9.2	30.0	39.1
<b>Current Form Total</b>	<b>9.2</b>	<b>30.0</b>	<b>39.1</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	9.2	30.0	39.1
<b>Final Form Total</b>	<b>9.2</b>	<b>30.0</b>	<b>39.1</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	23.60
Aluminum-based Metals/Alloys	42.00
Other Metals	7.00
Other Inorganic Materials	52.00
Cellulosics	81.00
Rubber	18.00
Plastics	68.00
Cements	0.00
Inorganic Matrix	5.00
Organic Matrix	1.00
Soils/gravel	3.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	0.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.51E+00
Am-243	8.71E-02
Np-237	1.05E-02
Pu-238	3.97E+00
Pu-239	3.60E+00
Pu-240	8.20E-01
Pu-241	5.34E+00
Pu-242	2.35E-04
Pu-244	5.83E-08
Th-229	3.52E-05
Th-230	4.19E-07
Th-232	2.17E-08
U-233	3.41E-02
U-234	2.23E-03
U-235	7.58E-05
U-236	1.74E-05
U-238	4.24E-05

No Hazardous Waste Numbers Provided

TRUCON Code(s)

125/225

## Waste Stream Description

Transuranic waste generated from Casting Laboratory (CL), formerly known as Plutonium Casting Lab (PCL) and the Experimental Fuels Lab (EFL), and Analytical Laboratory (AL) Hot cell operations. This waste is typically packaged in 55-gallon drums.

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Data ver. D.9.02

NOTE: Actual numerical values have been rounded for presentation purposes.

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Waste Stream ID: **AW-W020.13**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Argonne National Laboratory - West	Final Waste Form	Heterogeneous	Waste Matrix Code	S5440	Handling	RH
Source Cat.	R&D/R&D Laboratory Waste	Defense Determination	Likely Defense-Related	Inventory Date	12/31/2009		
Stream Name	TRU-CD-HOT CELL WASTE	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
45-gal Drum	0.3	12.2	12.6
Liner - RSWF	0.4	0.0	0.9
<b>Current Form Total</b>	<b>1.2</b>	<b>12.2</b>	<b>13.5</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid - Dir Ld	4.5	21.4	25.8
<b>Final Form Total</b>	<b>4.5</b>	<b>21.4</b>	<b>25.8</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	29.44
Aluminum-based Metals/Alloys	0.00
Other Metals	0.12
Other Inorganic Materials	13.12
Cellulosics	0.05
Rubber	0.00
Plastics	0.35
Cements	68.83
Inorganic Matrix	73.36
Organic Matrix	0.02
Soils/gravel	0.12
Vitrified	5.27
Packaging Material, Steel	560.60
Packaging Material, Plastic	0.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	7.24E-01
Cs-137	4.36E+02
Np-237	2.67E-03
Pu-238	9.32E+01
Pu-239	3.10E+01
Pu-240	1.36E+01
Pu-241	1.90E+00
Pu-242	9.43E-05
Sr-90	2.59E+01
Th-229	5.88E-07
Th-230	1.62E-05
Th-232	1.66E-12
U-233	3.92E-04
U-234	1.15E-01
U-235	2.01E-03
U-236	2.10E-03
U-238	2.78E-05

## Haz. Waste No(s).

D006, D007, D008

## TRUCON Code(s)

325

## Waste Stream Description

This waste stream consisted of metallic cadmium, salts, and associated cleanup materials (paper towels and cloth rags). Waste also includes RCRA metal contaminated remote-handled TRU-Mixed HEPA filters from the Analytical Lab. The waste is contaminated with activation and fission products as well as with plutonium. This waste stream is generated from Fuel Conditioning Facility Demonstration support experiments; the analysis of fuels in the hot cells. Waste is stored in the Radioactive Scrap and Waste Facility and Sodium Storage Building. Future waste generation will be small because evaporation as part of the process will be done in the hot cell to minimize the volume.

Waste Stream ID: **AW-W026**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Argonne National Laboratory - West	Final Waste Form	Heterogeneous	Waste Matrix Code	S5440	Handling	RH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Defense Determination	Likely Defense-Related	Inventory Date	12/31/2009		
Stream Name	ALHC Upgrade Decon Debris			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
Liner - RSWF	0.5	0.0	0.5
<b>Current Form Total</b>	<b>0.5</b>	<b>0.0</b>	<b>0.5</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid - Dir Ld	0.9	0.0	0.9
<b>Final Form Total</b>	<b>0.9</b>	<b>0.0</b>	<b>0.9</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	27.25
Aluminum-based Metals/Alloys	0.51
Other Metals	57.19
Other Inorganic Materials	3.15
Cellulosics	1.77
Rubber	0.11
Plastics	1.15
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	560.60
Packaging Material, Plastic	0.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	9.85E-02
Cs-137	8.97E-02
Np-237	5.18E-07
Pu-239	1.77E-02
Sr-90	3.17E-01
Th-229	9.02E-15
Th-230	8.06E-16
U-233	1.80E-11
U-234	1.12E-11
U-235	1.83E-06
U-238	2.48E-07

## Haz. Waste No(s).

D006, D007, D008

## TRUCON Code(s)

325

## Waste Stream Description

Waste packaged for WIPP containing remote-handled radioactive cadmium contaminated debris from CH-ANL-242T and remote-handled waste similar to AW-N026.82, solidified to meet WIPP-WAC requirement for particulate immobilization. RSWF Containers SN-161 and T-46. The waste contains a mixture of debris and solidified solids (paint dust from bead blasting) and neutralized/solidified sample waste. The majority of the waste is debris (over 50%) and will be processed as debris.

Waste Stream ID: **AW-W028**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Argonne National Laboratory - West	Final Waste Form	Heterogeneous	Waste Matrix Code	S5410	Handling	RH
Source Cat.	Pollution Control or Waste Treatment Process	Defense Determination	Likely Defense-Related	Inventory Date	12/31/2009		
Stream Name	TRU Waste Used Filters.	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
45-gal Drum	0.3	8.8	9.2
Bin - Metal	3.8	0.0	3.8
<b>Current Form Total</b>	<b>4.1</b>	<b>8.8</b>	<b>13.0</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/o Liner	1.8	16.0	17.8
<b>Final Form Total</b>	<b>1.8</b>	<b>16.0</b>	<b>17.8</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.00
Aluminum-based Metals/Alloys	28.69
Other Metals	71.77
Other Inorganic Materials	57.37
Cellulosics	100.45
Rubber	28.69
Plastics	0.00
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	652.20
Packaging Material, Plastic	0.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Cs-137	2.77E-01
Pu-239	3.47E-02
Pu-240	1.82E-03
Sr-90	7.66E-01
Th-230	3.12E-15
Th-232	3.42E-19
U-234	4.34E-11
U-235	1.79E-06
U-236	8.66E-10
U-238	9.63E-07

## Haz. Waste No(s).

D006, D007, D008

## TRUCON Code(s)

325

## Waste Stream Description

This waste stream consists of metal or wood-framed filters. Pre-Filters are 2'x2'x0.5', standard HEPA filters are 2'x2'x1'. Analytical Lab Hot Cell filters are 1'x1'x1'. The filters have screen mesh covering high efficiency filtering media. The concentration of radioisotopes and RCRA metals varies in each filter. These filters were generated from the decontamination of the analytical hot cells in 1993 and 1994, and subsequent hot cell filter changeouts in the Analytical Lab and the Fuel Conditioning Facility.

Waste Stream ID: **AW-W046**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Argonne National Laboratory - West	Final Waste Form	Heterogeneous	Waste Matrix Code	S5400	Handling	RH
Source Cat.	Pollution Control or Waste Treatment Process	Defense Determination	Likely Defense-Related	Inventory Date	12/31/2009		
Stream Name	FCF RLWS Filters and Resin	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
45-gal Drum	0.9	4.4	5.3
<b>Current Form Total</b>	<b>0.9</b>	<b>4.4</b>	<b>5.3</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/o Liner	1.8	8.0	9.8
<b>Final Form Total</b>	<b>1.8</b>	<b>8.0</b>	<b>9.8</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	16.81
Aluminum-based Metals/Alloys	1.22
Other Metals	1.36
Other Inorganic Materials	319.60
Cellulosics	7.16
Rubber	0.27
Plastics	14.32
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	652.20
Packaging Material, Plastic	0.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.11E-01
Cs-137	5.46E+02
Np-237	1.58E-05
Pu-238	1.24E-01
Pu-239	8.16E-02
Pu-240	5.18E-02
Pu-241	3.11E-01
Pu-242	1.21E-05
Sr-90	5.93E+02
Th-229	2.90E-14
Th-230	1.46E-11
Th-232	3.42E-19
U-233	2.06E-10
U-234	1.08E-06
U-235	1.95E-04
U-236	4.61E-09
U-238	7.55E-04

## Haz. Waste No(s).

D006

## TRUCON Code(s)

325

## Waste Stream Description

The filters consist of two types. One is a depth filter made entirely of polypropylene. The other is a pleated filter made up of a glass fiber filter media with polyester support. This media is housed in a polypropylene cage with silicone O-rings. The filters are used primarily for the removal of cadmium. However, they also remove uranium and plutonium.

Waste Stream ID: **AW-W047**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Argonne National Laboratory - West	Final Waste Form	Heterogeneous	Waste Matrix Code	S5400	Handling	RH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Defense Determination	Likely Defense-Related	Inventory Date	12/31/2009		
Stream Name	FCF Crucible (Graphite)	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
45-gal Drum	0.2	2.2	2.4
<b>Current Form Total</b>	<b>0.2</b>	<b>2.2</b>	<b>2.4</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/o Liner	0.9	4.5	5.3
<b>Final Form Total</b>	<b>0.9</b>	<b>4.5</b>	<b>5.3</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	158.41
Aluminum-based Metals/Alloys	1.47
Other Metals	341.31
Other Inorganic Materials	9.15
Cellulosics	5.14
Rubber	0.33
Plastics	3.35
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	652.20
Packaging Material, Plastic	0.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Cs-137	1.12E+02
Pu-239	6.66E-04
Sr-90	1.21E+02
U-235	3.94E-12

No Hazardous Waste Numbers Provided

TRUCON Code(s)

315

## Waste Stream Description

The crucible waste stream in the Fuel Conditioning Facility (FCF) has been characterized as TRU waste. Waste is loaded into 45-gallon RH-TRU inner waste cans. Containers are filled with crushed graphite crucible material, and are shipped for storage in the Radioactive Scrap and Waste Facility (RSWF). Before crushing, crucibles are cleaned to their clean tare weight. Based on samples taken on crushed crucible material, there are only a few tenths of grams of fissile material (U-235 or Pu-239) present per crucible disposed.

Comprehensive Inventory Database ver. 1.00

Data ver. D.9.02

NOTE: Actual numerical values have been rounded for presentation purposes.

Waste Stream ID: **AW-W048**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Argonne National Laboratory - West	Final Waste Form	Heterogeneous	Waste Matrix Code	S5400	Handling	RH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Defense Determination	Likely Defense-Related	Inventory Date	12/31/2009		
Stream Name	FCF Indirect RH-MTRU Waste	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
Canister - (MFC) o/p 45-gal Drums	2.0	5.4	7.5
Liner - RSWF	0.2	0.0	0.2
<b>Current Form Total</b>	<b>2.2</b>	<b>5.4</b>	<b>7.7</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid - Dir Ld	3.6	7.1	10.7
<b>Final Form Total</b>	<b>3.6</b>	<b>7.1</b>	<b>10.7</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	511.22
Aluminum-based Metals/Alloys	41.11
Other Metals	459.42
Other Inorganic Materials	42.76
Cellulosics	47.92
Rubber	13.32
Plastics	50.34
Cements	0.00
Inorganic Matrix	71.82
Organic Matrix	0.58
Soils/gravel	2.24
Vitrified	0.00
Packaging Material, Steel	560.60
Packaging Material, Plastic	0.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Cs-137	8.14E+02
Pu-239	4.03E-01
Sr-90	8.83E+02
U-235	1.24E-04

## Haz. Waste No(s).

D006

## TRUCON Code(s)

325

## Waste Stream Description

FCF Argon cell RH-MTRU waste - rags, plastic, glass, rubber, paper, cardboard, aluminum foil, metal, brushes, copper, bolts, smears, nylon sling, insulation, o-rings, etc.



Waste Stream ID: **AW-W049**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Argonne National Laboratory - West	Final Waste Form	Heterogeneous	Waste Matrix Code	S5440	Handling	CH
Source Cat.	R&D/R&D Laboratory Waste	Defense Determination	Likely Defense-Related	Inventory Date	12/31/2009		
Stream Name	FMF glovebox waste	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.4	30.0	30.4
<b>Current Form Total</b>	<b>0.4</b>	<b>30.0</b>	<b>30.4</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	0.4	30.0	30.4
<b>Final Form Total</b>	<b>0.4</b>	<b>30.0</b>	<b>30.4</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	260.00
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	15.00
Cellulosics	150.00
Rubber	0.00
Plastics	150.00
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	0.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.08E+00
Np-237	6.96E-07
Pu-238	5.54E-02
Pu-239	3.12E-01
Pu-240	2.23E-01
Pu-241	3.22E+00
Pu-242	8.22E-05
Th-229	1.89E-16
Th-230	2.86E-12
Th-232	6.53E-19
U-233	3.03E-12
U-234	3.17E-07
U-235	7.63E-06
U-236	1.32E-08
U-238	8.37E-08

No Hazardous Waste Numbers Provided

TRUCON Code(s)

125/225

## Waste Stream Description

Fuel Manufacturing Facility experiment glovebox waste.

Waste Stream ID: **BT-T001**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Bettis Atomic Power Laboratory	Final Waste Form	Heterogeneous	Waste Matrix Code	S5420	Handling	RH
Source Cat.	R&D/R&D Laboratory Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Irradiated TRU material waste			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
HIP	0.0	0.0	0.0
Hot Cell	1.9	0.0	1.9
<b>Current Form Total</b>	<b>2.0</b>	<b>0.0</b>	<b>2.0</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/o Liner	4.5	0.0	4.5
<b>Final Form Total</b>	<b>4.5</b>	<b>0.0</b>	<b>4.5</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.00
Aluminum-based Metals/Alloys	0.00
Other Metals	200.00
Other Inorganic Materials	0.00
Cellulosics	10.00
Rubber	0.00
Plastics	500.00
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	652.20
Packaging Material, Plastic	0.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.21E+00
Am-243	7.30E-03
Cm-244	1.42E-01
Cs-137	3.21E+03
Np-237	1.01E-02
Pu-238	7.91E+01
Pu-239	1.41E-01
Pu-240	1.58E-01
Pu-241	9.07E+00
Pu-242	1.12E-03
Sr-90	3.16E+03
Th-229	9.59E-03
Th-230	3.71E-04
Th-232	8.49E-04
U-233	3.08E+00
U-234	4.32E-01
U-235	2.49E-03
U-236	2.83E-02
U-238	1.73E-05

No Hazardous Waste Numbers Provided

TRUCON Code(s)

325

## Waste Stream Description

Specimen processing fines, material, and debris.

Comprehensive Inventory Database ver. 1.00

Data ver. D.9.02

NOTE: Actual numerical values have been rounded for presentation purposes.

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Waste Stream ID: **BT-T002**

Appendix A

TRU Waste Inventory Profile Report

Site	Bettis Atomic Power Laboratory	Final Waste Form	Heterogeneous	Waste Matrix Code	S5000	Handling	CH
Source Cat.	Remediation/D&D Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Contaminated Piping System	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
Piping	18.9	0.0	18.9
<b>Current Form Total</b>	<b>18.9</b>	<b>0.0</b>	<b>18.9</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
SWB Dir Ld w/o Liner	18.9	0.0	18.9
<b>Final Form Total</b>	<b>18.9</b>	<b>0.0</b>	<b>18.9</b>

Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	430.00
Aluminum-based Metals/Alloys	35.00
Other Metals	1.00
Other Inorganic Materials	1.00
Cellulosics	0.50
Rubber	7.00
Plastics	35.00
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	1.00
Vitrified	0.00
Packaging Material, Steel	153.50
Packaging Material, Plastic	0.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	5.29E-04
Am-243	2.13E-06
Cm-244	1.04E-04
Cs-137	9.79E-01
Np-237	3.03E-06
Pu-238	4.73E-02
Pu-239	3.90E-05
Pu-240	7.97E-05
Pu-241	6.08E-03
Pu-242	6.20E-07
Pu-244	3.56E-14
Sr-90	9.73E-01
Th-229	2.99E-14
Th-230	6.77E-09
Th-232	8.56E-15
U-233	9.11E-11
U-234	1.08E-04
U-235	1.40E-06
U-236	1.60E-05
U-238	6.46E-09

No Hazardous Waste Numbers Provided

TRUCON Code(s)  
125/225

Waste Stream Description

Piping, pumps, tanks, and other metal items, and debris.

Waste Stream ID: **BT-T007**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Bettis Atomic Power Laboratory	Final Waste Form	Lead/Cadmium Metal Waste	Waste Matrix Code	S5000	Handling	RH
Source Cat.	Remediation/D&D Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Irradiated TRU material waste and debris.			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
Hot Cell	0.1	0.0	0.1
<b>Current Form Total</b>	<b>0.1</b>	<b>0.0</b>	<b>0.1</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/o Liner	0.9	0.0	0.9
<b>Final Form Total</b>	<b>0.9</b>	<b>0.0</b>	<b>0.9</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.00
Aluminum-based Metals/Alloys	0.00
Other Metals	501.00
Other Inorganic Materials	0.00
Cellulosics	0.00
Rubber	0.00
Plastics	0.00
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	652.20
Packaging Material, Plastic	0.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.21E+00
Am-243	7.30E-03
Cm-244	1.42E-01
Cs-137	3.21E+03
Np-237	1.01E-02
Pu-238	7.91E+01
Pu-239	1.41E-01
Pu-240	1.58E-01
Pu-241	9.07E+00
Pu-242	1.12E-03
Sr-90	3.16E+03
Th-229	9.59E-03
Th-230	3.71E-04
Th-232	8.49E-04
U-233	3.08E+00
U-234	4.32E-01
U-235	2.49E-03
U-236	2.83E-02
U-238	1.73E-05

## Haz. Waste No(s).

D008

## TRUCON Code(s)

317

## Waste Stream Description

Hazardous Metal debris (Lead)

Comprehensive Inventory Database ver. 1.00

Data ver. D.9.02

NOTE: Actual numerical values have been rounded for presentation purposes.

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Waste Stream ID: **IN-AE-AGHC-01**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Idaho National Laboratory	Final Waste Form	Heterogeneous	Waste Matrix Code	S5400	Handling	RH
Source Cat.	R&D/R&D Laboratory Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	RH-TRU Debris Waste From ANL-E Stored at the INL			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
30-gal Drum	1.8	0.0	1.8
<b>Current Form Total</b>	<b>1.8</b>	<b>0.0</b>	<b>1.8</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	5.3	0.0	5.3
<b>Final Form Total</b>	<b>5.3</b>	<b>0.0</b>	<b>5.3</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	43.40
Aluminum-based Metals/Alloys	10.40
Other Metals	15.70
Other Inorganic Materials	10.40
Cellulosics	13.83
Rubber	3.45
Plastics	15.70
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.46
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	652.20
Packaging Material, Plastic	26.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.71E-01
Cs-137	3.27E+00
Pu-238	9.21E-02
Pu-239	3.30E-01
Pu-240	1.74E-01
Pu-241	2.69E+00
Pu-242	5.01E-03
Sr-90	2.46E+00
U-233	8.70E-04
U-234	1.06E-03
U-235	3.76E-05
U-238	6.38E-06

## Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D019, D028, D029, F002, F005

## TRUCON Code(s)

321, 322, 325

## Waste Stream Description

This waste stream was generated at Argonne National Laboratory-East (ANL-E). This waste was generated during post irradiation examinations operations conducted in the ANL-E Alpha Gamma Hot Cell Facility (AGHCF) and K-1 and K-2 cells in the M-Wing hot cell Facility

Comprehensive Inventory Database ver. 1.00

Data ver. D.9.02

NOTE: Actual numerical values have been rounded for presentation purposes.

A - IN - 1

Waste Stream ID: **IN-AE-AGHC-02**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Idaho National Laboratory	Final Waste Form	Heterogeneous	Waste Matrix Code	S5400	Handling	RH
Source Cat.	R&D/R&D Laboratory Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	MFC Retrievable ANL-E RH TRU Containers - Stage 2			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
Canister - (ANL-E)	2.2	0.0	2.2
<b>Current Form Total</b>	<b>2.2</b>	<b>0.0</b>	<b>2.2</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	21.4	0.0	21.4
<b>Final Form Total</b>	<b>21.4</b>	<b>0.0</b>	<b>21.4</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.00
Aluminum-based Metals/Alloys	0.51
Other Metals	56.60
Other Inorganic Materials	3.10
Cellulosics	1.76
Rubber	0.11
Plastics	1.15
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	652.20
Packaging Material, Plastic	26.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Cs-137	3.43E+02
Pu-239	8.02E+00
Pu-240	2.99E+00
Sr-90	5.34E+02
Th-230	7.66E-13
Th-232	3.10E-07
U-234	1.31E-08
U-235	9.48E-04
U-236	1.15E-06
U-238	3.58E-04

No Hazardous Waste Numbers Provided

TRUCON Code(s)

321, 322, 325

## Waste Stream Description

The Stage 2 waste is radioactive only and consists of combustible waste, irradiated material, and scrap from the destructive examination of irradiated experiments in the Alpha-Gamma Hot Cell at ANL-E. The contents of the ANL-E waste cans include dried sludge, table and floor sweepings, scrap, met mounts, fines, rags, tissues, pipe nipple containers, fuel granules, combustible and non-combustible scrap, recoverable and non-recoverable fissile material, bonded clad material, irradiated structural material, grinding papers, and fuel impregnated with epoxy. some of these materials are in aluminum glass, or plastic containers, one container, ANLE44 (RSWF Storage Liner V-23), noted to have a single 2R inner container, contains 39 whole elements.

Comprehensive Inventory Database ver. 1.00

Data ver. D.9.02

NOTE: Actual numerical values have been rounded for presentation purposes.

A - IN - 2

Waste Stream ID: **IN-AW-161**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Idaho National Laboratory	Final Waste Form	Heterogeneous	Waste Matrix Code	S5400	Handling	RH
Source Cat.	R&D/R&D Laboratory Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	RH-TRU Debris Waste From Materials and Fuels Complex at the INL.			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	1.7	0.0	1.7
<b>Current Form Total</b>	<b>1.7</b>	<b>0.0</b>	<b>1.7</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	2.7	0.0	2.7
<b>Final Form Total</b>	<b>2.7</b>	<b>0.0</b>	<b>2.7</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	8.45
Aluminum-based Metals/Alloys	0.05
Other Metals	0.05
Other Inorganic Materials	20.10
Cellulosics	6.20
Rubber	0.05
Plastics	12.15
Cements	0.00
Inorganic Matrix	2.90
Organic Matrix	2.90
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	652.20
Packaging Material, Plastic	26.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Cs-137	9.54E-02
Pu-239	6.50E-01
Pu-240	1.38E-02
Th-230	1.73E-16
Th-232	4.45E-18
U-234	1.83E-12
U-235	3.92E-07
U-236	8.58E-09
U-238	3.09E-08

## Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D019, D022, D038, F002, F005

## TRUCON Code(s)

321, 325

## Waste Stream Description

This waste stream was generated at Argonne National Laboratory-West at the INL. The waste consists of glassware, paper, poly, and miscellaneous hardware generated during analytical chemistry laboratory and hot cell operations.

Waste Stream ID: **IN-BN004**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Idaho National Laboratory	Final Waste Form	Solidified Inorganics	Waste Matrix Code	S3150	Handling	CH
Source Cat.	Materials Production/Recovery Effluents	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Special Setups Waste	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	244.4	0.0	244.4
Box - Misc	3.2	0.0	3.2
<b>Current Form Total</b>	<b>247.6</b>	<b>0.0</b>	<b>247.6</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	11.4	0.0	11.4
SWB w/ 4 - 55-gal Drums w/ Liners	408.2	0.0	408.2
TDOP w/ 10 - 55-gal Drums w/ Liners	130.5	0.0	130.5
<b>Final Form Total</b>	<b>550.2</b>	<b>0.0</b>	<b>550.2</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.02
Aluminum-based Metals/Alloys	0.00
Other Metals	0.04
Other Inorganic Materials	2.50
Cellulosics	0.03
Rubber	0.01
Plastics	0.23
Cements	290.00
Inorganic Matrix	190.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	214.34
Packaging Material, Plastic	16.92
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.09E+00
Cm-244	4.57E-03
Cs-137	6.93E-06
Np-237	5.08E-04
Pu-238	1.46E-01
Pu-239	3.60E+00
Pu-240	8.16E-01
Pu-241	6.14E+00
Pu-242	7.43E-05
Sr-90	1.17E-05
Th-229	2.68E-07
Th-230	1.18E-09
Th-232	9.56E-18
U-233	7.15E-04
U-234	3.36E-05
U-235	7.37E-06
U-236	9.68E-08
U-238	5.71E-06

## Haz. Waste No(s).

D006, D007, D008, D011, D029, F001, F002, F005, F006, F007, F009

## TRUCON Code(s)

111/211

## Waste Stream Description

IN-BN004 (Special Setups) waste was generated from a waste treatment process (predominately laboratory waste) generated in support of plutonium operations at RFETS. Resins and electrochemical milling sludges were also solidified with the liquid waste. This waste stream is comprised of solidified waste assigned IDC ID-RF-004 and ID-RF-802. Special Setups consists of waste >50% by volume inorganic solidified waste. Specifically, small quantities of liquids solidified in large quantities of cement.



Waste Stream ID: **IN-BN005**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Idaho National Laboratory	Final Waste Form	Salt Waste	Waste Matrix Code	S3143	Handling	CH
Source Cat.	Pollution Control or Waste Treatment Process	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Evaporator Salts	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	617.3	0.0	617.3
Box - Misc	3.2	0.0	3.2
<b>Current Form Total</b>	<b>620.5</b>	<b>0.0</b>	<b>620.5</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
SWB w/ 4 - 55-gal Drums w/ Liners	1479.9	0.0	1479.9
<b>Final Form Total</b>	<b>1479.9</b>	<b>0.0</b>	<b>1479.9</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.00
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	330.00
Cellulosics	0.00
Rubber	0.00
Plastics	0.00
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	211.10
Packaging Material, Plastic	16.30
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	4.97E-04
U-234	5.28E-06
U-235	1.32E-06
U-238	1.25E-05

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

## Waste Stream Description

"Waste is generated at Rocky Flats Plant from aqueous waste treatment in building 774. Waste consists of a salt residue generated by Building 774 evaporator system from concentrating and drying liquid waste from the solar evaporation ponds. The approximate chemical makeup of the salt is 60% sodium nitrate, 30% potassium nitrate, and 10% miscellaneous. Wastes may also contain < 50% by volume surgeons' gloves, paper, rags, and metal debris. Portland cement was added to damp or wet salt when necessary.

The majority of salt drums in storage at the INEL should contain TRU activity concentration of <10 nCi/g TRU."

Waste Stream ID: **IN-BN090**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Idaho National Laboratory	Final Waste Form	Soils	Waste Matrix Code	S4200	Handling	CH
Source Cat.	Spill Clean-ups/Emergency Response Actions	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Dirt	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	228.6	0.0	228.6
<b>Current Form Total</b>	<b>228.6</b>	<b>0.0</b>	<b>228.6</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
SWB w/ 4 - 55-gal Drums w/ Liners	548.1	0.0	548.1
<b>Final Form Total</b>	<b>548.1</b>	<b>0.0</b>	<b>548.1</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.85
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	6.60
Cellulosics	3.40
Rubber	0.00
Plastics	0.36
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.24
Soils/gravel	460.00
Vitrified	0.00
Packaging Material, Steel	211.10
Packaging Material, Plastic	16.30
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	9.89E-03
Cs-137	8.39E-09
Np-237	1.41E-07
Pu-238	2.44E-03
Pu-239	4.40E-02
Pu-240	1.01E-02
Pu-241	5.96E-02
Pu-242	8.61E-07
Sr-90	9.24E-09
Th-229	2.84E-17
Th-230	2.24E-11
Th-232	7.39E-21
U-233	6.08E-13
U-234	2.50E-06
U-235	6.29E-07
U-236	2.99E-10
U-238	8.34E-06

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

## Waste Stream Description

This waste generated at the Rocky Flats Plant consists of dry dirt or soil generated from cleanup of spills, leaks, etc. Waste may be damp and may include evaporator pond sludge (S3000). Waste may also contain limited amounts (<50% by volume) of combustibles such as coveralls and gloves.

Waste Stream ID: **IN-BN095**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Idaho National Laboratory	Final Waste Form	Solidified Organics	Waste Matrix Code	S3221	Handling	CH
Source Cat.	Pollution Control or Waste Treatment Process	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Sewer Sludge	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	93.0	0.0	93.0
Box - Misc	25.4	0.0	25.4
<b>Current Form Total</b>	<b>118.3</b>	<b>0.0</b>	<b>118.3</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
SWB w/ 4 - 55-gal Drums w/ Liners	240.0	0.0	240.0
<b>Final Form Total</b>	<b>240.0</b>	<b>0.0</b>	<b>240.0</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.00
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	96.11
Cellulosics	0.00
Rubber	0.00
Plastics	0.00
Cements	57.66
Inorganic Matrix	86.53
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	211.10
Packaging Material, Plastic	16.30
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	9.22E-03
Cs-137	3.76E-08
Np-237	5.97E-09
Pu-238	1.79E-04
Pu-239	6.16E-03
Pu-240	1.37E-03
Pu-241	1.32E-02
Pu-242	1.78E-07
Sr-90	4.12E-08
Th-229	1.63E-18
Th-230	9.45E-11
Th-232	4.01E-21
U-233	2.60E-14
U-234	5.25E-06
U-235	1.30E-06
U-236	8.12E-11
U-238	1.95E-05

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

## Waste Stream Description

"This waste stream, generated at the Rocky Flats Plant, consists of moist to dry organic sewer sludge generated from cleaning the stabilization ponds at the Sewer Treatment Plant (Building 995). This waste also contains a limited number of drums containing sludge generated by plutonium recovery operations. The sludge may contain fines, chunks or pieces of dried cake. Shipment of sewer sludge to the INEL stopped in 1976.

There are high levels of fines. In addition the drums may contain free liquids. The sewage sludge should contain less than 10 nCi/g TRU elements. The portion of the waste that is suspected to be TRU is addressed by this waste stream. Organic content in the sludge is not known. No free liquids should be present. No explosive, pyrophoric, or corrosive materials should be in the waste.

Waste Stream ID: **IN-BN204**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Idaho National Laboratory	Final Waste Form	Solidified Inorganics	Waste Matrix Code	S3150	Handling	CH
Source Cat.	Remediation/D&D Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Solidified Solutions	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	1.5	0.0	1.5
<b>Current Form Total</b>	<b>1.5</b>	<b>0.0</b>	<b>1.5</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
SWB w/ 4 - 55-gal Drums w/ Liners	3.8	0.0	3.8
<b>Final Form Total</b>	<b>3.8</b>	<b>0.0</b>	<b>3.8</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.00
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	196.75
Cellulosics	0.00
Rubber	0.00
Plastics	0.00
Cements	0.00
Inorganic Matrix	199.14
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	211.10
Packaging Material, Plastic	16.30
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	4.30E-02
Cs-137	5.37E-08
Np-237	4.06E-06
Pu-238	8.61E-01
Pu-239	5.60E-02
Pu-240	1.59E-02
Pu-241	1.29E-01
Pu-242	1.12E-05
Sr-90	5.89E-08
Th-229	8.29E-16
Th-230	3.07E-11
Th-232	1.17E-20
U-233	1.77E-11
U-234	4.64E-06
U-235	6.53E-07
U-236	4.72E-10
U-238	1.69E-15

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

## Waste Stream Description

This waste comes from Battelle Columbus Labs. It is a turco soap decontamination solution (used to decontaminate glove boxes from a Pu lab) which is solidified in plaster-of-paris.

Waste Stream ID: **IN-BN222**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Idaho National Laboratory	Final Waste Form	Solidified Inorganics	Waste Matrix Code	S3150	Handling	CH
Source Cat.	Pollution Control or Waste Treatment Process	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Solidified Plutonium Recovery Incinerator Waste			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	110.0	0.0	110.0
<b>Current Form Total</b>	<b>110.0</b>	<b>0.0</b>	<b>110.0</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
SWB w/ 4 - 55-gal Drums w/o Liners	287.3	0.0	287.3
<b>Final Form Total</b>	<b>287.3</b>	<b>0.0</b>	<b>287.3</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	4.50
Aluminum-based Metals/Alloys	0.02
Other Metals	0.13
Other Inorganic Materials	2.00
Cellulosics	0.05
Rubber	0.04
Plastics	13.00
Cements	85.00
Inorganic Matrix	100.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	211.10
Packaging Material, Plastic	0.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.51E+00
Cs-137	8.95E-09
Np-237	1.31E-03
Pu-238	3.30E-01
Pu-239	8.22E+00
Pu-240	1.87E+00
Pu-241	1.47E+01
Pu-242	1.45E-04
Sr-90	1.00E-08
Th-229	1.56E-08
Th-230	1.67E-11
Th-232	1.37E-18
U-233	1.66E-04
U-234	2.33E-06
U-235	3.80E-07
U-236	5.53E-08
U-238	3.12E-07

## Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D022, F001, F002, F005, F006, F007, F009

## TRUCON Code(s)

111/211, 114/214

## Waste Stream Description

The waste is comprised of plutonium recovery incinerator waste. This waste stream includes solidified ash from the incinerator burn chamber and solidified soot and scrubber sludge from the incinerator off-gas system of the plutonium recovery incinerator. Although individual drums may also contain small amounts of debris (PPE, plastic, metal, glass, cement bags, Ful-Flo filters, unburned feed material and broken plastic molds) each container in this waste stream will contain >50% by volume solidified homogeneous solids. The IN-BN222 waste stream includes IDCs ID-RF-292, ID-RF-807b/696, ID-RF-818, and ID-RF-820.

Waste Stream ID: **IN-BN311**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Idaho National Laboratory	Final Waste Form	Solidified Inorganics	Waste Matrix Code	S3119	Handling	CH
Source Cat.	Other/Multiple Sources	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Process Heels	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	13.1	0.0	13.1
Box - Misc	3.2	0.0	3.2
<b>Current Form Total</b>	<b>16.3</b>	<b>0.0</b>	<b>16.3</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
TDOP w/ 10 - 55-gal Drums w/ Liners	36.0	0.0	36.0
<b>Final Form Total</b>	<b>36.0</b>	<b>0.0</b>	<b>36.0</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	1.20
Aluminum-based Metals/Alloys	0.00
Other Metals	0.37
Other Inorganic Materials	110.00
Cellulosics	0.00
Rubber	0.00
Plastics	22.00
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	231.80
Packaging Material, Plastic	17.10
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	4.30E+00
Np-237	4.71E-05
Pu-238	1.39E+00
Pu-239	2.32E+01
Pu-240	5.45E+00
Pu-241	2.96E+01
Pu-242	4.26E-04
Th-229	4.02E-13
Th-230	9.02E-10
Th-232	1.95E-16
U-233	1.27E-09
U-234	2.84E-05
U-235	1.60E-07
U-236	1.13E-06
U-238	4.50E-13

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

## Waste Stream Description

This waste stream, generated at the RFETS, consists of miscellaneous residues generated by laboratory operations, plutonium recovery, and R&D activities. This waste stream is comprised of IDCs ID-RF-311, ID-RF-361, and ID-RF-393

Waste Stream ID: **IN-BN375**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Idaho National Laboratory	Final Waste Form	Solidified Inorganics	Waste Matrix Code	S3113	Handling	CH
Source Cat.	Materials Production/Recovery Effluents	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Oil-Dri-Residue From Incinerator	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	4.0	0.0	4.0
<b>Current Form Total</b>	<b>4.0</b>	<b>0.0</b>	<b>4.0</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
SWB w/ 4 - 55-gal Drums w/ Liners	9.5	0.0	9.5
<b>Final Form Total</b>	<b>9.5</b>	<b>0.0</b>	<b>9.5</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	7.10
Aluminum-based Metals/Alloys	0.00
Other Metals	0.89
Other Inorganic Materials	140.00
Cellulosics	1.80
Rubber	0.04
Plastics	7.80
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	211.10
Packaging Material, Plastic	16.30
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	8.34E-01
Cs-137	2.73E-08
Np-237	9.53E-06
Pu-238	5.65E-02
Pu-239	1.51E+00
Pu-240	3.54E-01
Pu-241	2.04E+00
Pu-242	3.20E-05
Sr-90	3.10E-08
Th-229	1.65E-14
Th-230	1.43E-11
Th-232	2.33E-18
U-233	1.19E-10
U-234	7.73E-07
U-235	9.71E-08
U-236	3.15E-08
U-238	1.45E-14

## Haz. Waste No(s).

F001, F002

## TRUCON Code(s)

122/222

## Waste Stream Description

"This waste, from the Rocky Flats Plant, consists of spent clay absorbent materials such as oil-dri, floor dry, vermiculite, and sorbent booms. Waste may also contain <50% by volume debris (i.e., rags)."

Waste Stream ID: **IN-BN409**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Idaho National Laboratory	Final Waste Form	Salt Waste	Waste Matrix Code	S3141	Handling	CH
Source Cat.	Materials Production/Recovery Effluents	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Chloride Salts	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	16.6	0.0	16.6
<b>Current Form Total</b>	<b>16.6</b>	<b>0.0</b>	<b>16.6</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
TDOP w/ 10 - 55-gal Drums w/ Liners	40.5	0.0	40.5
<b>Final Form Total</b>	<b>40.5</b>	<b>0.0</b>	<b>40.5</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	12.00
Aluminum-based Metals/Alloys	0.00
Other Metals	0.65
Other Inorganic Materials	110.00
Cellulosics	0.82
Rubber	0.00
Plastics	6.30
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	231.80
Packaging Material, Plastic	17.10
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.48E+01
Cs-137	3.60E-07
Np-237	1.42E-04
Pu-238	7.17E-01
Pu-239	1.52E+01
Pu-240	3.51E+00
Pu-241	1.83E+01
Pu-242	4.86E-04
Sr-90	3.95E-07
Th-229	1.18E-12
Th-230	4.71E-10
Th-232	1.26E-16
U-233	3.78E-09
U-234	1.47E-05
U-235	1.37E-07
U-236	7.28E-07
U-238	5.13E-13

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

## Waste Stream Description

This waste stream, generated at the RFETS, includes spent salts generated by production and experimental pyrochemical operations used to recover and purify plutonium metal. This waste stream is comprised of IDCs ID-RF-409, ID-RF-410, ID-RF-411, ID-RF-412, and ID-RF-414



Waste Stream ID: **IN-BN421**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Idaho National Laboratory	Final Waste Form	Solidified Inorganics	Waste Matrix Code	S3111	Handling	CH
Source Cat.	Materials Production/Recovery Effluents	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Uncemented Ash/Soot	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	31.4	0.0	31.4
<b>Current Form Total</b>	<b>31.4</b>	<b>0.0</b>	<b>31.4</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
TDOP w/ 10 - 55-gal Drums w/ Liners	72.0	0.0	72.0
<b>Final Form Total</b>	<b>72.0</b>	<b>0.0</b>	<b>72.0</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	4.30
Aluminum-based Metals/Alloys	0.00
Other Metals	0.11
Other Inorganic Materials	110.00
Cellulosics	0.00
Rubber	0.00
Plastics	16.00
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	231.80
Packaging Material, Plastic	17.10
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	7.98E+00
Cs-137	1.37E-07
Np-237	1.10E-04
Pu-238	1.99E+00
Pu-239	3.10E+01
Pu-240	7.16E+00
Pu-241	4.12E+01
Pu-242	6.43E-04
Sr-90	1.52E-07
Th-229	3.29E-13
Th-230	5.08E-10
Th-232	8.39E-17
U-233	1.78E-09
U-234	2.55E-05
U-235	7.89E-07
U-236	8.50E-07
U-238	8.29E-07

## Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, F001, F002, F005

## TRUCON Code(s)

114/214

## Waste Stream Description

This waste stream, generated at the RFETS, includes ash and soot generated in the Building 771 plutonium recovery incinerator. This waste stream is comprised of IDCs ID-RF-420, ID-RF-421, and ID-RF-422

Waste Stream ID: **IN-BN425**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Idaho National Laboratory	Final Waste Form	Solidified Inorganics	Waste Matrix Code	S3111	Handling	CH
Source Cat.	R&D/R&D Laboratory Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Fluid Bed Ash				Activity Concentrations Decayed to CY	2009	

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	1.7	0.0	1.7
<b>Current Form Total</b>	<b>1.7</b>	<b>0.0</b>	<b>1.7</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
TDOP w/ 10 - 55-gal Drums w/ Liners	4.5	0.0	4.5
<b>Final Form Total</b>	<b>4.5</b>	<b>0.0</b>	<b>4.5</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.00
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	0.56
Cellulosics	0.00
Rubber	0.00
Plastics	1.60
Cements	0.00
Inorganic Matrix	310.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	231.80
Packaging Material, Plastic	17.10
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.31E-02
Np-237	4.97E-08
Pu-238	4.85E-03
Pu-239	1.57E-01
Pu-240	3.46E-02
Pu-241	2.48E-01
Pu-242	7.13E-06
Th-229	7.61E-16
Th-230	2.75E-11
Th-232	1.02E-17
U-233	1.55E-12
U-234	2.98E-07
U-235	3.09E-09
U-236	2.06E-08
U-238	2.15E-14

## Haz. Waste No(s).

D007, F005

## TRUCON Code(s)

114/214

## Waste Stream Description

This waste, generated at the Rocky Flats Plant, consists of fluidized bed ash which is a fine powder generated from low-level plutonium-contaminated combustible solid and liquid wastes introduced into the fluid bed incinerator (FBI)

Waste Stream ID: **IN-BN430**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Idaho National Laboratory	Final Waste Form	Combustible	Waste Matrix Code	S5390	Handling	CH
Source Cat.	Materials Production/Recovery Effluents	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Unleached Ion Column Resin	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	6.0	0.0	6.0
<b>Current Form Total</b>	<b>6.0</b>	<b>0.0</b>	<b>6.0</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
TDOP w/ 10 - 55-gal Drums w/o Liners	13.5	0.0	13.5
<b>Final Form Total</b>	<b>13.5</b>	<b>0.0</b>	<b>13.5</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.00
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	0.00
Cellulosics	0.00
Rubber	0.00
Plastics	14.54
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	18.70
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	231.80
Packaging Material, Plastic	0.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.08E+00
Cs-137	2.84E-07
Np-237	1.87E-05
Pu-238	3.26E-01
Pu-239	9.50E+00
Pu-240	2.12E+00
Pu-241	9.92E+00
Pu-242	1.58E-04
Sr-90	3.12E-07
Th-229	3.73E-15
Th-230	4.18E-12
Th-232	1.55E-18
U-233	7.99E-11
U-234	9.29E-07
U-235	9.37E-09
U-236	6.29E-08
U-238	2.39E-14

No Hazardous Waste Numbers Provided

TRUCON Code(s)

126/226

## Waste Stream Description

This waste, generated at the Rocky Flats Plant, consists of anionic and cationic exchange resins used in the purification and recovery of plutonium and americium, respectively. The anionic resins were DOWEX 1-X4 and the cationic resins were DOWEX 50W-X8, both being polystyrene-divinylbenzene copolymers.

Comprehensive Inventory Database ver. 1.00

Data ver. D.9.02

NOTE: Actual numerical values have been rounded for presentation purposes.

A - IN - 15

Waste Stream ID: **IN-BN431**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Idaho National Laboratory	Final Waste Form	Combustible	Waste Matrix Code	S5390	Handling	CH
Source Cat.	Materials Production/Recovery Effluents	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Leached Resin	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	1.2	0.0	1.2
<b>Current Form Total</b>	<b>1.2</b>	<b>0.0</b>	<b>1.2</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
SWB w/ 4 - 55-gal Drums w/ Liners	3.8	0.0	3.8
<b>Final Form Total</b>	<b>3.8</b>	<b>0.0</b>	<b>3.8</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.00
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	0.00
Cellulosics	0.00
Rubber	0.00
Plastics	8.15
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	10.48
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	211.10
Packaging Material, Plastic	16.30
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	4.19E-01
Np-237	1.59E-06
Pu-238	1.55E-01
Pu-239	5.02E+00
Pu-240	1.11E+00
Pu-241	7.90E+00
Pu-242	2.92E-04
Th-229	2.43E-14
Th-230	8.82E-10
Th-232	3.25E-16
U-233	4.95E-11
U-234	9.56E-06
U-235	9.90E-08
U-236	6.57E-07
U-238	8.81E-13

No Hazardous Waste Numbers Provided

TRUCON Code(s)

126/226

## Waste Stream Description

This waste, generated at the Rocky Flats Plant, consists of anionic and cationic exchange resins used in the purification and recovery of plutonium and americium, respectively. It is believed that the resins were Content Code 430 resins that were processed by leaching to recover plutonium. Content code was used during 1972 only.

Waste Stream ID: **IN-BN432**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Idaho National Laboratory	Final Waste Form	Solidified Organics	Waste Matrix Code	S3211	Handling	CH
Source Cat.	Other/Multiple Sources	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Homogeneous Resin Waste			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	65.1	0.0	65.1
<b>Current Form Total</b>	<b>65.1</b>	<b>0.0</b>	<b>65.1</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
TDOP w/ 10 - 55-gal Drums w/ Liners	175.5	0.0	175.5
<b>Final Form Total</b>	<b>175.5</b>	<b>0.0</b>	<b>175.5</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	1.90
Aluminum-based Metals/Alloys	0.00
Other Metals	2.90
Other Inorganic Materials	3.40
Cellulosics	0.17
Rubber	0.00
Plastics	14.00
Cements	89.00
Inorganic Matrix	0.00
Organic Matrix	75.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	231.80
Packaging Material, Plastic	17.10
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.00E+01
Cs-137	6.99E-06
Np-237	8.46E-05
Pu-238	3.10E-01
Pu-239	6.94E+00
Pu-240	1.59E+00
Pu-241	1.09E+01
Pu-242	1.37E-04
Sr-90	7.68E-06
Th-229	1.18E-08
Th-230	5.53E-11
Th-232	1.05E-17
U-233	4.19E-05
U-234	3.38E-06
U-235	2.49E-07
U-236	1.41E-07
U-238	6.21E-14

## Haz. Waste No(s).

D008, F001, F002

## TRUCON Code(s)

126/226

## Waste Stream Description

This waste stream, generated at the RFETS, consists of leached, spent anion and cation exchange resins that were cemented by mixing Portland cement, water, and washed resin into a slurry. This waste stream is comprised of IDCs ID-RF-432, and ID-RF-822

Waste Stream ID: **IN-BN510**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Idaho National Laboratory	Final Waste Form	Heterogeneous	Waste Matrix Code	S5490	Handling	CH
Source Cat.	Other/Multiple Sources	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	SUPERCOMPACTED DEBRIS WASTE			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
100-gal Drum Dir Ld w/o Liner	9.1	0.0	9.1
55-gal Drum Dir Ld w/ Liner	6577.2	0.0	6577.2
Bin - Misc	406.0	0.0	406.0
Box - Misc	8571.7	0.0	8571.7
<b>Current Form Total</b>	<b>15563.9</b>	<b>0.0</b>	<b>15563.9</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
100-gal Drum Dir Ld w/o Liner	7055.8	0.0	7055.8
SWB Dir Ld w/o Liner	22.7	0.0	22.7
<b>Final Form Total</b>	<b>7078.5</b>	<b>0.0</b>	<b>7078.5</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	360.00
Aluminum-based Metals/Alloys	1.80
Other Metals	2.40
Other Inorganic Materials	19.00
Cellulosics	150.00
Rubber	8.30
Plastics	150.00
Cements	0.00
Inorganic Matrix	0.03
Organic Matrix	0.05
Soils/gravel	0.02
Vitrified	0.00
Packaging Material, Steel	113.83
Packaging Material, Plastic	0.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	3.41E-01
Am-243	8.21E-08
Cm-244	2.89E-04
Cs-137	1.28E-07
Np-237	1.36E-05
Pu-238	2.15E-01
Pu-239	1.41E+00
Pu-240	3.07E-01
Pu-241	2.21E+00
Pu-242	2.81E-05
Sr-90	2.31E-07
Th-229	1.96E-09
Th-230	2.45E-09
Th-232	8.98E-19
U-233	1.05E-05
U-234	1.37E-04
U-235	1.27E-04
U-236	1.82E-08
U-238	4.21E-06

## Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D022, D028, D029, F001, F002, F005, F006, F007, F009

## TRUCON Code(s)

121/221

## Waste Stream Description

BN510 is a newly generated debris waste stream generated from supercompacted 55-gallon containers of debris waste.

Waste Stream ID: **IN-BN806**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Idaho National Laboratory	Final Waste Form	Solidified Inorganics	Waste Matrix Code	S3150	Handling	CH
Source Cat.	Materials Production/Recovery Effluents	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Solidified Process Solids	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	8.5	0.0	8.5
<b>Current Form Total</b>	<b>8.5</b>	<b>0.0</b>	<b>8.5</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	8.5	0.0	8.5
<b>Final Form Total</b>	<b>8.5</b>	<b>0.0</b>	<b>8.5</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.31
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	0.12
Cellulosics	0.02
Rubber	0.04
Plastics	3.30
Cements	99.00
Inorganic Matrix	120.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	4.11E-01
Np-237	7.31E-06
Pu-238	1.41E-01
Pu-239	3.23E+00
Pu-240	7.36E-01
Pu-241	5.69E+00
Pu-242	5.28E-05
Th-229	2.22E-14
Th-230	2.94E-11
Th-232	8.63E-18
U-233	1.20E-10
U-234	1.63E-06
U-235	1.27E-08
U-236	8.74E-08
U-238	3.19E-14

## Haz. Waste No(s).

D008, F001, F002, F003, F005

No TRUCON Codes Provided

## Waste Stream Description

This waste stream, generated at Rocky Flats includes all inorganic particulate and inorganic sludge that is immobilized into a solid with Portland Cement. Each waste type was preconditioned (neutralized, thickened) with Portland cement. Cemented wastes were cast into 1-gallon molds allowed to cure. The cured "pucks" were removed from the molds in the form of a solid monolith.

Waste Stream ID: **IN-BN817**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Idaho National Laboratory	Final Waste Form	Solidified Inorganics	Waste Matrix Code	S3150	Handling	CH
Source Cat.	Materials Production/Recovery Effluents	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Cemented Sand, Slag, Crucible Heels	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	5.6	0.0	5.6
<b>Current Form Total</b>	<b>5.6</b>	<b>0.0</b>	<b>5.6</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	5.6	0.0	5.6
<b>Final Form Total</b>	<b>5.6</b>	<b>0.0</b>	<b>5.6</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.07
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	0.01
Cellulosics	0.00
Rubber	0.00
Plastics	3.70
Cements	140.00
Inorganic Matrix	160.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	3.93E-01
Np-237	6.93E-06
Pu-238	1.41E-01
Pu-239	3.09E+00
Pu-240	7.07E-01
Pu-241	5.30E+00
Pu-242	4.98E-05
Th-229	3.26E-14
Th-230	4.60E-11
Th-232	1.29E-17
U-233	1.41E-10
U-234	2.03E-06
U-235	1.52E-08
U-236	1.05E-07
U-238	3.76E-14

## Haz. Waste No(s).

D007

No TRUCON Codes Provided

## Waste Stream Description

This waste stream, generated at Rocky Flats consists of the remaining insoluble residues general following plutonium leaching and hot nitric acid. After leaching, the insoluble solution residue (heel) was collected on a filter and dried on a hotplate. The waste was preconditioned (neutralized, thickened), and portland cement was added. Cemented wastes were cast into 1-gallon molds and allowed to cure. The cured "pucks" were removed from the molds in the form of a solid monolith.

Comprehensive Inventory Database ver. 1.00

Data ver. D.9.02

NOTE: Actual numerical values have been rounded for presentation purposes.



Waste Stream ID: **IN-BN823**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Idaho National Laboratory	Final Waste Form	Solidified Inorganics	Waste Matrix Code	S3150	Handling	CH
Source Cat.	Materials Production/Recovery Effluents	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Cemented Miscellaneous Sludge	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	3.7	0.0	3.7
<b>Current Form Total</b>	<b>3.7</b>	<b>0.0</b>	<b>3.7</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	3.7	0.0	3.7
<b>Final Form Total</b>	<b>3.7</b>	<b>0.0</b>	<b>3.7</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.00
Aluminum-based Metals/Alloys	0.00
Other Metals	0.25
Other Inorganic Materials	0.00
Cellulosics	0.00
Rubber	0.00
Plastics	3.30
Cements	110.00
Inorganic Matrix	130.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	7.63E-03
Np-237	7.24E-02
Pu-238	3.58E-03
Pu-239	6.38E-02
Pu-240	1.46E-02
Pu-241	1.16E-01
Pu-242	1.60E-06
Th-229	3.62E-10
Th-230	1.17E-12
Th-232	2.68E-19
U-233	1.54E-06
U-234	5.18E-08
U-235	3.15E-10
U-236	2.17E-09
U-238	1.21E-15

## Haz. Waste No(s).

D008, F001, F002, F003

No TRUCON Codes Provided

## Waste Stream Description

This waste stream, generated at Rocky Flats includes all inorganic sludge that is immobilized into a solid with Portland Cement. Each waste type was preconditioned (neutralized, thickened) with Portland cement. Cemented wastes were cast into 1-gallon molds allowed to cure. The cured "pucks" were removed from the molds in the form of a solid monolith.

Waste Stream ID: **IN-BN835**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Idaho National Laboratory	Final Waste Form	Solidified Inorganics	Waste Matrix Code	S3113	Handling	CH
Source Cat.	Materials Production/Recovery Effluents	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Solidified Acid/Caustic Waste	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	39.3	0.0	39.3
<b>Current Form Total</b>	<b>39.3</b>	<b>0.0</b>	<b>39.3</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
SWB w/ 4 - 55-gal Drums w/ Liners	94.5	0.0	94.5
<b>Final Form Total</b>	<b>94.5</b>	<b>0.0</b>	<b>94.5</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.02
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	0.06
Cellulosics	5.60
Rubber	0.02
Plastics	0.26
Cements	0.00
Inorganic Matrix	240.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	211.10
Packaging Material, Plastic	16.30
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	4.01E-02
Cs-137	8.41E-08
Np-237	6.15E-06
Pu-238	1.63E+00
Pu-239	3.26E-03
Pu-240	2.09E-03
Pu-241	3.32E-02
Pu-242	2.12E-06
Sr-90	1.47E-07
Th-229	1.95E-14
Th-230	3.40E-10
Th-232	2.45E-20
U-233	1.04E-10
U-234	1.88E-05
U-235	1.40E-10
U-236	2.48E-10
U-238	2.03E-07

## Haz. Waste No(s).

D007, D008, D009,  
F001, F002

## TRUCON Code(s)

111/211

## Waste Stream Description

IN-BN835 waste stream consists of drums containing solidified acid (IDC 834) and caustic (IDC 835) wastes combined with nonhazardous absorbent. This waste stream was generated from pressed plutonium oxides sphere or plutonium molybdenum cermet production, isotope recovery, cleaning or leaching of items and construction of standards. Acidic and caustic waste was commingled during the wastewater treatment process. This waste stream consists of waste that is primarily inorganic particulate absorbent materials (>50% by volume) including absorbed aqueous liquids, if present.

Waste Stream ID: **IN-BN836**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Idaho National Laboratory	Final Waste Form	Solidified Inorganics	Waste Matrix Code	S3121	Handling	CH
Source Cat.	Pollution Control or Waste Treatment Process	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Cemented Sludge	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	82.2	0.0	82.2
<b>Current Form Total</b>	<b>82.2</b>	<b>0.0</b>	<b>82.2</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	4.8	0.0	4.8
SWB w/ 4 - 55-gal Drums w/ Liners	179.6	0.0	179.6
<b>Final Form Total</b>	<b>184.3</b>	<b>0.0</b>	<b>184.3</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.01
Aluminum-based Metals/Alloys	0.00
Other Metals	0.01
Other Inorganic Materials	0.23
Cellulosics	0.12
Rubber	0.00
Plastics	0.05
Cements	240.00
Inorganic Matrix	310.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	209.02
Packaging Material, Plastic	16.84
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.37E-03
Cs-137	2.65E-07
Np-237	1.28E-06
Pu-238	1.03E+00
Pu-239	1.61E-03
Pu-240	1.09E-03
Pu-241	4.79E-03
Pu-242	1.24E-06
Sr-90	4.35E-07
Th-229	2.35E-15
Th-230	1.24E-10
Th-232	7.16E-21
U-233	1.67E-11
U-234	8.99E-06
U-235	1.90E-08
U-236	9.66E-11
U-238	7.79E-09

## Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, F001, F002, F005

## TRUCON Code(s)

111/211

## Waste Stream Description

IN-BN836 consists of drums containing Mound cemented sludge (IDC 836). The sludge was generated from the treatment of alpha-contaminated wastewaters at the Waste Disposal Building. The wastewater originated outside process gloveboxes from sources such as floor drains, laboratory sinks, and sumps, as well as the old alpha waste line. The wastewaters were generated from decontamination, laundry, research and analytical operations. IN-BN836 consists of >50% by volume sludge from a wastewater treatment process that was solidified with portland cement. Florco, a non-hazardous absorbent, may have also been added to this waste stream.

Waste Stream ID: **IN-BN842**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Idaho National Laboratory	Final Waste Form	Soils	Waste Matrix Code	S4200	Handling	CH
Source Cat.	Remediation/D&D Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	CONTAMINATED SOIL			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
Box - Misc	123.6	0.0	123.6
<b>Current Form Total</b>	<b>123.6</b>	<b>0.0</b>	<b>123.6</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
SWB w/ 4 - 55-gal Drums w/ Liners	45.4	0.0	45.4
<b>Final Form Total</b>	<b>45.4</b>	<b>0.0</b>	<b>45.4</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.09
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	5.67
Cellulosics	16.82
Rubber	0.00
Plastics	0.00
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	542.81
Vitrified	0.00
Packaging Material, Steel	211.10
Packaging Material, Plastic	16.30
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.00E-04
Np-237	7.56E-10
Pu-238	1.25E+00
Pu-239	6.79E-02
Pu-240	1.08E-04
Pu-241	3.77E-03
Pu-242	9.44E-08
Th-229	1.16E-17
Th-230	7.07E-09
Th-232	3.16E-20
U-233	2.36E-14
U-234	7.67E-05
U-235	1.34E-09
U-236	6.40E-11
U-238	2.85E-16

## Haz. Waste No(s).

D006, D007, D008,  
D009, D010, D011**No TRUCON  
Codes Provided**

## Waste Stream Description

This waste, generated at Mound Laboratories, consists of soil, including small rocks and pebbles, generated from cleanup of a leak. All soil waste was dry when packaged. A few waste boxes also include picks, shovels, metal cans, rubber gloves, booties, respirators, plastic, and possibly an air hammer and chisel. Soils waste was packaged in small, plastic lined plywood boxes (42 x 20 x 39 inch) other waste was then placed on top of the soil before the box was sealed. Four of the small boxes were then packaged in a standard larger waste box (4 x 4 x 7 feet) lined with fiberglass-reinforced polyester. Assay was performed using radiochemical analysis on core samples taken from the contaminated area.

Waste Stream ID: **IN-BN976**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Idaho National Laboratory	Final Waste Form	Solidified Inorganics	Waste Matrix Code	S3129	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Bldg. 776 Process Sludge	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	1.5	0.0	1.5
Box - Misc	63.4	0.0	63.4
<b>Current Form Total</b>	<b>64.9</b>	<b>0.0</b>	<b>64.9</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
SWB w/ 4 - 55-gal Drums w/ Liners	170.1	0.0	170.1
<b>Final Form Total</b>	<b>170.1</b>	<b>0.0</b>	<b>170.1</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.00
Aluminum-based Metals/Alloys	0.00
Other Metals	1.46
Other Inorganic Materials	15.79
Cellulosics	6.62
Rubber	0.00
Plastics	4.10
Cements	193.25
Inorganic Matrix	289.87
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	211.10
Packaging Material, Plastic	16.30
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.43E+00
Cs-137	1.81E-07
Np-237	1.90E-05
Pu-238	2.26E-01
Pu-239	5.83E+00
Pu-240	1.35E+00
Pu-241	6.74E+00
Pu-242	1.11E-04
Sr-90	1.99E-07
Th-229	3.32E-14
Th-230	2.66E-10
Th-232	8.88E-18
U-233	2.39E-10
U-234	1.08E-05
U-235	1.60E-06
U-236	1.20E-07
U-238	4.58E-05

## Haz. Waste No(s).

D006, D007, D008, D009, D022, D028, F001, F002, F003

No TRUCON Codes Provided

## Waste Stream Description

This waste is from Rocky Flats and consists of sludge from floor drains in a Pu process facility that have been cemented in portland. The cement is described as a poor grade. Also may be laundry sludges, material contents given are for an organic laundry sludge.

Waste Stream ID: **IN-BN978**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Idaho National Laboratory	Final Waste Form	Solidified Inorganics	Waste Matrix Code	S3129	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	LAUNDRY SLUDGE	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
Box - Misc	34.9	0.0	34.9
<b>Current Form Total</b>	<b>34.9</b>	<b>0.0</b>	<b>34.9</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
TDOP w/ 10 - 55-gal Drums w/ Liners	22.5	0.0	22.5
<b>Final Form Total</b>	<b>22.5</b>	<b>0.0</b>	<b>22.5</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.00
Aluminum-based Metals/Alloys	0.00
Other Metals	2.96
Other Inorganic Materials	30.25
Cellulosics	30.25
Rubber	40.10
Plastics	8.18
Cements	268.45
Inorganic Matrix	402.68
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	231.80
Packaging Material, Plastic	17.10
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	3.11E-03
Np-237	2.98E-09
Pu-238	3.83E-04
Pu-239	1.39E-02
Pu-240	3.08E-03
Pu-241	2.18E-02
Pu-242	4.01E-07
Th-229	1.81E-18
Th-230	1.26E-10
Th-232	2.03E-20
U-233	1.94E-14
U-234	4.66E-06
U-235	9.85E-07
U-236	2.74E-10
U-238	2.59E-05

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

## Waste Stream Description

This waste consists of sludge (lint, spent detergent, dirt, and other similar waste) mixed with Portland cement generated by laundry operations. The sludge was removed from two laundry tanks located north of Building 776. Both tanks collected liquid effluent from the laundry in Building 776.

Comprehensive Inventory Database ver. 1.00

Data ver. D.9.02

NOTE: Actual numerical values have been rounded for presentation purposes.

Waste Stream ID: **IN-BNINW216**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Idaho National Laboratory	Final Waste Form	Solidified Inorganics	Waste Matrix Code	S3100	Handling	CH
Source Cat.	Pollution Control or Waste Treatment Process	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	First/Second Stage Sludge	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	2729.8	0.0	2729.8
Box - Misc	22.2	0.0	22.2
<b>Current Form Total</b>	<b>2752.0</b>	<b>0.0</b>	<b>2752.0</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	182.4	0.0	182.4
SWB w/ 4 - 55-gal Drums w/ Liners	1277.6	0.0	1277.6
TDOP w/ 10 - 55-gal Drums w/ Liners	4720.5	0.0	4720.5
<b>Final Form Total</b>	<b>6180.6</b>	<b>0.0</b>	<b>6180.6</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.05
Aluminum-based Metals/Alloys	0.00
Other Metals	0.07
Other Inorganic Materials	3.90
Cellulosics	0.03
Rubber	0.02
Plastics	0.35
Cements	48.00
Inorganic Matrix	360.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	224.54
Packaging Material, Plastic	17.52
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	6.70E+00
Cs-137	1.77E-08
Np-237	8.31E-05
Pu-238	4.30E-02
Pu-239	4.09E-01
Pu-240	1.05E-01
Pu-241	1.07E+00
Pu-242	5.69E-05
Sr-90	2.88E-08
Th-229	2.46E-13
Th-230	1.40E-09
Th-232	1.23E-18
U-233	1.34E-09
U-234	3.92E-05
U-235	6.88E-06
U-236	1.24E-08
U-238	3.87E-04

## Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D022, F001, F002, F003, F005, F006, F007, F009

## TRUCON Code(s)

111/211, 132/232

## Waste Stream Description

IN-BNINW216 (aqueous sludge wastes from Building 774) were generated from a carrier precipitation and immobilization process (sludge mixed with diatomite and Portland cement) The First/Second Sludge waste stream is comprised of IDCs ID-RF-001, ID-RF-002, and ID-RF-800. The First/Second Sludge waste stream consists of >50% by volume secondary sludge or filter cake from wastewater treatment processes or heavy metal sludges from recovery processes.

Two waste matrix codes have been assigned to this waste stream because the immobilization process for this waste stream was changed in 1986. Prior to 1986 the first/second stage sludge was placed into a drum with Portland cement. The excess liquid was immobilized but a solid monolith was not formed. Subsequent to 1986 the sludge was co-fed into a drum with a diatomite and Portland cement mixture, which formed a solid monolith after curing.

Waste Stream ID: **IN-BNINW218**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Idaho National Laboratory	Final Waste Form	Solidified Inorganics	Waste Matrix Code	S3100	Handling	CH
Source Cat.	Materials Production/Recovery Effluents	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Building 374 Sludge	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	238.4	0.0	238.4
Box - Misc	6.3	0.0	6.3
<b>Current Form Total</b>	<b>244.7</b>	<b>0.0</b>	<b>244.7</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
SWB w/ 4 - 55-gal Drums w/ Liners	77.5	0.0	77.5
TDOP w/ 10 - 55-gal Drums w/ Liners	526.5	0.0	526.5
<b>Final Form Total</b>	<b>604.0</b>	<b>0.0</b>	<b>604.0</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.02
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	24.00
Cellulosics	0.00
Rubber	0.01
Plastics	2.20
Cements	23.00
Inorganic Matrix	350.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	229.14
Packaging Material, Plastic	17.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	9.11E-02
Cs-137	2.07E-08
Np-237	5.56E-04
Pu-238	4.84E-03
Pu-239	9.78E-02
Pu-240	2.02E-02
Pu-241	1.76E-01
Pu-242	2.95E-06
Sr-90	3.38E-08
Th-229	2.78E-12
Th-230	2.92E-09
Th-232	3.69E-19
U-233	1.19E-08
U-234	6.49E-05
U-235	6.20E-06
U-236	2.99E-09
U-238	5.88E-04

## Haz. Waste No(s).

D006, D007, D008, D009, D010, D011, D032, F001, F002, F005, F006, F007, F009

## TRUCON Code(s)

111/211

## Waste Stream Description

The Building 374 Sludge waste stream (BNINW218) consists of drums containing Building 374 dry sludge (IDC 007), solidified direct cementation process sludge (IDC 803), or Building 374 solidified by-pass sludge (IDC 807). The aqueous sludge wastes from Building 374 were generated from a carrier precipitation and immobilization process.

Two waste matrix codes have been assigned to this waste stream because the cementation immobilization process for this waste stream was changed in the 1986-1987 timeframe. The immobilization process at other times involved mixing the sludge with Portland cement or a Portland cement and diatomite mixture. The feed streams to the process did not change over time.



Waste Stream ID: **IN-GEM-01**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Idaho National Laboratory	Final Waste Form	Soils	Waste Matrix Code	S4000	Handling	CH
Source Cat.	Remediation/D&D Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Glovebox Excavator Method Project Soils and Sludge			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	7.3	0.0	7.3
<b>Current Form Total</b>	<b>7.3</b>	<b>0.0</b>	<b>7.3</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	7.3	0.0	7.3
<b>Final Form Total</b>	<b>7.3</b>	<b>0.0</b>	<b>7.3</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.00
Aluminum-based Metals/Alloys	0.00
Other Metals	0.50
Other Inorganic Materials	59.40
Cellulosics	0.00
Rubber	0.00
Plastics	0.00
Cements	116.58
Inorganic Matrix	97.88
Organic Matrix	224.00
Soils/gravel	947.70
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	4.57E-01
Np-237	8.32E-06
Pu-238	9.25E-02
Pu-239	1.97E+00
Pu-240	4.28E-01
Pu-241	2.14E+00
Pu-242	3.48E-05
Th-229	1.68E-15
Th-230	6.98E-12
Th-232	3.13E-19
U-233	3.59E-11
U-234	9.08E-07
U-235	1.22E-07
U-236	1.27E-08
U-238	5.26E-15

## Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D022, D027, D028, D029, D030, D032, D033, D034, D037, D038, D043, F001, F002, F004, F005, F006, F007, F009, P098, P106

**No TRUCON Codes Provided**

## Waste Stream Description

Waste consists of soils (approximately 60%) and associated sludge type wastes to be generated through environmental restoration activities at the Idaho National Engineering Laboratory's Subsurface Disposal Area (Pit 9). The sludge waste originated at the Rocky Flats Plant from various treatment processes in building 774. Sludge wastes included in the waste stream correspond to the following ID numbers: IN-W216, First Stage Sludge; IN-W228, Second Stage Sludge; IN-W309, Organic Setups Oil Solids; IN-W157, Special Setups (Cement); IN-W315, Evaporator Salts; IN-W276, Graphite. Graphite waste generated at the Rocky Flats Plant for casting plutonium metal is also included in the overall waste stream. The originally disposed sludges, graphite and surrounding soils are packaged in a single waste stream through environmental restoration retrieval and repackaging activities.

Waste Stream ID: **IN-GEM-02**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Idaho National Laboratory	Final Waste Form	Heterogeneous	Waste Matrix Code	S5400	Handling	CH
Source Cat.	Remediation/D&D Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Glovebox Excavator Method Project Heterogeneous Debris.			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	5.6	0.0	5.6
<b>Current Form Total</b>	<b>5.6</b>	<b>0.0</b>	<b>5.6</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	5.6	0.0	5.6
<b>Final Form Total</b>	<b>5.6</b>	<b>0.0</b>	<b>5.6</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	17.30
Aluminum-based Metals/Alloys	1.13
Other Metals	58.00
Other Inorganic Materials	13.56
Cellulosics	41.00
Rubber	17.43
Plastics	63.27
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	4.28E-01
Np-237	6.75E-06
Pu-238	1.18E-01
Pu-239	1.76E+00
Pu-240	3.68E-01
Pu-241	2.04E+00
Pu-242	3.06E-05
Th-229	1.36E-15
Th-230	1.64E-11
Th-232	2.69E-19
U-233	2.91E-11
U-234	2.00E-06
U-235	3.41E-07
U-236	1.09E-08
U-238	4.30E-06

## Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D022, D027, D028, D029, D030, D032, D033, D034, D037, D038, D043, F001, F002, F004, F005, F006, F007, F009, P098, P106

**No TRUCON Codes Provided**

## Waste Stream Description

Waste consists of combustible and noncombustible heterogeneous debris generated through environmental restoration activities at the INEEL Subsurface disposal area (Pit 9). The debris includes drum remnants of sludge waste packaging material that originated at the Rocky Flats Plant from various treatment processes in building 774. Original packaging material (if still present) are segregated during retrieval operations and combined with noncombustible and combustible debris streams that originated at the Rocky Flats Plant. The original noncombustible and combustible debris streams are similar to the following ID numbers: IN-W169, dry Paper and Rags; IN-W278, Low Specific Activity Metal, Glass Etc.; and IN-W296, Non special Source Metal. The materials are combined in a single waste stream through environmental restoration retrieval repackaging activities.

Waste Stream ID: **IN-ID-BTO-030**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Idaho National Laboratory	Final Waste Form	Solidified Inorganics	Waste Matrix Code	S3000	Handling	RH
Source Cat.	R&D/R&D Laboratory Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Solidified Waste Sludge from Bettis Atomic Power Lab.			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
HFEF-5 RH Insert	0.3	0.0	0.3
<b>Current Form Total</b>	<b>0.3</b>	<b>0.0</b>	<b>0.3</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	1.8	0.0	1.8
<b>Final Form Total</b>	<b>1.8</b>	<b>0.0</b>	<b>1.8</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	91.82
Aluminum-based Metals/Alloys	1.05
Other Metals	0.00
Other Inorganic Materials	0.09
Cellulosics	0.00
Rubber	0.00
Plastics	0.00
Cements	37.52
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	652.20
Packaging Material, Plastic	26.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	3.01E-03
Am-243	3.87E-04
Cs-137	2.46E+01
Np-237	4.08E-04
Pu-238	3.20E+00
Pu-239	3.47E-03
Pu-240	3.50E-03
Pu-242	3.38E-05
Sr-90	2.39E+01
Th-229	1.57E-04
Th-230	2.01E-08
Th-232	8.30E-06
U-233	7.99E-02
U-234	2.08E-04
U-235	4.48E-05
U-236	2.18E-09
U-238	1.07E-13

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

## Waste Stream Description

The inventory reported here represents best available information on this waste stream. It consists of 2 inserts (12 in Diax6 ft tall). Each insert will be repackaged into 2-55 gallon drums and 3-55 gallon drums will be placed in a RH TRU Removable Lid Canister. This waste consists of two inserts that contain solidified sludge from sectioning, drilling and grinding from metallographic and dissolution process. Concrete was used as the immobilizing matrix. This waste was shipped from BETTIS in 53 small containers to ANL-W and was repackaged at ANL-W prior to transporting to RWMC for interim storage.

Comprehensive Inventory Database ver. 1.00

Data ver. D.9.02

NOTE: Actual numerical values have been rounded for presentation purposes.

Waste Stream ID: **IN-ID-INL-152**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Idaho National Laboratory	Final Waste Form	Heterogeneous	Waste Matrix Code	S5000	Handling	RH
Source Cat.	R&D/R&D Laboratory Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	RH-TRU Debris Waste From Materials and Fuels Complex Hot Fuel Examination Facility at the INL.			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
HFEF-5 RH Insert	3.9	0.0	3.9
<b>Current Form Total</b>	<b>3.9</b>	<b>0.0</b>	<b>3.9</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	16.9	0.0	16.9
<b>Final Form Total</b>	<b>16.9</b>	<b>0.0</b>	<b>16.9</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	57.00
Aluminum-based Metals/Alloys	0.00
Other Metals	3.16
Other Inorganic Materials	1.27
Cellulosics	13.70
Rubber	1.05
Plastics	15.80
Cements	0.00
Inorganic Matrix	1.05
Organic Matrix	0.09
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	652.20
Packaging Material, Plastic	26.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Cs-137	2.87E+01
Np-237	1.39E-06
Pu-239	3.82E-01
Pu-240	1.48E-01
Sr-90	2.68E+01
Th-229	7.67E-06
Th-230	2.18E-13
Th-232	2.40E-06
U-233	3.90E-03
U-234	2.31E-09
U-235	1.54E-04
U-236	9.20E-08
U-238	3.89E-05

## Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D022, D038, F002, F005

## TRUCON Code(s)

321, 322, 325

## Waste Stream Description

This waste stream consists of 28 inserts (12 in Diax6 ft tall). Each insert will be repackaged into 2-55 gallon drums and 3-55-gallon drums will be placed in a RH TRU Removable Lid Canister.

Waste Stream ID: **IN-ID-INL-152M**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Idaho National Laboratory	Final Waste Form	Heterogeneous	Waste Matrix Code	S5000	Handling	RH
Source Cat.	R&D/R&D Laboratory Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	RH-TRU Debris Waste From Materials and Fuels Complex Hot Fuel Examination Facility at the INL.			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
HFEF-5 RH Insert	7.6	0.0	7.6
<b>Current Form Total</b>	<b>7.6</b>	<b>0.0</b>	<b>7.6</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	32.0	0.0	32.0
<b>Final Form Total</b>	<b>32.0</b>	<b>0.0</b>	<b>32.0</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	41.50
Aluminum-based Metals/Alloys	0.77
Other Metals	2.30
Other Inorganic Materials	9.22
Cellulosics	9.99
Rubber	0.77
Plastics	11.50
Cements	0.00
Inorganic Matrix	0.77
Organic Matrix	0.07
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	652.20
Packaging Material, Plastic	26.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.69E-01
Am-243	9.60E-13
Cm-244	9.85E-02
Cs-137	3.30E+01
Np-237	4.69E-05
Pu-238	2.80E-01
Pu-239	5.82E-01
Pu-240	1.45E-01
Pu-241	8.66E-01
Pu-242	9.11E-09
Pu-244	8.35E-25
Sr-90	2.76E+01
Th-229	1.00E-06
Th-230	1.29E-07
Th-232	1.15E-06
U-233	8.23E-04
U-234	1.11E-03
U-235	1.40E-04
U-236	3.36E-05
U-238	1.33E-04

## Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D022, D038, F002, F005

## TRUCON Code(s)

321, 322, 325

## Waste Stream Description

This waste stream consists of 54 inserts (12 in Diax6 ft tall). Each insert will be repackaged into 2-55 gallon drums and 3-55-gallon drums will be placed in a RH TRU Removable Lid Canister. Some of the canisters in this waste stream have hazardous waste codes applied by the generator.

Waste Stream ID: **IN-ID-NTLRC-S5400**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Idaho National Laboratory	Final Waste Form	Heterogeneous	Waste Matrix Code	S5400	Handling	CH
Source Cat.	Remediation/D&D Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	NTS Lynchburg Research Center Debris Waste			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	0.2	0.0	0.2
<b>Current Form Total</b>	<b>0.2</b>	<b>0.0</b>	<b>0.2</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	0.2	0.0	0.2
<b>Final Form Total</b>	<b>0.2</b>	<b>0.0</b>	<b>0.2</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	49.10
Aluminum-based Metals/Alloys	0.00
Other Metals	2.36
Other Inorganic Materials	1.89
Cellulosics	0.00
Rubber	0.00
Plastics	9.43
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	0.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.42E+00
Np-237	3.14E-04
Pu-238	2.70E-01
Pu-239	7.04E+00
Pu-240	1.54E+00
Pu-241	9.39E+00
Pu-242	1.30E-04
U-234	8.56E-04
U-235	2.94E-05
U-238	5.05E-05

## Haz. Waste No(s).

D005, D008, D009, D011, D019, D040, F005

## TRUCON Code(s)

121/221, 125/225

## Waste Stream Description

This waste stream was originally generated at the Lynchburg Research Center (LRC) and shipped to the Nevada Test Site (NTS) in 1985. This waste stream consists of mixed heterogeneous debris removed from four of fifteen plutonium matrix standard drums used to compare assay systems. The debris waste consists primarily of iron pipes with caps, plastic bottles and vials, and plutonium shaps contained in polyvinyl (PVC) plastic pipes. It is possible that this waste also can contain contaminated laboratory materials originally present in the LRC drums. In addition, the waste may also contain small amounts of homogeneous solids such as absorbent material and mixed oxide.

Waste Stream ID: **IN-ID-RF-S3114**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Idaho National Laboratory	Final Waste Form	Solidified Organics	Waste Matrix Code	S3114	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Organic Setups	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	1790.3	0.0	1790.3
<b>Current Form Total</b>	<b>1790.3</b>	<b>0.0</b>	<b>1790.3</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
SWB w/ 4 - 55-gal Drums w/ Liners	517.9	0.0	517.9
TDOP w/ 10 - 55-gal Drums w/ Liners	3654.0	0.0	3654.0
<b>Final Form Total</b>	<b>4171.9</b>	<b>0.0</b>	<b>4171.9</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	4.62
Aluminum-based Metals/Alloys	0.00
Other Metals	0.90
Other Inorganic Materials	4.22
Cellulosics	0.06
Rubber	0.57
Plastics	2.41
Cements	0.00
Inorganic Matrix	0.19
Organic Matrix	353.10
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	229.23
Packaging Material, Plastic	17.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.72E-02
Am-243	5.27E-09
Cs-137	1.04E-08
Np-237	6.30E-07
Pu-238	3.21E-03
Pu-239	9.10E-02
Pu-240	1.84E-02
Pu-241	1.72E-01
Pu-242	2.01E-06
Sr-90	1.10E-07
Th-229	1.13E-15
Th-230	9.73E-11
Th-232	1.21E-19
U-233	8.07E-12
U-234	3.62E-06
U-235	1.04E-07
U-236	1.64E-09
U-238	5.87E-06

## Haz. Waste No(s).

D022, D026, D027, D028, D029, D030, D032, D034, D036, D037, F001, F002, F005

## TRUCON Code(s)

112/212, 154

## Waste Stream Description

Waste Stream ID-RF-3114 consists of various organic liquids that were immobilized to form a grease or paste -like material. The organic liquids were primarily a mixture of oils and chlorinated solvents. This waste consists of > 50% by volume solidified organic liquids

Waste Stream ID: **IN-ID-RF-S3150-A**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Idaho National Laboratory	Final Waste Form	Solidified Organics	Waste Matrix Code	S3150	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Organic and Sludge Immobilization System Waste	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	39.7	0.0	39.7
<b>Current Form Total</b>	<b>39.7</b>	<b>0.0</b>	<b>39.7</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	26.2	0.0	26.2
SWB w/ 4 - 55-gal Drums w/ Liners	28.4	0.0	28.4
TDOP w/ 10 - 55-gal Drums w/ Liners	9.0	0.0	9.0
<b>Final Form Total</b>	<b>63.6</b>	<b>0.0</b>	<b>63.6</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.01
Aluminum-based Metals/Alloys	0.00
Other Metals	21.13
Other Inorganic Materials	4.29
Cellulosics	0.00
Rubber	1.93
Plastics	3.22
Cements	2.69
Inorganic Matrix	0.00
Organic Matrix	665.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	180.92
Packaging Material, Plastic	24.95
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.88E-01
Cs-137	8.35E-08
Np-237	8.71E-06
Pu-238	3.42E-02
Pu-239	7.54E-01
Pu-240	1.66E-01
Pu-241	1.45E+00
Pu-242	1.40E-05
Sr-90	1.42E-07
Th-229	2.72E-14
Th-230	1.00E-07
Th-232	1.94E-18
U-233	1.46E-10
U-234	2.79E-03
U-235	4.88E-07
U-236	1.96E-08
U-238	9.13E-07

## Haz. Waste No(s).

D022, D028, D029, D030, D032, D034, D036, D043, F001, F002, F005

## TRUCON Code(s)

112/212, 154

## Waste Stream Description

Waste Stream ID-RF-3150A consists of various organic liquids that were immobilized into a solid monolith by the Organic and Sludge Immobilization System (OASIS). The organic liquids were primarily a mixture of oils and chlorinated solvents. This waste consists of > 50% by volume solidified organic liquids



Waste Stream ID: **IN-ID-RF-S5100-A**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Idaho National Laboratory	Final Waste Form	Inorganic Non-Metal	Waste Matrix Code	S5100	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Rocky Flats Raschig Rings Stored at the INL			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	25.6	0.0	25.6
<b>Current Form Total</b>	<b>25.6</b>	<b>0.0</b>	<b>25.6</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	11.0	0.0	11.0
SWB w/ 4 - 55-gal Drums w/ Liners	1.9	0.0	1.9
TDOP w/ 10 - 55-gal Drums w/ Liners	31.5	0.0	31.5
<b>Final Form Total</b>	<b>44.4</b>	<b>0.0</b>	<b>44.4</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.03
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	121.80
Cellulosics	14.89
Rubber	0.01
Plastics	8.57
Cements	0.00
Inorganic Matrix	0.97
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	205.85
Packaging Material, Plastic	22.01
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.44E-01
Cs-137	2.09E-08
Np-237	2.67E-06
Pu-238	3.19E-02
Pu-239	9.74E-01
Pu-240	2.06E-01
Pu-241	1.13E+00
Pu-242	1.77E-05
Sr-90	3.16E-08
Th-229	1.68E-09
Th-230	1.21E-10
Th-232	2.41E-18
U-233	4.49E-06
U-234	3.54E-06
U-235	1.43E-07
U-236	2.44E-08
U-238	7.13E-09

## Haz. Waste No(s).

D008, D009, D022,  
F001, F002, F005

## TRUCON Code(s)

125/225

## Waste Stream Description

Waste stream IN-ID-RF-S5100 is comprised of Raschig ring waste assigned IDC ID-RF-441 and ID-RF-442. Raschig rings are borosilicate glass rings used to maintain subcritical conditions in fissile solution storage tanks that were not safe by dimension. This waste consists of >50% by volume Raschig Rings

Waste Stream ID: **IN-ID-RF-S5126-A**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Idaho National Laboratory	Final Waste Form	Graphite	Waste Matrix Code	S5126	Handling	CH
Source Cat.	Materials Production/Recovery Effluents	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	TRU Mixed Graphite Debris	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	41.0	0.0	41.0
<b>Current Form Total</b>	<b>41.0</b>	<b>0.0</b>	<b>41.0</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	22.0	0.0	22.0
SWB w/ 4 - 55-gal Drums w/ Liners	3.8	0.0	3.8
TDOP w/ 10 - 55-gal Drums w/ Liners	40.5	0.0	40.5
<b>Final Form Total</b>	<b>66.3</b>	<b>0.0</b>	<b>66.3</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.48
Aluminum-based Metals/Alloys	0.00
Other Metals	0.03
Other Inorganic Materials	238.60
Cellulosics	5.57
Rubber	0.05
Plastics	4.78
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	197.05
Packaging Material, Plastic	23.67
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	6.86E-01
Cs-137	4.01E-03
Np-237	1.18E-05
Pu-238	1.30E-01
Pu-239	3.62E+00
Pu-240	8.43E-01
Pu-241	5.78E+00
Pu-242	7.71E-05
Sr-90	8.08E-08
Th-229	2.64E-07
Th-230	1.95E-09
Th-232	5.56E-18
U-233	9.38E-04
U-234	7.28E-05
U-235	6.32E-08
U-236	7.50E-08
U-238	6.84E-06

## Haz. Waste No(s).

D008, D029, F001, F002, F005

## TRUCON Code(s)

115/215, 154

## Waste Stream Description

Graphite wastes (ID-RF-S5126) are comprised of graphite generated by production, recovery, laboratory, size reduction, and research and development activities associated with RFETS plutonium operations. ID-RF-S5126 contains more than 50% (by volume) inorganic nonmetal debris.

Waste Stream ID: **IN-ID-RF-S5300-A**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Idaho National Laboratory	Final Waste Form	Combustible	Waste Matrix Code	S5300	Handling	CH
Source Cat.	Materials Production/Recovery Effluents	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	RFETS Combustibles and Plastic Stored at INL	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	3379.4	0.0	3379.4
<b>Current Form Total</b>	<b>3379.4</b>	<b>0.0</b>	<b>3379.4</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
SWB w/ 4 - 55-gal Drums w/ Liners	168.2	0.0	168.2
TDOP w/ 10 - 55-gal Drums w/ Liners	7164.0	0.0	7164.0
<b>Final Form Total</b>	<b>7332.2</b>	<b>0.0</b>	<b>7332.2</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	4.31
Aluminum-based Metals/Alloys	0.20
Other Metals	0.45
Other Inorganic Materials	6.37
Cellulosics	56.12
Rubber	4.93
Plastics	48.45
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.01
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	231.33
Packaging Material, Plastic	17.08
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	3.16E-02
Am-243	6.24E-12
Cm-244	1.72E-04
Cs-137	8.34E-09
Np-237	1.48E-06
Pu-238	2.87E-03
Pu-239	8.76E-02
Pu-240	1.97E-02
Pu-241	1.20E-01
Pu-242	1.89E-05
Sr-90	1.11E-08
Th-229	3.04E-08
Th-230	2.24E-10
Th-232	1.30E-19
U-233	1.08E-04
U-234	8.30E-06
U-235	2.18E-07
U-236	1.75E-09
U-238	3.19E-07

## Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D022, D028, D029, F001, F002, F005, F006, F007, F009

## TRUCON Code(s)

116/216, 154

## Waste Stream Description

Waste stream ID-RF-S5300-A is comprised of combustible and plastic waste items assigned Item IDCs 330, 336, and 337. Contains greater than 80% (by volume), organic combustible and plastic debris

Waste Stream ID: **IN-ID-SDA-Debris**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Idaho National Laboratory	Final Waste Form	Heterogeneous	Waste Matrix Code	S5400	Handling	CH
Source Cat.	Remediation/D&D Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	ICP Retrieved Debris Waste (Filters/Graphite)			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	595.3	0.0	595.3
<b>Current Form Total</b>	<b>595.3</b>	<b>0.0</b>	<b>595.3</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	571.2	0.0	571.2
SWB w/ 4 - 55-gal Drums w/ Liners	54.8	0.0	54.8
<b>Final Form Total</b>	<b>626.0</b>	<b>0.0</b>	<b>626.0</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	1.68
Aluminum-based Metals/Alloys	0.55
Other Metals	0.07
Other Inorganic Materials	216.35
Cellulosics	102.98
Rubber	0.05
Plastics	9.43
Cements	0.89
Inorganic Matrix	0.52
Organic Matrix	0.82
Soils/gravel	5.07
Vitrified	0.00
Packaging Material, Steel	137.83
Packaging Material, Plastic	35.19
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	6.41E-01
Cs-137	1.86E-07
Np-237	1.04E-05
Pu-238	5.53E-02
Pu-239	1.60E+00
Pu-240	3.57E-01
Pu-241	1.87E+00
Pu-242	3.66E-05
Sr-90	2.04E-07
U-234	1.56E-04
U-235	3.92E-06
U-238	5.51E-04

## Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D022, D027, D028, D029, D030, D032, D033, D034, D037, D038, D043, F001, F002, F004, F005, F006, F007, F009, P098, P106

## TRUCON Code(s)

112/212, 122/222, 127/227, 154

## Waste Stream Description

Pre-1970 buried waste retrieved for the Idaho Completion Project

Waste Stream ID: **IN-ID-SDA-Sludge**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Idaho National Laboratory	Final Waste Form	Solidified Inorganics	Waste Matrix Code	S3900	Handling	CH
Source Cat.	Remediation/D&D Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	ICP Retrieved Sludge Waste (Inorganic/Organic Sludge/Roaster Oxide)			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	3774.8	0.0	3774.8
<b>Current Form Total</b>	<b>3774.8</b>	<b>0.0</b>	<b>3774.8</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	3353.8	0.0	3353.8
SWB w/ 4 - 55-gal Drums w/ Liners	956.3	0.0	956.3
<b>Final Form Total</b>	<b>4310.1</b>	<b>0.0</b>	<b>4310.1</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.12
Aluminum-based Metals/Alloys	0.00
Other Metals	0.02
Other Inorganic Materials	43.47
Cellulosics	0.40
Rubber	0.02
Plastics	1.32
Cements	0.09
Inorganic Matrix	124.55
Organic Matrix	500.93
Soils/gravel	0.14
Vitrified	0.00
Packaging Material, Steel	148.62
Packaging Material, Plastic	32.41
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.05E+00
Cs-137	1.50E-07
Np-237	3.05E-05
Pu-238	2.64E-02
Pu-239	6.00E-01
Pu-240	1.36E-01
Pu-241	1.18E+00
Pu-242	2.53E-05
Sr-90	1.67E-07
Th-232	1.20E-09
U-233	8.87E-05
U-234	1.96E-04
U-235	5.08E-06
U-238	7.07E-02

## Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D022, D027, D028, D029, D030, D032, D033, D034, D037, D038, D043, F001, F002, F004, F005, F006, F007, F009, P098, P106

## TRUCON Code(s)

111/211, 112/212, 122/222, 127/227, 154

## Waste Stream Description

Pre-1970 buried waste retrieved for the Idaho Completion Project

Waste Stream ID: **IN-ID-SDA-Soil**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Idaho National Laboratory	Final Waste Form	Soils	Waste Matrix Code	S4200	Handling	CH
Source Cat.	Remediation/D&D Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	ICP Retrieved Soils	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	1640.1	0.0	1640.1
<b>Current Form Total</b>	<b>1640.1</b>	<b>0.0</b>	<b>1640.1</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	1528.6	0.0	1528.6
SWB w/ 4 - 55-gal Drums w/ Liners	253.3	0.0	253.3
<b>Final Form Total</b>	<b>1781.9</b>	<b>0.0</b>	<b>1781.9</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.57
Aluminum-based Metals/Alloys	0.01
Other Metals	0.19
Other Inorganic Materials	23.61
Cellulosics	9.95
Rubber	0.07
Plastics	6.15
Cements	0.14
Inorganic Matrix	4.78
Organic Matrix	2.93
Soils/gravel	626.51
Vitrified	0.00
Packaging Material, Steel	142.21
Packaging Material, Plastic	34.06
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	8.07E-01
Cs-137	6.61E-07
Np-237	1.11E-05
Pu-238	2.13E-02
Pu-239	5.52E-01
Pu-240	1.23E-01
Pu-241	8.35E-01
Pu-242	1.75E-05
Sr-90	7.28E-07
U-234	2.65E-04
U-235	6.96E-06
U-238	9.50E-04

## Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D022, D027, D028, D029, D030, D032, D033, D034, D037, D038, D043, F001, F002, F004, F005, F006, F007, F009, P098, P106

## TRUCON Code(s)

112/212, 122/222, 127/227, 154

## Waste Stream Description

Pre-1970 buried waste retrieved for the Idaho Completion Project

Waste Stream ID: **IN-INTEC-SFS-01**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Idaho National Laboratory	Final Waste Form	Heterogeneous	Waste Matrix Code	S5400	Handling	RH
Source Cat.	R&D/R&D Laboratory Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Stored RH TRU Debris waste from Idaho Nuclear Technology and Engineering Center at the INL			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
30-gal Drum	0.2	0.0	0.2
<b>Current Form Total</b>	<b>0.2</b>	<b>0.0</b>	<b>0.2</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	0.9	0.0	0.9
<b>Final Form Total</b>	<b>0.9</b>	<b>0.0</b>	<b>0.9</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	54.60
Aluminum-based Metals/Alloys	0.48
Other Metals	447.00
Other Inorganic Materials	8.03
Cellulosics	5.89
Rubber	0.48
Plastics	28.10
Cements	0.00
Inorganic Matrix	0.48
Organic Matrix	8.03
Soils/gravel	0.48
Vitrified	0.00
Packaging Material, Steel	652.20
Packaging Material, Plastic	26.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.73E+00
Cs-137	3.30E+00
Np-237	1.09E-05
Pu-238	1.85E+00
Pu-239	2.72E-01
Pu-240	3.14E-01
Pu-241	1.55E+01
Pu-242	1.13E-03
Sr-90	2.39E+00
Th-229	4.25E-13
Th-230	2.68E-08
Th-232	2.21E-16
U-233	5.47E-10
U-234	1.85E-04
U-235	9.67E-06
U-236	2.89E-07
U-238	5.29E-12

## Haz. Waste No(s).

D008, D018

## TRUCON Code(s)

321, 325

## Waste Stream Description

This waste stream was generated at the Idaho Chemical Processing Plant at the INEEL, and may include both combustibles and noncombustibles. The waste includes solidified sludge of acid-dissolved fuel, absorbed into diatomaceous earth.

The waste is contained in two 30-gallon lead-lined drums. The sludge is contained in glass bottles and sealed inside metal cans. Other materials may include glass containers, plastics, metal, scraps, lead shielding, and miscellaneous laboratory equipment. The surface dose rate is limited to 30 R/hr.

Waste Stream ID: **IN-NRF-153**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Idaho National Laboratory	Final Waste Form	Heterogeneous	Waste Matrix Code	S5300	Handling	RH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	INL RH-TRU Debris Waste from the Naval Reactors Facility.			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
30-gal Drum	3.1	0.0	3.1
<b>Current Form Total</b>	<b>3.1</b>	<b>0.0</b>	<b>3.1</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	8.0	0.0	8.0
<b>Final Form Total</b>	<b>8.0</b>	<b>0.0</b>	<b>8.0</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.42
Aluminum-based Metals/Alloys	0.04
Other Metals	0.04
Other Inorganic Materials	0.53
Cellulosics	5.91
Rubber	0.04
Plastics	28.20
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	652.20
Packaging Material, Plastic	26.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.38E-03
Np-237	8.40E-09
Pu-238	2.83E-02
Pu-239	4.05E-04
Pu-240	4.37E-04
Pu-241	1.32E-02
Pu-242	1.45E-06
Th-229	3.05E-16
Th-230	3.81E-10
Th-232	2.88E-19
U-233	4.06E-13
U-234	2.72E-06
U-235	5.92E-06
U-236	3.89E-10
U-238	6.56E-15

## Haz. Waste No(s).

D004, D005, D006,  
D007, D008, D010,  
D011, F002

## TRUCON Code(s)

316

## Waste Stream Description

This waste stream consists of 27 debris waste drums generated during analysis of post-irradiated nuclear fuel assemblies from naval reactor programs, using destructive examination methods.

Comprehensive Inventory Database ver. 1.00

Data ver. D.9.02

NOTE: Actual numerical values have been rounded for presentation purposes.



Waste Stream ID: **IN-NRF-SPC**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Idaho National Laboratory	Final Waste Form	Heterogeneous	Waste Matrix Code	S5100	Handling	RH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	RH TRU Sludge Pan Container waste from Naval Reactor Facility at Idaho Site.			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
Sludge Pan Container	1.9	0.0	1.9
<b>Current Form Total</b>	<b>1.9</b>	<b>0.0</b>	<b>1.9</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	27.6	0.0	27.6
<b>Final Form Total</b>	<b>27.6</b>	<b>0.0</b>	<b>27.6</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	63.20
Aluminum-based Metals/Alloys	1.07
Other Metals	0.12
Other Inorganic Materials	4.17
Cellulosics	0.13
Rubber	0.10
Plastics	0.02
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	652.20
Packaging Material, Plastic	26.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	6.77E-03
Cs-137	8.07E+00
Np-237	2.18E-09
Pu-238	5.03E-01
Pu-239	1.35E-03
Pu-240	5.89E-04
Pu-241	5.45E-02
Pu-242	1.76E-06
Sr-90	7.60E+00
Th-229	1.53E-07
Th-230	5.44E-09
Th-232	4.31E-22
U-233	1.63E-03
U-234	6.05E-04
U-235	9.51E-07
U-236	1.75E-11
U-238	9.21E-08

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

## Waste Stream Description

This waste stream was generated at Naval Reactor Facility. AK information is being collected to assure that the waste stream meets WIPP requirement. There are 92 containers in storage. This waste stream is planned to be re-packaged in 2008-2011 time frame.

Comprehensive Inventory Database ver. 1.00

Data ver. D.9.02

NOTE: Actual numerical values have been rounded for presentation purposes.

Waste Stream ID: **IN-NT-RF-DECON**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Idaho National Laboratory	Final Waste Form	Heterogeneous	Waste Matrix Code	S5400	Handling	CH
Source Cat.	Remediation/D&D Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	CH Transuranic Debris Waste from Decontaminating Rocky Flats Waste at the NTS.			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.4	0.0	0.4
<b>Current Form Total</b>	<b>0.4</b>	<b>0.0</b>	<b>0.4</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
SWB Dir Ld w/ Liner	1.9	0.0	1.9
<b>Final Form Total</b>	<b>1.9</b>	<b>0.0</b>	<b>1.9</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	110.00
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	7.55
Cellulosics	0.00
Rubber	0.00
Plastics	55.00
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	153.50
Packaging Material, Plastic	1.20
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	4.57E-01
Cs-137	6.19E-06
Np-237	3.51E-05
Pu-238	1.92E-01
Pu-239	8.67E-01
Pu-240	1.76E-01
Pu-241	2.01E+00
Pu-242	5.41E-05
Sr-90	6.80E-06

## Haz. Waste No(s).

D007, F002

## TRUCON Code(s)

125/225

## Waste Stream Description

This waste stream was generated at NTS in 2008 from decontamination activities from Buildings 777 and 779 at the Rocky Flats Plant. This waste stream consists debris waste such as wipes, cloth, cotton swabs, gauze, paper, pH test strips, cardboard, fiberboard liner lids, abrasive pads, bags, bottles, sheeting, caulking rubber gloves, metal hardware, discs, plates, and absorbent.

Waste Stream ID: **IN-NTLLLBL-S5400**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Idaho National Laboratory	Final Waste Form	Heterogeneous	Waste Matrix Code	S5400	Handling	CH
Source Cat.	Other/Multiple Sources	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	NTS Lawrence Livermore and Lawrence Berkly National Laboratory Waste			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
SWB Dir Ld w/ Liner	1.9	0.0	1.9
<b>Current Form Total</b>	<b>1.9</b>	<b>0.0</b>	<b>1.9</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
SWB Dir Ld w/ Liner	1.9	0.0	1.9
<b>Final Form Total</b>	<b>1.9</b>	<b>0.0</b>	<b>1.9</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	163.00
Aluminum-based Metals/Alloys	0.00
Other Metals	0.12
Other Inorganic Materials	0.00
Cellulosics	0.00
Rubber	0.00
Plastics	4.79
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	153.50
Packaging Material, Plastic	1.20
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	4.70E-02
Am-243	1.58E-05
Pu-238	4.53E-03
Pu-239	1.16E-01
Pu-240	2.46E-02
Pu-241	3.88E-01
Pu-242	4.61E-06

## Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D022, D027, D028, D029, F001, F002, F004, F005

## TRUCON Code(s)

121/221, 125/225

## Waste Stream Description

This waste stream consists of mixed heterogeneous debris generated from glovebox R&D, maintenance, D&D, and waste repackaging operations historically generated at the Lawrence Livermore National Laboratory (LLNL) and Lawrence Berkeley National Laboratory (LBNL). This TRU waste was shipped to the NTS from LLNL and LBNL from 1974 to 1990 for interim storage and characterization. Organic debris materials (paper, masking tape, wood, HEPA filter frames, cardboard), plastic (bags, sheeting, tubing, nylon rope, small containers with lids, HEPA filters, foam chunks), rubber (glovebox gloves, latex gloves, glovebox port and window gaskets, tubing, hose, and washers, electrical cords, plexiglass glovebox windows). Inorganic debris includes ferrous metal (steel containers, scrap, struts, glovebox parts, flexible tubing, glovebox ports, valves, tools, heating coils), aluminum metal (scrap, small containers, foil), lead pigs, copper, brass, metal etching tools, small glass containers, ceramics, absorbent, fire suppression powder.

Waste Stream ID: **IN-NTS-EG&G-HET**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Idaho National Laboratory	Final Waste Form	Heterogeneous	Waste Matrix Code	S5400	Handling	CH
Source Cat.	Remediation/D&D Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	NTS EG&G Energy Measurements (North Las Vegas Facility) Debris Waste			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	0.2	0.0	0.2
<b>Current Form Total</b>	<b>0.2</b>	<b>0.0</b>	<b>0.2</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	0.2	0.0	0.2
<b>Final Form Total</b>	<b>0.2</b>	<b>0.0</b>	<b>0.2</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	87.30
Aluminum-based Metals/Alloys	0.00
Other Metals	0.94
Other Inorganic Materials	0.00
Cellulosics	0.47
Rubber	0.00
Plastics	44.80
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	0.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	6.32E-01
Np-237	6.29E-06
Pu-238	3.29E-01
Pu-239	6.71E+00
Pu-240	1.32E+00
Pu-241	5.41E+00
Pu-242	2.06E-04

## Haz. Waste No(s).

D008, D011

## TRUCON Code(s)

125/225

## Waste Stream Description

This waste stream was originally generated at the North Las Vegas Facility (NLVF A-1 Complex and shipped to the Nevada Test Site (NTS) in 1985. This waste stream consists of mixed heterogeneous debris waste generated during the disposal of sources and debris formerly used for instrument calibration and neutron detection in support of nuclear weapons testing at NTS. The waste consists of organic debris material such as filter media, fiberboard lining, leather gloves, o-ring bags, latex gloves, sheeting, styrafoam, radionuclide disks and metal.

Waste Stream ID: **IN-NTS-ITRI-S5310**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Idaho National Laboratory	Final Waste Form	Combustible	Waste Matrix Code	S5310	Handling	CH
Source Cat.	R&D/R&D Laboratory Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	NTS Inhalation Toxicology Research Institute (ITRI) Waste			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	0.2	0.0	0.2
<b>Current Form Total</b>	<b>0.2</b>	<b>0.0</b>	<b>0.2</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.2	0.0	0.2
<b>Final Form Total</b>	<b>0.2</b>	<b>0.0</b>	<b>0.2</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.00
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	0.00
Cellulosics	0.00
Rubber	0.00
Plastics	20.30
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.52E-04
Np-237	1.49E-07
Pu-238	4.36E-01
Pu-239	4.53E-02
Pu-240	1.22E-03
Pu-241	1.37E-02
Pu-242	2.01E-06

No Hazardous Waste Numbers Provided

TRUCON Code(s)

125/225

## Waste Stream Description

This waste stream was originally generated from research operations conducted at the Inhalation Toxicology Research Institute in Albuquerque, New Mexico and was shipped to NTS in the early 1980s. This debris waste stream contains plutonium dioxide samples and associated packaging and waste materials. Debris materials with the samples include the original packaging materials consisting of plastic snap cap vials, gelatin capsules, plastic zip-lock bags, centrifuge cones, plastic bags and tape.

Waste Stream ID: **IN-NTS-TTR-HET**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Idaho National Laboratory	Final Waste Form	Heterogeneous	Waste Matrix Code	S5400	Handling	CH
Source Cat.	Remediation/D&D Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Tonapah Test Range/Roller Coaster Project CH TRU Waste			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	0.2	0.0	0.2
<b>Current Form Total</b>	<b>0.2</b>	<b>0.0</b>	<b>0.2</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	0.2	0.0	0.2
<b>Final Form Total</b>	<b>0.2</b>	<b>0.0</b>	<b>0.2</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	1.42
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	0.00
Cellulosics	0.00
Rubber	37.70
Plastics	23.60
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	9.43
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	0.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.85E-02
Cs-137	2.38E-06
Np-237	1.15E-06
Pu-238	4.94E-03
Pu-239	3.55E-01
Pu-240	2.77E-02
Pu-241	1.98E-01
Pu-242	7.58E-07
Sr-90	2.62E-06

No Hazardous Waste Numbers Provided

TRUCON Code(s)

121/221, 125/225

## Waste Stream Description

This waste stream was originally generated at the Tonopa Test Range (TTR) and the Nellis Air Force Range (NAFR) where the Roller Coaster Project testing was conducted. This waste stream consists of heterogeneous debris waste with a small amount of soil containing metallic fragments. Debris materials include PPE and sampling equipment, including plastic gloves, and bags, boot covers, disposable coveralls, wipes, foil, used respirator cartridges, and disposable sampling tools.

Comprehensive Inventory Database ver. 1.00

Data ver. D.9.02

NOTE: Actual numerical values have been rounded for presentation purposes.

A - IN - 50

Waste Stream ID: **IN-NTVERB-S5400**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Idaho National Laboratory	Final Waste Form	Heterogeneous	Waste Matrix Code	S5400	Handling	CH
Source Cat.	Remediation/D&D Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	NTS Visual Examination and Repackaging Building Decon and Maintenance Waste			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
SWB Dir Ld w/ Liner	3.8	0.0	3.8
<b>Current Form Total</b>	<b>3.8</b>	<b>0.0</b>	<b>3.8</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
SWB Dir Ld w/ Liner	3.8	0.0	3.8
<b>Final Form Total</b>	<b>3.8</b>	<b>0.0</b>	<b>3.8</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	64.20
Aluminum-based Metals/Alloys	0.00
Other Metals	0.29
Other Inorganic Materials	0.00
Cellulosics	0.00
Rubber	0.00
Plastics	22.20
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	153.50
Packaging Material, Plastic	1.20
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.32E+00
Am-243	4.50E-05
Cm-244	4.38E-01
Np-237	1.46E-05
Pu-238	1.77E-01
Pu-239	7.12E-01
Pu-240	3.20E-01
Pu-241	3.12E+01
Pu-242	4.66E-05

## Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D022, D027, D028, D029, F001, F002, F004, F005

## TRUCON Code(s)

121/221, 125/225

## Waste Stream Description

This waste stream was generated from the decontamination and cleanup of the Visual Examination and Repackaging Building (VERB) at the NTS. This waste stream consists of mixed heterogeneous debris generated from maintenance and decontamination and decommissioning activities following TRU waste repackaging operations. Debris materials include wipes, envelopes, disk smears, cardboard boxes, filter media, fire blankets, bags, sheeting, labels, airline suits, booties, masslinns, gloves respirator filters, glovebox port covers, conduit, electrical boxes, hardware, drum lid rings, PVC cutters, lead shot and disks, HEPA vacuum, glass, absorbent, dust/dirt and sand.

Waste Stream ID: **IN-TRA-150**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Idaho National Laboratory	Final Waste Form	Solidified Inorganics	Waste Matrix Code	S3120	Handling	RH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Stored RH TRU Sludge Waste From Reactor Technology Complex at the Idaho National Laboratory			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.4	0.0	0.4
<b>Current Form Total</b>	<b>0.4</b>	<b>0.0</b>	<b>0.4</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	0.9	0.0	0.9
<b>Final Form Total</b>	<b>0.9</b>	<b>0.0</b>	<b>0.9</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	14.10
Aluminum-based Metals/Alloys	0.26
Other Metals	0.26
Other Inorganic Materials	0.26
Cellulosics	0.26
Rubber	0.26
Plastics	0.26
Cements	0.00
Inorganic Matrix	255.00
Organic Matrix	0.26
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	652.20
Packaging Material, Plastic	26.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.06E+01
Np-237	6.61E-05
Pu-238	1.08E+01
Th-229	1.63E-12
Th-230	5.52E-08
U-233	2.74E-09
U-234	6.31E-04

## Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D019, D022, F002, F005

## TRUCON Code(s)

311

## Waste Stream Description

This waste stream consists of 2 drums of waste generated from removal of sludge from wastewater storage tanks utilized in the storage and handling of Reactor Technology Complex radioactive waste water. A total of 10 sludge drums were generated from this process, however eight of them were characterized as LLW.



Waste Stream ID: **IN-W169R**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Idaho National Laboratory	Final Waste Form	Combustible	Waste Matrix Code	S5300	Handling	RH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Dry Paper and Rags (RH)	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	15.6	0.0	15.6
<b>Current Form Total</b>	<b>15.6</b>	<b>0.0</b>	<b>15.6</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/o Liner	22.3	0.0	22.3
<b>Final Form Total</b>	<b>22.3</b>	<b>0.0</b>	<b>22.3</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.00
Aluminum-based Metals/Alloys	0.00
Other Metals	25.80
Other Inorganic Materials	19.10
Cellulosics	94.70
Rubber	40.10
Plastics	131.80
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	652.20
Packaging Material, Plastic	0.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	4.39E-01
Np-237	2.69E-06
Pu-238	1.80E-02
Pu-239	5.98E-01
Pu-240	1.36E-01
Pu-241	1.38E+00
Pu-242	9.75E-06
Th-229	7.01E-14
Th-230	1.02E-10
Th-232	3.98E-17
U-233	1.14E-10
U-234	1.11E-06
U-235	2.61E-06
U-236	8.06E-08
U-238	8.48E-11

## Haz. Waste No(s).

D008, D022, D029,  
F001, F002, F003,  
F005No TRUCON  
Codes Provided

## Waste Stream Description

This waste stream, generated at the RFETS, primarily consists of line- and nonline generated dry combustible materials such as paper, rags, plastics, rubber, cardboard, wood, and PE bottles. Wastes are primarily from decontamination and cleanup work and maybe from plutonium areas. Drums containing wastes from the Americium Recovery Line are lead-lined.

Waste Stream ID: **IN-W170**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Idaho National Laboratory	Final Waste Form	Heterogeneous	Waste Matrix Code	S5440	Handling	CH
Source Cat.	Remediation/D&D Waste	Defense Determination	Likely Defense-Related	Inventory Date	12/31/2009		
Stream Name	D&D Waste Comp. And Comb. Solids			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.4	0.0	0.4
<b>Current Form Total</b>	<b>0.4</b>	<b>0.0</b>	<b>0.4</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.4	0.0	0.4
<b>Final Form Total</b>	<b>0.4</b>	<b>0.0</b>	<b>0.4</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	22.50
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	1.60
Cellulosics	130.30
Rubber	1.50
Plastics	0.00
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	4.97E+00
Np-237	3.27E-05
Pu-239	2.06E+01
Th-229	8.94E-13
U-233	1.43E-09
U-235	4.06E-07

## Haz. Waste No(s).

D004, D006, D008, F003

No TRUCON Codes Provided

## Waste Stream Description

This waste stream, generated at Argonne National Laboratory-East, is derived from decontamination and disposal of facilities and ancillary systems (e.g., gloveboxes). The composition of the waste is unknown.

Waste Stream ID: **IN-W171**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Idaho National Laboratory	Final Waste Form	Heterogeneous	Waste Matrix Code	S5440	Handling	CH
Source Cat.	R&D/R&D Laboratory Waste	Defense Determination	Likely Defense-Related	Inventory Date	12/31/2009		
Stream Name	Research Generated Waste	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.4	0.0	0.4
Box - Misc	3.2	0.0	3.2
<b>Current Form Total</b>	<b>3.6</b>	<b>0.0</b>	<b>3.6</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	1.5	0.0	1.5
<b>Final Form Total</b>	<b>1.5</b>	<b>0.0</b>	<b>1.5</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	2.90
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	2.90
Cellulosics	175.90
Rubber	2.00
Plastics	22.00
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.44E+00
Am-243	1.70E-03
Np-237	6.53E-06
Pu-239	5.12E+00
Pu-241	1.99E+01
Th-229	1.30E-13
U-233	2.35E-10
U-235	1.01E-07

## Haz. Waste No(s).

D004, D006, D008, F003

No TRUCON Codes Provided

## Waste Stream Description

This waste stream, generated at Argonne National Laboratory-East, is derived from research activities performed in a laboratory environment. The waste includes soft plastics, cardboard, rags, paper, and cloth from various processes.

Waste Stream ID: **IN-W197R**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Idaho National Laboratory	Final Waste Form	Combustible	Waste Matrix Code	S5300	Handling	RH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Moist Paper and Rags (RH)	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	15.2	0.0	15.2
<b>Current Form Total</b>	<b>15.2</b>	<b>0.0</b>	<b>15.2</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/o Liner	22.3	0.0	22.3
<b>Final Form Total</b>	<b>22.3</b>	<b>0.0</b>	<b>22.3</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.50
Aluminum-based Metals/Alloys	0.00
Other Metals	1.40
Other Inorganic Materials	12.80
Cellulosics	33.10
Rubber	6.40
Plastics	50.60
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	652.20
Packaging Material, Plastic	0.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	8.80E-01
Np-237	5.56E-06
Pu-238	2.06E-02
Pu-239	6.82E-01
Pu-240	1.55E-01
Pu-241	1.57E+00
Pu-242	1.11E-05
Th-229	1.48E-13
Th-230	1.17E-10
Th-232	4.54E-17
U-233	2.39E-10
U-234	1.27E-06
U-235	9.86E-07
U-236	9.18E-08
U-238	3.35E-14

## Haz. Waste No(s).

D008, D022, F001, F002, F003, F005

No TRUCON Codes Provided

## Waste Stream Description

This waste stream, generated at the RFETS, consists of damp or wet line- and nonline- generated combustible materials (paper, rags, plastics, rubber, cardboard, wood, and PE bottles from decontamination and cleanup work and maybe from plutonium areas.

Waste Stream ID: **IN-W208R**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Idaho National Laboratory	Final Waste Form	Filter	Waste Matrix Code	S5410	Handling	RH
Source Cat.	Materials Production/Recovery Effluents	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Absolute 8X8 filters:(RH)			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.4	0.0	0.4
<b>Current Form Total</b>	<b>0.4</b>	<b>0.0</b>	<b>0.4</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/o Liner	0.9	0.0	0.9
<b>Final Form Total</b>	<b>0.9</b>	<b>0.0</b>	<b>0.9</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	16.75
Aluminum-based Metals/Alloys	14.25
Other Metals	1.06
Other Inorganic Materials	17.77
Cellulosics	86.85
Rubber	8.58
Plastics	35.61
Cements	5.20
Inorganic Matrix	0.36
Organic Matrix	0.03
Soils/gravel	0.13
Vitrified	0.00
Packaging Material, Steel	652.20
Packaging Material, Plastic	0.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.88E+01
Np-237	1.12E-04
Pu-238	1.43E+00
Pu-239	4.78E+01
Pu-240	1.08E+01
Pu-241	1.05E+02
Pu-242	7.80E-04
Th-229	3.07E-12
Th-230	9.00E-09
Th-232	3.48E-15
U-233	4.84E-09
U-234	9.28E-05
U-235	3.96E-05
U-236	6.72E-06
U-238	1.03E-06

## Haz. Waste No(s).

D022, D028, D029,  
F001, F002, F003,  
F005No TRUCON  
Codes Provided

## Waste Stream Description

This waste stream, generated at the Rocky Flats Plant, consists of absolute filters used for filtering intake and exhaust air from glovebox lines. The filters are composed of wood or particle board frames and an asbestos-type filter media. The waste may include limited amounts of combustible materials (surgical gloves, etc.). Several sizes of filters may be present. This code has not been used since 1975. Since then absolute filters were processed as Content Code 338 (insulation and CWS filter media) or 376 (cemented insulation and filter media). Some of the drums may be lead lined. There is a lack of information about the particulate on the filter media. Although there may be some organic material, it should be less than 14 lb/ft<sup>3</sup>. Significant amounts of respirable fines may be present. No sludges or free liquids should be present. No explosive, pyrophoric, or corrosive materials should be in this waste, except for some residual amounts of nitric acid. Each filter is double contained in PVC and PE bags and assayed. Up to 12-20 filters are placed in each prepared drum. Small amounts of Oil-Dri are added to drums containing damp filters. Drums were packed according to the usual pre-1972 procedures.

Waste Stream ID: **IN-W216R**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Idaho National Laboratory	Final Waste Form	Solidified Inorganics	Waste Matrix Code	S3121	Handling	RH
Source Cat.	Pollution Control or Waste Treatment Process	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	First Stage Sludge: (RH)	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	40.4	0.0	40.4
<b>Current Form Total</b>	<b>40.4</b>	<b>0.0</b>	<b>40.4</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/o Liner	57.9	0.0	57.9
<b>Final Form Total</b>	<b>57.9</b>	<b>0.0</b>	<b>57.9</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.00
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	44.60
Cellulosics	0.00
Rubber	0.00
Plastics	4.14
Cements	0.00
Inorganic Matrix	744.00
Organic Matrix	14.90
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	652.20
Packaging Material, Plastic	0.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	5.05E+01
Np-237	3.48E-04
Pu-238	6.90E-02
Pu-239	2.30E+00
Pu-240	5.22E-01
Pu-241	5.06E+00
Pu-242	3.76E-05
Th-229	1.05E-11
Th-230	4.34E-10
Th-232	1.69E-16
U-233	1.59E-08
U-234	4.47E-06
U-235	4.76E-08
U-236	3.25E-07
U-238	1.19E-13

## Haz. Waste No(s).

D005, D006, D007, D008, D009, D011, D022, D028, F001, F002, F003

**No TRUCON Codes Provided**

## Waste Stream Description

Waste consists of a wet sludge produced from treating aqueous process wastes, such as ion exchange column effluent, distillates, and caustic scrub solutions generated by Plutonium Recovery Operations (Building 771). Portland cement is added to the waste package for absorption of free liquids. Waste drums may periodically contain surgeons' gloves, glovebox gloves, etc. Since the fall of 1979, First-stage sludge (IDC 001) and Second-stage sludge (IDC 002) have been combined into Content Code 1 - Combined sludge. Sludge is produced by treating aqueous wastes by the carrier precipitation process. Aqueous wastes are made basic, if necessary, with sodium hydroxide. Radioactive elements such as plutonium and americium are chemically precipitated from the liquid waste. Treatment chemicals include ferric sulfate, calcium chloride, magnesium sulfate, and flocculating agents. The treatment process produces a precipitate of the hydrated oxides of iron, magnesium, aluminum, silicon, etc., which also carries the hydrated oxides of plutonium and americium. The precipitate or slurry is filtered to produce a sludge containing 50 to 70 percent water. Liquid wastes were analyzed for fissile content prior to release from Buildings 771 and 774, and were retained at Building 771 for further treatment if contaminated with above-discard amounts of plutonium.

Comprehensive Inventory Database ver. 1.00

Data ver. D.9.02

NOTE: Actual numerical values have been rounded for presentation purposes.

Waste Stream ID: **IN-W228R**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Idaho National Laboratory	Final Waste Form	Solidified Inorganics	Waste Matrix Code	S3121	Handling	RH
Source Cat.	Pollution Control or Waste Treatment Process	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Second Stage Sludge (RH)	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	20.6	0.0	20.6
<b>Current Form Total</b>	<b>20.6</b>	<b>0.0</b>	<b>20.6</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/o Liner	29.4	0.0	29.4
<b>Final Form Total</b>	<b>29.4</b>	<b>0.0</b>	<b>29.4</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	1.70
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	21.00
Cellulosics	0.00
Rubber	0.01
Plastics	1.90
Cements	21.00
Inorganic Matrix	310.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	652.20
Packaging Material, Plastic	0.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	3.70E-01
Np-237	2.40E-06
Pu-238	2.76E-03
Pu-239	9.15E-02
Pu-240	2.07E-02
Pu-241	2.11E-01
Pu-242	1.49E-06
Th-229	6.51E-14
Th-230	1.57E-11
Th-232	6.06E-18
U-233	1.04E-10
U-234	1.70E-07
U-235	1.80E-09
U-236	1.23E-08
U-238	4.49E-15

## Haz. Waste No(s).

D005, D006, D007, D008, D009, D011, D022, D028, F001, F002, F003

**No TRUCON Codes Provided**

## Waste Stream Description

Waste consists of a wet sludge produced from treatment of other plant radioactive and/or chemical contaminated wastes and further treatment of the first-stage effluent. Portland cement was added to the waste package for absorption of free liquids. Second-stage sludge drums packaged prior to 1973 may contain other waste such as electric motors, bottles of chemical (usually liquid) wastes, mercury, lithium batteries, and small amounts of contaminated mercury in pint bottles. Radioactive sources were also periodically included in second-stage drums through 1979. Since the fall of 1979, Second stage sludge (IDC 002) have been combined into Content Code 1 - Combined sludge. Content code 2 is no longer used. Sludge is produced by treating aqueous wastes by the carrier precipitation process. Aqueous wastes are made basic, if necessary, with sodium hydroxide. Radioactive elements such as plutonium and americium are chemically precipitated from the liquid waste. Treatment chemicals include ferric sulfate, calcium chloride, magnesium sulfate, and flocculating agents. The treatment process produces a precipitate of the hydrated oxides of iron, magnesium, aluminum, silicon, etc., which also carries the hydrated oxides of plutonium and americium. The precipitate or slurry is filtered to produce a sludge containing 50 to 70 percent water. Liquid wastes were analyzed for fissile content prior to release from Buildings 771 and 774, and were retained at Building 771 for further treatment if contaminated with above-discard amounts of plutonium.

Comprehensive Inventory Database ver. 1.00

Data ver. D.9.02

NOTE: Actual numerical values have been rounded for presentation purposes.

Waste Stream ID: **IN-W243R**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Idaho National Laboratory	Final Waste Form	Inorganic Non-Metal	Waste Matrix Code	S5122	Handling	RH
Source Cat.	Analytical Laboratory Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Glass (RH)	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	3.3	0.0	3.3
<b>Current Form Total</b>	<b>3.3</b>	<b>0.0</b>	<b>3.3</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/o Liner	5.3	0.0	5.3
<b>Final Form Total</b>	<b>5.3</b>	<b>0.0</b>	<b>5.3</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.00
Aluminum-based Metals/Alloys	0.00
Other Metals	1.15
Other Inorganic Materials	208.53
Cellulosics	0.00
Rubber	0.76
Plastics	22.60
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	652.20
Packaging Material, Plastic	0.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	4.08E-01
Np-237	1.96E-06
Pu-238	6.44E-02
Pu-239	2.14E+00
Pu-240	4.84E-01
Pu-241	4.93E+00
Pu-242	3.49E-05
Th-229	4.16E-14
Th-230	3.65E-10
Th-232	1.42E-16
U-233	7.31E-11
U-234	3.96E-06
U-235	6.59E-07
U-236	2.87E-07
U-238	4.26E-08

## Haz. Waste No(s).

D008, D029, F001, F002, F003, F005

No TRUCON Codes Provided

## Waste Stream Description

This waste stream, generated at the Rocky Flats Plant, consists of glass sample vials, bottles, lead-taped sample vials, ion exchange columns, dissolver ports, laboratory glassware such as pyrex flasks and beakers, glovebox windows (glass, plexiglass, leaded glass), and crushed and ground glass. The waste includes limited amounts of other non-combustibles such as metals, and limited amounts of combustible wastes. No sludges should be present although some glass vials may contain limited amounts of free liquids. No explosive, pyrophoric, or corrosive materials should be in the waste. Drums may contain respirable crushed glass fines or free liquids. The glass may be packaged with some variation depending on if it is whole, broken to peices, or crushed or ground. Whole or broken glass may be packaged in 1-gallon PE bottles, in 13-inch high by 15.5-inch diameter Fibre-Paks (either loose or inside plastic bags inside the Fibre-Pak), or double-packed in plastic bags, with the outside of the outer bag taped for protecion against sharp edges. Glassware such as sample vials may be taped together before packaging. Nonline generated glassware, light bulbs, and fluorescent tubes are usually crushed or ground and placed directly into a prepared 55-gallon drum. Drums were packed according to the usual pre-1972 and post-1972 procedures.

Each drum was assayed. Since 1972, the drums were also processed according to inspection and seling procedures; and since 1982, vermiculite instead of Oil-Dri was placed on the top of the outer seared PE drum bag. A small number of the drums are lead-lined. Also, Oil-Dri was added to the glass waste if moisture was present.

Comprehensive Inventory Database ver. 1.00

Data ver. D.9.02

NOTE: Actual numerical values have been rounded for presentation purposes.

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Waste Stream ID: **IN-W245R**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Idaho National Laboratory	Final Waste Form	Inorganic Non-Metal	Waste Matrix Code	S5100	Handling	RH
Source Cat.	Materials Production/Recovery Effluents	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Unleached Raschig Rings (RH)	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	1.2	0.0	1.2
<b>Current Form Total</b>	<b>1.2</b>	<b>0.0</b>	<b>1.2</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/o Liner	1.8	0.0	1.8
<b>Final Form Total</b>	<b>1.8</b>	<b>0.0</b>	<b>1.8</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.00
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	246.20
Cellulosics	15.80
Rubber	0.00
Plastics	5.50
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	652.20
Packaging Material, Plastic	0.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	5.36E-01
Np-237	2.06E-06
Pu-238	1.30E-01
Pu-239	4.29E+00
Pu-240	9.72E-01
Pu-241	9.89E+00
Pu-242	7.00E-05
Th-229	3.25E-14
Th-230	7.36E-10
Th-232	2.85E-16
U-233	6.53E-11
U-234	7.98E-06
U-235	8.46E-08
U-236	5.77E-07
U-238	2.11E-13

## Haz. Waste No(s).

D008, F001

No TRUCON Codes Provided

## Waste Stream Description

This waste stream, generated at the RFETS, consists of boronated glass rings used to minimize neutron multiplication in liquid storage tanks. Unleached Raschig Rings were used from 1971-1979 as a separate stream and then combined with IDC 442. The rings are heat and chemical resistant borosilicate glass. Some of the rings were leached with nitric acid to recover the plutonium and then rinsed with water and dried.

Waste Stream ID: **IN-W247R**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Idaho National Laboratory	Final Waste Form	Inorganic Non-Metal	Waste Matrix Code	S5100	Handling	RH
Source Cat.	Materials Production/Recovery Effluents	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Leached Raschig Rings (RH)	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	1.0	0.0	1.0
<b>Current Form Total</b>	<b>1.0</b>	<b>0.0</b>	<b>1.0</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/o Liner	1.8	0.0	1.8
<b>Final Form Total</b>	<b>1.8</b>	<b>0.0</b>	<b>1.8</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.00
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	137.40
Cellulosics	16.50
Rubber	0.00
Plastics	7.20
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	652.20
Packaging Material, Plastic	0.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.58E-01
Np-237	9.90E-07
Pu-238	6.24E-02
Pu-239	2.07E+00
Pu-240	4.69E-01
Pu-241	4.77E+00
Pu-242	3.38E-05
Th-229	1.56E-14
Th-230	3.54E-10
Th-232	1.38E-16
U-233	3.13E-11
U-234	3.84E-06
U-235	4.53E-07
U-236	2.78E-07
U-238	1.02E-13

## Haz. Waste No(s).

D008, D028, D029,  
F001, F002, F003,  
F005No TRUCON  
Codes Provided

## Waste Stream Description

This waste stream, generated at the RFETS, consists of boronated glass rings used to minimize neutron multiplication in liquid storage tanks. Unleached Raschig Rings were used from 1971-1979 as a separate stream and then combined with IDC 442. The rings are heat and chemical resistant borosilicate glass. Some of the rings were leached with nitric acid to recover the plutonium and then rinsed with water and dried.

Waste Stream ID: **IN-W252R**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Idaho National Laboratory	Final Waste Form	Combustible	Waste Matrix Code	S5311	Handling	RH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Leaded Rubber Gloves and Aprons (RH)			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	11.9	0.0	11.9
<b>Current Form Total</b>	<b>11.9</b>	<b>0.0</b>	<b>11.9</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/o Liner	17.8	0.0	17.8
<b>Final Form Total</b>	<b>17.8</b>	<b>0.0</b>	<b>17.8</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.00
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	13.40
Cellulosics	2.60
Rubber	286.00
Plastics	8.40
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	652.20
Packaging Material, Plastic	0.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.13E+00
Np-237	4.99E-06
Pu-238	2.19E-01
Pu-239	7.25E+00
Pu-240	1.64E+00
Pu-241	1.67E+01
Pu-242	1.18E-04
Th-229	9.62E-14
Th-230	1.24E-09
Th-232	4.80E-16
U-233	1.76E-10
U-234	1.34E-05
U-235	1.43E-07
U-236	9.71E-07
U-238	3.56E-13

## Haz. Waste No(s).

D008, D022, D028, D029, F001, F002, F003, F005

No TRUCON Codes Provided

## Waste Stream Description

This waste comes from the Rocky Flats Plant and consists of leaded rubber gloves and aprons. A limited amount of unleaded gloves, lead bricks, and lead sheeting may also be present. Content Code 463 was replaced by Content Code 339 in 1973. Waste is packaged in standard RFP fashion. Lead linings are present on some drums.

Waste Stream ID: **IN-W254R**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Idaho National Laboratory	Final Waste Form	Combustible	Waste Matrix Code	S5311	Handling	RH
Source Cat.	Materials Production/Recovery Effluents	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Leaded Rubber Gloves and Aprons (RH)			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.8	0.0	0.8
<b>Current Form Total</b>	<b>0.8</b>	<b>0.0</b>	<b>0.8</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/o Liner	1.8	0.0	1.8
<b>Final Form Total</b>	<b>1.8</b>	<b>0.0</b>	<b>1.8</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.00
Aluminum-based Metals/Alloys	0.00
Other Metals	178.10
Other Inorganic Materials	20.10
Cellulosics	3.80
Rubber	185.70
Plastics	11.40
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	652.20
Packaging Material, Plastic	0.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	5.31E-01
Np-237	2.01E-06
Pu-238	1.31E-01
Pu-239	4.33E+00
Pu-240	9.81E-01
Pu-241	1.00E+01
Pu-242	7.07E-05
Th-229	3.07E-14
Th-230	7.41E-10
Th-232	2.88E-16
U-233	6.26E-11
U-234	8.03E-06
U-235	8.54E-08
U-236	5.82E-07
U-238	2.13E-13

## Haz. Waste No(s).

D008, F001, F002

No TRUCON Codes Provided

## Waste Stream Description

This waste comes from the Rocky Flats Plant and consists of leaded rubber gloves and aprons. A limited amount of unleaded gloves, lead bricks, and lead sheeting may also be present. Content Code 463 was replaced by Content Code 339 in 1973. Waste is packaged in standard RFP fashion. Lead linings are present on some drums.

Waste Stream ID: **IN-W259**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Idaho National Laboratory	Final Waste Form	Heterogeneous	Waste Matrix Code	S5400	Handling	CH
Source Cat.	Other/Multiple Sources	Defense Determination	Likely Defense-Related	Inventory Date	12/31/2009		
Stream Name	Alpha Hot Cell Waste	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	54.1	0.0	54.1
Bin - Misc	7.0	0.0	7.0
<b>Current Form Total</b>	<b>61.1</b>	<b>0.0</b>	<b>61.1</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	1.5	0.0	1.5
TDOP w/ 10 - 55-gal Drums w/ Liners	117.0	0.0	117.0
<b>Final Form Total</b>	<b>118.5</b>	<b>0.0</b>	<b>118.5</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	83.60
Aluminum-based Metals/Alloys	0.00
Other Metals	0.10
Other Inorganic Materials	2.10
Cellulosics	70.30
Rubber	6.30
Plastics	56.40
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	230.56
Packaging Material, Plastic	17.34
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Pu-239	2.45E-01
Pu-240	2.70E-02
Th-232	7.93E-18
U-235	6.09E-05
U-236	1.60E-08

## Haz. Waste No(s).

D008

No TRUCON Codes Provided

## Waste Stream Description

This waste stream, generated at Argonne National Laboratory-East, contains alpha hot cell waste. Noncombustible and combustible waste are segregated. Sodium in the waste is reacted with ethyl alcohol, mixed with pelletized clay, and dried. Nitrates and oxidizing agents are neutralized or reduced, mixed with pelletized clay, and dried to ferrous or ferric salts.

Waste Stream ID: **IN-W283**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Idaho National Laboratory	Final Waste Form	Heterogeneous	Waste Matrix Code	S5490	Handling	CH
Source Cat.	Other/Multiple Sources	Defense Determination	Pending Determination	Inventory Date	12/31/2009		
Stream Name	Americium Process Residues:			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	24.3	0.0	24.3
<b>Current Form Total</b>	<b>24.3</b>	<b>0.0</b>	<b>24.3</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	24.3	0.0	24.3
<b>Final Form Total</b>	<b>24.3</b>	<b>0.0</b>	<b>24.3</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	159.00
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	129.00
Cellulosics	13.50
Rubber	0.00
Plastics	81.90
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.30E+00
Np-237	9.83E-06
Pu-238	2.16E-01
Pu-239	8.13E+00
Pu-240	1.84E+00
Pu-241	8.68E+00
Pu-242	1.33E-04
Th-229	5.29E-13
Th-230	4.33E-09
Th-232	1.75E-15
U-233	5.81E-10
U-234	2.55E-05
U-235	2.89E-07
U-236	1.97E-06
U-238	7.22E-13

## Haz. Waste No(s).

D008, F002, F003

No TRUCON Codes Provided

## Waste Stream Description

This waste stream, generated at the Rocky Flats Plant, consists of piping, flanges, valves, tools, equipment, PVC piping, glassware (flasks ion exchange columns), glass filters, PE bottles, leaded glovebox gloves, paper, and plastics. Some of the containers are lead-lined.

Waste Stream ID: **IN-W283R**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Idaho National Laboratory	Final Waste Form	Heterogeneous	Waste Matrix Code	S5420	Handling	RH
Source Cat.	Other/Multiple Sources	Defense Determination	Pending Determination	Inventory Date	12/31/2009		
Stream Name	Americium Process Residues: (RH)			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.4	0.0	0.4
<b>Current Form Total</b>	<b>0.4</b>	<b>0.0</b>	<b>0.4</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	0.9	0.0	0.9
<b>Final Form Total</b>	<b>0.9</b>	<b>0.0</b>	<b>0.9</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.00
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	90.40
Cellulosics	0.00
Rubber	0.00
Plastics	57.40
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	652.20
Packaging Material, Plastic	26.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	9.94E-01
Np-237	3.76E-06
Pu-238	2.45E-01
Pu-239	8.13E+00
Pu-240	1.85E+00
Pu-241	1.88E+01
Pu-242	1.33E-04
Th-229	5.76E-14
Th-230	1.39E-09
Th-232	5.41E-16
U-233	1.17E-10
U-234	1.51E-05
U-235	1.60E-07
U-236	1.10E-06
U-238	4.01E-13

## Haz. Waste No(s).

D008, F002, F003

No TRUCON Codes Provided

## Waste Stream Description

This waste stream, generated at the RFETS, was shipped in 1972 and 1973 from renovation of the americium process recovery line. It consists of piping, flanges, valves, tools, equipment, PVC piping, glassware, glass filters, PE bottles, leaded glovebox gloves, paper and plastics. Some of these containers were lead-lined.

Waste Stream ID: **IN-W287**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Idaho National Laboratory	Final Waste Form	Heterogeneous	Waste Matrix Code	S5100	Handling	CH
Source Cat.	Remediation/D&D Waste	Defense Determination	Likely Defense-Related	Inventory Date	12/31/2009		
Stream Name	Cut-Up Gloveboxes	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
Bin - Misc	234.5	0.0	234.5
Box - Misc	15.9	0.0	15.9
<b>Current Form Total</b>	<b>250.4</b>	<b>0.0</b>	<b>250.4</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	69.7	0.0	69.7
<b>Final Form Total</b>	<b>69.7</b>	<b>0.0</b>	<b>69.7</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	213.20
Aluminum-based Metals/Alloys	34.20
Other Metals	15.80
Other Inorganic Materials	38.90
Cellulosics	56.80
Rubber	0.60
Plastics	5.70
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	7.72E-03
Np-237	7.88E-04
Pu-239	2.58E-01
Pu-240	3.06E+00
Pu-241	1.09E-01
Th-229	6.40E-11
Th-230	3.00E-13
Th-232	8.98E-16
U-233	6.83E-08
U-234	3.34E-09
U-235	1.75E-08
U-236	1.82E-06
U-238	5.91E-05

## Haz. Waste No(s).

D008

No TRUCON Codes Provided

## Waste Stream Description

This waste stream, generated at Argonne National Laboratory-East, contains glovebox sections and associated equipment from decontamination and decommissioning operations. This waste is predominantly noncombustible



Waste Stream ID: **IN-W294R**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Idaho National Laboratory	Final Waste Form	Uncategorized Metal	Waste Matrix Code	S5112	Handling	RH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Leached Non-special Source Metal (RH)			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	5.8	0.0	5.8
<b>Current Form Total</b>	<b>5.8</b>	<b>0.0</b>	<b>5.8</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/o Liner	8.9	0.0	8.9
<b>Final Form Total</b>	<b>8.9</b>	<b>0.0</b>	<b>8.9</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	113.00
Aluminum-based Metals/Alloys	6.70
Other Metals	85.10
Other Inorganic Materials	22.10
Cellulosics	0.00
Rubber	0.00
Plastics	11.40
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	652.20
Packaging Material, Plastic	0.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	4.57E-01
Np-237	1.93E-06
Pu-238	9.48E-02
Pu-239	3.15E+00
Pu-240	7.13E-01
Pu-241	7.26E+00
Pu-242	5.14E-05
Th-229	3.54E-14
Th-230	5.38E-10
Th-232	2.09E-16
U-233	6.63E-11
U-234	5.83E-06
U-235	2.08E-06
U-236	4.23E-07
U-238	1.55E-13

## Haz. Waste No(s).

D008, D022, F001,  
F002, F005No TRUCON  
Codes Provided

## Waste Stream Description

The waste comes from Rocky Flats Plant. It consists of the smaller pieces of the waste described under Content Code 480 that have been washed with hot water to recover plutonium. The waste is packaged in standard RFP fashion. Sharp metal edges are taped before packaging. Some lead-lined containers are included.

Waste Stream ID: **IN-W296R**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Idaho National Laboratory	Final Waste Form	Uncategorized Metal	Waste Matrix Code	S5112	Handling	RH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Non-special Source Metal:(RH)			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	17.5	0.0	17.5
<b>Current Form Total</b>	<b>17.5</b>	<b>0.0</b>	<b>17.5</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/o Liner	24.9	0.0	24.9
<b>Final Form Total</b>	<b>24.9</b>	<b>0.0</b>	<b>24.9</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	230.79
Aluminum-based Metals/Alloys	1.27
Other Metals	10.50
Other Inorganic Materials	0.49
Cellulosics	7.19
Rubber	0.20
Plastics	4.84
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.01
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	652.20
Packaging Material, Plastic	0.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	3.80E-01
Np-237	1.19E-05
Pu-238	7.33E-02
Pu-239	2.43E+00
Pu-240	5.50E-01
Pu-241	5.61E+00
Pu-242	3.97E-05
Th-229	8.61E-13
Th-230	4.16E-10
Th-232	1.61E-16
U-233	9.43E-10
U-234	4.50E-06
U-235	4.20E-07
U-236	3.26E-07
U-238	1.20E-13

## Haz. Waste No(s).

D008, D028, D029,  
F001, F002, F003,  
F005No TRUCON  
Codes Provided

## Waste Stream Description

The waste comes from Rocky Flats Plant. It consists of the nonline- and line-generated wastes. The waste may be in the form of gloveboxes, glovebox windows, furnaces, lathes, drill presses, ducting, piping, angle iron, tanks, downdraft tables, respirator filters, ultrasonic cleaners, control panels, electronic instrumentation, vacuum sweepers, pumps, motors, railing, stairs, metal racks and trays, hotplates, empty metal produce and paint cans, carts, power tools (saws, drills, etc.) hand tools (wrenches hammers, saws, chisels, gauges, etc.), chairs desks, tables, typewriters, filing cabinets, crushed 55-gallon drums, etc. The waste may also include limited amounts of combustible wastes. The waste is packaged in standard RFP fashion. Sharp metal edges are taped before packaging. Some lead lined containers are included.

Waste Stream ID: **IN-W298R**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Idaho National Laboratory	Final Waste Form	Uncategorized Metal	Waste Matrix Code	S5112	Handling	RH
Source Cat.	Materials Production/Recovery Effluents	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Heavy Non-special Source Metal (RH)			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	5.4	0.0	5.4
<b>Current Form Total</b>	<b>5.4</b>	<b>0.0</b>	<b>5.4</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/o Liner	8.0	0.0	8.0
<b>Final Form Total</b>	<b>8.0</b>	<b>0.0</b>	<b>8.0</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	129.00
Aluminum-based Metals/Alloys	4.40
Other Metals	28.40
Other Inorganic Materials	14.60
Cellulosics	9.60
Rubber	1.00
Plastics	9.50
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	652.20
Packaging Material, Plastic	0.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.64E+00
Np-237	1.32E-05
Pu-238	3.63E-01
Pu-239	1.20E+01
Pu-240	2.72E+00
Pu-241	2.78E+01
Pu-242	1.97E-04
Th-229	2.94E-13
Th-230	2.06E-09
Th-232	7.99E-16
U-233	5.08E-10
U-234	2.23E-05
U-235	2.37E-07
U-236	1.62E-06
U-238	5.95E-13

## Haz. Waste No(s).

D008, F001, F002

No TRUCON Codes Provided

## Waste Stream Description

This waste comes from the Rocky Flats Plant. It consists of used tantalum crucibles, funnels, funnel inserts, and pour-rods. This waste is packaged in standard RFP fashion. Sharp metal edges are taped before packaging. Other metals may include tungsten, platinum, and lead. Some lead-lined containers are included.

Waste Stream ID: **IN-W317R**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Idaho National Laboratory	Final Waste Form	Solidified Organics	Waste Matrix Code	S3211	Handling	RH
Source Cat.	Materials Production/Recovery Effluents	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Leached and Cemented Resin (RH)	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	2.1	0.0	2.1
<b>Current Form Total</b>	<b>2.1</b>	<b>0.0</b>	<b>2.1</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	3.6	0.0	3.6
<b>Final Form Total</b>	<b>3.6</b>	<b>0.0</b>	<b>3.6</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	1.90
Aluminum-based Metals/Alloys	0.00
Other Metals	2.90
Other Inorganic Materials	3.40
Cellulosics	0.17
Rubber	0.00
Plastics	13.00
Cements	89.00
Inorganic Matrix	0.00
Organic Matrix	76.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	652.20
Packaging Material, Plastic	26.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	3.91E+00
Np-237	2.22E-05
Pu-238	3.13E-01
Pu-239	1.04E+01
Pu-240	2.36E+00
Pu-241	2.40E+01
Pu-242	1.70E-04
Th-229	5.49E-13
Th-230	1.78E-09
Th-232	6.91E-16
U-233	9.09E-10
U-234	1.93E-05
U-235	2.05E-07
U-236	1.40E-06
U-238	5.13E-13

## Haz. Waste No(s).

D008, F001, F002

No TRUCON Codes Provided

## Waste Stream Description

This waste stream, generated at the RFETS, consists of anion and cation exchange resins used in the purification and recovery of plutonium and americium, respectively. The resins are leached and cemented before disposal.

Waste Stream ID: **IN-W323**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Idaho National Laboratory	Final Waste Form	Heterogeneous	Waste Matrix Code	S5440	Handling	CH
Source Cat.	Other/Multiple Sources	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Combustible Lab Waste	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	6.2	0.0	6.2
<b>Current Form Total</b>	<b>6.2</b>	<b>0.0</b>	<b>6.2</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
SWB w/ 4 - 55-gal Drums w/ Liners	15.1	0.0	15.1
<b>Final Form Total</b>	<b>15.1</b>	<b>0.0</b>	<b>15.1</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	12.15
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	0.86
Cellulosics	70.39
Rubber	0.79
Plastics	7.03
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	211.10
Packaging Material, Plastic	16.30
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	3.12E-02
Np-237	1.18E-07
Pu-238	6.13E-01
Pu-239	1.32E-01
Pu-241	5.88E-01
Th-229	1.81E-15
Th-230	3.48E-09
U-233	3.68E-12
U-234	3.77E-05
U-235	5.07E-05

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

## Waste Stream Description

This waste stream was generated at the Argonne National Laboratory-West at the INEL. Most of the waste is organic and combustible materials including paper, wood, PVC and plastic containers and items, rubber gaskets and gloves, leather, rags, towels, Q-tips, tubing, filter media, abrasive media, and metal pieces. Small residuals of moderators and fuel are trapped on the filters. The waste stream is non-mixed, because the lead is shielding only and not considered part of waste stream.

Comprehensive Inventory Database ver. 1.00

Data ver. D.9.02

NOTE: Actual numerical values have been rounded for presentation purposes.

Waste Stream ID: **IN-W345**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Idaho National Laboratory	Final Waste Form	Heterogeneous	Waste Matrix Code	S5000	Handling	CH
Source Cat.	Remediation/D&D Waste	Defense Determination	Likely Defense-Related	Inventory Date	12/31/2009		
Stream Name	TRU Scrap				Activity Concentrations Decayed to CY	2009	

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	2.9	0.0	2.9
Box - Misc	15.9	0.0	15.9
<b>Current Form Total</b>	<b>18.8</b>	<b>0.0</b>	<b>18.8</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	7.1	0.0	7.1
<b>Final Form Total</b>	<b>7.1</b>	<b>0.0</b>	<b>7.1</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	96.20
Aluminum-based Metals/Alloys	0.00
Other Metals	0.10
Other Inorganic Materials	2.40
Cellulosics	80.90
Rubber	7.30
Plastics	64.90
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	5.77E+00
Np-237	3.80E-05
Pu-238	1.43E+00
Pu-239	1.35E+00
Pu-240	8.57E-01
Th-229	1.04E-12
Th-230	8.09E-09
Th-232	3.91E-05
U-233	1.66E-09
U-234	8.77E-05
U-235	1.79E-05
U-236	5.09E-07

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

## Waste Stream Description

This waste stream, generated at the Idaho Engineering Laboratory, consists of a plastic glovebox, hydraulic pump containing oil, vacuum pumps, centrifuges, tools and experimental fuel capsules.

Waste Stream ID: **IN-W347**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Idaho National Laboratory	Final Waste Form	Solidified Inorganics	Waste Matrix Code	S3113	Handling	CH
Source Cat.	R&D/R&D Laboratory Waste	Defense Determination	Likely Defense-Related	Inventory Date	12/31/2009		
Stream Name	Absorbed Liquids	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	21.8	0.0	21.8
Bin - Misc	45.5	0.0	45.5
<b>Current Form Total</b>	<b>67.3</b>	<b>0.0</b>	<b>67.3</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	32.7	0.0	32.7
<b>Final Form Total</b>	<b>32.7</b>	<b>0.0</b>	<b>32.7</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.00
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	63.97
Cellulosics	0.00
Rubber	0.00
Plastics	0.00
Cements	0.00
Inorganic Matrix	137.01
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.86E+00
Cs-137	5.57E-06
Np-237	3.80E-05
Pu-238	2.44E-01
Pu-239	3.56E+00
Pu-240	1.14E+00
Pu-241	9.56E+00
Pu-242	1.26E-04
Sr-90	6.13E-06
U-234	4.52E-05
U-235	1.09E-05
U-238	1.85E-04

## Haz. Waste No(s).

F003

No TRUCON Codes Provided

## Waste Stream Description

This waste comes from Argonne National Laboratory-East. It consists of liquids adjusted to pH 10 using NaOH which are then absorbed in vermiculite.

Waste Stream ID: **IN-W351**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Idaho National Laboratory	Final Waste Form	Solidified Inorganics	Waste Matrix Code	S3113	Handling	CH
Source Cat.	R&D/R&D Laboratory Waste	Defense Determination	Likely Defense-Related	Inventory Date	12/31/2009		
Stream Name	Empty Bottles and Absorbent			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	1.5	0.0	1.5
<b>Current Form Total</b>	<b>1.5</b>	<b>0.0</b>	<b>1.5</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	1.5	0.0	1.5
<b>Final Form Total</b>	<b>1.5</b>	<b>0.0</b>	<b>1.5</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	3.40
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	3.40
Cellulosics	202.10
Rubber	2.30
Plastics	25.30
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.39E+00
Np-237	1.31E-05
Pu-238	1.77E-01
Pu-239	1.66E+00
Pu-240	8.70E-01
Pu-241	9.06E+00
Pu-242	2.90E-04

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

## Waste Stream Description

This waste stream, generated at Argonne National Laboratory-East, consists of polyethylene and glass bottles used to collect liquid waste are emptied and filled with vermiculite to absorb any remaining liquid. The tops were replaced to contain the liquid. No free liquids should be present, except for small quantities of wet vermiculite.

Comprehensive Inventory Database ver. 1.00

Data ver. D.9.02

NOTE: Actual numerical values have been rounded for presentation purposes.



Waste Stream ID: **IN-W358**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Idaho National Laboratory	Final Waste Form	Uncategorized Metal	Waste Matrix Code	S5000	Handling	CH
Source Cat.	Other/Multiple Sources	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	PU Neutron Sources	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.2	0.0	0.2
Bin - Misc	3.5	0.0	3.5
<b>Current Form Total</b>	<b>3.7</b>	<b>0.0</b>	<b>3.7</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	1.2	0.0	1.2
<b>Final Form Total</b>	<b>1.2</b>	<b>0.0</b>	<b>1.2</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	96.20
Aluminum-based Metals/Alloys	0.80
Other Metals	0.10
Other Inorganic Materials	2.40
Cellulosics	80.90
Rubber	7.30
Plastics	64.90
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Pu-238	5.95E+02
Pu-239	3.02E+00
Pu-240	5.80E+00
Th-230	1.60E-06
Th-232	8.33E-16
U-234	2.50E-02
U-235	4.17E-08
U-236	2.41E-06

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

## Waste Stream Description

This waste stream was generated at Argonne National Laboratory-West at the INEL. These wastes consist of noncombustible materials including Pu-Be neutron sources (small fuel samples, small sections of moderator, a pu standard, and pu foil), tools, hot cell operating equipment, various containers, and ferrous and nonferrous metals. Some combustible materials may include paper, plastic and PVC containers, rags, Q-tips, string mop heads, and an electrical plug strip and cord.

Waste Stream ID: **IN-W364R**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Idaho National Laboratory	Final Waste Form	Inorganic Non-Metal	Waste Matrix Code	S5000	Handling	RH
Source Cat.	Materials Production/Recovery Effluents	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Sand, Slag, and Crucibles (RH)			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.2	0.0	0.2
<b>Current Form Total</b>	<b>0.2</b>	<b>0.0</b>	<b>0.2</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	0.9	0.0	0.9
<b>Final Form Total</b>	<b>0.9</b>	<b>0.0</b>	<b>0.9</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.00
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	146.00
Cellulosics	0.00
Rubber	0.00
Plastics	0.00
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	652.20
Packaging Material, Plastic	26.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.18E+01
Np-237	4.47E-05
Pu-238	2.92E+00
Pu-239	9.67E+01
Pu-240	2.19E+01
Pu-241	2.23E+02
Pu-242	1.58E-03
Th-229	6.85E-13
Th-230	1.66E-08
Th-232	6.41E-15
U-233	1.40E-09
U-234	1.79E-04
U-235	1.91E-06
U-236	1.30E-05
U-238	4.77E-12

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

## Waste Stream Description

Specific information is not available for this content code. The waste stream is thought to be similar to content code 391, crucibles and sand. The operation which generated the waste is unknown. The waste packaging and handling procedures are unknown, although the waste form is thought to similar to content code 391.

Waste Stream ID: **IN-W365R**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Idaho National Laboratory	Final Waste Form	Inorganic Non-Metal	Waste Matrix Code	S5000	Handling	RH
Source Cat.	Materials Production/Recovery Effluents	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Crucibles and Sand (RH)	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.2	0.0	0.2
<b>Current Form Total</b>	<b>0.2</b>	<b>0.0</b>	<b>0.2</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	0.9	0.0	0.9
<b>Final Form Total</b>	<b>0.9</b>	<b>0.0</b>	<b>0.9</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.00
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	175.57
Cellulosics	0.00
Rubber	0.00
Plastics	0.00
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	652.20
Packaging Material, Plastic	26.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.20E+02
Np-237	1.44E-03
Pu-238	1.34E+00
Pu-239	4.43E+01
Pu-240	1.01E+01
Pu-241	1.02E+02
Pu-242	7.23E-04
Th-229	3.90E-11
Th-230	7.61E-09
Th-232	2.96E-15
U-233	6.24E-08
U-234	8.24E-05
U-235	8.73E-07
U-236	5.98E-06
U-238	2.18E-12

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

## Waste Stream Description

This waste consists of broken magnesium oxide crucibles and limited amounts of magnesium oxide sand, used in a molten salt cleanup project when reducing plutonium tetrafluoride to plutonium metal. Above-discard levels of plutonium were recovered from these crucibles by nitric acid leaching.

The waste stream handling and packaging is as follows: the crucibles were placed into 1-gallon PE bottles. Each bottle was double-bagged out the glovebox in PVC and PE bags. Each bottle was assayed and the placed in prepared 55 gallon drums, about 12-16 bottles per drum. Some of the drums were lead-lined. Prior to 1972, the drums were lined with one or two PE bags, which were sealed with tape. Some of the drums may have cardboard liners inside of the inner liner. After 1972, 90-mil sealed rigid liners were used in addition to one or two PE bags.

Since 1972, drums were inspected (and corrected where needed) for free liquids, proper packaging, and proper content code. One to two quarts of Oil-dri was placed on the outer sealed PE drum bag. Starting in February 1982, 3-12 lb of vermiculite was used to fill the space between the outer drum bag and the rigid liner.

Waste Stream ID: KA-T001

## Appendix A

## TRU Waste Inventory Profile Report

Site	Knolls Atomic Power Laboratory - Schenectady	Final Waste Form	Heterogeneous	Waste Matrix Code	S5000	Handling	RH
Source Cat.	R&D/R&D Laboratory Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Transuranic Debris	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
5-gal Can	2.0	4.9	6.9
<b>Current Form Total</b>	<b>2.0</b>	<b>4.9</b>	<b>6.9</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	30.3	72.1	102.4
<b>Final Form Total</b>	<b>30.3</b>	<b>72.1</b>	<b>102.4</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	98.20
Aluminum-based Metals/Alloys	0.60
Other Metals	0.10
Other Inorganic Materials	2.40
Cellulosics	80.90
Rubber	7.30
Plastics	64.90
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	652.20
Packaging Material, Plastic	26.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	3.46E-04
Am-243	5.57E-07
Cm-244	1.22E-05
Cs-137	6.92E-01
Np-237	9.00E-06
Pu-238	2.84E-02
Pu-239	7.99E-05
Pu-240	2.00E-05
Pu-241	2.03E-03
Pu-242	7.63E-08
Pu-244	1.81E-14
Sr-90	6.56E-01
Th-229	1.29E-11
Th-230	1.79E-08
Th-232	4.39E-13
U-233	4.38E-09
U-234	5.15E-05
U-235	7.61E-07
U-236	7.22E-06
U-238	3.34E-09

No Hazardous Waste Numbers Provided

TRUCON Code(s)

325

## Waste Stream Description

Organic and inorganic particulate and debris.

Comprehensive Inventory Database ver. 1.00

Data ver. D.9.02

NOTE: Actual numerical values have been rounded for presentation purposes.

A - KA - 1

Waste Stream ID: **KA-W016**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Knolls Atomic Power Laboratory - Schenectady	Final Waste Form	Heterogeneous	Waste Matrix Code	S5000	Handling	RH
Source Cat.	R&D/R&D Laboratory Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Transuranic Debris	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
5-gal Can	0.0	0.5	0.5
<b>Current Form Total</b>	<b>0.0</b>	<b>0.5</b>	<b>0.5</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	0.0	8.0	8.0
<b>Final Form Total</b>	<b>0.0</b>	<b>8.0</b>	<b>8.0</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	98.20
Aluminum-based Metals/Alloys	0.60
Other Metals	0.10
Other Inorganic Materials	2.40
Cellulosics	80.90
Rubber	7.30
Plastics	64.90
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	652.20
Packaging Material, Plastic	26.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	3.46E-04
Am-243	5.57E-07
Cm-244	1.22E-05
Cs-137	6.92E-01
Np-237	9.00E-06
Pu-238	2.84E-02
Pu-239	7.99E-05
Pu-240	2.00E-05
Pu-241	2.03E-03
Pu-242	7.63E-08
Pu-244	1.81E-14
Sr-90	6.56E-01
Th-229	1.29E-11
Th-230	1.79E-08
Th-232	4.39E-13
U-233	4.38E-09
U-234	5.15E-05
U-235	7.61E-07
U-236	7.22E-06
U-238	3.34E-09

## Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D018, D035, D039, D040, F001, F002, F003, F005

## TRUCON Code(s)

325

## Waste Stream Description

This transuranic mixed waste has not yet been generated. Waste will be segregated to the extent possible (considering ALARA) into inorganic, organic and heterogeneous waste streams and packaged separately. Details of waste characteristics will be developed upon generation. This waste stream will not be moratorium waste.

Waste Stream ID: KN-B234TRU

## Appendix A

## TRU Waste Inventory Profile Report

Site	Knolls Atomic Power Laboratory - Nuclear Fuel Services	Final Waste Form	Soils	Waste Matrix Code	S4200	Handling	CH
Source Cat.	Remediation/D&D Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Building 234 TRU Waste	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	3.1	0.0	3.1
Box - Crate	2.8	0.0	2.8
Uncontained	197.6	0.0	197.6
<b>Current Form Total</b>	<b>203.5</b>	<b>0.0</b>	<b>203.5</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	203.6	0.0	203.6
<b>Final Form Total</b>	<b>203.6</b>	<b>0.0</b>	<b>203.6</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	35.70
Aluminum-based Metals/Alloys	2.60
Other Metals	0.00
Other Inorganic Materials	33.60
Cellulosics	5.10
Rubber	0.30
Plastics	31.50
Cements	2270.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	1601.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.29E-01
Np-237	5.10E-07
Pu-238	2.56E-02
Pu-239	8.10E-01
Pu-240	8.09E-01
Pu-241	8.57E-01
Th-229	1.90E-06
Th-230	4.50E-04
Th-232	1.50E-04
U-233	2.90E-03
U-234	2.90E-03
U-235	5.50E-04
U-236	5.50E-04
U-238	7.10E-05

No Hazardous Waste Numbers Provided

TRUCON Code(s)

111/211, 125/225

## Waste Stream Description

This waste is non-hazardous soil and debris from Building 234 decommissioning. The majority of the waste to be generated, estimated 90%, will be soil. All process equipment and glove boxes were removed in the early 1990s and are not part of this waste stream. The remaining debris consists of concrete block, metal, PPE, plywood, plexiglass, plastic, HEPA filters, piping, duct work, glass, cheese cloth, paper, rubber and small tools.

Comprehensive Inventory Database ver. 1.00

Data ver. D.9.02

NOTE: Actual numerical values have been rounded for presentation purposes.

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Waste Stream ID: KN-B234TRU\_SS

## Appendix A

## TRU Waste Inventory Profile Report

Site	Knolls Atomic Power Laboratory - Nuclear Fuel Services	Final Waste Form	Solidified Inorganics	Waste Matrix Code	S3000	Handling	CH
Source Cat.	Pollution Control or Waste Treatment Process	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Building 234 TRU Waste	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
Uncontained	118.5	0.0	118.5
<b>Current Form Total</b>	<b>118.5</b>	<b>0.0</b>	<b>118.5</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	118.6	0.0	118.6
<b>Final Form Total</b>	<b>118.6</b>	<b>0.0</b>	<b>118.6</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.00
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	0.00
Cellulosics	0.00
Rubber	0.00
Plastics	0.00
Cements	0.00
Inorganic Matrix	1281.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	4.58E-02
Np-237	1.02E-07
Pu-238	5.11E-03
Pu-239	1.62E-01
Pu-240	1.62E-01
Pu-241	1.71E-01
Th-229	3.81E-07
Th-230	9.00E-05
Th-232	3.00E-05
U-233	5.80E-04
U-234	5.80E-04
U-235	1.10E-04
U-236	1.10E-04
U-238	1.42E-05

No Hazardous Waste Numbers Provided

TRUCON Code(s)

111/211

## Waste Stream Description

This waste is non hazardous solidified sludge/residue from ground water management processing system.

Waste Stream ID: LA-CIN01.001

## Appendix A

## TRU Waste Inventory Profile Report

Site	Los Alamos National Laboratory	Final Waste Form	Solidified Inorganics	Waste Matrix Code	S3150	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Cemented TRU Waste	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
110-gal Drum w/ 1 - 55-gal Drum w/ Liner	3.3	0.0	3.3
55-gal Drum Dir Ld w/ Liner	391.5	47.4	438.9
85-gal Drum w/ 1 - 55-gal Drum w/ Liner	241.2	0.0	241.2
Cask - Misc w/ 1 - 30-gal Drum	0.4	0.0	0.4
<b>Current Form Total</b>	<b>636.4</b>	<b>47.4</b>	<b>683.8</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	548.9	47.4	596.3
SWB Dir Ld w/ Liner	1.9	0.0	1.9
<b>Final Form Total</b>	<b>550.8</b>	<b>47.4</b>	<b>598.2</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	33.47
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	0.00
Cellulosics	0.00
Rubber	0.00
Plastics	5.95
Cements	936.25
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.87
Packaging Material, Plastic	36.89
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	4.51E+01
Am-243	7.26E-04
Cs-137	6.85E-09
Np-237	3.07E-05
Pu-238	2.34E+00
Pu-239	1.64E+01
Pu-240	4.42E+00
Pu-241	8.29E+01
Pu-242	6.66E-03
Pu-244	5.42E-09
Sr-90	6.84E-09
Th-229	2.55E-08
Th-230	3.50E-09
Th-232	4.18E-06
U-233	1.75E-04
U-234	3.93E-04
U-235	1.64E-05
U-236	8.39E-07
U-238	5.84E-04

## Haz. Waste No(s).

D006, D007, D008, D011, D019, D021, D039, F001, F002, F003

## TRUCON Code(s)

114/214, 126/226

## Waste Stream Description

Cemented TRU waste is generated by or originated from materials used during recovery, fabrication, R&amp;D, and associated maintenance operations.



Waste Stream ID: **LA-CIN02.001**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Los Alamos National Laboratory	Final Waste Form	Solidified Inorganics	Waste Matrix Code	S3150	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Radioactive Aqueous Liquid Waste	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
110-gal Drum w/ 1 - 55-gal Drum w/ Liner	5.4	0.0	5.4
55-gal Drum Dir Ld w/ Liner	27.0	0.0	27.0
85-gal Drum w/ 1 - 55-gal Drum w/ Liner	66.7	0.0	66.7
SWB w/ 4 - 55-gal Drums w/ Liners	69.9	0.0	69.9
<b>Current Form Total</b>	<b>169.0</b>	<b>0.0</b>	<b>169.0</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	73.0	0.0	73.0
SWB w/ 4 - 55-gal Drums w/ Liners	69.9	0.0	69.9
<b>Final Form Total</b>	<b>142.9</b>	<b>0.0</b>	<b>142.9</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.00
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	0.00
Cellulosics	0.00
Rubber	0.00
Plastics	0.83
Cements	824.50
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	170.09
Packaging Material, Plastic	26.87
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	3.21E+00
Am-243	4.59E-06
Cs-137	1.36E-03
Np-237	1.47E-05
Pu-238	4.44E-01
Pu-239	4.54E+00
Pu-240	1.35E-01
Pu-241	1.48E+00
Pu-242	2.47E-05
Sr-90	3.20E-05
Th-229	2.62E-08
Th-230	2.32E-09
Th-232	3.95E-19
U-233	1.40E-04
U-234	1.30E-04
U-235	2.03E-05
U-236	8.00E-09
U-238	7.55E-08

## Haz. Waste No(s).

D004, D006, D007, D008, D009, D010, D011, F001, F002, F005

## TRUCON Code(s)

111/211, 114/214

## Waste Stream Description

Generation during the pretreatment of radioactive aqueous liquid waste that was piped to TA-50 from TA-55

Waste Stream ID: LA-CIN03.001

## Appendix A

## TRU Waste Inventory Profile Report

Site	Los Alamos National Laboratory	Final Waste Form	Solidified Inorganics	Waste Matrix Code	S3150	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Cemented TRU Waste	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	2.3	0.0	2.3
85-gal Drum w/ 1 - 55-gal Drum w/ Liner	1.9	0.0	1.9
<b>Current Form Total</b>	<b>4.2</b>	<b>0.0</b>	<b>4.2</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	3.5	0.0	3.5
<b>Final Form Total</b>	<b>3.5</b>	<b>0.0</b>	<b>3.5</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.05
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	0.00
Cellulosics	0.00
Rubber	0.00
Plastics	0.18
Cements	590.93
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.26E-01
Cs-137	2.03E-05
Np-237	1.60E-06
Pu-238	5.25E-02
Pu-239	1.02E+00
Pu-240	2.20E-01
Pu-241	1.18E+00
Pu-242	3.02E-05
Sr-90	1.99E-05
Th-229	1.68E-07
Th-230	2.07E-08
Th-232	1.18E-16
U-233	1.35E-10
U-234	8.73E-05
U-235	1.97E-06
U-236	1.76E-07
U-238	3.25E-05

## Haz. Waste No(s).

D007, D019, F001, F002

## TRUCON Code(s)

126/226

## Waste Stream Description

Cemented TRU waste generated in the CMR during facility and equipment operations and maintenance processes.

Waste Stream ID: LA-LAMHDO3DD

## Appendix A

## TRU Waste Inventory Profile Report

Site	Los Alamos National Laboratory	Final Waste Form	Heterogeneous	Waste Matrix Code	S5400	Handling	CH
Source Cat.	Remediation/D&D Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	REPACKAGED INTO THIS WASTE STREAM ARE FRP 55196, FRP 55194 AND PART OF B-25. Non-Plutonium Metals			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
SWB w/ 4 - 55-gal Drums w/ Liners	3.8	0.0	3.8
<b>Current Form Total</b>	<b>3.8</b>	<b>0.0</b>	<b>3.8</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
SWB w/ 4 - 55-gal Drums w/ Liners	3.8	0.0	3.8
<b>Final Form Total</b>	<b>3.8</b>	<b>0.0</b>	<b>3.8</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	4.89
Aluminum-based Metals/Alloys	0.00
Other Metals	1.60
Other Inorganic Materials	7.76
Cellulosics	6.25
Rubber	0.63
Plastics	18.35
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.12
Vitrified	0.00
Packaging Material, Steel	211.10
Packaging Material, Plastic	16.30
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	4.94E-04
Np-237	5.57E-10
Pu-238	1.72E-02
Pu-239	9.34E-03
Pu-241	1.93E-02
Th-229	5.45E-19
Th-230	3.60E-12
U-233	4.49E-15
U-234	1.99E-07
U-235	3.69E-11

No Hazardous Waste Numbers Provided

TRUCON Code(s)

125/225

## Waste Stream Description

REPACKAGED INTO THIS WASTE STREAM ARE FRP 55196, FRP 55194 AND PART OF B-25. Non-Plutonium Metals

Comprehensive Inventory Database ver. 1.00

Data ver. D.9.02

NOTE: Actual numerical values have been rounded for presentation purposes.

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Waste Stream ID: LA-LAMINO4S

## Appendix A

## TRU Waste Inventory Profile Report

Site	Los Alamos National Laboratory	Final Waste Form	Solidified Inorganics	Waste Matrix Code	S3120	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	INORGANIC HOMOGENEOUS WASTE			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	1.0	25.8	26.8
55-gal POC - 12" w/ Liner	0.6	0.0	0.6
<b>Current Form Total</b>	<b>1.7</b>	<b>25.8</b>	<b>27.5</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	1.0	25.8	26.8
55-gal POC - 12" w/ Liner	0.6	0.0	0.6
<b>Final Form Total</b>	<b>1.7</b>	<b>25.8</b>	<b>27.5</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	10.77
Aluminum-based Metals/Alloys	0.00
Other Metals	0.67
Other Inorganic Materials	0.00
Cellulosics	0.00
Rubber	0.00
Plastics	5.64
Cements	0.00
Inorganic Matrix	34.22
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	139.81
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	3.13
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.01E+01
Np-237	1.30E-05
Pu-238	8.96E-01
Pu-239	2.80E+01
Pu-240	6.85E+00
Pu-241	9.57E+01
Pu-242	4.79E-04
Th-229	3.52E-15
Th-230	4.62E-11
Th-232	2.01E-17
U-233	5.64E-11
U-234	5.12E-06
U-235	5.53E-08
U-236	4.06E-07
U-238	1.45E-13

## Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D021, D022, D035, D038, D039, D040, F001, F002, F003, F005

## TRUCON Code(s)

124/224

## Waste Stream Description

INORGANIC HOMOGENEOUS WASTE

Waste Stream ID: LA-LANHD01

## Appendix A

## TRU Waste Inventory Profile Report

Site	Los Alamos National Laboratory	Final Waste Form	Heterogeneous	Waste Matrix Code	S5400	Handling	CH
Source Cat.	R&D/R&D Laboratory Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Heterogeneous Debris			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.2	21.8	22.0
<b>Current Form Total</b>	<b>0.2</b>	<b>21.8</b>	<b>22.0</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.2	21.8	22.0
<b>Final Form Total</b>	<b>0.2</b>	<b>21.8</b>	<b>22.0</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	4.03
Aluminum-based Metals/Alloys	0.02
Other Metals	0.48
Other Inorganic Materials	2.62
Cellulosics	0.33
Rubber	0.50
Plastics	1.54
Cements	0.00
Inorganic Matrix	0.06
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	8.11E+00
Pu-238	1.50E+00
Pu-239	1.66E+01
Pu-240	5.71E+00
Pu-241	1.07E+02
Pu-242	8.13E-04
U-234	1.05E-03
U-235	4.90E-05
U-238	1.06E-03

No Hazardous Waste Numbers Provided

TRUCON Code(s)

125/225

## Waste Stream Description

Heterogeneous debris waste generated during plutonium recovery, fabrication, R&amp;D, facility and equipment operations, and maintenance processes.

Waste Stream ID: LA-LANINO3NC

## Appendix A

## TRU Waste Inventory Profile Report

Site	Los Alamos National Laboratory	Final Waste Form	Salt Waste	Waste Matrix Code	S3140	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	NON-CEMENTED SOLID INORGANIC (HOMOGENEOUS)			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	2.7	89.4	92.1
55-gal POC - 12" w/ Liner	1.7	0.0	1.7
<b>Current Form Total</b>	<b>4.4</b>	<b>89.4</b>	<b>93.8</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	2.7	89.4	92.1
55-gal POC - 12" w/ Liner	1.7	0.0	1.7
<b>Final Form Total</b>	<b>4.4</b>	<b>89.4</b>	<b>93.8</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	17.54
Aluminum-based Metals/Alloys	0.07
Other Metals	2.10
Other Inorganic Materials	11.38
Cellulosics	1.45
Rubber	2.18
Plastics	6.72
Cements	0.00
Inorganic Matrix	0.28
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	137.84
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	2.44
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.89E+01
Np-237	1.06E-04
Pu-238	1.16E+00
Pu-239	2.97E+01
Pu-240	7.69E+00
Pu-241	1.17E+02
Pu-242	7.08E-04
Th-229	7.62E-14
Th-230	5.98E-11
Th-232	2.25E-17
U-233	8.39E-10
U-234	6.64E-06
U-235	5.86E-08
U-236	4.56E-07
U-238	2.14E-13

## Haz. Waste No(s).

D005, D006, D007, D008, D009, D010, D011

## TRUCON Code(s)

122/222, 124/224

## Waste Stream Description

NON-CEMENTED SOLID INORGANIC (HOMOGENEOUS)

Waste Stream ID: LA-MHD01.001

## Appendix A

## TRU Waste Inventory Profile Report

Site	Los Alamos National Laboratory	Final Waste Form	Heterogeneous	Waste Matrix Code	S5400	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Debris waste includes paper, rags, plastic, rubber, wood-based HEPA filters			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
110-gal Drum w/ 1 - 55-gal Drum w/ Liner	1.2	0.0	1.2
55-gal Drum Dir Ld w/ Liner	655.2	252.3	907.5
55-gal POC - 12" w/ Liner	35.8	0.0	35.8
85-gal Drum w/ 1 - 55-gal Drum w/ Liner	797.0	0.0	797.0
Box - Crate	213.0	0.0	213.0
Box - FRP	167.2	0.0	167.2
Other	531.1	0.0	531.1
SWB w/ 4 - 55-gal Drums w/ Liners	279.7	0.0	279.7
<b>Current Form Total</b>	<b>2680.2</b>	<b>252.3</b>	<b>2932.5</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	1170.8	252.3	1423.1
55-gal POC - 12" w/ Liner	35.8	0.0	35.8
SWB Dir Ld w/ Liner	912.9	0.0	912.9
SWB w/ 4 - 55-gal Drums w/ Liners	279.7	0.0	279.7
<b>Final Form Total</b>	<b>2399.2</b>	<b>252.3</b>	<b>2651.5</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	78.95
Aluminum-based Metals/Alloys	0.32
Other Metals	9.46
Other Inorganic Materials	51.20
Cellulosics	6.53
Rubber	9.80
Plastics	30.23
Cements	0.00
Inorganic Matrix	1.26
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	152.44
Packaging Material, Plastic	22.49
Packaging Material, Cellulosics	1.86
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.23E+00
Am-243	5.45E-05
Cm-244	1.34E-02
Cs-137	1.06E-06
Np-237	2.34E-05
Pu-238	6.52E+00
Pu-239	6.71E+00
Pu-240	1.79E+00
Pu-241	2.78E+01
Pu-242	3.79E-03
Pu-244	2.39E-09
Sr-90	1.06E-06
Th-229	2.45E-08
Th-230	2.19E-09
Th-232	4.56E-11
U-233	1.36E-04
U-234	2.53E-04
U-235	1.98E-06
U-236	1.21E-07
U-238	3.23E-05

## Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D021, D022, D035, D038, D039, D040, F001, F002, F003, F005

## TRUCON Code(s)

111/211, 114/214, 115/215, 116/216, 117/217, 118/218, 119/219, 122/222, 123/223, 124/224, 125/225, 130/230

## Waste Stream Description

Debris waste includes paper, rags, plastic, rubber, wood-based HEPA filters

Comprehensive Inventory Database ver. 1.00

Data ver. D.9.02

NOTE: Actual numerical values have been rounded for presentation purposes.

Waste Stream ID: LA-MHD02-PTX.001

## Appendix A

## TRU Waste Inventory Profile Report

Site	Los Alamos National Laboratory	Final Waste Form	Heterogeneous	Waste Matrix Code	S5400	Handling	CH
Source Cat.	Spill Clean-ups/Emergency Response Actions	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Heterogeneous Debris Waste			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.6	0.0	0.6
<b>Current Form Total</b>	<b>0.6</b>	<b>0.0</b>	<b>0.6</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.6	0.0	0.6
<b>Final Form Total</b>	<b>0.6</b>	<b>0.0</b>	<b>0.6</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	45.52
Aluminum-based Metals/Alloys	6.44
Other Metals	12.13
Other Inorganic Materials	11.53
Cellulosics	40.73
Rubber	0.00
Plastics	33.39
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.72E-02
Np-237	6.18E-08
Pu-238	7.56E-03
Pu-239	8.92E-02
Pu-240	2.10E-02
Pu-241	1.21E-01
Th-229	5.73E-16
Th-230	1.48E-11
Th-232	2.21E-18
U-233	1.55E-12
U-234	2.70E-07
U-235	1.06E-09
U-236	7.47E-09

## Haz. Waste No(s).

D008

## TRUCON Code(s)

116/216

## Waste Stream Description

Mixed heterogeneous debris waste resulting from the clean-up of a single off-normal event when a sealed pit cracked during a dismantlement operation.



Waste Stream ID: LA-MHD03.001

## Appendix A

## TRU Waste Inventory Profile Report

Site	Los Alamos National Laboratory	Final Waste Form	Heterogeneous	Waste Matrix Code	S5400	Handling	CH
Source Cat.	Remediation/D&D Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	MIXED HETEROGENEOUS DEBRIS WASTE, D&D, COMBUSTIBLE/NON COMBUSTIBLE			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
110-gal Drum w/ 1 - 55-gal Drum w/ Liner	0.8	0.0	0.8
30-gal Drum	4.5	0.0	4.5
55-gal Drum Dir Ld w/ Liner	187.0	0.0	187.0
55-gal POC - 12" w/ Liner	0.4	0.0	0.4
85-gal Drum w/ 1 - 55-gal Drum w/ Liner	150.1	0.0	150.1
Box - Cardboard	0.0	0.0	0.0
Cask - Misc w/ 1 - 30-gal Drum	0.8	0.0	0.8
Other	15.5	0.0	15.5
SWB w/ 4 - 55-gal Drums w/ Liners	85.1	0.0	85.1
<b>Current Form Total</b>	<b>444.2</b>	<b>0.0</b>	<b>444.2</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	289.1	0.0	289.1
55-gal POC - 12" w/ Liner	0.4	0.0	0.4
SWB Dir Ld w/ Liner	18.9	0.0	18.9
SWB w/ 4 - 55-gal Drums w/ Liners	85.1	0.0	85.1
<b>Final Form Total</b>	<b>393.5</b>	<b>0.0</b>	<b>393.5</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	26.29
Aluminum-based Metals/Alloys	0.00
Other Metals	8.60
Other Inorganic Materials	41.71
Cellulosics	33.59
Rubber	3.41
Plastics	98.63
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.66
Vitrified	0.00
Packaging Material, Steel	149.67
Packaging Material, Plastic	30.81
Packaging Material, Cellulosics	0.15
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	3.69E-01
Am-243	1.08E-04
Cm-244	3.99E-01
Cs-137	4.08E-03
Np-237	1.80E-04
Pu-238	2.49E+00
Pu-239	9.03E-01
Pu-240	2.04E-01
Pu-241	3.24E+00
Pu-242	1.35E-04
Pu-244	8.90E-11
Sr-90	4.27E-03
Th-229	5.21E-09
Th-230	1.88E-09
Th-232	1.19E-17
U-233	1.70E-05
U-234	2.13E-04
U-235	2.00E-05
U-236	2.43E-07
U-238	4.35E-06

## Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D021, D022, D026, D027, D028, D029, D030, D035, D036, D037, D038, D039, D040, D043, F001, F002, F003, F004, F005

## TRUCON Code(s)

116/216, 117/217, 118/218, 119/219, 125/225

## Waste Stream Description

MIXED HETEROGENEOUS DEBRIS WASTE, D&D, COMBUSTIBLE/NON COMBUSTIBLE

Comprehensive Inventory Database ver. 1.00

Data ver. D.9.02

NOTE: Actual numerical values have been rounded for presentation purposes.

Waste Stream ID: LA-MHD04.001

## Appendix A

## TRU Waste Inventory Profile Report

Site	Los Alamos National Laboratory	Final Waste Form	Heterogeneous	Waste Matrix Code	S5400	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Mixed heterogeneous combustible and noncombustible debris			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
110-gal Drum w/ 1 - 55-gal Drum w/ Liner	0.4	0.0	0.4
30-gal Drum	0.1	0.0	0.1
55-gal Drum Dir Ld w/ Liner	2.7	0.0	2.7
85-gal Drum w/ 1 - 55-gal Drum w/ Liner	4.8	0.0	4.8
Box - Crate	737.8	0.0	737.8
Box - FRP	394.1	0.0	394.1
Other	145.3	0.0	145.3
SWB w/ 4 - 55-gal Drums w/ Liners	17.0	0.0	17.0
<b>Current Form Total</b>	<b>1302.3</b>	<b>0.0</b>	<b>1302.3</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	6.4	0.0	6.4
SWB Dir Ld w/ Liner	1279.5	0.0	1279.5
SWB w/ 4 - 55-gal Drums w/ Liners	17.0	0.0	17.0
<b>Final Form Total</b>	<b>1303.0</b>	<b>0.0</b>	<b>1303.0</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	24.90
Aluminum-based Metals/Alloys	9.50
Other Metals	19.09
Other Inorganic Materials	5.43
Cellulosics	16.18
Rubber	12.50
Plastics	9.30
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	154.14
Packaging Material, Plastic	1.57
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	5.41E-03
Am-243	1.03E-06
Cs-137	8.59E-10
Np-237	1.98E-07
Pu-238	2.38E+00
Pu-239	3.16E-01
Pu-240	4.58E-03
Pu-241	1.05E-01
Pu-242	3.40E-07
Pu-244	1.34E-07
Sr-90	5.10E-09
Th-229	3.73E-13
Th-230	6.71E-11
Th-232	3.35E-21
U-233	3.98E-09
U-234	1.09E-05
U-235	3.26E-08
U-236	1.36E-10
U-238	1.04E-09

## Haz. Waste No(s).

D004, D006, D007, D008, D009, F001, F002

## TRUCON Code(s)

117/217, 125/225

## Waste Stream Description

Mixed heterogeneous combustible and noncombustible debris

Comprehensive Inventory Database ver. 1.00

Data ver. D.9.02

NOTE: Actual numerical values have been rounded for presentation purposes.

Waste Stream ID: LA-MHD05-ITRI.001

## Appendix A

## TRU Waste Inventory Profile Report

Site	Los Alamos National Laboratory	Final Waste Form	Heterogeneous	Waste Matrix Code	S5400	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Heterogeneous Debris Waste	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	10.0	0.0	10.0
85-gal Drum w/ 1 - 55-gal Drum w/ Liner	1.3	0.0	1.3
<b>Current Form Total</b>	<b>11.3</b>	<b>0.0</b>	<b>11.3</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	10.8	0.0	10.8
<b>Final Form Total</b>	<b>10.8</b>	<b>0.0</b>	<b>10.8</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	134.76
Aluminum-based Metals/Alloys	4.17
Other Metals	8.09
Other Inorganic Materials	20.09
Cellulosics	4.17
Rubber	6.86
Plastics	6.86
Cements	0.00
Inorganic Matrix	53.90
Organic Matrix	6.62
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.17E+00
Cm-244	5.60E+00
Pu-238	4.57E+00
Pu-239	6.24E-01
Pu-240	2.74E-03
Pu-241	1.50E-03
Pu-242	7.77E-08
U-233	8.97E-06
U-238	7.54E-07

## Haz. Waste No(s).

D008, F001, F002

## TRUCON Code(s)

125/225, 154

## Waste Stream Description

Mixed CH-TRU waste stored at LANL resulting from the preparation of aerosols of TRU isotopes for inhalation studies.

Waste Stream ID: LA-MHD08.001

## Appendix A

## TRU Waste Inventory Profile Report

Site	Los Alamos National Laboratory	Final Waste Form	Heterogeneous	Waste Matrix Code	S5400	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Heterogeneous Debris	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	9.6	0.0	9.6
85-gal Drum w/ 1 - 55-gal Drum w/ Liner	1.3	0.0	1.3
Box - Cardboard	0.0	0.0	0.0
<b>Current Form Total</b>	<b>10.9</b>	<b>0.0</b>	<b>10.9</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	10.6	0.0	10.6
<b>Final Form Total</b>	<b>10.6</b>	<b>0.0</b>	<b>10.6</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	6.66
Aluminum-based Metals/Alloys	0.00
Other Metals	2.21
Other Inorganic Materials	10.73
Cellulosics	8.61
Rubber	0.88
Plastics	25.34
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.92E-02
Am-243	1.19E-03
Cm-244	1.10E-01
Cs-137	5.20E-05
Np-237	3.02E-04
Pu-238	5.18E-02
Pu-239	1.25E-01
Pu-240	2.76E-02
Pu-241	2.61E-01
Pu-242	9.51E-03
Pu-244	9.99E-06
Sr-90	2.26E-05
Th-229	8.58E-09
Th-230	1.71E-11
Th-232	1.04E-08
U-233	9.14E-05
U-234	1.97E-06
U-235	1.24E-10
U-236	8.19E-10
U-238	6.41E-06

## Haz. Waste No(s).

D008, D011

## TRUCON Code(s)

111/211, 116/216,  
125/225

## Waste Stream Description

Consists of mixed heterogeneous combustible and non-combustible debris generated during plutonium and uranium R&amp;D processes in the Alpha Facility

Comprehensive Inventory Database ver. 1.00

Data ver. D.9.02

NOTE: Actual numerical values have been rounded for presentation purposes.

Waste Stream ID: LA-MHD09.001

## Appendix A

## TRU Waste Inventory Profile Report

Site	Los Alamos National Laboratory	Final Waste Form	Heterogeneous	Waste Matrix Code	S5400	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Heterogeneous Debris	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	5.4	0.0	5.4
85-gal Drum w/ 1 - 55-gal Drum w/ Liner	2.6	0.0	2.6
Box - Crate	0.6	0.0	0.6
Other	26.7	0.0	26.7
SWB w/ 4 - 55-gal Drums w/ Liners	20.8	0.0	20.8
<b>Current Form Total</b>	<b>56.1</b>	<b>0.0</b>	<b>56.1</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	7.1	0.0	7.1
SWB Dir Ld w/ Liner	30.2	0.0	30.2
SWB w/ 4 - 55-gal Drums w/ Liners	20.8	0.0	20.8
<b>Final Form Total</b>	<b>58.1</b>	<b>0.0</b>	<b>58.1</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	158.29
Aluminum-based Metals/Alloys	57.62
Other Metals	58.48
Other Inorganic Materials	6.43
Cellulosics	11.84
Rubber	10.91
Plastics	11.96
Cements	0.00
Inorganic Matrix	2.64
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	171.35
Packaging Material, Plastic	10.96
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	3.59E-01
Am-243	1.41E-04
Cs-137	1.24E-03
Np-237	6.15E-05
Pu-238	3.07E+00
Pu-239	3.01E-01
Pu-240	8.19E-02
Pu-241	2.79E+00
Pu-242	5.49E-05
U-234	3.18E-06
U-235	4.05E-07

## Haz. Waste No(s).

D004, D006, D007, D008, D009, D010, F001

## TRUCON Code(s)

116/216, 117/217, 125/225

## Waste Stream Description

Mixed heterogeneous combustible and non-combustible debris from the TA-50-01 RLWTF, TA-50-37 CAI, and TA-50-69 WCRR Facility generated during facility and equipment maintenance, decontamination and decommissioning (D&D), and waste repackaging activities.

Waste Stream ID: LA-MIN02-V.001

## Appendix A

## TRU Waste Inventory Profile Report

Site	Los Alamos National Laboratory	Final Waste Form	Solidified Organics	Waste Matrix Code	S3110	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Mixed Inorganic Homogeneous Waste, Organics on Vermiculite.			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	8.3	5.0	13.3
85-gal Drum w/ 1 - 55-gal Drum w/ Liner	1.0	0.0	1.0
SWB w/ 4 - 55-gal Drums w/ Liners	1.9	0.0	1.9
<b>Current Form Total</b>	<b>11.2</b>	<b>5.0</b>	<b>16.2</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	8.9	5.0	13.9
SWB w/ 4 - 55-gal Drums w/ Liners	1.9	0.0	1.9
<b>Final Form Total</b>	<b>10.8</b>	<b>5.0</b>	<b>15.8</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	10.65
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	3.92
Cellulosics	0.00
Rubber	0.00
Plastics	16.70
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	84.92
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	140.39
Packaging Material, Plastic	34.53
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	3.40E-01
Am-243	1.27E-05
Cs-137	3.86E-08
Np-237	4.41E-05
Pu-238	3.81E+00
Pu-239	2.51E+00
Pu-240	6.24E-01
Pu-241	8.06E+00
Pu-242	4.59E-05
Sr-90	3.85E-08
Th-229	9.00E-15
Th-230	1.08E-09
Th-232	4.57E-19
U-233	1.92E-10
U-234	1.25E-04
U-235	3.25E-06
U-236	1.85E-08
U-238	1.21E-06

## Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D021, D022, D035, D038, D039, D040, F001, F002, F003, F005

## TRUCON Code(s)

112/212

## Waste Stream Description

Inorganic particulate waste generated during plutonium recovery, fabrication, R&D, facility and equipment operations, and maintenance processes.

Waste Stream ID: LA-MIN03-NC.001

## Appendix A

## TRU Waste Inventory Profile Report

Site	Los Alamos National Laboratory	Final Waste Form	Solidified Inorganics	Waste Matrix Code	S3120	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	MIXED INORGANIC HOMOGENEOUS WASTE, NONCEMENTED			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
110-gal Drum w/ 1 - 55-gal Drum w/ Liner	0.4	0.0	0.4
55-gal Drum Dir Ld w/ Liner	131.5	0.0	131.5
85-gal Drum w/ 1 - 55-gal Drum w/ Liner	196.4	0.0	196.4
<b>Current Form Total</b>	<b>328.3</b>	<b>0.0</b>	<b>328.3</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	258.5	0.0	258.5
<b>Final Form Total</b>	<b>258.5</b>	<b>0.0</b>	<b>258.5</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.09
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	0.08
Cellulosics	0.00
Rubber	0.00
Plastics	4.60
Cements	0.00
Inorganic Matrix	862.85
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	3.73E-01
Am-243	7.60E-06
Cs-137	2.02E-05
Np-237	1.92E-06
Pu-238	6.22E-02
Pu-239	3.53E-01
Pu-240	8.89E-03
Pu-241	2.66E+00
Pu-242	2.36E-06
Sr-90	2.02E-05
Th-229	3.83E-08
Th-230	4.20E-10
Th-232	6.51E-21
U-233	8.09E-12
U-234	4.68E-05
U-235	1.25E-06
U-236	2.64E-10
U-238	3.00E-06

## Haz. Waste No(s).

D007, D008, D009,  
F001, F002

## TRUCON Code(s)

111/211

## Waste Stream Description

MIXED INORGANIC HOMOGENEOUS WASTE, NONCEMENTED

Comprehensive Inventory Database ver. 1.00

Data ver. D.9.02

NOTE: Actual numerical values have been rounded for presentation purposes.

Waste Stream ID: LA-MIN04-S.001

## Appendix A

## TRU Waste Inventory Profile Report

Site	Los Alamos National Laboratory	Final Waste Form	Salt Waste	Waste Matrix Code	S3140	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Salt Waste	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	10.4	0.0	10.4
55-gal POC - 12" w/ Liner	0.4	0.0	0.4
85-gal Drum w/ 1 - 55-gal Drum w/ Liner	0.3	0.0	0.3
<b>Current Form Total</b>	<b>11.1</b>	<b>0.0</b>	<b>11.1</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	10.6	0.0	10.6
55-gal POC - 12" w/ Liner	0.4	0.0	0.4
<b>Final Form Total</b>	<b>11.0</b>	<b>0.0</b>	<b>11.0</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	15.28
Aluminum-based Metals/Alloys	0.00
Other Metals	0.95
Other Inorganic Materials	0.00
Cellulosics	0.00
Rubber	0.00
Plastics	8.00
Cements	0.00
Inorganic Matrix	48.53
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	145.77
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	5.19
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	7.53E+00
Am-243	4.26E-05
Cm-244	4.96E-02
Cs-137	1.34E-07
Np-237	1.66E-04
Pu-238	2.09E+00
Pu-239	3.71E+01
Pu-240	9.18E+00
Pu-241	8.88E+01
Pu-242	7.23E-04
Sr-90	1.34E-07
U-233	4.01E-04
U-234	1.01E-04
U-235	2.51E-06

## Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D021, D022, D035, D038, D039, D040, F001, F002, F003, F005

## TRUCON Code(s)

124/224, 125/225

## Waste Stream Description

Inorganic homogeneous solid waste generated during plutonium recovery, fabrication, R&D, facility and equipment operations, and maintenance processes.



Waste Stream ID: LA-OS-00-01.001

## Appendix A

## TRU Waste Inventory Profile Report

Site	Los Alamos National Laboratory	Final Waste Form	Uncategorized Metal	Waste Matrix Code	S5111	Handling	CH
Source Cat.	Discarding Excess/Expired Materials	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Metal debris from Off-Site Source Recovery (OSR) project			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	1.0	0.0	1.0
55-gal POC - 12" w/ Liner	9.2	0.0	9.2
55-gal POC - 6" w/ Liner	103.0	0.0	103.0
<b>Current Form Total</b>	<b>113.2</b>	<b>0.0</b>	<b>113.2</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	1.0	0.0	1.0
55-gal POC - 12" w/ Liner	9.2	0.0	9.2
55-gal POC - 6" w/ Liner	103.0	0.0	103.0
<b>Final Form Total</b>	<b>113.2</b>	<b>0.0</b>	<b>113.2</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	15.54
Aluminum-based Metals/Alloys	0.00
Other Metals	2.74
Other Inorganic Materials	0.00
Cellulosics	0.00
Rubber	0.00
Plastics	0.00
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	335.67
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	205.48
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.13E+02
Cs-137	3.34E-02
Np-237	2.21E-04
Pu-238	1.33E+01
Pu-239	2.47E-05
Pu-240	5.85E-06
Pu-241	5.01E-05
Pu-242	3.32E-10
Th-229	5.33E-13
Th-230	6.30E-09
Th-232	1.54E-22
U-233	2.84E-09
U-234	2.32E-04
U-235	1.46E-13
U-236	1.04E-12
U-238	3.00E-19

No Hazardous Waste Numbers Provided

TRUCON Code(s)  
120/220

## Waste Stream Description

Off-Site Source Recovery (OSR) sealed sources are radionuclide (actinide) solids (e.g., Am, Pu, AmBe, or PuBe) that are encapsulated in metal jackets. The actinides are either metal or metal oxides.

Comprehensive Inventory Database ver. 1.00

Data ver. D.9.02

NOTE: Actual numerical values have been rounded for presentation purposes.

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Waste Stream ID: LA-OS-00-03

## Appendix A

## TRU Waste Inventory Profile Report

Site	Los Alamos National Laboratory	Final Waste Form	Uncategorized Metal	Waste Matrix Code	S5111	Handling	CH
Source Cat.	Discarding Excess/Expired Materials	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Metal debris from Off-Site Source Recovery (OSR) project (non-mixed)			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	14.6	0.0	14.6
<b>Current Form Total</b>	<b>14.6</b>	<b>0.0</b>	<b>14.6</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	14.6	0.0	14.6
<b>Final Form Total</b>	<b>14.6</b>	<b>0.0</b>	<b>14.6</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	971.88
Aluminum-based Metals/Alloys	0.00
Other Metals	0.97
Other Inorganic Materials	0.00
Cellulosics	0.00
Rubber	0.00
Plastics	0.97
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.76E+00
Np-237	1.72E-06
Th-229	1.05E-15
U-233	1.12E-11

No Hazardous Waste Numbers Provided

TRUCON Code(s) 120/220
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## Waste Stream Description

Off-Site Source Recovery (OSR) sealed sources are radionuclide (actinide) solids (e.g., Am, Pu, AmBe, or PuBe) that are encapsulated in metal jackets. The actinides are either metal or metal oxides.

Waste Stream ID: LA-TA-00-01

## Appendix A

## TRU Waste Inventory Profile Report

Site	Los Alamos National Laboratory	Final Waste Form	Heterogeneous	Waste Matrix Code	S5400	Handling	CH
Source Cat.	Other/Multiple Sources	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Containers waiting assignment to waste streams			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	8.7	0.0	8.7
85-gal Drum w/ 1 - 55-gal Drum w/ Liner	1.0	0.0	1.0
Box - Cardboard	0.2	0.0	0.2
Box - Crate	105.8	0.0	105.8
Other	8.5	0.0	8.5
<b>Current Form Total</b>	<b>124.2</b>	<b>0.0</b>	<b>124.2</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	9.6	0.0	9.6
SWB Dir Ld w/ Liner	115.3	0.0	115.3
<b>Final Form Total</b>	<b>124.9</b>	<b>0.0</b>	<b>124.9</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	112.29
Aluminum-based Metals/Alloys	0.45
Other Metals	13.46
Other Inorganic Materials	72.82
Cellulosics	9.29
Rubber	13.94
Plastics	42.99
Cements	0.00
Inorganic Matrix	1.79
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	151.76
Packaging Material, Plastic	3.94
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	4.45E-02
Am-243	4.27E-10
Cm-244	5.93E-07
Cs-137	3.51E-09
Np-237	1.74E-05
Pu-238	2.31E-02
Pu-239	5.41E-01
Pu-240	9.47E-02
Pu-241	3.38E-01
Pu-242	5.47E-06
Sr-90	3.43E-09
Th-229	3.14E-12
Th-230	3.10E-10
Th-232	6.25E-17
U-233	2.24E-09
U-234	2.22E-06
U-235	1.60E-08
U-236	8.43E-08
U-238	2.48E-14

## Haz. Waste No(s).

D008, F001

No TRUCON Codes Provided

## Waste Stream Description

Miscellaneous Containers waiting assignment to waste streams

Comprehensive Inventory Database ver. 1.00

Data ver. D.9.02

NOTE: Actual numerical values have been rounded for presentation purposes.

Waste Stream ID: LA-TA-00-03

## Appendix A

## TRU Waste Inventory Profile Report

Site	Los Alamos National Laboratory	Final Waste Form	Heterogeneous	Waste Matrix Code	S5400	Handling	RH
Source Cat.	Other/Multiple Sources	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Containers waiting assignment to waste streams			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
Canister - (LANL-RH)	2.1	0.0	2.1
<b>Current Form Total</b>	<b>2.1</b>	<b>0.0</b>	<b>2.1</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid - Dir Ld	2.7	0.0	2.7
<b>Final Form Total</b>	<b>2.7</b>	<b>0.0</b>	<b>2.7</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.24
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	0.22
Cellulosics	0.00
Rubber	0.00
Plastics	12.97
Cements	0.00
Inorganic Matrix	2433.57
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	560.60
Packaging Material, Plastic	0.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Pu-239	4.64E+00
U-235	1.33E-07

## Haz. Waste No(s).

D008

No TRUCON Codes Provided

## Waste Stream Description

Miscellaneous Containers waiting assignment to waste streams

Waste Stream ID: LA-TA-03-01

## Appendix A

## TRU Waste Inventory Profile Report

Site	Los Alamos National Laboratory	Final Waste Form	Solidified Organics	Waste Matrix Code	S3200	Handling	CH
Source Cat.	Source Information Not Compiled	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Solidified Organics	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.2	0.0	0.2
<b>Current Form Total</b>	<b>0.2</b>	<b>0.0</b>	<b>0.2</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.2	0.0	0.2
<b>Final Form Total</b>	<b>0.2</b>	<b>0.0</b>	<b>0.2</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	33.80
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	12.42
Cellulosics	0.00
Rubber	0.00
Plastics	52.96
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	269.37
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.86E-01
Np-237	3.25E-05
Pu-238	2.45E-02
Pu-239	8.91E-01
Pu-240	2.11E-01
Pu-241	2.09E+00
Pu-242	1.20E-05
Th-229	4.15E-13
Th-230	2.08E-11
Th-232	9.91E-18
U-233	1.11E-09
U-234	5.73E-07
U-235	7.03E-09
U-236	5.01E-08
U-238	1.44E-14

## Haz. Waste No(s).

D006, D008, D009,  
D011, D019, D021,  
F001, F002, F005

## TRUCON Code(s)

112/212

## Waste Stream Description

Solidified Organics

Waste Stream ID: LA-TA-03-09

## Appendix A

## TRU Waste Inventory Profile Report

Site	Los Alamos National Laboratory	Final Waste Form	Heterogeneous	Waste Matrix Code	S5400	Handling	CH
Source Cat.	Source Information Not Compiled	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	NonCombustible	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
Other	11.3	0.0	11.3
<b>Current Form Total</b>	<b>11.3</b>	<b>0.0</b>	<b>11.3</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
SWB Dir Ld w/ Liner	11.3	0.0	11.3
<b>Final Form Total</b>	<b>11.3</b>	<b>0.0</b>	<b>11.3</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	9.63
Aluminum-based Metals/Alloys	0.00
Other Metals	3.15
Other Inorganic Materials	15.28
Cellulosics	12.31
Rubber	1.25
Plastics	36.14
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.24
Vitrified	0.00
Packaging Material, Steel	153.50
Packaging Material, Plastic	1.20
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	6.39E-04
Am-243	2.19E-07
Np-237	1.25E-09
Pu-238	5.36E-03
Pu-239	3.78E-11
Th-229	3.02E-18
Th-230	2.54E-12
U-233	1.61E-14
U-234	9.34E-08
U-235	1.12E-19
U-238	1.06E-06

## Haz. Waste No(s).

D008

## TRUCON Code(s)

117/217

## Waste Stream Description

NonCombustible

Waste Stream ID: LA-TA-03-10

## Appendix A

## TRU Waste Inventory Profile Report

Site	Los Alamos National Laboratory	Final Waste Form	Heterogeneous	Waste Matrix Code	S5400	Handling	CH
Source Cat.	Source Information Not Compiled	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Combined Combustible and NonCombustible			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	4.0	32.0	36.0
Other	64.0	0.0	64.0
<b>Current Form Total</b>	<b>68.0</b>	<b>32.0</b>	<b>100.0</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	4.0	32.0	36.0
SWB Dir Ld w/ Liner	64.3	0.0	64.3
<b>Final Form Total</b>	<b>68.2</b>	<b>32.0</b>	<b>100.2</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	1.24
Aluminum-based Metals/Alloys	0.00
Other Metals	0.41
Other Inorganic Materials	1.97
Cellulosics	1.59
Rubber	0.16
Plastics	4.67
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.03
Vitrified	0.00
Packaging Material, Steel	145.35
Packaging Material, Plastic	14.05
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	8.84E-02
Am-243	4.71E-05
Np-237	9.52E-06
Pu-238	4.26E-01
Pu-239	3.38E-01
Pu-240	8.30E-02
Pu-241	1.27E+00
Pu-242	2.24E-04
Pu-244	3.06E-10
Th-229	1.94E-15
Th-230	5.46E-12
Th-232	6.08E-20
U-233	4.14E-11
U-234	1.21E-06
U-235	1.34E-06
U-236	2.46E-09
U-238	5.28E-06

No Hazardous Waste Numbers Provided

TRUCON Code(s)

125/225

## Waste Stream Description

Combined Combustible and NonCombustible

Comprehensive Inventory Database ver. 1.00

Data ver. D.9.02

NOTE: Actual numerical values have been rounded for presentation purposes.

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Waste Stream ID: LA-TA-03-12

## Appendix A

## TRU Waste Inventory Profile Report

Site	Los Alamos National Laboratory	Final Waste Form	Heterogeneous	Waste Matrix Code	S5400	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Combustible debris waste from chemistry operations in wings 3, 5, and 7 of the CMR facility			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.2	0.0	0.2
<b>Current Form Total</b>	<b>0.2</b>	<b>0.0</b>	<b>0.2</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.2	0.0	0.2
<b>Final Form Total</b>	<b>0.2</b>	<b>0.0</b>	<b>0.2</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	15.62
Aluminum-based Metals/Alloys	0.00
Other Metals	5.11
Other Inorganic Materials	24.78
Cellulosics	19.96
Rubber	2.02
Plastics	58.60
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.39
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	5.93E-02
Np-237	1.87E-07
Pu-238	2.34E-02
Pu-239	9.11E-01
Pu-240	2.13E-01
Pu-241	1.42E+00
Pu-242	1.23E-05
Th-229	2.03E-15
Th-230	9.46E-11
Th-232	4.51E-17
U-233	4.89E-12
U-234	1.21E-06
U-235	1.53E-08
U-236	1.07E-07
U-238	3.16E-14

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

## Waste Stream Description

Combustible waste generated from facility and equipment operations and maintenance. This waste includes paper, rags, plastic, rubber, wood-based HEPA filters, and plastic-based and cellulose-based waste generated at the facility. Plastic-based waste includes, but may not be limited to, tape, polyethylene and vinyl; gloves; plastic vials; polystyrene; Tygon tubing; polyvinyl chloride plastic; Teflon products; Plexiglas; and dry box gloves (unleaded neoprene base). Cellulose-based waste includes, but may not be limited to, rags, wood, paper, cardboard, laboratory coats and coveralls, booties and cotton gloves, and similar materials. The waste stream may also contain a smaller fraction of non-combustible solids (e.g., scrap metal, crucibles, metal lids, zippers, discarded tools) and a small fraction of homogenous solids, salts, leached solids, ash, hydroxide cakes, crucibles, impure oxides.



Waste Stream ID: LA-TA-03-14

## Appendix A

## TRU Waste Inventory Profile Report

Site	Los Alamos National Laboratory	Final Waste Form	Heterogeneous	Waste Matrix Code	S5400	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Metals and Miscellaneous Equipment Debris			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
Box - Crate	19.8	0.0	19.8
<b>Current Form Total</b>	<b>19.8</b>	<b>0.0</b>	<b>19.8</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
SWB Dir Ld w/ Liner	20.8	0.0	20.8
<b>Final Form Total</b>	<b>20.8</b>	<b>0.0</b>	<b>20.8</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	31.00
Aluminum-based Metals/Alloys	0.00
Other Metals	10.14
Other Inorganic Materials	49.17
Cellulosics	39.61
Rubber	4.02
Plastics	116.28
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.78
Vitrified	0.00
Packaging Material, Steel	153.50
Packaging Material, Plastic	1.20
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Pu-238	1.33E-01
Pu-239	4.50E-02
Th-230	2.51E-09
U-234	1.53E-05
U-235	5.29E-06

## Haz. Waste No(s).

D008

No TRUCON Codes Provided

## Waste Stream Description

Metals and Miscellaneous Equipment Debris

Waste Stream ID: LA-TA-03-27

## Appendix A

## TRU Waste Inventory Profile Report

Site	Los Alamos National Laboratory	Final Waste Form	Heterogeneous	Waste Matrix Code	S5400	Handling	RH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Combined combustible and noncombustible debris waste (RH-TRU) of the CMR facility			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
2-gal Drum (RH)	0.5	0.0	0.5
Box - Steel	11.5	0.0	11.5
Canister - (LANL-RH)	76.4	0.0	76.4
RH Can w/ Fxd Lid - Dir Ld	0.9	0.0	0.9
<b>Current Form Total</b>	<b>89.3</b>	<b>0.0</b>	<b>89.3</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Fxd Lid - Dir Ld	0.9	0.0	0.9
RH Can w/ Remov Lid - Dir Ld	78.3	0.0	78.3
<b>Final Form Total</b>	<b>79.2</b>	<b>0.0</b>	<b>79.2</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	228.65
Aluminum-based Metals/Alloys	0.00
Other Metals	74.80
Other Inorganic Materials	362.69
Cellulosics	292.15
Rubber	29.62
Plastics	857.75
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	5.74
Vitrified	0.00
Packaging Material, Steel	559.17
Packaging Material, Plastic	0.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	5.21

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.84E-02
Cs-137	2.17E-02
Np-237	1.65E-07
Pu-238	1.59E-02
Pu-239	1.21E+00
Pu-240	3.19E-02
Pu-241	2.88E-01
Pu-242	1.92E-05
Sr-90	1.95E-02
Th-229	5.58E-15
Th-230	5.93E-09
Th-232	1.66E-16
U-233	7.71E-12
U-234	2.34E-05
U-235	1.09E-04
U-236	1.30E-07
U-238	5.16E-07

## Haz. Waste No(s).

D008

## TRUCON Code(s)

117/217

## Waste Stream Description

Combined combustible and noncombustible debris waste (RH-TRU) from wing 9 of the CMR facility (mixed). Combined Combustible and non-combustible remote handled waste (RH-TRU). This waste stream contains both combustible and non-combustible waste that is classified as "remotely handled". Combustible waste is generated from facility and equipment operations and maintenance. Combustible waste includes paper, rags, plastic, rubber, and plastic-based and cellulose-based waste generated at the facility. Plastic based waste includes, but may not be limited to, tape, polyethylene, and vinyl; gloves; plastic vials; polystyrene; Tygon tubing; polyvinyl chloride plastic; Teflon products; plexiglass; and dry box gloves (unleaded Neoprene base). Cellulose-based waste includes, but may not be limited to rags, wood, paper, cardboard, laboratory coats and coveralls, booties and cotton gloves, and similar materials. Noncombustible scrap waste is also generated from facility and equipment operations and maintenance. Noncombustible waste includes items such as small tools, cans, small equipment items, and broken glass. This waste consists of glass waste including, but not limited to, discarded labware, windows, and bottles; metal waste including motors, pumps, tools, and process equipment; leaded rubber, and metal waste including lead-lined glovebox gloves discarded along with metal waste, such as motors and tools.

Waste Stream ID: LA-TA-03-28

## Appendix A

## TRU Waste Inventory Profile Report

Site	Los Alamos National Laboratory	Final Waste Form	Solidified Inorganics	Waste Matrix Code	S3120	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Cement paste from CMR building (mixed)	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	1.0	0.0	1.0
<b>Current Form Total</b>	<b>1.0</b>	<b>0.0</b>	<b>1.0</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	1.0	0.0	1.0
<b>Final Form Total</b>	<b>1.0</b>	<b>0.0</b>	<b>1.0</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.09
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	0.00
Cellulosics	0.00
Rubber	0.00
Plastics	0.31
Cements	1015.09
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Pu-238	2.55E+00
Th-230	5.11E-08
U-234	3.01E-04

## Haz. Waste No(s).

D007, F001, F002

No TRUCON Codes Provided

## Waste Stream Description

Cement Past Solidified aqueous waste and cemented sludge generated from facility and equipment operations and maintenance. The sludge is a residue from numerous treatment and filtration operations involving aqueous liquid radioactive waste. This treatment produces a thin sludge (approximately 25 percent solids) that is alkaline and is compatible with Portland cement. Final cemented waste monoliths are produced by mixing the waste in 55-gallon steel drums containing empirically determined quantities of sludge, Portland cement, vermiculite, and sodium silicate.

Waste Stream ID: LA-TA-03-30

## Appendix A

## TRU Waste Inventory Profile Report

Site	Los Alamos National Laboratory	Final Waste Form	Solidified Organics	Waste Matrix Code	S3200	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Absorbed Organics on vermiculite (mixed)			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
30-gal Drum	0.1	0.0	0.1
SWB w/ 4 - 55-gal Drums w/ Liners	5.7	0.0	5.7
<b>Current Form Total</b>	<b>5.8</b>	<b>0.0</b>	<b>5.8</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.2	0.0	0.2
SWB w/ 4 - 55-gal Drums w/ Liners	5.7	0.0	5.7
<b>Final Form Total</b>	<b>5.9</b>	<b>0.0</b>	<b>5.9</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	12.46
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	4.58
Cellulosics	0.00
Rubber	0.00
Plastics	19.53
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	99.35
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	208.26
Packaging Material, Plastic	17.03
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	6.20E-03
Np-237	1.15E-07
Pu-238	1.06E-02
Pu-239	9.05E-03
Pu-240	2.11E-03
Pu-241	1.34E-02
Pu-242	1.22E-07
Th-229	3.82E-15
Th-230	2.85E-11
Th-232	3.04E-19
U-233	6.10E-12
U-234	4.45E-07
U-235	2.82E-08
U-236	8.78E-10
U-238	2.57E-16

## Haz. Waste No(s).

D008, D009

## TRUCON Code(s)

125/225

## Waste Stream Description

Absorbed Organics on Vermiculite Organic liquids (solvents and oils) generated from facility and equipment operations and maintenance and absorbed on vermiculite.

Waste Stream ID: LA-TA-03-31

## Appendix A

## TRU Waste Inventory Profile Report

Site	Los Alamos National Laboratory	Final Waste Form	Solidified Inorganics	Waste Matrix Code	S3100	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Cemented inorganics, leached process solids (mixed)			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.2	0.0	0.2
<b>Current Form Total</b>	<b>0.2</b>	<b>0.0</b>	<b>0.2</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.2	0.0	0.2
<b>Final Form Total</b>	<b>0.2</b>	<b>0.0</b>	<b>0.2</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.10
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	0.00
Cellulosics	0.00
Rubber	0.00
Plastics	0.33
Cements	1085.33
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	4.52E-01
Np-237	2.11E-06
Pu-238	1.39E-01
Pu-239	5.71E+00
Pu-240	1.33E+00
Pu-241	6.37E+00
Pu-242	7.72E-05
Th-229	4.75E-14
Th-230	1.16E-09
Th-232	5.64E-16
U-233	8.01E-11
U-234	1.04E-05
U-235	1.35E-07
U-236	9.50E-07
U-238	2.79E-13

## Haz. Waste No(s).

D008

No TRUCON Codes Provided

## Waste Stream Description

Cemented Inorganics (Leached Process Solids) Solidified inorganic process solids generated from facility and equipment operations and maintenance. This waste consists of process leached solids, ash, filter cakes, salts, metal oxides, fines, and evaporator bottoms stabilized in Portland or gypsum cement.

Waste Stream ID: **LA-TA-03-33**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Los Alamos National Laboratory	Final Waste Form	Heterogeneous	Waste Matrix Code	S5400	Handling	CH
Source Cat.	Source Information Not Compiled	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Combustibles and noncombustibles	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
30-gal Drum	0.1	0.0	0.1
<b>Current Form Total</b>	<b>0.1</b>	<b>0.0</b>	<b>0.1</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.2	0.0	0.2
<b>Final Form Total</b>	<b>0.2</b>	<b>0.0</b>	<b>0.2</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	16.16
Aluminum-based Metals/Alloys	0.00
Other Metals	5.29
Other Inorganic Materials	25.63
Cellulosics	20.65
Rubber	2.09
Plastics	60.62
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.41
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Np-237	8.88E-04
Th-229	2.34E-10
U-233	1.39E-07

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

## Waste Stream Description

Special items (precious metals) requiring tracking by CST-7

Waste Stream ID: LA-TA-03-34

## Appendix A

## TRU Waste Inventory Profile Report

Site	Los Alamos National Laboratory	Final Waste Form	Heterogeneous	Waste Matrix Code	S5400	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Inorganic Solid (Miscellaneous Glovebox Debris)	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
Box - FRP	14.8	0.0	14.8
Other	15.6	0.0	15.6
SWB w/ 4 - 55-gal Drums w/ Liners	1.9	0.0	1.9
<b>Current Form Total</b>	<b>32.4</b>	<b>0.0</b>	<b>32.4</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
SWB Dir Ld w/ Liner	32.1	0.0	32.1
SWB w/ 4 - 55-gal Drums w/ Liners	1.9	0.0	1.9
<b>Final Form Total</b>	<b>34.0</b>	<b>0.0</b>	<b>34.0</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	8.35
Aluminum-based Metals/Alloys	0.00
Other Metals	2.73
Other Inorganic Materials	13.25
Cellulosics	10.67
Rubber	1.08
Plastics	31.34
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.21
Vitrified	0.00
Packaging Material, Steel	156.70
Packaging Material, Plastic	2.04
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	4.51E-04
Cs-137	3.88E-09
Np-237	1.73E-09
Pu-238	8.68E-02
Pu-239	1.13E-03
Pu-240	1.26E-04
Pu-241	8.94E-04
Pu-242	7.29E-09
Th-229	1.67E-17
Th-230	1.70E-10
Th-232	1.33E-20
U-233	4.46E-14
U-234	3.10E-06
U-235	7.82E-08
U-236	4.49E-11
U-238	1.81E-07

No Hazardous Waste Numbers Provided

TRUCON Code(s)

125/225

## Waste Stream Description

Inorganic Solid (Miscellaneous Glovebox Debris)

Comprehensive Inventory Database ver. 1.00

Data ver. D.9.02

NOTE: Actual numerical values have been rounded for presentation purposes.

Waste Stream ID: LA-TA-03-40

## Appendix A

## TRU Waste Inventory Profile Report

Site	Los Alamos National Laboratory	Final Waste Form	Heterogeneous	Waste Matrix Code	S5400	Handling	CH
Source Cat.	Remediation/D&D Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Metals debris generated from D&D activities in CMR Building			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
Box - Crate	27.9	0.0	27.9
<b>Current Form Total</b>	<b>27.9</b>	<b>0.0</b>	<b>27.9</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
SWB Dir Ld w/ Liner	28.4	0.0	28.4
<b>Final Form Total</b>	<b>28.4</b>	<b>0.0</b>	<b>28.4</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	35.33
Aluminum-based Metals/Alloys	0.00
Other Metals	11.56
Other Inorganic Materials	56.04
Cellulosics	45.14
Rubber	4.58
Plastics	132.53
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.89
Vitrified	0.00
Packaging Material, Steel	153.50
Packaging Material, Plastic	1.20
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Pu-238	1.95E-02
Pu-239	2.67E-01
Th-230	2.27E-10
U-234	1.74E-06
U-235	1.09E-06

## Haz. Waste No(s).

D008

No TRUCON Codes Provided

## Waste Stream Description

Metals debris generated from decontamination and decommissioning activities in Wings 2, 3, 4, and 7 of CMR Building (mix). This waste consists mostly of metals or metal equipment, either whole or sectioned, and small volumes of combustibles generated during decommissioning, sectioning, and packaging. The waste forms primarily include gloveboxes, tools, cans, motors, pumps, decommissioned process equipment, and ductwork



Waste Stream ID: LA-TA-03-42

## Appendix A

## TRU Waste Inventory Profile Report

Site	Los Alamos National Laboratory	Final Waste Form	Heterogeneous	Waste Matrix Code	S5400	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	HEPA filter debris waste from wings 2, 3, 4, 5, and 7 of CMR Building			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
Box - Crate	6.8	0.0	6.8
Box - FRP	6.4	0.0	6.4
SWB w/ 4 - 55-gal Drums w/ Liners	11.3	0.0	11.3
<b>Current Form Total</b>	<b>24.5</b>	<b>0.0</b>	<b>24.5</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
SWB Dir Ld w/ Liner	15.1	0.0	15.1
SWB w/ 4 - 55-gal Drums w/ Liners	11.3	0.0	11.3
<b>Final Form Total</b>	<b>26.5</b>	<b>0.0</b>	<b>26.5</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	16.07
Aluminum-based Metals/Alloys	0.00
Other Metals	5.26
Other Inorganic Materials	25.49
Cellulosics	20.53
Rubber	2.08
Plastics	60.28
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.40
Vitrified	0.00
Packaging Material, Steel	178.19
Packaging Material, Plastic	7.67
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	6.46E-04
Am-243	3.37E-07
Cs-137	1.01E-06
Np-237	5.00E-08
Pu-238	1.74E-02
Pu-239	1.05E-02
Pu-240	2.76E-04
Pu-241	2.02E-03
Pu-242	1.59E-08
Th-229	2.19E-15
Th-230	5.41E-11
Th-232	4.56E-20
U-233	3.15E-12
U-234	7.86E-07
U-235	1.79E-08
U-236	1.23E-10
U-238	3.61E-17

No Hazardous Waste Numbers Provided

TRUCON Code(s)

119/219

## Waste Stream Description

HEPA filter waste generated from facility and equipment operations and maintenance. A small fraction of combustible waste, such as plastics (mainly packaging), may also be present in this waste stream.

Waste Stream ID: LA-TA-21-05

## Appendix A

## TRU Waste Inventory Profile Report

Site	Los Alamos National Laboratory	Final Waste Form	Heterogeneous	Waste Matrix Code	S5400	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Graphite	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
30-gal Drum	0.1	0.0	0.1
55-gal Drum Dir Ld w/ Liner	0.2	0.0	0.2
<b>Current Form Total</b>	<b>0.3</b>	<b>0.0</b>	<b>0.3</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.4	0.0	0.4
<b>Final Form Total</b>	<b>0.4</b>	<b>0.0</b>	<b>0.4</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	49.00
Aluminum-based Metals/Alloys	18.68
Other Metals	37.56
Other Inorganic Materials	10.68
Cellulosics	31.84
Rubber	24.59
Plastics	18.30
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.48E-01
Np-237	1.81E-06
Pu-238	5.97E-02
Pu-239	2.53E+00
Pu-240	6.02E-01
Pu-241	1.75E+00
Pu-242	4.05E-05
Th-229	9.17E-14
Th-230	1.12E-09
Th-232	5.42E-16
U-233	1.04E-10
U-234	6.83E-06
U-235	4.77E-05
U-236	6.26E-07
U-238	2.14E-13

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

## Waste Stream Description

Graphite

Waste Stream ID: LA-TA-21-06

## Appendix A

## TRU Waste Inventory Profile Report

Site	Los Alamos National Laboratory	Final Waste Form	Heterogeneous	Waste Matrix Code	S5400	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Combustible debris waste (mixed)	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
30-gal Drum	16.5	0.0	16.5
55-gal Drum Dir Ld w/ Liner	184.7	0.0	184.7
85-gal Drum w/ 1 - 55-gal Drum w/ Liner	1.9	0.0	1.9
Cask - Misc w/ 1 - 30-gal Drum	81.4	0.0	81.4
<b>Current Form Total</b>	<b>284.6</b>	<b>0.0</b>	<b>284.6</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	202.6	0.0	202.6
SWB Dir Ld w/ Liner	83.2	0.0	83.2
<b>Final Form Total</b>	<b>285.8</b>	<b>0.0</b>	<b>285.8</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	30.17
Aluminum-based Metals/Alloys	11.50
Other Metals	23.13
Other Inorganic Materials	6.57
Cellulosics	19.60
Rubber	15.14
Plastics	11.27
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	137.41
Packaging Material, Plastic	26.58
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.25E-01
Np-237	8.50E-07
Pu-238	4.89E+01
Pu-239	7.11E-01
Pu-240	2.15E-01
Pu-241	9.93E-01
Pu-242	3.90E-05
Th-229	3.79E-14
Th-230	8.10E-07
Th-232	1.72E-16
U-233	4.56E-11
U-234	5.23E-03
U-235	3.28E-06
U-236	2.11E-07
U-238	1.94E-13

## Haz. Waste No(s).

F001, F002

No TRUCON Codes Provided

## Waste Stream Description

Combustible waste generated from facility and equipment operations and maintenance. This waste includes paper, rags, plastic, rubber, wood-based HEPA filters, and plastic-based and cellulose-based waste generated at the facility. Plastic-based waste includes, but may not be limited to, tape, polyethylene and vinyl; gloves; plastic vials; polystyrene; Tygon tubing; polyvinyl chloride plastic; Teflon products; Plexiglas; and dry box gloves (unleaded neoprene base). Cellulose-based waste includes, but may not be limited to, rags, wood, paper, cardboard, laboratory coats and coveralls, booties and cotton gloves, and similar materials. The waste stream may also contain a smaller fraction of non-combustible solids (e.g., scrap metal, crucibles, metal lids, zippers, discarded tools) and a small fraction of homogenous solids, salts, leached solids, ash, hydroxide cakes, crucibles, impure oxides.

Waste Stream ID: LA-TA-21-07

## Appendix A

## TRU Waste Inventory Profile Report

Site	Los Alamos National Laboratory	Final Waste Form	Heterogeneous	Waste Matrix Code	S5400	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Metal	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
15-gal Drum	0.7	0.0	0.7
30-gal Drum	6.4	0.0	6.4
55-gal Drum Dir Ld w/ Liner	67.2	0.0	67.2
85-gal Drum w/ 1 - 55-gal Drum w/ Liner	0.3	0.0	0.3
Box - Crate	482.3	0.0	482.3
Cask - Misc w/ 1 - 30-gal Drum	47.0	0.0	47.0
Other	7.9	0.0	7.9
<b>Current Form Total</b>	<b>612.0</b>	<b>0.0</b>	<b>612.0</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	74.7	0.0	74.7
SWB Dir Ld w/ Liner	540.5	0.0	540.5
<b>Final Form Total</b>	<b>615.2</b>	<b>0.0</b>	<b>615.2</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	40.11
Aluminum-based Metals/Alloys	15.30
Other Metals	30.75
Other Inorganic Materials	8.74
Cellulosics	26.06
Rubber	20.13
Plastics	14.98
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	150.74
Packaging Material, Plastic	5.55
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.77E-02
Am-243	5.88E-15
Np-237	1.88E-07
Pu-238	1.72E+01
Pu-239	3.01E-01
Pu-240	6.37E-02
Pu-241	2.20E-01
Pu-242	5.53E-06
Th-229	8.40E-15
Th-230	2.85E-07
Th-232	5.09E-17
U-233	1.01E-11
U-234	1.84E-03
U-235	5.68E-08
U-236	6.25E-08
U-238	3.26E-06

## Haz. Waste No(s).

D008

No TRUCON Codes Provided

## Waste Stream Description

Metal

Comprehensive Inventory Database ver. 1.00

Data ver. D.9.02

NOTE: Actual numerical values have been rounded for presentation purposes.

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Waste Stream ID: LA-TA-21-08

## Appendix A

## TRU Waste Inventory Profile Report

Site	Los Alamos National Laboratory	Final Waste Form	Heterogeneous	Waste Matrix Code	S5400	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Glass	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
30-gal Drum	0.3	0.0	0.3
55-gal Drum Dir Ld w/ Liner	2.1	0.0	2.1
85-gal Drum w/ 1 - 55-gal Drum w/ Liner	0.3	0.0	0.3
Cask - Misc w/ 1 - 30-gal Drum	1.1	0.0	1.1
<b>Current Form Total</b>	<b>3.9</b>	<b>0.0</b>	<b>3.9</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	2.7	0.0	2.7
SWB Dir Ld w/ Liner	1.9	0.0	1.9
<b>Final Form Total</b>	<b>4.6</b>	<b>0.0</b>	<b>4.6</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	30.60
Aluminum-based Metals/Alloys	11.67
Other Metals	23.45
Other Inorganic Materials	6.67
Cellulosics	19.88
Rubber	15.36
Plastics	11.43
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	140.14
Packaging Material, Plastic	22.27
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	8.64E-02
Np-237	5.66E-07
Pu-238	1.99E+01
Pu-239	5.81E-01
Pu-240	1.64E-01
Pu-241	7.29E-01
Pu-242	2.44E-05
Th-229	2.36E-14
Th-230	3.08E-07
Th-232	1.23E-16
U-233	2.94E-11
U-234	2.05E-03
U-235	1.83E-08
U-236	1.55E-07
U-238	1.18E-13

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

## Waste Stream Description

Glass

Waste Stream ID: LA-TA-21-09

## Appendix A

## TRU Waste Inventory Profile Report

Site	Los Alamos National Laboratory	Final Waste Form	Heterogeneous	Waste Matrix Code	S5400	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Hepa Filters	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
30-gal Drum	0.1	0.0	0.1
55-gal Drum Dir Ld w/ Liner	0.6	0.0	0.6
Cask - Misc w/ 1 - 30-gal Drum	7.4	0.0	7.4
<b>Current Form Total</b>	<b>8.1</b>	<b>0.0</b>	<b>8.1</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.8	0.0	0.8
SWB Dir Ld w/ Liner	7.6	0.0	7.6
<b>Final Form Total</b>	<b>8.4</b>	<b>0.0</b>	<b>8.4</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	50.36
Aluminum-based Metals/Alloys	19.20
Other Metals	38.60
Other Inorganic Materials	10.97
Cellulosics	32.72
Rubber	25.28
Plastics	18.81
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	151.25
Packaging Material, Plastic	4.75
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	4.02E-03
Np-237	3.04E-08
Pu-238	1.73E+02
Pu-239	4.28E-02
Pu-240	9.99E-03
Pu-241	2.68E-02
Pu-242	5.78E-07
Th-229	1.63E-15
Th-230	3.47E-06
Th-232	9.50E-18
U-233	1.79E-12
U-234	2.04E-02
U-235	1.52E-09
U-236	1.07E-08
U-238	3.14E-15

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

## Waste Stream Description

Hepa Filters

Comprehensive Inventory Database ver. 1.00

Data ver. D.9.02

NOTE: Actual numerical values have been rounded for presentation purposes.

Waste Stream ID: LA-TA-21-10

## Appendix A

## TRU Waste Inventory Profile Report

Site	Los Alamos National Laboratory	Final Waste Form	Heterogeneous	Waste Matrix Code	S5400	Handling	CH
Source Cat.	Source Information Not Compiled	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Isotopic Source	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
Box - Crate	0.1	0.0	0.1
<b>Current Form Total</b>	<b>0.1</b>	<b>0.0</b>	<b>0.1</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.2	0.0	0.2
<b>Final Form Total</b>	<b>0.2</b>	<b>0.0</b>	<b>0.2</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	14.01
Aluminum-based Metals/Alloys	5.34
Other Metals	10.74
Other Inorganic Materials	3.05
Cellulosics	9.11
Rubber	7.03
Plastics	5.23
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Pu-239	2.44E+00
U-235	8.19E-08

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

## Waste Stream Description

Isotopic Source

Waste Stream ID: LA-TA-21-12

## Appendix A

## TRU Waste Inventory Profile Report

Site	Los Alamos National Laboratory	Final Waste Form	Heterogeneous	Waste Matrix Code	S5400	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Non-combustible and combustible debris waste			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
15-gal Drum	0.6	0.0	0.6
30-gal Drum	3.7	0.0	3.7
55-gal Drum Dir Ld w/ Liner	113.4	0.0	113.4
Box - Crate	6.3	0.0	6.3
Cask - Misc w/ 1 - 30-gal Drum	121.8	0.0	121.8
<b>Current Form Total</b>	<b>245.8</b>	<b>0.0</b>	<b>245.8</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	117.7	0.0	117.7
SWB Dir Ld w/ Liner	130.4	0.0	130.4
<b>Final Form Total</b>	<b>248.1</b>	<b>0.0</b>	<b>248.1</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	35.84
Aluminum-based Metals/Alloys	13.67
Other Metals	27.47
Other Inorganic Materials	7.81
Cellulosics	23.29
Rubber	17.99
Plastics	13.39
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	142.73
Packaging Material, Plastic	18.19
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.71E-01
Np-237	1.94E-06
Pu-238	1.77E+02
Pu-239	1.11E+00
Pu-240	3.67E-01
Pu-241	1.97E+00
Pu-242	9.21E-05
Th-229	5.20E-04
Th-230	2.94E-06
Th-232	2.93E-16
U-233	1.68E-01
U-234	1.90E-02
U-235	8.32E-06
U-236	3.59E-07
U-238	4.58E-13

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

## Waste Stream Description

COMBINED COMBUSTIBLE/NON-COMBUSTIBLE LAB TRASH

Comprehensive Inventory Database ver. 1.00

Data ver. D.9.02

NOTE: Actual numerical values have been rounded for presentation purposes.

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Waste Stream ID: LA-TA-21-13

## Appendix A

## TRU Waste Inventory Profile Report

Site	Los Alamos National Laboratory	Final Waste Form	Solidified Inorganics	Waste Matrix Code	S3100	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Cemented wastewater treatment sludge (mixed)	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	15.0	0.0	15.0
85-gal Drum w/ 1 - 55-gal Drum w/ Liner	0.3	0.0	0.3
Other	2920.9	0.0	2920.9
<b>Current Form Total</b>	<b>2936.2</b>	<b>0.0</b>	<b>2936.2</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	15.2	0.0	15.2
SWB Dir Ld w/ Liner	2921.9	0.0	2921.9
<b>Final Form Total</b>	<b>2937.1</b>	<b>0.0</b>	<b>2937.1</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	65.28
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	0.00
Cellulosics	0.00
Rubber	0.00
Plastics	11.61
Cements	1826.24
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	153.38
Packaging Material, Plastic	1.39
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	4.43E+00
Np-237	4.26E-05
Pu-238	6.48E-02
Pu-239	4.20E-02
Th-229	2.46E-12
Th-230	1.37E-09
Th-232	3.74E-08
U-233	2.71E-09
U-234	8.12E-06
U-235	8.17E-06
U-238	3.80E-06

## Haz. Waste No(s).

D007, F001, F002

No TRUCON Codes Provided

## Waste Stream Description

Cemented Wastewater Treatment Sludge Solidified aqueous waste generated from facility and equipment operations and maintenance. Solidified aqueous waste is a dewatered sludge generated by the vacuum filtration of solids from treated aqueous waste slurry. The filter media (diatomaceous earth) with the entrapped filtrate is then placed in drums with dry concreted absorbent.

Waste Stream ID: LA-TA-21-14

## Appendix A

## TRU Waste Inventory Profile Report

Site	Los Alamos National Laboratory	Final Waste Form	Soils	Waste Matrix Code	S4100	Handling	CH
Source Cat.	Remediation/D&D Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Plutonium contaminated soil (non-mixed)			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	7.9	0.0	7.9
Box - Crate	20.6	0.0	20.6
<b>Current Form Total</b>	<b>28.5</b>	<b>0.0</b>	<b>28.5</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	7.9	0.0	7.9
SWB Dir Ld w/ Liner	20.8	0.0	20.8
<b>Final Form Total</b>	<b>28.7</b>	<b>0.0</b>	<b>28.7</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.05
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	0.00
Cellulosics	0.00
Rubber	0.00
Plastics	0.05
Cements	0.00
Inorganic Matrix	0.16
Organic Matrix	0.00
Soils/gravel	518.76
Vitrified	0.00
Packaging Material, Steel	147.25
Packaging Material, Plastic	11.06
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Pu-239	3.47E-02
U-235	1.06E-09

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

## Waste Stream Description

Plutonium Contaminated Soils contaminated with transuranic material.

Waste Stream ID: LA-TA-21-15

## Appendix A

## TRU Waste Inventory Profile Report

Site	Los Alamos National Laboratory	Final Waste Form	Solidified Organics	Waste Matrix Code	S3200	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Solidified organics	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
30-gal Drum	0.2	0.0	0.2
55-gal Drum Dir Ld w/ Liner	3.3	0.0	3.3
<b>Current Form Total</b>	<b>3.6</b>	<b>0.0</b>	<b>3.6</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	3.7	0.0	3.7
<b>Final Form Total</b>	<b>3.7</b>	<b>0.0</b>	<b>3.7</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	49.21
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	18.08
Cellulosics	0.00
Rubber	0.00
Plastics	77.11
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	392.20
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	8.60E-02
Np-237	6.06E-07
Pu-238	2.10E-02
Pu-239	1.26E+00
Pu-240	2.18E-01
Pu-241	6.44E-01
Pu-242	1.26E-05
Th-229	2.88E-14
Th-230	3.71E-10
Th-232	1.85E-16
U-233	3.37E-11
U-234	2.33E-06
U-235	4.24E-08
U-236	2.20E-07
U-238	6.48E-14

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

## Waste Stream Description

Solidified organics

Waste Stream ID: LA-TA-21-16

## Appendix A

## TRU Waste Inventory Profile Report

Site	Los Alamos National Laboratory	Final Waste Form	Solidified Inorganics	Waste Matrix Code	S3100	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	SOLIDIFIED INORGANIC PROCESS SOLID			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
30-gal Drum	26.2	0.0	26.2
55-gal Drum Dir Ld w/ Liner	31.4	0.0	31.4
85-gal Drum w/ 1 - 55-gal Drum w/ Liner	0.3	0.0	0.3
<b>Current Form Total</b>	<b>57.9</b>	<b>0.0</b>	<b>57.9</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	58.0	0.0	58.0
<b>Final Form Total</b>	<b>58.0</b>	<b>0.0</b>	<b>58.0</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	7.26
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	0.00
Cellulosics	0.00
Rubber	0.00
Plastics	1.29
Cements	203.15
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.13E+00
Np-237	8.29E-06
Pu-238	3.50E-01
Pu-239	1.09E+01
Pu-240	2.60E+00
Pu-241	7.93E+00
Pu-242	2.14E-04
Th-229	4.23E-13
Th-230	6.60E-09
Th-232	2.34E-15
U-233	4.77E-10
U-234	4.01E-05
U-235	5.72E-05
U-236	2.71E-06
U-238	1.13E-12

## Haz. Waste No(s).

D008

No TRUCON Codes Provided

## Waste Stream Description

LEACHED PROCESS RESIDUES

Waste Stream ID: LA-TA-21-17

## Appendix A

## TRU Waste Inventory Profile Report

Site	Los Alamos National Laboratory	Final Waste Form	Heterogeneous	Waste Matrix Code	S5400	Handling	CH
Source Cat.	Source Information Not Compiled	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Process solids	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
30-gal Drum	0.1	0.0	0.1
55-gal Drum Dir Ld w/ Liner	0.4	0.0	0.4
<b>Current Form Total</b>	<b>0.5</b>	<b>0.0</b>	<b>0.5</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.6	0.0	0.6
<b>Final Form Total</b>	<b>0.6</b>	<b>0.0</b>	<b>0.6</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	29.57
Aluminum-based Metals/Alloys	11.28
Other Metals	22.67
Other Inorganic Materials	6.44
Cellulosics	19.22
Rubber	14.84
Plastics	11.05
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	3.94E-03
Np-237	2.98E-08
Pu-238	9.30E-04
Pu-239	4.20E-02
Pu-240	9.80E-03
Pu-241	2.63E-02
Pu-242	5.67E-07
Th-229	1.60E-15
Th-230	1.86E-11
Th-232	9.32E-18
U-233	1.76E-12
U-234	1.10E-07
U-235	1.49E-09
U-236	1.05E-08
U-238	3.08E-15

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

## Waste Stream Description

Special items (precious metals) requiring tracking by CST-7

Waste Stream ID: **LA-TA-21-41**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Los Alamos National Laboratory	Final Waste Form	Soils	Waste Matrix Code	S4100	Handling	CH
Source Cat.	Remediation/D&D Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Plutonium-contaminated soil (non-mixed)			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
Box - Crate	19.4	0.0	19.4
SWB w/ 4 - 55-gal Drums w/ Liners	1.9	0.0	1.9
<b>Current Form Total</b>	<b>21.3</b>	<b>0.0</b>	<b>21.3</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
SWB Dir Ld w/ Liner	20.8	0.0	20.8
SWB w/ 4 - 55-gal Drums w/ Liners	1.9	0.0	1.9
<b>Final Form Total</b>	<b>22.7</b>	<b>0.0</b>	<b>22.7</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.06
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	0.00
Cellulosics	0.00
Rubber	0.00
Plastics	0.06
Cements	0.00
Inorganic Matrix	0.20
Organic Matrix	0.00
Soils/gravel	652.11
Vitrified	0.00
Packaging Material, Steel	158.30
Packaging Material, Plastic	2.46
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Pu-239	8.06E-01
U-235	2.30E-08

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

## Waste Stream Description

Soils contaminated with transuranic material resulting from TA21 decontamination and decommissioning.

Waste Stream ID: LA-TA-50-12

## Appendix A

## TRU Waste Inventory Profile Report

Site	Los Alamos National Laboratory	Final Waste Form	Heterogeneous	Waste Matrix Code	S5400	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Metal	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.2	0.0	0.2
85-gal Drum w/ 1 - 55-gal Drum w/ Liner	0.3	0.0	0.3
Box - Crate	8.1	0.0	8.1
SWB w/ 4 - 55-gal Drums w/ Liners	1.9	0.0	1.9
<b>Current Form Total</b>	<b>10.5</b>	<b>0.0</b>	<b>10.5</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.4	0.0	0.4
SWB Dir Ld w/ Liner	9.5	0.0	9.5
SWB w/ 4 - 55-gal Drums w/ Liners	1.9	0.0	1.9
<b>Final Form Total</b>	<b>11.8</b>	<b>0.0</b>	<b>11.8</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	106.46
Aluminum-based Metals/Alloys	38.75
Other Metals	39.33
Other Inorganic Materials	4.32
Cellulosics	7.96
Rubber	7.34
Plastics	8.05
Cements	0.00
Inorganic Matrix	1.78
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	161.96
Packaging Material, Plastic	4.89
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.00E-03
Np-237	9.30E-09
Pu-238	3.52E-04
Pu-239	1.21E-03
Th-229	5.01E-16
Th-230	8.51E-10
U-233	5.70E-13
U-234	6.76E-06
U-235	3.34E-11
U-238	8.51E-02

## Haz. Waste No(s).

D008

No TRUCON Codes Provided

## Waste Stream Description

Metal

Waste Stream ID: LA-TA-50-15

## Appendix A

## TRU Waste Inventory Profile Report

Site	Los Alamos National Laboratory	Final Waste Form	Heterogeneous	Waste Matrix Code	S5400	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Non-combustible and combustible debris waste from operations at WCRRF & SRF			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
Other	2.3	0.0	2.3
SWB w/ 4 - 55-gal Drums w/ Liners	1.9	0.0	1.9
<b>Current Form Total</b>	<b>4.2</b>	<b>0.0</b>	<b>4.2</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
SWB Dir Ld w/ Liner	3.8	0.0	3.8
SWB w/ 4 - 55-gal Drums w/ Liners	1.9	0.0	1.9
<b>Final Form Total</b>	<b>5.7</b>	<b>0.0</b>	<b>5.7</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	187.93
Aluminum-based Metals/Alloys	68.41
Other Metals	69.43
Other Inorganic Materials	7.63
Cellulosics	14.05
Rubber	12.96
Plastics	14.20
Cements	0.00
Inorganic Matrix	3.14
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	172.70
Packaging Material, Plastic	6.23
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	5.26E-03
Np-237	1.99E-08
Pu-238	1.84E-03
Pu-239	7.32E-02
Pu-240	1.71E-02
Pu-241	9.91E-02
Pu-242	9.90E-07
Th-229	3.05E-16
Th-230	1.04E-11
Th-232	5.02E-18
U-233	6.20E-13
U-234	1.13E-07
U-235	1.44E-09
U-236	1.02E-08
U-238	2.99E-15

## Haz. Waste No(s).

D008

No TRUCON Codes Provided

## Waste Stream Description

Non-combustible and combustible debris waste from operations in the WCRRF and SRF (building 50-69) (mixed). Combined Non-combustible and combustible waste generated from facility and equipment operations and maintenance. This waste includes, but may not be limited to, small tools, small equipment, cans, motors, pumps, process equipment, gloveboxes, ventilation ductwork, HEPA filters, pipes, glass, slag and crucibles, salt, discarded lab ware, windows, and bottles. The waste stream may also contain a smaller fraction of combustible solids (e.g., paper, rags, plastic, rubber, leaded gloves) and a small fraction of homogeneous solids (e.g., leached solids, ash, hydroxide cakes, impure oxides).



Waste Stream ID: LA-TA-50-16

## Appendix A

## TRU Waste Inventory Profile Report

Site	Los Alamos National Laboratory	Final Waste Form	Heterogeneous	Waste Matrix Code	S5400	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Combined Combustible and NonCombustible			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
SWB w/ 4 - 55-gal Drums w/ Liners	1.9	0.0	1.9
<b>Current Form Total</b>	<b>1.9</b>	<b>0.0</b>	<b>1.9</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
SWB w/ 4 - 55-gal Drums w/ Liners	1.9	0.0	1.9
<b>Final Form Total</b>	<b>1.9</b>	<b>0.0</b>	<b>1.9</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	127.16
Aluminum-based Metals/Alloys	46.29
Other Metals	46.98
Other Inorganic Materials	5.16
Cellulosics	9.51
Rubber	8.77
Plastics	9.61
Cements	0.00
Inorganic Matrix	2.12
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	211.10
Packaging Material, Plastic	16.30
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	4.99E-06
Np-237	2.12E-11
Pu-238	1.53E-06
Pu-239	3.25E-02
Th-229	2.44E-19
Th-230	3.53E-15
U-233	5.99E-16
U-234	5.94E-11
U-235	4.16E-10

No Hazardous Waste Numbers Provided

TRUCON Code(s)

125/225

## Waste Stream Description

Combined Combustible and NonCombustible

Comprehensive Inventory Database ver. 1.00

Data ver. D.9.02

NOTE: Actual numerical values have been rounded for presentation purposes.

A - LA - 50

Waste Stream ID: LA-TA-50-18

## Appendix A

## TRU Waste Inventory Profile Report

Site	Los Alamos National Laboratory	Final Waste Form	Solidified Inorganics	Waste Matrix Code	S3100	Handling	CH
Source Cat.	Materials Production/Recovery Effluents	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Cemented caustic liquid waste (mixed)	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.4	0.0	0.4
Other	7.8	0.0	7.8
<b>Current Form Total</b>	<b>8.2</b>	<b>0.0</b>	<b>8.2</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.4	0.0	0.4
SWB Dir Ld w/ Liner	9.5	0.0	9.5
<b>Final Form Total</b>	<b>9.9</b>	<b>0.0</b>	<b>9.9</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.00
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	0.00
Cellulosics	0.00
Rubber	0.00
Plastics	0.70
Cements	702.04
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	152.54
Packaging Material, Plastic	2.71
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	3.06E-02
Np-237	3.68E-07
Pu-238	4.81E-02
Pu-239	7.18E-03
Th-229	3.28E-14
Th-230	9.65E-10
U-233	2.91E-11
U-234	5.69E-06
U-235	2.55E-10

## Haz. Waste No(s).

D007, F001, F002

No TRUCON Codes Provided

## Waste Stream Description

Cemented Caustic Liquid Waste Solidified (through cementation) caustic aqueous waste from TA-55. The sludge is a residue from numerous treatment and filtration operations involving aqueous liquid radioactive waste.

Waste Stream ID: LA-TA-50-19

## Appendix A

## TRU Waste Inventory Profile Report

Site	Los Alamos National Laboratory	Final Waste Form	Solidified Inorganics	Waste Matrix Code	S3120	Handling	CH
Source Cat.	Materials Production/Recovery Effluents	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Homogeneous Inorganic Solids	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
110-gal Drum w/ 1 - 55-gal Drum w/ Liner	1.2	0.0	1.2
55-gal Drum Dir Ld w/ Liner	64.9	0.0	64.9
85-gal Drum w/ 1 - 55-gal Drum w/ Liner	1.3	0.0	1.3
Other	67.6	0.0	67.6
<b>Current Form Total</b>	<b>135.1</b>	<b>0.0</b>	<b>135.1</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	66.4	0.0	66.4
SWB Dir Ld w/ Liner	68.0	0.0	68.0
<b>Final Form Total</b>	<b>134.4</b>	<b>0.0</b>	<b>134.4</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.09
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	0.08
Cellulosics	0.00
Rubber	0.00
Plastics	4.80
Cements	0.00
Inorganic Matrix	900.90
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	142.29
Packaging Material, Plastic	18.88
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.81E-01
Am-243	2.34E-08
Cs-137	4.72E-07
Np-237	1.88E-06
Pu-238	3.63E-01
Pu-239	5.39E-02
Pu-240	1.34E-04
Pu-241	4.10E-04
Sr-90	4.62E-07
Th-229	1.27E-13
Th-230	5.34E-09
Th-232	9.44E-20
U-233	1.29E-10
U-234	3.65E-05
U-235	4.28E-07
U-236	1.23E-10
U-238	7.41E-08

## Haz. Waste No(s).

F001

No TRUCON  
Codes Provided

## Waste Stream Description

Consists of homogeneous dewatered sludge generated in the TA-50-01 RLWTF at LANL. This sludge was further treated by rotary drum vacuum filtration in a filter precoated with perlite or diatomaceous earth.

Waste Stream ID: LA-TA-50-20

## Appendix A

## TRU Waste Inventory Profile Report

Site	Los Alamos National Laboratory	Final Waste Form	Soils	Waste Matrix Code	S4000	Handling	CH
Source Cat.	Remediation/D&D Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Plutonium contaminated soil (non-mixed)			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.2	0.0	0.2
85-gal Drum w/ 1 - 55-gal Drum w/ Liner	0.3	0.0	0.3
<b>Current Form Total</b>	<b>0.5</b>	<b>0.0</b>	<b>0.5</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.4	0.0	0.4
<b>Final Form Total</b>	<b>0.4</b>	<b>0.0</b>	<b>0.4</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	91.59
Aluminum-based Metals/Alloys	0.00
Other Metals	29.96
Other Inorganic Materials	145.28
Cellulosics	117.03
Rubber	11.87
Plastics	343.59
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	2.30
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	6.88E-03
Np-237	6.62E-08
Pu-239	7.21E-03
Th-229	3.82E-15
U-233	4.20E-12
U-235	2.06E-10

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

## Waste Stream Description

Plutonium Contaminated Soils contaminated with transuranic material as a result of facility and equipment operations and maintenance.

Waste Stream ID: LA-TA-55-19

## Appendix A

## TRU Waste Inventory Profile Report

Site	Los Alamos National Laboratory	Final Waste Form	Heterogeneous	Waste Matrix Code	S5400	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Combustible debris waste (mixed)	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	42.8	111.3	154.1
Cask - Misc w/ 1 - 30-gal Drum	28.4	0.0	28.4
<b>Current Form Total</b>	<b>71.2</b>	<b>111.3</b>	<b>182.5</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	42.8	111.3	154.1
SWB Dir Ld w/ Liner	30.2	0.0	30.2
<b>Final Form Total</b>	<b>73.1</b>	<b>111.3</b>	<b>184.4</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	52.32
Aluminum-based Metals/Alloys	0.21
Other Metals	6.27
Other Inorganic Materials	33.93
Cellulosics	4.33
Rubber	6.50
Plastics	20.03
Cements	0.00
Inorganic Matrix	0.83
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	134.52
Packaging Material, Plastic	31.13
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.54E+00
Np-237	2.84E-05
Pu-238	5.93E+01
Pu-239	3.43E+00
Pu-240	1.70E+00
Pu-241	1.55E+01
Pu-242	1.60E-03
Pu-244	1.97E-10
Th-229	3.63E-12
Th-230	1.42E-06
Th-232	1.68E-14
U-233	2.87E-09
U-234	8.07E-03
U-235	8.12E-05
U-236	1.25E-05
U-238	1.91E-05

## Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D021, D022, D035, D038, D039, D040, F001, F002, F003, F005

## TRUCON Code(s)

116/216, 125/225

## Waste Stream Description

Combustible waste generated from facility and equipment operations and maintenance. This waste includes paper, rags, plastic, rubber, wood-based HEPA filters, and plastic-based and cellulose-based waste generated at the facility. Plastic-based waste includes, but may not be limited to, tape, polyethylene and vinyl; gloves; plastic vials; polystyrene; Tygon tubing; polyvinyl chloride plastic; Teflon products; Plexiglas; and dry box gloves (unleaded neoprene base). Cellulose-based waste includes, but may not be limited to, rags, wood, paper, cardboard, laboratory coats and coveralls, booties and cotton gloves, and similar materials. The waste stream may also contain a smaller fraction of non-combustible solids (e.g., scrap metal, crucibles, metal lids, zippers, discarded tools) and a small fraction of homogenous solids, salts, leached solids, ash, hydroxide cakes, crucibles, impure oxides.

Waste Stream ID: LA-TA-55-20

## Appendix A

## TRU Waste Inventory Profile Report

Site	Los Alamos National Laboratory	Final Waste Form	Heterogeneous	Waste Matrix Code	S5400	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Combustible debris waste (non-mixed)	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.2	0.0	0.2
<b>Current Form Total</b>	<b>0.2</b>	<b>0.0</b>	<b>0.2</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.2	0.0	0.2
<b>Final Form Total</b>	<b>0.2</b>	<b>0.0</b>	<b>0.2</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	2.20
Aluminum-based Metals/Alloys	0.01
Other Metals	0.26
Other Inorganic Materials	1.43
Cellulosics	0.18
Rubber	0.27
Plastics	0.84
Cements	0.00
Inorganic Matrix	0.04
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.24E-02
Np-237	3.52E-08
Pu-238	7.98E+01
Pu-239	5.14E-02
Pu-240	2.62E-02
Pu-241	1.25E+00
Pu-242	2.11E-05
Th-229	1.02E-16
Th-230	8.65E-08
Th-232	1.56E-18
U-233	4.72E-13
U-234	2.11E-03
U-235	4.56E-10
U-236	7.00E-09
U-238	2.86E-14

No Hazardous Waste Numbers Provided

TRUCON Code(s)

116/216

## Waste Stream Description

Combustible waste generated from facility and equipment operations and maintenance. This waste includes paper, rags, plastic, rubber, wood-based HEPA filters, and plastic-based and cellulose-based waste generated at the facility. Plastic-based waste includes, but may not be limited to, tape, polyethylene and vinyl; gloves; plastic vials; polystyrene; Tygon tubing; polyvinyl chloride plastic; Teflon products; Plexiglas; and dry box gloves (unleaded neoprene base). Cellulose-based waste includes, but may not be limited to, rags, wood, paper, cardboard, laboratory coats and coveralls, booties and cotton gloves, and similar materials. The waste stream may also contain a smaller fraction of non-combustible solids (e.g., scrap metal, crucibles, metal lids, zippers, discarded tools) and a small fraction of homogenous solids, salts, leached solids, ash, hydroxide cakes, crucibles, impure oxides.

Waste Stream ID: LA-TA-55-21

## Appendix A

## TRU Waste Inventory Profile Report

Site	Los Alamos National Laboratory	Final Waste Form	Heterogeneous	Waste Matrix Code	S5400	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Metal debris waste (mixed)	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	2.3	0.0	2.3
Cask - Misc w/ 1 - 30-gal Drum	13.2	0.0	13.2
<b>Current Form Total</b>	<b>15.5</b>	<b>0.0</b>	<b>15.5</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	2.3	0.0	2.3
SWB Dir Ld w/ Liner	13.2	0.0	13.2
<b>Final Form Total</b>	<b>15.5</b>	<b>0.0</b>	<b>15.5</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	64.88
Aluminum-based Metals/Alloys	0.26
Other Metals	7.78
Other Inorganic Materials	42.08
Cellulosics	5.37
Rubber	8.05
Plastics	24.84
Cements	0.00
Inorganic Matrix	1.03
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	150.15
Packaging Material, Plastic	6.48
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	3.82E-02
Np-237	2.23E-07
Pu-238	7.85E+01
Pu-239	9.69E-02
Pu-240	3.47E-02
Pu-241	3.87E-01
Pu-242	1.71E-05
Th-229	7.51E-15
Th-230	9.82E-07
Th-232	2.14E-17
U-233	1.04E-11
U-234	7.26E-03
U-235	2.77E-09
U-236	2.99E-08
U-238	1.31E-07

## Haz. Waste No(s).

D008

No TRUCON Codes Provided

## Waste Stream Description

Metal Noncombustible waste including small tools, small equipment, cans, motors, pumps, process equipment, gloveboxes, ventilation ductwork, and pipes. May also contain some glass, ceramic, porcelain, etc. as well as some small fraction of combustible waste (e.g., paper, rubber, plastics).

Waste Stream ID: LA-TA-55-23

## Appendix A

## TRU Waste Inventory Profile Report

Site	Los Alamos National Laboratory	Final Waste Form	Heterogeneous	Waste Matrix Code	S5400	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Glass debris waste from PF-4	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
Cask - Misc w/ 1 - 30-gal Drum	0.8	0.0	0.8
<b>Current Form Total</b>	<b>0.8</b>	<b>0.0</b>	<b>0.8</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
SWB Dir Ld w/ Liner	1.9	0.0	1.9
<b>Final Form Total</b>	<b>1.9</b>	<b>0.0</b>	<b>1.9</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	8.57
Aluminum-based Metals/Alloys	0.03
Other Metals	1.03
Other Inorganic Materials	5.56
Cellulosics	0.71
Rubber	1.06
Plastics	3.28
Cements	0.00
Inorganic Matrix	0.14
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	153.50
Packaging Material, Plastic	1.20
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.91E-02
Np-237	1.42E-07
Pu-238	8.68E+01
Pu-239	5.30E-02
Pu-240	2.07E-02
Pu-241	3.83E-01
Pu-242	1.49E-05
Th-229	3.50E-15
Th-230	7.90E-07
Th-232	9.50E-18
U-233	5.64E-12
U-234	6.81E-03
U-235	1.31E-09
U-236	1.54E-08
U-238	5.62E-14

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

## Waste Stream Description

Glass waste generated from facility and equipment operations and maintenance. This waste includes, but is not limited to, broken glass discarded labware, windows, and bottles. A small fraction of combustible waste, such as plastics (mainly packaging), may also be present in this waste stream.



Waste Stream ID: LA-TA-55-30

## Appendix A

## TRU Waste Inventory Profile Report

Site	Los Alamos National Laboratory	Final Waste Form	Heterogeneous	Waste Matrix Code	S5400	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Non-combustible and combustible debris waste (mixed)			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	70.3	111.3	181.6
55-gal POC - 12" w/ Liner	0.2	0.0	0.2
85-gal Drum w/ 1 - 55-gal Drum w/ Liner	0.3	0.0	0.3
Box - Crate	7.2	0.0	7.2
Cask - Misc w/ 1 - 30-gal Drum	27.2	0.0	27.2
Other	23.2	0.0	23.2
SWB w/ 4 - 55-gal Drums w/ Liners	1.9	0.0	1.9
<b>Current Form Total</b>	<b>130.3</b>	<b>111.3</b>	<b>241.6</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	70.5	111.3	181.8
55-gal POC - 12" w/ Liner	0.2	0.0	0.2
SWB Dir Ld w/ Liner	60.5	0.0	60.5
SWB w/ 4 - 55-gal Drums w/ Liners	1.9	0.0	1.9
<b>Final Form Total</b>	<b>133.1</b>	<b>111.3</b>	<b>244.4</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	59.91
Aluminum-based Metals/Alloys	0.24
Other Metals	7.18
Other Inorganic Materials	38.85
Cellulosics	4.96
Rubber	7.44
Plastics	22.94
Cements	0.00
Inorganic Matrix	0.95
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	137.38
Packaging Material, Plastic	27.98
Packaging Material, Cellulosics	0.12
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.47E+00
Cs-137	2.15E-10
Np-237	1.03E-05
Pu-238	3.72E+01
Pu-239	1.81E+00
Pu-240	9.73E-01
Pu-241	1.04E+01
Pu-242	1.23E-03
Pu-244	3.33E-10
Th-229	9.14E-09
Th-230	4.96E-07
Th-232	8.68E-16
U-233	5.53E-10
U-234	3.55E-03
U-235	4.54E-06
U-236	1.02E-06
U-238	7.78E-05

## Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D021, D022, D035, D038, D039, D040, F001, F002, F003, F005

## TRUCON Code(s)

117/217, 122/222, 125/225

## Waste Stream Description

Non-combustible and combustible waste generated from facility and equipment operations and maintenance. This waste includes, but may not be limited to, small tools, small equipment, cans, motors, pumps, process equipment, gloveboxes, ventilation ductwork, metal-based HEPA filters, pipes, glass, slag and crucibles, salt, discarded lab ware, windows, and bottles. The waste stream may also contain a smaller fraction of combustible solids (e.g., paper, rags, plastic, rubber, leaded gloves) and a small fraction of homogeneous solids (e.g., leached solids, ash, hydroxide cakes, impure oxides).

Comprehensive Inventory Database ver. 1.00

Data ver. D.9.02

NOTE: Actual numerical values have been rounded for presentation purposes.

Waste Stream ID: LA-TA-55-32

## Appendix A

## TRU Waste Inventory Profile Report

Site	Los Alamos National Laboratory	Final Waste Form	Solidified Inorganics	Waste Matrix Code	S3100	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Homogeneous inorganic solids (mixed)			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
Cask - Misc w/ 1 - 30-gal Drum	0.4	0.0	0.4
SWB w/ 4 - 55-gal Drums w/ Liners	3.8	0.0	3.8
<b>Current Form Total</b>	<b>4.2</b>	<b>0.0</b>	<b>4.2</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
SWB Dir Ld w/ Liner	1.9	0.0	1.9
SWB w/ 4 - 55-gal Drums w/ Liners	3.8	0.0	3.8
<b>Final Form Total</b>	<b>5.7</b>	<b>0.0</b>	<b>5.7</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	22.14
Aluminum-based Metals/Alloys	0.00
Other Metals	1.37
Other Inorganic Materials	0.00
Cellulosics	0.00
Rubber	0.00
Plastics	11.60
Cements	0.00
Inorganic Matrix	70.32
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	191.90
Packaging Material, Plastic	11.27
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.67E-02
Np-237	1.48E-07
Pu-238	8.48E+01
Pu-239	5.58E-02
Pu-240	1.95E-02
Pu-241	6.16E-01
Pu-242	1.33E-05
Th-229	3.03E-15
Th-230	1.96E-07
Th-232	2.41E-18
U-233	5.72E-12
U-234	3.30E-03
U-235	7.15E-10
U-236	7.52E-09
U-238	2.61E-14

## Haz. Waste No(s).

D008

## TRUCON Code(s)

125/225

## Waste Stream Description

Homogeneous Inorganic Solids Solidified inorganic process solids generated from facility and equipment operations and maintenance. This waste consists of large chunks of filter cakes and salts.

Waste Stream ID: **LA-TA-55-33**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Los Alamos National Laboratory	Final Waste Form	Solidified Organics	Waste Matrix Code	S3200	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Absorbed organics from all wings of PF4			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.2	0.0	0.2
<b>Current Form Total</b>	<b>0.2</b>	<b>0.0</b>	<b>0.2</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.2	0.0	0.2
<b>Final Form Total</b>	<b>0.2</b>	<b>0.0</b>	<b>0.2</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	25.26
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	9.28
Cellulosics	0.00
Rubber	0.00
Plastics	39.59
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	201.35
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.08E+00
Np-237	5.52E-06
Pu-238	3.25E-01
Pu-239	1.94E+00
Pu-240	1.42E+00
Pu-241	1.33E+01
Pu-242	5.32E-04
Th-229	1.48E-13
Th-230	3.21E-09
Th-232	7.07E-16
U-233	2.28E-10
U-234	2.66E-05
U-235	4.97E-08
U-236	1.10E-06
U-238	2.08E-12

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

## Waste Stream Description

Solidified Organics (absorbed organics on vermiculite) from all wings of PF4. Organic liquids (solvents and oils) generated from facility and equipment operations and maintenance and absorbed on vermiculite. Hazardous materials such as methylene chloride and carbon tetrachloride may be present but PCB's are NOT expected.

Waste Stream ID: LA-TA-55-38

## Appendix A

## TRU Waste Inventory Profile Report

Site	Los Alamos National Laboratory	Final Waste Form	Solidified Inorganics	Waste Matrix Code	S3100	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Cemented inorganics (mixed)	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.2	0.0	0.2
Cask - Misc w/ 1 - 30-gal Drum	5.2	0.0	5.2
<b>Current Form Total</b>	<b>5.4</b>	<b>0.0</b>	<b>5.4</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.2	0.0	0.2
SWB Dir Ld w/ Liner	5.7	0.0	5.7
<b>Final Form Total</b>	<b>5.9</b>	<b>0.0</b>	<b>5.9</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	2.09
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	0.00
Cellulosics	0.00
Rubber	0.00
Plastics	0.37
Cements	58.44
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	152.70
Packaging Material, Plastic	2.47
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	9.25E-02
Np-237	4.96E-07
Pu-238	2.62E+02
Pu-239	1.63E-01
Pu-240	6.36E-02
Pu-241	1.07E+00
Pu-242	4.57E-05
Th-229	1.44E-14
Th-230	2.82E-06
Th-232	3.40E-17
U-233	2.14E-11
U-234	2.24E-02
U-235	4.33E-09
U-236	5.10E-08
U-238	1.86E-13

## Haz. Waste No(s).

D008

No TRUCON Codes Provided

## Waste Stream Description

Cemented Inorganics and Spent Samples Solidified inorganic process solids generated from facility and equipment operations and maintenance. This waste includes process leached solids, ash, filter cakes, salts, metal oxides, fines, evaporator bottoms, and sample residues (received from the CMR building) stabilized in Portland or gypsum cement.

Waste Stream ID: LA-TA-55-43

## Appendix A

## TRU Waste Inventory Profile Report

Site	Los Alamos National Laboratory	Final Waste Form	Heterogeneous	Waste Matrix Code	S5400	Handling	CH
Source Cat.	Materials Production/Recovery Effluents	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Combustible/noncombustible debris containing Pu-238 (non-mixed)			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.2	0.0	0.2
<b>Current Form Total</b>	<b>0.2</b>	<b>0.0</b>	<b>0.2</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.2	0.0	0.2
<b>Final Form Total</b>	<b>0.2</b>	<b>0.0</b>	<b>0.2</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	68.41
Aluminum-based Metals/Alloys	0.28
Other Metals	8.20
Other Inorganic Materials	44.36
Cellulosics	5.66
Rubber	8.49
Plastics	26.19
Cements	0.00
Inorganic Matrix	1.09
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.40E-02
Np-237	3.31E-08
Pu-238	1.90E+01
Pu-239	1.18E-02
Pu-240	5.98E-03
Pu-241	3.24E-01
Pu-242	4.90E-06
Th-229	1.58E-16
Th-230	2.05E-08
Th-232	3.55E-19
U-233	5.88E-13
U-234	5.02E-04
U-235	1.05E-10
U-236	1.60E-09
U-238	6.65E-15

No Hazardous Waste Numbers Provided

TRUCON Code(s)

116/216

## Waste Stream Description

Combustible/noncombustible debris including paper, rags, plastic, rubber, and plastic-based and cellulose-based waste generated during 238Pu activities. Plastic-based waste includes, but may not be limited to: tape, polyethylene and vinyl; gloves; plastic vials, polystyrene; tygon tubing; polyvinyl chloride plastic; Teflon products; plexiglass; and dry box gloves (unleaded neoprene base). Cellulose based waste includes, but may not be limited to: rags, wood, paper, and cardboard; laboratory coats and overalls; booties and cotton gloves, and similar materials. The waste may also contain HEPA filters, noncombustible glass and metallic debris. Some of this waste was packaged in small metal cans before being placed in 55 Gallon drums.

Waste Stream ID: LA-TA-55-61

## Appendix A

## TRU Waste Inventory Profile Report

Site	Los Alamos National Laboratory	Final Waste Form	Heterogeneous	Waste Matrix Code	S5400	Handling	CH
Source Cat.	Remediation/D&D Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Metal debris waste from all wings of PF-4 (mixed)			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
Other	15.0	0.0	15.0
<b>Current Form Total</b>	<b>15.0</b>	<b>0.0</b>	<b>15.0</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
SWB Dir Ld w/ Liner	15.1	0.0	15.1
<b>Final Form Total</b>	<b>15.1</b>	<b>0.0</b>	<b>15.1</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	125.52
Aluminum-based Metals/Alloys	0.51
Other Metals	15.04
Other Inorganic Materials	81.40
Cellulosics	10.39
Rubber	15.58
Plastics	48.06
Cements	0.00
Inorganic Matrix	2.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	153.50
Packaging Material, Plastic	1.20
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	9.60E-03
Np-237	2.87E-08
Pu-239	4.89E-02
Pu-241	8.75E-02
Th-229	1.84E-16
U-233	5.99E-13
U-235	4.82E-10

## Haz. Waste No(s).

D008

No TRUCON Codes Provided

## Waste Stream Description

Metal waste generated from facility and equipment decontamination and decommissioning activities.. This waste includes small tools, cans, small equipment items, motors, pumps, and process equipment. This waste also includes gloveboxes and associated ducting, equipment, and construction debris associated with the removal of gloveboxes. A small fraction of combustible waste, such as plastics (mainly packaging), may also be present in this waste stream.

Waste Stream ID: **LB-T001**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Lawrence Berkeley Laboratory	Final Waste Form	Heterogeneous	Waste Matrix Code	S5400	Handling	CH
Source Cat.	R&D/R&D Laboratory Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	LBL-Non Mixed Waste			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
12.2-gal Drum	0.1	0.0	0.2
30-gal Drum	0.1	0.0	0.1
55-gal Drum Dir Ld w/o Liner	0.2	0.0	0.2
5-gal Drum	0.1	0.0	0.1
<b>Current Form Total</b>	<b>0.6</b>	<b>0.0</b>	<b>0.6</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.2	0.2	0.4
<b>Final Form Total</b>	<b>0.2</b>	<b>0.2</b>	<b>0.4</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	11.30
Aluminum-based Metals/Alloys	0.00
Other Metals	2.75
Other Inorganic Materials	1.71
Cellulosics	9.98
Rubber	0.00
Plastics	6.84
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	4.07E-02
Am-243	2.40E-03
Cm-244	2.80E-08
Np-237	1.70E-04
Pu-238	1.13E-04
Pu-239	2.70E-03
Pu-240	4.80E-04
Pu-241	1.43E-02
Pu-242	4.30E-05
Pu-244	2.95E-13
Th-229	2.25E-07
Th-230	9.61E-14
Th-232	5.00E-09
U-233	3.00E-04
U-234	2.64E-09
U-235	1.20E-07
U-236	1.14E-10
U-238	1.60E-07

No Hazardous Waste Numbers Provided

TRUCON Code(s)

125/225

## Waste Stream Description

Heterogeneous transuranic, non mixed waste

Comprehensive Inventory Database ver. 1.00

Data ver. D.9.02

NOTE: Actual numerical values have been rounded for presentation purposes.

A - LB - 1

Waste Stream ID: LB-T002

## Appendix A

## TRU Waste Inventory Profile Report

Site	Lawrence Berkeley Laboratory	Final Waste Form	Heterogeneous	Waste Matrix Code	S5400	Handling	CH
Source Cat.	R&D/R&D Laboratory Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	LBL - Mixed Waste			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
12.2-gal Drum	0.1	0.0	0.2
5-gal Drum	0.2	0.1	0.3
<b>Current Form Total</b>	<b>0.4</b>	<b>0.1</b>	<b>0.5</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.2	0.2	0.4
<b>Final Form Total</b>	<b>0.2</b>	<b>0.2</b>	<b>0.4</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.00
Aluminum-based Metals/Alloys	0.00
Other Metals	25.50
Other Inorganic Materials	48.50
Cellulosics	11.90
Rubber	0.00
Plastics	13.50
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.47E-01
Am-243	5.29E-04
Cs-137	6.08E-09
Np-237	7.30E-03
Pu-238	1.22E-02
Pu-239	1.10E-01
Pu-240	1.60E-04
Pu-241	2.74E-02
Pu-242	1.20E-04
Pu-244	5.90E-05
Th-229	4.28E-10
Th-230	4.95E-11
Th-232	1.00E-08
U-233	5.38E-07
U-234	6.33E-07
U-235	1.20E-06
U-236	8.06E-11
U-238	2.60E-05

## Haz. Waste No(s).

D005, D006, D007, D008, D009, D010, D011, D018, D022, D028, D035, D039, F003, F005

## TRUCON Code(s)

125/225

## Waste Stream Description

Heterogeneous transuranic mixed waste



Waste Stream ID: **LB-T003**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Lawrence Berkeley Laboratory	Final Waste Form	Heterogeneous	Waste Matrix Code	S5000	Handling	CH
Source Cat.	R&D/R&D Laboratory Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	TRU Mixed waste sources	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
5-gal Drum	0.0	0.0	0.0
<b>Current Form Total</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal S100 POC - 6" w/ Liner	0.2	0.2	0.4
<b>Final Form Total</b>	<b>0.2</b>	<b>0.2</b>	<b>0.4</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	2.77
Aluminum-based Metals/Alloys	0.00
Other Metals	7.26
Other Inorganic Materials	0.00
Cellulosics	0.79
Rubber	0.00
Plastics	0.07
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	320.70
Packaging Material, Plastic	713.00
Packaging Material, Cellulosics	69.70
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	3.61E+00
Cm-244	1.24E-03
Np-237	1.78E-05
Pu-240	5.69E-03
Th-229	2.72E-13
Th-232	9.39E-19
U-233	5.79E-10
U-236	2.53E-09

## Haz. Waste No(s).

D008

## TRUCON Code(s)

125/225

## Waste Stream Description

Mixed waste sources

Waste Stream ID: **LB-T004**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Lawrence Berkeley Laboratory	Final Waste Form	Heterogeneous	Waste Matrix Code	S5000	Handling	CH
Source Cat.	R&D/R&D Laboratory Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	TRU Non mixed sources	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
12.2-gal Drum	0.1	0.0	0.1
5-gal Drum	0.0	0.0	0.1
<b>Current Form Total</b>	<b>0.1</b>	<b>0.1</b>	<b>0.2</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal S100 POC - 6" w/ Liner	0.2	0.2	0.4
<b>Final Form Total</b>	<b>0.2</b>	<b>0.2</b>	<b>0.4</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.00
Aluminum-based Metals/Alloys	0.00
Other Metals	1.86
Other Inorganic Materials	0.00
Cellulosics	0.00
Rubber	0.01
Plastics	0.07
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	320.70
Packaging Material, Plastic	713.00
Packaging Material, Cellulosics	69.70
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.67E-01
Cm-244	1.58E-02
Np-237	6.55E-07
Pu-238	3.91E-05
Pu-239	1.80E-06
Pu-240	5.24E-05
Th-229	6.40E-15
Th-230	7.66E-14
Th-232	3.84E-21
U-233	1.70E-11
U-234	1.40E-09
U-235	2.13E-14
U-236	1.45E-11

No Hazardous Waste Numbers Provided

TRUCON Code(s)

125/225

## Waste Stream Description

Non mixed sources

Waste Stream ID: LL-M001

## Appendix A

## TRU Waste Inventory Profile Report

Site	Lawrence Livermore National Laboratory	Final Waste Form	Heterogeneous	Waste Matrix Code	S5400	Handling	CH
Source Cat.	R&D/R&D Laboratory Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	R&D Glovebox Waste (Form 1)	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	20.8	2.5	23.3
55-gal Drum Dir Ld w/o Liner	64.1	199.7	263.7
55-gal POC - 12" w/o Liner	2.9	12.1	15.0
<b>Current Form Total</b>	<b>87.8</b>	<b>214.2</b>	<b>302.0</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	10.4	0.0	10.4
55-gal Drum Dir Ld w/o Liner	74.5	202.2	276.6
55-gal POC - 12" w/o Liner	2.9	12.1	15.0
<b>Final Form Total</b>	<b>87.8</b>	<b>214.2</b>	<b>302.0</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	70.70
Aluminum-based Metals/Alloys	9.90
Other Metals	12.60
Other Inorganic Materials	12.00
Cellulosics	33.70
Rubber	19.90
Plastics	38.90
Cements	10.52
Inorganic Matrix	5.60
Organic Matrix	1.29
Soils/gravel	0.08
Vitrified	0.00
Packaging Material, Steel	150.47
Packaging Material, Plastic	1.27
Packaging Material, Cellulosics	6.82
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.52E+00
Am-243	4.41E-04
Cm-244	1.01E+00
Cs-137	1.03E-03
Np-237	2.98E-05
Pu-238	3.14E+00
Pu-239	3.97E+00
Pu-240	1.11E+00
Pu-241	1.12E+01
Pu-242	2.72E-04
Pu-244	3.50E-13
Sr-90	1.03E-03
Th-229	3.57E-05
Th-230	4.28E-07
Th-232	2.48E-08
U-233	5.70E-04
U-234	1.70E-04
U-235	6.10E-06
U-236	6.58E-08
U-238	1.83E-05

## Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D022, D028, D029, D035, D040, F001, F002, F005

## TRUCON Code(s)

116/216

## Waste Stream Description

Specific waste items in this waste stream may include paper cartons, cardboard, Kimwipes, cotton swabs, tissues, cheesecloth, grinding paper, plastic (e.g., bags, sheet, tape, containers, pipette tips, and glovebox windows), Neoprene and Hypalon gloves (leaded and non-leaded), aluminum foil, tin cans, hardware (e.g., nuts, bolts, washers, fittings, gauges, fixtures, thermocouples), metal tools (e.g., screwdrivers and pliers), metal parts, equipment (with or without circuit boards), copper (wire, tubing, flanges, rods, and molds), sealed sources, aerosol cans, glass (e.g., beakers, vials, and ion exchange columns with resin), graphite molds, crucibles (magnesium oxide, tantalum), epoxy resin chunks, lead metal (e.g., bricks, foil), Kaufman cans (lead seams), lead-lined and cadmium-lined steel cans, mercury batteries, fluorescent and incandescent light bulbs, and small quantities of pyrochemical salts and solidified aqueous or organic liquids (individual drums contain less than 50 percent, by volume, solidified liquids, and/or salts).

Comprehensive Inventory Database ver. 1.00

Data ver. D.9.02

NOTE: Actual numerical values have been rounded for presentation purposes.

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Waste Stream ID: LL-T004

## Appendix A

## TRU Waste Inventory Profile Report

Site	Lawrence Livermore National Laboratory	Final Waste Form	Salt Waste	Waste Matrix Code	S3141	Handling	CH
Source Cat.	R&D/R&D Laboratory Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Pyrochemical salt waste (Form 4)			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	1.2	0.0	1.2
<b>Current Form Total</b>	<b>1.2</b>	<b>0.0</b>	<b>1.2</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	1.2	0.0	1.2
<b>Final Form Total</b>	<b>1.2</b>	<b>0.0</b>	<b>1.2</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	20.00
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	290.00
Cellulosics	2.00
Rubber	0.00
Plastics	20.00
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	0.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.65E+01
Cm-244	1.45E-03
Np-237	7.31E-05
Pu-238	1.33E+00
Pu-239	3.42E+00
Pu-240	1.67E+00
Pu-241	2.05E+01
Pu-242	1.04E-03
Th-229	5.39E-14
Th-230	6.85E-11
Th-232	4.89E-18
U-233	5.91E-10
U-234	7.60E-06
U-235	6.75E-09
U-236	9.90E-08
U-238	3.14E-13

No Hazardous Waste Numbers Provided

TRUCON Code(s)

124/224

## Waste Stream Description

The waste consists primarily of used chloride and fluoride salts from pyrochemical processes such as electrorefining, molten salt extraction, and direct oxide reduction. There may also be up to 20% heterogeneous organic glovebox bagout waste packaged with the salt waste. This waste does not contain any RCRA listed hazardous materials.

Waste Stream ID: LL-W018-S5100

## Appendix A

## TRU Waste Inventory Profile Report

Site	Lawrence Livermore National Laboratory	Final Waste Form	Heterogeneous	Waste Matrix Code	S5100	Handling	CH
Source Cat.	R&D/R&D Laboratory Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Combined metal scrap & incidental combust.(Form 3)			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
Box - Misc	2.6	0.0	120.6
SLB2 (5' x 5' x 8) Dir Ld	0.0	101.9	101.9
SWB Dir Ld w/o Liner	20.8	117.2	138.0
<b>Current Form Total</b>	<b>141.4</b>	<b>219.1</b>	<b>360.5</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
SLB2 (5' x 5' x 8) Dir Ld	164.1	101.9	266.0
SWB Dir Ld w/o Liner	20.8	117.2	138.0
<b>Final Form Total</b>	<b>184.9</b>	<b>219.1</b>	<b>404.0</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	62.80
Aluminum-based Metals/Alloys	1.96
Other Metals	10.00
Other Inorganic Materials	0.66
Cellulosics	2.49
Rubber	3.27
Plastics	1.51
Cements	1.00
Inorganic Matrix	0.00
Organic Matrix	2.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	194.85
Packaging Material, Plastic	0.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	6.84E-02
Cm-244	4.59E-05
Np-237	4.68E-08
Pu-238	5.67E-03
Pu-239	4.08E-02
Pu-240	1.44E-02
Pu-241	3.86E-01
Pu-242	3.10E-06
Th-229	1.43E-17
Th-230	2.93E-13
Th-232	4.22E-20
U-233	2.16E-13
U-234	3.24E-08
U-235	8.05E-11
U-236	8.53E-10
U-238	9.36E-16

## Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D022, D028, D029, D035, D040, F001, F002, F005

## TRUCON Code(s)

125/225

## Waste Stream Description

This waste stream is composed primarily of objects which, because of physical size, cannot be packaged in a 55-gallon drum. Typical objects include decommissioned gloveboxes, hoods, and large pieces of equipment (lathes, mills, etc.). This waste stream may contain lead metal (e.g., bricks, foil), Kaufman cans (lead seams), lead-lined and cadmium-lined steel cans, mercury batteries, fluorescent and incandescent light bulbs. The void space in boxes may be filled with other TRU waste items or with foam in plastic bags.

Waste Stream ID: LL-W018-SS

## Appendix A

## TRU Waste Inventory Profile Report

Site	Lawrence Livermore National Laboratory	Final Waste Form	Heterogeneous	Waste Matrix Code	S5000	Handling	CH
Source Cat.	R&D/R&D Laboratory Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Sealed Sources	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	4.2	0.0	4.2
55-gal POC - 12" w/o Liner	0.0	4.2	4.2
<b>Current Form Total</b>	<b>4.2</b>	<b>4.2</b>	<b>8.3</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal POC - 12" w/o Liner	4.2	4.2	8.3
<b>Final Form Total</b>	<b>4.2</b>	<b>4.2</b>	<b>8.3</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	7.69
Aluminum-based Metals/Alloys	1.65
Other Metals	4.67
Other Inorganic Materials	4.09
Cellulosics	1.67
Rubber	0.00
Plastics	0.04
Cements	0.00
Inorganic Matrix	10.10
Organic Matrix	5.32
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	527.40
Packaging Material, Plastic	0.00
Packaging Material, Cellulosics	137.50
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.89E+01
Am-243	2.50E-06
Cm-244	2.02E-04
Cs-137	1.15E-02
Np-237	1.40E-05
Pu-238	3.10E+00
Pu-239	1.44E-01
Pu-240	4.61E-04
Pu-241	9.45E-02
Pu-244	8.03E-24
Sr-90	1.14E-02
Th-229	4.73E-15
Th-230	1.60E-10
Th-232	1.35E-21
U-233	6.83E-11
U-234	1.77E-05
U-235	1.03E-07
U-236	2.73E-11

No Hazardous Waste Numbers Provided

TRUCON Code(s)

117/217

## Waste Stream Description

Specific waste items in this waste stream include sealed sources composed primarily of metal or metal encapsulated in a plastic or resin disk. Other waste items consist of packaging including cans, ice cream cartons, and plastic bags, sheet, and tape, bentonite clay or other inorganic absorbents such as Floor Dry

Waste Stream ID: LL-W019

## Appendix A

## TRU Waste Inventory Profile Report

Site	Lawrence Livermore National Laboratory	Final Waste Form	Solidified Organics	Waste Matrix Code	S3900	Handling	CH
Source Cat.	R&D/R&D Laboratory Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Solidified Waste (Form 2)			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	15.4	0.0	15.4
55-gal Drum Dir Ld w/o Liner	5.6	15.6	21.2
<b>Current Form Total</b>	<b>21.0</b>	<b>15.6</b>	<b>36.6</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	21.0	15.6	36.6
<b>Final Form Total</b>	<b>21.0</b>	<b>15.6</b>	<b>36.6</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	26.90
Aluminum-based Metals/Alloys	46.80
Other Metals	2.31
Other Inorganic Materials	13.80
Cellulosics	4.87
Rubber	6.62
Plastics	39.60
Cements	0.00
Inorganic Matrix	123.00
Organic Matrix	47.60
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	0.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.09E+00
Am-243	1.57E-07
Cm-244	8.16E-04
Cs-137	1.94E-06
Np-237	8.71E-05
Pu-238	1.40E+00
Pu-239	5.28E+00
Pu-240	1.44E+00
Pu-241	1.70E+01
Pu-242	2.39E-04
Sr-90	1.94E-06
Th-229	1.01E-05
Th-230	4.68E-09
Th-232	4.22E-18
U-233	5.41E-02
U-234	2.64E-04
U-235	3.29E-05
U-236	8.53E-08
U-238	1.08E-04

## Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D022, D028, D029, D035, D040, F001, F002, F005

## TRUCON Code(s)

113/213

## Waste Stream Description

This waste stream consists of drums with 50 percent or greater by volume solidified aqueous or organic liquids. Additional waste in each container includes glovebox trash.

Waste Stream ID: MC-W001

## Appendix A

## TRU Waste Inventory Profile Report

Site	U.S. Army Materiel Command	Final Waste Form	Heterogeneous	Waste Matrix Code	S5110	Handling	CH
Source Cat.	Discarding Excess/Expired Materials	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	USAMC TRU Waste	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
30-gal Drum	0.1	0.0	0.1
<b>Current Form Total</b>	<b>0.1</b>	<b>0.0</b>	<b>0.1</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal S300 POC - 12" w/ Liner	0.2	0.0	0.2
<b>Final Form Total</b>	<b>0.2</b>	<b>0.0</b>	<b>0.2</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	190.00
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	0.00
Cellulosics	0.00
Rubber	0.00
Plastics	0.00
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	527.40
Packaging Material, Plastic	226.90
Packaging Material, Cellulosics	137.50
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Np-237	1.90E-04
Pu-239	2.43E-02
Th-229	3.48E-11
U-233	2.48E-08
U-235	7.19E-10

No Hazardous Waste Numbers Provided

TRUCON Code(s) 120/220
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## Waste Stream Description

Army sealed sources

Comprehensive Inventory Database ver. 1.00

Data ver. D.9.02

NOTE: Actual numerical values have been rounded for presentation purposes.

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Waste Stream ID: ND-T001

## Appendix A

## TRU Waste Inventory Profile Report

Site	Nuclear Radiation Development Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5400	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Defense Determination	Pending Determination	Inventory Date	12/31/2009		
Stream Name	AmO2 Bagout/ Silver Bagout			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	14.1	4.6	18.7
Box - Crate	1.5	0.0	1.5
<b>Current Form Total</b>	<b>15.6</b>	<b>4.6</b>	<b>20.2</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	27.0	4.6	31.6
<b>Final Form Total</b>	<b>27.0</b>	<b>4.6</b>	<b>31.6</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	90.10
Aluminum-based Metals/Alloys	0.00
Other Metals	4.50
Other Inorganic Materials	2.30
Cellulosics	90.10
Rubber	13.50
Plastics	22.50
Cements	0.00
Inorganic Matrix	225.30
Organic Matrix	4.50
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	0.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	4.72E+01
Np-237	3.06E-05
Th-229	8.35E-15
U-233	1.34E-10

## Haz. Waste No(s).

D008, D011, D035,  
D040, F001, F002,  
F005

## TRUCON Code(s)

125/225

## Waste Stream Description

AmO<sub>2</sub> Bagout- Material generated from the production of ionization sources containing Am-241. Material consists mainly of consumable items used in the production gloveboxes (e.g. tissues paper towels, graphite blocks) but also includes equipment and tools that have exceeded their useful life. Most material is contained in one gallon cans that are placed into fifty five gallon drums. Silver Bagout- Material is mainly a vitrified slag that is created during the recovery of precious metals from scrap Am-241 foil. Also contained are items used in the glovebox during the recovery process (e.g. plastic bags, Carbon/Graphite crucibles, paper towels, induction furnaces).

Waste Stream ID: ND-T002

## Appendix A

## TRU Waste Inventory Profile Report

Site	Nuclear Radiation Development Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5000	Handling	CH
Source Cat.	Discarding Excess/Expired Materials	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Returned Smoke Detector Sources			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	1.5	0.8	2.3
<b>Current Form Total</b>	<b>1.5</b>	<b>0.8</b>	<b>2.3</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	1.5	0.8	2.3
<b>Final Form Total</b>	<b>1.5</b>	<b>0.8</b>	<b>2.3</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	1000.00
Aluminum-based Metals/Alloys	0.00
Other Metals	100.00
Other Inorganic Materials	0.00
Cellulosics	0.00
Rubber	0.00
Plastics	0.00
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	0.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.25E+00

No Hazardous Waste Numbers Provided

TRUCON Code(s)

125/225

## Waste Stream Description

Sealed sources returned from smoke detector manufacturers or other end users.

Waste Stream ID: NT-JAS-01

## Appendix A

## TRU Waste Inventory Profile Report

Site	Nevada Test Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5400	Handling	CH
Source Cat.	R&D/R&D Laboratory Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Combined metal scrap and incidental combustibles			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
SWB Dir Ld w/ Liner	34.0	49.1	83.2
<b>Current Form Total</b>	<b>34.0</b>	<b>49.1</b>	<b>83.2</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
SWB Dir Ld w/ Liner	34.0	49.1	83.2
<b>Final Form Total</b>	<b>34.0</b>	<b>49.1</b>	<b>83.2</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	20.00
Aluminum-based Metals/Alloys	3.00
Other Metals	1.00
Other Inorganic Materials	1.00
Cellulosics	1.00
Rubber	1.00
Plastics	1.00
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	153.50
Packaging Material, Plastic	1.20
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.85E+00
Np-237	3.55E-06
Pu-238	5.93E-02
Pu-239	1.32E+00
Pu-240	3.03E-01
Pu-241	5.81E+00
Th-229	8.50E-15
Th-230	2.81E-11
Th-232	7.99E-18
U-233	4.54E-11
U-234	1.03E-06
U-235	7.81E-09
U-236	5.39E-08

No Hazardous Waste Numbers Provided

TRUCON Code(s)

125/225

## Waste Stream Description

Waste stream consists of spent Primary Target Chambers from Jasper gas gun experiments. PTCs are metal chambers used to contain debris from the impact of a sabot on a disk of plutonium metal.

Waste Stream ID: NT-W021

## Appendix A

## TRU Waste Inventory Profile Report

Site	Nevada Test Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5400	Handling	CH
Source Cat.	R&D/R&D Laboratory Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	V3XA Spheres	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
Sphere - 3-ft. dia HY80 Carbon Steel	5.1	0.0	5.1
<b>Current Form Total</b>	<b>5.1</b>	<b>0.0</b>	<b>5.1</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
SWB Dir Ld w/o Liner	3.8	0.0	3.8
<b>Final Form Total</b>	<b>3.8</b>	<b>0.0</b>	<b>3.8</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	664.00
Aluminum-based Metals/Alloys	1.40
Other Metals	2.23
Other Inorganic Materials	0.00
Cellulosics	2.15
Rubber	0.00
Plastics	0.00
Cements	3.17
Inorganic Matrix	116.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	153.50
Packaging Material, Plastic	0.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.21E+00
Np-237	1.55E-05
Pu-238	3.01E-01
Pu-239	1.35E+01
Pu-240	3.09E+00
Pu-241	5.95E+00
Pu-242	2.74E-04
Th-229	1.73E-12
Th-230	3.85E-07
Th-232	1.20E-15
U-233	1.31E-09
U-234	1.87E-03
U-235	1.30E-05
U-236	2.11E-06
U-238	6.56E-04

No Hazardous Waste Numbers Provided

TRUCON Code(s)

125/225

## Waste Stream Description

The two steel vessels are 1-inch thick by 3-feet diameter, weighing about 2700 lbs. each. The vessels contain heterogeneous mixtures of the following materials: Plutonium, D-38, Beryllium metal, Completely burned high explosive, Stainless steel, Brass, Polystyrene foam, Aluminum, Coke (degassed coal), Water absorbed by the coke, Steel, Glass, Epoxy resin, Thermalite (aerated cement block), Plaster, Hortag (fly-ash and clay), Wood, and Krypton-85 tracer gas for leak detection. The UK has had similar vessels in storage for over ten years, but none containing plutonium have ever been opened. Vessels containing D-38 only have been opened, with small amounts of water vapor and some loose debris found inside. The bulk of the materials were found to be trapped within the thick coke layer lining the inner surface of the vessel. No more wastes of this type are planned to be generated.

Waste Stream ID: **OR-7930-CH-HET**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Oak Ridge National Laboratory	Final Waste Form	Heterogeneous	Waste Matrix Code	S5000	Handling	CH
Source Cat.	R&D/R&D Laboratory Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Oak Ridge Bldg 7930 CH-TRU Debris Waste			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	0.8	0.0	0.8
Box - Misc	23.7	0.0	23.7
<b>Current Form Total</b>	<b>24.5</b>	<b>0.0</b>	<b>24.5</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	12.3	0.0	12.3
<b>Final Form Total</b>	<b>12.3</b>	<b>0.0</b>	<b>12.3</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	87.37
Aluminum-based Metals/Alloys	4.24
Other Metals	2.38
Other Inorganic Materials	33.89
Cellulosics	12.97
Rubber	3.44
Plastics	120.46
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	0.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	4.08E-06
Cm-244	3.44E-08
Np-237	3.06E-11
Pu-238	2.26E-05
Pu-239	1.96E-05
Pu-240	5.06E-06
Pu-241	7.41E-06
Pu-242	3.44E-07
Pu-244	4.42E-15
Th-229	1.17E-18
Th-230	1.88E-13
Th-232	4.07E-08
U-233	1.57E-15
U-234	1.69E-09
U-235	4.64E-13
U-236	3.60E-12
U-238	1.25E-15

## Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D022, F001, F002, F004, F005

## TRUCON Code(s)

125/225

## Waste Stream Description

Waste consists of CH-TRU debris from Bldg. 7930.

Waste Stream ID: **OR-CHEM-CH-HET**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Oak Ridge National Laboratory	Final Waste Form	Heterogeneous	Waste Matrix Code	S5000	Handling	CH
Source Cat.	Analytical Laboratory Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	ORNL Analytical Chemistry CH-TRU Debris Waste			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
110-gal Drum Dir Ld	0.4	0.0	0.4
55-gal Drum Dir Ld w/o Liner	43.7	0.0	43.7
79-gal Drum Dir Ld	1.2	0.0	1.2
Box - Misc	4.7	0.0	4.7
<b>Current Form Total</b>	<b>50.0</b>	<b>0.0</b>	<b>50.0</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	30.2	0.0	30.2
<b>Final Form Total</b>	<b>30.2</b>	<b>0.0</b>	<b>30.2</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	96.20
Aluminum-based Metals/Alloys	0.80
Other Metals	10.65
Other Inorganic Materials	2.40
Cellulosics	80.90
Rubber	7.40
Plastics	64.90
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	1.50
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	0.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.94E-01
Am-243	4.22E-05
Cm-244	3.88E-03
Cs-137	9.41E-03
Np-237	2.98E-06
Pu-238	4.15E+00
Pu-239	1.24E-01
Pu-240	2.41E-02
Pu-241	1.45E-01
Pu-242	3.58E-05
Pu-244	6.87E-20
Sr-90	7.64E-03
Th-229	5.84E-05
Th-230	4.45E-08
Th-232	2.82E-06
U-233	2.55E-02
U-234	3.56E-04
U-235	2.58E-06
U-236	3.72E-08
U-238	4.17E-05

## Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D011, D019, D022, F002, F005

## TRUCON Code(s)

125/225

## Waste Stream Description

Waste consists of CH-TRU debris from analytical chemistry operations at ORNL

Waste Stream ID: **OR-GENR-CH-HET**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Oak Ridge National Laboratory	Final Waste Form	Heterogeneous	Waste Matrix Code	S5000	Handling	CH
Source Cat.	R&D/R&D Laboratory Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	ORNL General Research & Development CH-TRU Debris Waste			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
110-gal Drum Dir Ld	1.2	0.0	1.2
55-gal Drum Dir Ld w/o Liner	24.1	0.0	24.1
79-gal Drum Dir Ld	13.8	0.0	13.8
85-gal Drum Dir Ld w/ Liner	0.3	0.0	0.3
Box - Misc	6.7	0.0	6.7
<b>Current Form Total</b>	<b>46.2</b>	<b>0.0</b>	<b>46.2</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	27.9	0.0	27.9
<b>Final Form Total</b>	<b>27.9</b>	<b>0.0</b>	<b>27.9</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	96.20
Aluminum-based Metals/Alloys	0.80
Other Metals	10.65
Other Inorganic Materials	2.40
Cellulosics	80.90
Rubber	7.40
Plastics	64.90
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	1.50
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	0.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.87E-02
Am-243	2.01E-02
Cm-244	2.19E-01
Cs-137	6.35E-08
Np-237	5.91E-04
Pu-238	4.63E-02
Pu-239	1.10E-01
Pu-240	1.11E-03
Pu-241	7.97E-05
Pu-242	1.81E-03
Pu-244	4.06E-11
Sr-90	3.25E-07
Th-229	5.91E-06
Th-230	1.20E-05
Th-232	7.78E-08
U-233	2.61E-03
U-234	1.31E-05
U-235	1.98E-07
U-236	1.49E-06
U-238	1.16E-05

## Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D019, D022, D028, F001, F002, F005

## TRUCON Code(s)

125/225

## Waste Stream Description

Waste consists of CH-TRU debris from general R&amp;D at ORNL

Waste Stream ID: **OR-ISTP-CH-HET**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Oak Ridge National Laboratory	Final Waste Form	Heterogeneous	Waste Matrix Code	S5000	Handling	CH
Source Cat.	Materials Production/Recovery Effluents	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	ORNL Isotopes Facilities CH-TRU Debris Waste			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
110-gal Drum Dir Ld	3.7	0.0	3.7
55-gal Drum Dir Ld w/o Liner	65.9	0.0	65.9
79-gal Drum Dir Ld	49.3	0.0	49.3
85-gal Drum Dir Ld w/ Liner	1.3	0.0	1.3
Box - Misc	20.4	0.0	20.4
<b>Current Form Total</b>	<b>140.7</b>	<b>0.0</b>	<b>140.7</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	84.9	0.0	84.9
<b>Final Form Total</b>	<b>84.9</b>	<b>0.0</b>	<b>84.9</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	96.20
Aluminum-based Metals/Alloys	0.80
Other Metals	10.65
Other Inorganic Materials	2.40
Cellulosics	80.90
Rubber	7.40
Plastics	64.90
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	1.50
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	0.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.06E+00
Am-243	1.34E-02
Cm-244	7.74E+00
Cs-137	1.85E-06
Np-237	4.14E-03
Pu-238	1.13E+01
Pu-239	1.49E-01
Pu-240	2.15E-01
Pu-241	1.50E+00
Pu-242	1.20E-03
Pu-244	1.20E-10
Sr-90	1.95E-07
Th-229	4.45E-06
Th-230	7.31E-06
Th-232	9.82E-07
U-233	1.97E-03
U-234	8.58E-04
U-235	2.38E-06
U-236	1.86E-07
U-238	3.31E-06

## Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D022, F001, F002, F004, F005

## TRUCON Code(s)

125/225

## Waste Stream Description

Waste consists of CH-TRU debris from isotopes production at ORNL



Waste Stream ID: **OR-NBL-CH-HET**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Oak Ridge National Laboratory	Final Waste Form	Heterogeneous	Waste Matrix Code	S5000	Handling	CH
Source Cat.	R&D/R&D Laboratory Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	New Brunswick Laboratory CH-TRU Debris Waste			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
110-gal Drum Dir Ld	0.8	0.0	0.8
55-gal Drum Dir Ld w/o Liner	7.1	0.0	7.1
79-gal Drum Dir Ld	15.0	0.0	15.0
85-gal Drum Dir Ld w/o Liner	0.3	0.0	0.3
<b>Current Form Total</b>	<b>23.2</b>	<b>0.0</b>	<b>23.2</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	13.9	0.0	13.9
<b>Final Form Total</b>	<b>13.9</b>	<b>0.0</b>	<b>13.9</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	96.20
Aluminum-based Metals/Alloys	0.80
Other Metals	10.65
Other Inorganic Materials	2.40
Cellulosics	80.90
Rubber	7.40
Plastics	64.90
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	1.50
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	0.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.90E-06
Np-237	2.17E-11
Pu-238	6.18E-02
Pu-239	9.49E-02
Pu-240	3.75E-02
Pu-241	5.67E-06
Th-229	2.84E-06
Th-230	2.27E-08
Th-232	1.58E-17
U-233	1.26E-03
U-234	1.08E-04
U-235	1.41E-05
U-236	2.67E-08
U-238	8.75E-05

## Haz. Waste No(s).

D008, D009

## TRUCON Code(s)

125/225

## Waste Stream Description

Waste consists of CH-TRU debris from NBL

Waste Stream ID: **OR-NFS-CH-HET**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Oak Ridge National Laboratory	Final Waste Form	Heterogeneous	Waste Matrix Code	S5000	Handling	CH
Source Cat.	Remediation/D&D Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Nuclear Fuel Services CH-TRU Waste			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	68.8	0.0	68.8
Box - Misc	15.3	0.0	15.3
<b>Current Form Total</b>	<b>84.1</b>	<b>0.0</b>	<b>84.1</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	76.3	0.0	76.3
<b>Final Form Total</b>	<b>76.3</b>	<b>0.0</b>	<b>76.3</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	36.01
Aluminum-based Metals/Alloys	3.18
Other Metals	2.91
Other Inorganic Materials	193.00
Cellulosics	7.41
Rubber	1.59
Plastics	20.39
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.26
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	0.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.13E+00
Am-243	1.22E-07
Cm-244	2.01E-05
Cs-137	9.94E-07
Np-237	7.97E-06
Pu-238	2.23E-01
Pu-239	1.84E+00
Pu-240	1.04E+00
Pu-241	5.87E+00
Pu-242	9.86E-05
Sr-90	9.78E-07
Th-229	1.07E-06
Th-230	1.32E-05
Th-232	1.65E-06
U-233	2.85E-04
U-234	6.11E-02
U-235	4.31E-06
U-236	7.40E-07
U-238	6.96E-05

## Haz. Waste No(s).

D006, D008, D009,  
D011, F002

## TRUCON Code(s)

125/225

## Waste Stream Description

Waste consists of non-mixed CH-TRU debris from NFS

Waste Stream ID: **OR-NFS-CH-HOM**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Oak Ridge National Laboratory	Final Waste Form	Solidified Inorganics	Waste Matrix Code	S3000	Handling	CH
Source Cat.	Remediation/D&D Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Nuclear Fuel Services CH-TRU Homogeneous Waste			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	9.8	0.0	9.8
<b>Current Form Total</b>	<b>9.8</b>	<b>0.0</b>	<b>9.8</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	9.8	0.0	9.8
<b>Final Form Total</b>	<b>9.8</b>	<b>0.0</b>	<b>9.8</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.00
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	319.00
Cellulosics	0.00
Rubber	0.00
Plastics	0.00
Cements	100.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	0.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.08E+01
Np-237	7.07E-05
Pu-238	2.95E+00
Pu-239	1.62E+01
Pu-240	8.73E+00
Pu-241	6.51E+01
Pu-242	1.06E-03
Th-229	2.42E-12
Th-230	1.00E-04
Th-232	3.69E-15
U-233	3.39E-09
U-234	4.65E-01
U-235	1.90E-05
U-236	6.22E-06
U-238	5.13E-04

## Haz. Waste No(s).

D006, D009

## TRUCON Code(s)

111/211

## Waste Stream Description

Waste consists of homogeneous waste from NFS

Waste Stream ID: **OR-NFS-CH-SOIL**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Oak Ridge National Laboratory	Final Waste Form	Soils	Waste Matrix Code	S4200	Handling	CH
Source Cat.	Remediation/D&D Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Nuclear Fuel Services CH-TRU Soil Waste			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	115.2	0.0	115.2
SWB w/ 4 - 55-gal Drums w/ Liners	3.8	0.0	3.8
<b>Current Form Total</b>	<b>119.0</b>	<b>0.0</b>	<b>119.0</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	115.2	0.0	115.2
SWB w/ 4 - 55-gal Drums w/ Liners	3.8	0.0	3.8
<b>Final Form Total</b>	<b>119.0</b>	<b>0.0</b>	<b>119.0</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.00
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	0.00
Cellulosics	0.00
Rubber	0.00
Plastics	2.60
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	26.00
Soils/gravel	1270.10
Vitrified	0.00
Packaging Material, Steel	133.35
Packaging Material, Plastic	0.52
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.06E+00
Am-243	5.15E-09
Cm-244	5.75E-09
Cs-137	2.34E-06
Np-237	8.95E-04
Pu-238	1.00E-01
Pu-239	2.32E+00
Pu-240	7.93E-01
Pu-241	1.80E+00
Pu-242	1.06E-03
Pu-244	1.19E-18
Sr-90	2.30E-06
Th-229	3.55E-07
Th-230	1.00E-06
Th-232	2.08E-07
U-233	1.58E-04
U-234	4.65E-03
U-235	4.48E-07
U-236	5.65E-07
U-238	5.12E-06

## Haz. Waste No(s).

F002

## TRUCON Code(s)

111/211

## Waste Stream Description

Waste consists of non-mixed soils from NFS

Comprehensive Inventory Database ver. 1.00

Data ver. D.9.02

NOTE: Actual numerical values have been rounded for presentation purposes.

A - OR - 8

Waste Stream ID: **OR-PGDP-CH-HET**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Oak Ridge National Laboratory	Final Waste Form	Heterogeneous	Waste Matrix Code	S5000	Handling	CH
Source Cat.	Materials Production/Recovery Effluents	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Paducah Gaseous Diffusion Plant CH-TRU Debris Waste			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	7.3	0.0	7.3
<b>Current Form Total</b>	<b>7.3</b>	<b>0.0</b>	<b>7.3</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	3.7	0.0	3.7
<b>Final Form Total</b>	<b>3.7</b>	<b>0.0</b>	<b>3.7</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	96.20
Aluminum-based Metals/Alloys	0.80
Other Metals	10.65
Other Inorganic Materials	2.40
Cellulosics	80.90
Rubber	7.40
Plastics	64.90
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	1.50
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	0.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Np-237	2.35E-02
Pu-239	7.59E-02
Th-229	2.75E-09
Th-230	6.08E-07
U-233	2.45E-06
U-234	2.82E-03
U-235	1.13E-04
U-238	2.80E-03

## Haz. Waste No(s).

D008

## TRUCON Code(s)

125/225

## Waste Stream Description

Waste consists of CH-TRU debris from PGDP

Waste Stream ID: **OR-RADP-CH-HET**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Oak Ridge National Laboratory	Final Waste Form	Heterogeneous	Waste Matrix Code	S5000	Handling	CH
Source Cat.	R&D/R&D Laboratory Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	ORNL Radiochemical Processing Research & Development CH-TRU Debris Waste			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
110-gal Drum Dir Ld	0.4	0.0	0.4
55-gal Drum Dir Ld w/o Liner	79.0	0.0	79.0
79-gal Drum Dir Ld	15.2	0.0	15.2
85-gal Drum Dir Ld w/o Liner	0.6	0.0	0.6
<b>Current Form Total</b>	<b>95.3</b>	<b>0.0</b>	<b>95.3</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	96.1	0.0	96.1
<b>Final Form Total</b>	<b>96.1</b>	<b>0.0</b>	<b>96.1</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	99.28
Aluminum-based Metals/Alloys	3.71
Other Metals	13.77
Other Inorganic Materials	11.38
Cellulosics	57.19
Rubber	14.03
Plastics	63.28
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	1.59
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	0.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	6.49E-01
Am-243	1.44E-03
Cm-244	1.44E+00
Cs-137	6.45E-04
Np-237	7.72E-05
Pu-238	6.31E-02
Pu-239	2.53E-01
Pu-240	5.03E-02
Pu-241	2.32E-01
Pu-242	2.28E-05
Pu-244	1.84E-10
Sr-90	7.79E-05
Th-229	5.74E-07
Th-230	2.77E-09
Th-232	2.14E-08
U-233	2.33E-04
U-234	1.51E-05
U-235	2.48E-06
U-236	3.40E-08
U-238	8.26E-08

## Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D028, F002, F005

## TRUCON Code(s)

125/225

## Waste Stream Description

Waste consists of CH-TRU debris from radiochemical processing R&amp;D at ORNL

Waste Stream ID: **OR-RADP-CH-SOILS**

Appendix A

TRU Waste Inventory Profile Report

Site	Oak Ridge National Laboratory	Final Waste Form	Soils	Waste Matrix Code	S4200	Handling	CH
Source Cat.	Remediation/D&D Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Oak Ridge CH-TRU Soils Waste from TRU Trenches			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	12.1	0.0	12.1
<b>Current Form Total</b>	<b>12.1</b>	<b>0.0</b>	<b>12.1</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	6.0	0.0	6.0
<b>Final Form Total</b>	<b>6.0</b>	<b>0.0</b>	<b>6.0</b>

Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.00
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	0.00
Cellulosics	0.00
Rubber	0.00
Plastics	2.50
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	1300.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	0.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	5.16E+00
Cm-244	4.43E-01
Np-237	2.71E-04
Pu-238	4.08E-06
Pu-239	3.01E-01
Pu-240	3.44E-03
Sr-90	2.78E-06
Th-229	2.85E-11
Th-230	3.42E-14
Th-232	9.94E-19
U-233	2.61E-08
U-234	3.07E-10
U-235	7.17E-07
U-236	1.89E-09
U-238	2.36E-08

Haz. Waste No(s).

F002

TRUCON Code(s)

111/211

Waste Stream Description

Waste consists of CH-TRU soils from the TRU Trench Waste Retrieval activities.

Waste Stream ID: **OR-REDC-CH-HET**

Appendix A

TRU Waste Inventory Profile Report

Site	Oak Ridge National Laboratory	Final Waste Form	Heterogeneous	Waste Matrix Code	S5000	Handling	CH
Source Cat.	R&D/R&D Laboratory Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Radiochemical Engineering Development Center CH-TRU Waste			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
110-gal Drum Dir Ld	0.4	0.0	0.4
55-gal Drum Dir Ld w/o Liner	203.0	37.4	240.4
79-gal Drum Dir Ld	8.1	0.0	8.1
85-gal Drum Dir Ld w/ Liner	0.6	0.0	0.6
Box - Misc	31.9	0.0	31.9
<b>Current Form Total</b>	<b>244.1</b>	<b>37.4</b>	<b>281.5</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	272.9	37.4	310.3
<b>Final Form Total</b>	<b>272.9</b>	<b>37.4</b>	<b>310.3</b>

Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	87.37
Aluminum-based Metals/Alloys	4.24
Other Metals	2.38
Other Inorganic Materials	33.89
Cellulosics	12.97
Rubber	3.44
Plastics	120.46
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	0.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	9.10E-03
Am-243	1.10E-03
Cm-244	2.45E-01
Cs-137	5.31E-03
Np-237	4.21E-05
Pu-238	3.53E-02
Pu-239	3.01E-02
Pu-240	1.78E-02
Pu-241	2.48E-02
Pu-242	4.00E-05
Pu-244	5.83E-10
Sr-90	3.27E-02
Th-229	4.14E-07
Th-230	1.34E-09
Th-232	2.72E-08
U-233	1.77E-04
U-234	7.51E-06
U-235	4.21E-08
U-236	5.12E-04
U-238	1.04E-07

Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D019, F002, F005

TRUCON Code(s)

125/225

Waste Stream Description

Waste consists of CH-TRU debris from REDC at ORNL



Waste Stream ID: **OR-REDC-RH-HET**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Oak Ridge National Laboratory	Final Waste Form	Heterogeneous	Waste Matrix Code	S5000	Handling	RH
Source Cat.	R&D/R&D Laboratory Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Radiochemical Engineering Development Center RH-TRU Waste			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	6.0	0.0	6.0
Cask - Misc	11.2	0.0	426.2
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	8.9	0.0	8.9
<b>Current Form Total</b>	<b>411.3</b>	<b>29.9</b>	<b>441.2</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	431.7	21.4	453.0
<b>Final Form Total</b>	<b>431.7</b>	<b>21.4</b>	<b>453.0</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	156.55
Aluminum-based Metals/Alloys	0.03
Other Metals	15.65
Other Inorganic Materials	44.43
Cellulosics	17.69
Rubber	4.39
Plastics	22.82
Cements	0.00
Inorganic Matrix	3.20
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	652.20
Packaging Material, Plastic	26.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	6.06E-03
Am-243	3.53E-04
Cm-244	3.79E-01
Cs-137	1.26E-02
Np-237	1.52E-06
Pu-238	3.02E-03
Pu-239	8.49E-04
Pu-240	4.00E-03
Pu-241	1.36E-02
Pu-242	2.84E-05
Pu-244	2.12E-12
Sr-90	7.62E-02
Th-229	1.74E-13
Th-230	2.58E-11
Th-232	1.31E-18
U-233	1.56E-10
U-234	2.29E-07
U-235	1.49E-10
U-236	2.39E-09
U-238	1.04E-09

## Haz. Waste No(s).

D005, D006, D007, D008, D009, D010, D011, D019, F002, F005

## TRUCON Code(s)

325

## Waste Stream Description

Waste consists of RH-TRU debris from REDC at ORNL

Comprehensive Inventory Database ver. 1.00

Data ver. D.9.02

NOTE: Actual numerical values have been rounded for presentation purposes.

Waste Stream ID: **OR-RF-CH-HET**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Oak Ridge National Laboratory	Final Waste Form	Heterogeneous	Waste Matrix Code	S5000	Handling	CH
Source Cat.	R&D/R&D Laboratory Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	ORNL Reactor Fuels Research & Development CH-TRU Debris Waste			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
110-gal Drum Dir Ld	0.4	0.0	0.4
55-gal Drum Dir Ld w/o Liner	97.6	0.0	97.6
79-gal Drum Dir Ld	4.8	0.0	4.8
85-gal Drum Dir Ld w/ Liner	0.3	0.0	0.3
Box - Misc	27.6	0.0	27.6
<b>Current Form Total</b>	<b>130.7</b>	<b>0.0</b>	<b>130.7</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	79.0	0.0	79.0
<b>Final Form Total</b>	<b>79.0</b>	<b>0.0</b>	<b>79.0</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	58.25
Aluminum-based Metals/Alloys	10.59
Other Metals	26.48
Other Inorganic Materials	5.30
Cellulosics	45.01
Rubber	37.07
Plastics	68.84
Cements	0.00
Inorganic Matrix	13.24
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	0.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.78E-01
Am-243	1.61E-04
Cm-244	1.21E-03
Cs-137	3.58E-03
Np-237	2.73E-06
Pu-238	4.68E-02
Pu-239	5.34E-01
Pu-240	1.31E-01
Pu-241	6.32E-01
Pu-242	5.37E-04
Pu-244	5.24E-19
Sr-90	1.03E-03
Th-229	2.06E-04
Th-230	1.06E-08
Th-232	2.23E-06
U-233	9.09E-02
U-234	5.09E-05
U-235	3.37E-06
U-236	9.37E-08
U-238	8.68E-07

## Haz. Waste No(s).

D006, D007, D008,  
D009, D011, D019,  
F001, F002, F005

## TRUCON Code(s)

125/225

## Waste Stream Description

Waste consists of CH-TRU debris from reactor fuels R&amp;D at ORNL

Waste Stream ID: **OR-RF-CH-HOM**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Oak Ridge National Laboratory	Final Waste Form	Solidified Inorganics	Waste Matrix Code	S3000	Handling	CH
Source Cat.	R&D/R&D Laboratory Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	ORNL Reactor Fuels Research & Development CH-TRU Homogeneous Waste			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	2.5	0.0	2.5
<b>Current Form Total</b>	<b>2.5</b>	<b>0.0</b>	<b>2.5</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	2.5	0.0	2.5
<b>Final Form Total</b>	<b>2.5</b>	<b>0.0</b>	<b>2.5</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.00
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	319.00
Cellulosics	0.00
Rubber	0.00
Plastics	0.00
Cements	100.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	0.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.90E-02
Cs-137	1.06E-03
Np-237	1.51E-07
Pu-238	6.73E-03
Pu-239	1.68E-02
Pu-240	1.65E-02
Sr-90	1.08E-02
Th-229	5.95E-15
Th-230	4.39E-09
Th-232	6.99E-18
U-233	7.91E-12
U-234	2.06E-05
U-235	9.22E-07
U-236	1.18E-08
U-238	3.28E-05

## Haz. Waste No(s).

D006, D007, D008,  
D009, D010

## TRUCON Code(s)

111/211

## Waste Stream Description

Waste consists of homogeneous waste from reactor fuels R&amp;D at ORNL

Waste Stream ID: **OR-TBD-CH-HET**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Oak Ridge National Laboratory	Final Waste Form	Heterogeneous	Waste Matrix Code	S5000	Handling	CH
Source Cat.	Other/Multiple Sources	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	TBD CH-TRU Debris Waste	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
110-gal Drum Dir Ld	0.4	0.0	0.4
55-gal Drum Dir Ld w/o Liner	30.6	12.5	43.1
79-gal Drum Dir Ld	5.1	0.0	5.1
85-gal Drum Dir Ld w/o Liner	0.3	0.0	0.3
Box - Misc	39.4	0.0	39.4
<b>Current Form Total</b>	<b>75.8</b>	<b>12.5</b>	<b>88.3</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	68.0	12.5	80.5
<b>Final Form Total</b>	<b>68.0</b>	<b>12.5</b>	<b>80.5</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	60.00
Aluminum-based Metals/Alloys	4.00
Other Metals	10.00
Other Inorganic Materials	10.00
Cellulosics	1.00
Rubber	8.00
Plastics	7.00
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	0.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.80E+00
Am-243	2.11E-02
Cm-244	2.30E+00
Cs-137	3.97E-03
Np-237	5.93E-04
Pu-238	3.20E+00
Pu-239	1.00E+00
Pu-240	1.68E+00
Pu-241	6.17E-01
Pu-242	2.00E-03
Pu-244	4.05E-11
Sr-90	5.76E-03
Th-229	1.05E-03
Th-230	6.55E-07
Th-232	2.72E-06
U-233	1.22E-01
U-234	2.85E-04
U-235	1.41E-05
U-236	1.20E-06
U-238	2.32E-04

## Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D022, F001, F002, F004, F005

## TRUCON Code(s)

125/225

## Waste Stream Description

CH-TRU Debris Waste Needing Further Evaluation

Comprehensive Inventory Database ver. 1.00

Data ver. D.9.02

NOTE: Actual numerical values have been rounded for presentation purposes.

Waste Stream ID: **OR-TBD-RH-HET**

Appendix A

TRU Waste Inventory Profile Report

Site	Oak Ridge National Laboratory	Final Waste Form	Heterogeneous	Waste Matrix Code	S5000	Handling	RH
Source Cat.	Other/Multiple Sources	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	TBD RH-TRU Debris Waste	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	26.2	0.0	26.2
79-gal Drum Dir Ld	1.5	0.0	1.5
Box - Misc	1.3	0.0	1.3
Cask - Misc	14.5	0.0	125.7
<b>Current Form Total</b>	<b>144.8</b>	<b>10.0</b>	<b>154.7</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	73.0	8.0	81.0
<b>Final Form Total</b>	<b>73.0</b>	<b>8.0</b>	<b>81.0</b>

Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	150.00
Aluminum-based Metals/Alloys	0.03
Other Metals	15.00
Other Inorganic Materials	45.00
Cellulosics	18.00
Rubber	4.50
Plastics	23.00
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	652.20
Packaging Material, Plastic	26.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	9.07E-01
Am-243	5.54E-03
Cm-244	1.43E+00
Cs-137	1.38E+01
Np-237	9.63E-05
Pu-238	7.75E-01
Pu-239	1.20E-01
Pu-240	9.10E-02
Pu-241	5.12E-01
Pu-242	1.82E-04
Pu-244	3.91E-11
Sr-90	8.35E+00
Th-229	3.39E-04
Th-230	9.05E-09
Th-232	8.72E-06
U-233	1.51E-01
U-234	7.00E-05
U-235	5.60E-06
U-236	5.34E-07
U-238	2.44E-06

Haz. Waste No(s).

D005, D006, D007, D008, D009, D011

TRUCON Code(s)

325

Waste Stream Description

RH-TRU Debris Waste Needing Further Evaluation

Waste Stream ID: **OR-W203**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Oak Ridge National Laboratory	Final Waste Form	Heterogeneous	Waste Matrix Code	S5000	Handling	CH
Source Cat.	Other/Multiple Sources	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	ORNL Newly Generated Debris - Post 2013			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	0.0	49.9	49.9
<b>Current Form Total</b>	<b>0.0</b>	<b>49.9</b>	<b>49.9</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	0.0	49.9	49.9
<b>Final Form Total</b>	<b>0.0</b>	<b>49.9</b>	<b>49.9</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	96.20
Aluminum-based Metals/Alloys	0.80
Other Metals	10.65
Other Inorganic Materials	2.40
Cellulosics	80.90
Rubber	7.40
Plastics	64.90
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	1.50
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	0.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	9.03E-03
Am-243	6.44E-04
Cm-244	1.11E+00
Cs-137	3.36E-02
Pu-238	6.79E-03
Pu-239	1.24E-04
Pu-240	5.84E-03
Pu-241	8.10E-02
Pu-242	8.46E-05
Sr-90	2.49E-01

No Hazardous Waste Numbers Provided

TRUCON Code(s)

125/225

## Waste Stream Description

Hot Cell Debris Waste

Comprehensive Inventory Database ver. 1.00

Data ver. D.9.02

NOTE: Actual numerical values have been rounded for presentation purposes.

Waste Stream ID: **OR-W213-RH-SOILS**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Oak Ridge National Laboratory	Final Waste Form	Soils	Waste Matrix Code	S4200	Handling	RH
Source Cat.	Remediation/D&D Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	ER RH TRU Heterogeneous Soils	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
10-gal Drum Dir Ld w/o Liner	1.4	0.0	1.4
55-gal Drum Dir Ld w/o Liner	0.2	0.0	0.2
5-gal Drum Dir Ld w/o Liner	0.0	0.0	0.0
Box - Misc	32.3	0.0	32.3
<b>Current Form Total</b>	<b>34.0</b>	<b>0.0</b>	<b>34.0</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	13.4	0.0	13.4
<b>Final Form Total</b>	<b>13.4</b>	<b>0.0</b>	<b>13.4</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.00
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	0.00
Cellulosics	0.00
Rubber	0.00
Plastics	2.50
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	1300.00
Vitrified	0.00
Packaging Material, Steel	652.20
Packaging Material, Plastic	26.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	3.32E-02
Am-243	1.25E-05
Cm-244	1.20E-04
Cs-137	3.27E-01
Np-237	5.74E-05
Pu-238	6.14E-03
Pu-239	1.64E-02
Pu-240	3.77E-04
Pu-241	6.73E-02
Pu-242	8.91E-06
Sr-90	4.00E-03
Th-229	2.38E-02
Th-230	4.35E-05
Th-232	3.87E-04
U-233	3.15E-02
U-234	2.36E-03
U-235	2.80E-05
U-236	2.87E-05
U-238	3.44E-04

No Hazardous Waste Numbers Provided

TRUCON Code(s)

311

## Waste Stream Description

This waste is made up of soils.

Comprehensive Inventory Database ver. 1.00

Data ver. D.9.02

NOTE: Actual numerical values have been rounded for presentation purposes.

Waste Stream ID: **OR-WSTR-CH-HET**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Oak Ridge National Laboratory	Final Waste Form	Heterogeneous	Waste Matrix Code	S5000	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	ORNL-Liquid Waste Treatment CH-TRU Debris Waste			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	0.4	0.0	0.4
<b>Current Form Total</b>	<b>0.4</b>	<b>0.0</b>	<b>0.4</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	0.4	0.0	0.4
<b>Final Form Total</b>	<b>0.4</b>	<b>0.0</b>	<b>0.4</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	96.20
Aluminum-based Metals/Alloys	0.80
Other Metals	10.65
Other Inorganic Materials	2.40
Cellulosics	80.90
Rubber	7.40
Plastics	64.90
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	1.50
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	0.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Pu-238	1.06E-01
Th-230	8.88E-10
U-234	7.98E-06

## Haz. Waste No(s).

D008

## TRUCON Code(s)

125/225

## Waste Stream Description

Waste consists of CH-TRU debris from ORNL liquids waste system.



Waste Stream ID: **OR-Y12-CH-HET**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Oak Ridge National Laboratory	Final Waste Form	Heterogeneous	Waste Matrix Code	S5000	Handling	CH
Source Cat.	Materials Production/Recovery Effluents	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Oak Ridge Y-12 CH-TRU Debris Waste	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	0.6	0.0	0.6
79-gal Drum Dir Ld	0.6	0.0	0.6
<b>Current Form Total</b>	<b>1.2</b>	<b>0.0</b>	<b>1.2</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	1.0	0.0	1.0
<b>Final Form Total</b>	<b>1.0</b>	<b>0.0</b>	<b>1.0</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	96.20
Aluminum-based Metals/Alloys	0.80
Other Metals	10.65
Other Inorganic Materials	2.40
Cellulosics	80.90
Rubber	7.40
Plastics	64.90
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	1.50
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	0.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Np-237	5.15E-03
Pu-238	1.78E-04
Pu-239	5.04E-02
Pu-240	1.05E-05
Th-229	6.03E-10
Th-230	9.63E-08
Th-232	4.45E-21
U-233	5.37E-07
U-234	4.46E-04
U-235	1.15E-04
U-236	7.51E-12
U-238	5.08E-04

## Haz. Waste No(s).

D008

## TRUCON Code(s)

125/225

## Waste Stream Description

Waste consists of CH-TRU debris from Y-12

Waste Stream ID: PA-A015

## Appendix A

## TRU Waste Inventory Profile Report

Site	Paducah Gaseous Diffusion Plant	Final Waste Form	Inorganic Non-Metal	Waste Matrix Code	S5129	Handling	CH
Source Cat.	Other/Multiple Sources	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Transuranic - Debris			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
110-gal Drum w/ 1 - 85-gal Drum w/ 1 55-gal Dru	0.8	0.0	0.8
30-gal Drum	0.3	0.0	0.3
55-gal Drum Dir Ld w/ Liner	0.2	0.0	0.2
85-gal Drum w/ 1 - 55-gal Drum w/ Liner	1.9	0.0	1.9
<b>Current Form Total</b>	<b>3.3</b>	<b>0.0</b>	<b>3.3</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	2.1	0.0	2.1
<b>Final Form Total</b>	<b>2.1</b>	<b>0.0</b>	<b>2.1</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.00
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	0.00
Cellulosics	0.00
Rubber	0.00
Plastics	96.00
Cements	0.00
Inorganic Matrix	1950.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.94E-02
Np-237	6.28E-02
Pu-238	1.37E-03
Pu-239	1.90E-01
Th-229	5.11E-09
Th-230	4.90E-03
U-233	5.45E-06
U-234	8.03E-03
U-235	4.02E-04
U-238	8.74E-03

## Haz. Waste No(s).

D007, D008

## TRUCON Code(s)

125/225

## Waste Stream Description

Transuranic Debris

Waste Stream ID: PA-W014

## Appendix A

## TRU Waste Inventory Profile Report

Site	Paducah Gaseous Diffusion Plant	Final Waste Form	Solidified Inorganics	Waste Matrix Code	S3129	Handling	CH
Source Cat.	Other/Multiple Sources	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Transuranic Waste Liquid/Solids			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
30-gal Drum	0.2	0.0	0.2
5-gal Drum	0.0	0.0	0.0
85-gal Drum w/ 1 - 55-gal Drum w/ Liner	3.2	0.0	3.2
<b>Current Form Total</b>	<b>3.5</b>	<b>0.0</b>	<b>3.5</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	2.9	0.0	2.9
<b>Final Form Total</b>	<b>2.9</b>	<b>0.0</b>	<b>2.9</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.00
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	0.00
Cellulosics	0.00
Rubber	0.00
Plastics	0.00
Cements	1950.00
Inorganic Matrix	575.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	5.53E-02
Cs-137	3.34E-03
Np-237	7.10E-01
Pu-239	5.50E-02
Th-229	5.21E-08
Th-230	4.19E-06
U-233	5.85E-05
U-234	2.45E-02
U-235	1.34E-03
U-238	3.76E-02

## Haz. Waste No(s).

D007, D008

## TRUCON Code(s)

114/214

## Waste Stream Description

Transuranic Aqueous Liquids and Sludges

Waste Stream ID: **RL105-01**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Hanford (Richland) Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5490	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	105-C, 105KE, and 105-N Bldg TRU Mixed Debris	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	21.8	0.0	21.8
Box - Misc	74.7	0.0	74.7
<b>Current Form Total</b>	<b>96.5</b>	<b>0.0</b>	<b>96.5</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	27.2	0.0	27.2
SWB Dir Ld w/ Liner	94.5	0.0	94.5
<b>Final Form Total</b>	<b>121.7</b>	<b>0.0</b>	<b>121.7</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	74.89
Aluminum-based Metals/Alloys	3.82
Other Metals	0.00
Other Inorganic Materials	24.81
Cellulosics	15.27
Rubber	13.36
Plastics	26.71
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	148.42
Packaging Material, Plastic	9.21
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.84E-01
Am-243	6.05E-04
Cm-244	1.02E-02
Cs-137	1.43E+00
Np-237	2.66E-04
Pu-238	4.54E-02
Pu-239	1.45E-01
Pu-240	5.49E-02
Pu-241	5.69E+00
Pu-242	1.95E-05
Sr-90	5.07E-01
Th-229	4.89E-13
Th-230	1.15E-09
Th-232	1.25E-15
U-233	3.48E-09
U-234	4.27E-05
U-235	2.37E-05
U-236	8.43E-06
U-238	3.87E-04

## Haz. Waste No(s).

D006, D007, F001, F002, F003, F005

## TRUCON Code(s)

125/225

## Waste Stream Description

Combustible and noncombustible debris from Hanford production reactor storage basin operations. Combustible waste may include wood, plastics, paper, and rags. Noncombustible waste may include metals, glass, concrete, and absorbed liquids.

Waste Stream ID: **RL105-03**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Hanford (Richland) Site	Final Waste Form	Solidified Inorganics	Waste Matrix Code	S3150	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	NLOP sludge	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	69.9	0.0	69.9
<b>Current Form Total</b>	<b>69.9</b>	<b>0.0</b>	<b>69.9</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	69.9	0.0	69.9
<b>Final Form Total</b>	<b>69.9</b>	<b>0.0</b>	<b>69.9</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	36.09
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	12.59
Cellulosics	0.00
Rubber	0.00
Plastics	0.00
Cements	930.62
Inorganic Matrix	620.41
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	5.20E-01
Cs-137	1.62E+00
Np-237	9.13E-06
Pu-238	6.75E-02
Pu-239	3.38E-01
Pu-240	1.86E-01
Pu-241	7.69E+00
Pu-242	8.86E-05
Sr-90	8.10E+00
Th-229	1.62E-14
Th-230	1.61E-08
Th-232	1.23E-18
U-233	1.16E-10
U-234	5.98E-04
U-235	2.25E-05
U-236	1.65E-08
U-238	4.82E-04

No Hazardous Waste Numbers Provided

TRUCON Code(s)

111/211

## Waste Stream Description

Solidified inorganic CH TRU waste generated from Facility/Equipment Operation and Maintenance activities at the Reactor facility.

Waste Stream ID: **RL105-08**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Hanford (Richland) Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5490	Handling	RH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	105-C, 105KE, and 105-N Bldg RH-TRU Mixed Debris			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	5.0	0.0	5.0
85-gal Drum Dir Ld w/ Liner	0.6	0.0	0.6
Box - Misc	124.5	0.0	124.5
SWB Dir Ld w/ Liner	3.8	0.0	3.8
<b>Current Form Total</b>	<b>133.9</b>	<b>0.0</b>	<b>133.9</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	241.2	0.0	241.2
<b>Final Form Total</b>	<b>241.2</b>	<b>0.0</b>	<b>241.2</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	74.89
Aluminum-based Metals/Alloys	3.82
Other Metals	0.00
Other Inorganic Materials	24.81
Cellulosics	15.27
Rubber	13.36
Plastics	26.71
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	652.20
Packaging Material, Plastic	26.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.82E-02
Am-243	2.66E-08
Cm-244	7.70E-04
Cs-137	1.23E+00
Np-237	6.04E-07
Pu-238	1.07E-02
Pu-239	2.70E-02
Pu-240	1.41E-02
Pu-241	2.92E-01
Pu-242	5.89E-07
Sr-90	5.70E-01
Th-229	1.36E-14
Th-230	8.17E-10
Th-232	3.53E-08
U-233	4.12E-11
U-234	2.28E-05
U-235	1.15E-06
U-236	4.01E-06
U-238	2.77E-05

## Haz. Waste No(s).

D006, D007, D008, D011, F001, F002, F003, F005

## TRUCON Code(s)

325

## Waste Stream Description

Typically, drums contain both combustible and noncombustible waste items. Combustible waste may include wood, plastics, paper, and rags. Noncombustible waste items may include metals, glass, concrete, and absorbed liquids. If present, boxes typically contain larger waste items (e.g., whole or sectioned glove boxes, ducting, and process vessels). Both drums and boxes may be used for disposal of high-efficiency particulate air filters. The waste stream ranges from contaminated clothing to process equipment. The waste is generated from Facility/Equipment Operation and Maintenance Waste activities at the REACTOR FACILITY.

Waste Stream ID: **RL105-09**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Hanford (Richland) Site	Final Waste Form	Solidified Inorganics	Waste Matrix Code	S3100	Handling	RH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	105KE TRU RH mixed solidified inorganics			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
85-gal Drum Dir Ld w/ Liner	0.6	0.0	0.6
Uncontained	151.8	0.0	151.8
<b>Current Form Total</b>	<b>152.4</b>	<b>0.0</b>	<b>152.4</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	890.9	0.0	890.9
<b>Final Form Total</b>	<b>890.9</b>	<b>0.0</b>	<b>890.9</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	211.78
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	7.90
Cellulosics	0.00
Rubber	0.00
Plastics	0.00
Cements	777.38
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	652.20
Packaging Material, Plastic	26.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.03E-01
Cs-137	3.53E-01
Np-237	1.86E-05
Pu-238	1.45E-02
Pu-239	7.12E-02
Pu-240	3.91E-02
Pu-241	1.81E+00
Pu-242	1.88E-05
Sr-90	1.33E-01
Th-229	3.41E-14
Th-230	3.38E-09
Th-232	2.83E-14
U-233	2.43E-10
U-234	1.25E-04
U-235	4.72E-06
U-236	1.91E-04
U-238	1.02E-04

No Hazardous Waste Numbers Provided

TRUCON Code(s)

311

## Waste Stream Description

The waste is generated from Facility/Equipment Operation and Maintenance Waste activities at the REACTOR FACILITY.

Waste Stream ID: **RL200-01**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Hanford (Richland) Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5000	Handling	CH
Source Cat.	Other/Multiple Sources	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Misc 200 Area TRU Mixed Debris	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	52.6	0.0	52.6
85-gal Drum Dir Ld w/ Liner	9.3	0.0	9.3
Box - Misc	85.8	0.0	85.8
SWB Dir Ld w/ Liner	1.9	0.0	1.9
<b>Current Form Total</b>	<b>149.6</b>	<b>0.0</b>	<b>149.6</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	73.4	0.0	73.4
SWB Dir Ld w/ Liner	109.6	0.0	109.6
<b>Final Form Total</b>	<b>183.0</b>	<b>0.0</b>	<b>183.0</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	571.32
Aluminum-based Metals/Alloys	129.26
Other Metals	0.00
Other Inorganic Materials	33.83
Cellulosics	24.79
Rubber	8.55
Plastics	33.85
Cements	0.00
Inorganic Matrix	5.43
Organic Matrix	0.00
Soils/gravel	2.92
Vitrified	0.00
Packaging Material, Steel	144.39
Packaging Material, Plastic	15.56
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	3.82E-01
Cs-137	6.82E-04
Np-237	3.61E-07
Pu-238	6.34E-02
Pu-239	2.51E-01
Pu-240	1.43E-01
Pu-241	4.64E+00
Pu-242	5.62E-06
Pu-244	9.63E-13
Sr-90	9.25E-04
Th-229	2.18E-16
Th-230	8.17E-11
Th-232	2.14E-18
U-233	2.34E-12
U-234	3.30E-06
U-235	1.04E-07
U-236	2.08E-08
U-238	3.77E-07

## Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D022, D027, D028, D029, D030, D032, D033, D034, D035, D037, D038, D043, F001, F002, F003, F004, F005

## TRUCON Code(s)

125/225

## Waste Stream Description

Typically, drums contain both combustible and noncombustible waste items. Combustible waste may include wood, plastics, paper, and rags. Noncombustible waste items may include metals, glass, concrete, and absorbed liquids. If present, boxes typically contain larger waste items (e.g., whole or sectioned glove boxes, ducting, and process vessels). Both drums and boxes may be used for disposal of high-efficiency particulate air filters.



Waste Stream ID: **RL200-02**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Hanford (Richland) Site	Final Waste Form	Soils	Waste Matrix Code	S4000	Handling	CH
Source Cat.	Other/Multiple Sources	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Soil from Groundwater project.			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	8.7	0.0	8.7
85-gal Drum Dir Ld w/ Liner	3.5	0.0	3.5
<b>Current Form Total</b>	<b>12.3</b>	<b>0.0</b>	<b>12.3</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	11.6	0.0	11.6
<b>Final Form Total</b>	<b>11.6</b>	<b>0.0</b>	<b>11.6</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	69.44
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	30.42
Cellulosics	0.00
Rubber	0.00
Plastics	6.61
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	554.87
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	3.91E-01
Cs-137	8.98E-02
Np-237	6.56E-07
Pu-238	3.87E-03
Pu-239	6.15E-02
Pu-240	2.48E-02
Pu-241	6.24E-02
Pu-242	4.37E-06
Sr-90	2.72E-02
Th-229	2.64E-10
Th-230	1.83E-08
Th-232	4.99E-08
U-233	9.37E-07
U-234	3.73E-06
U-235	1.22E-07
U-236	1.80E-07
U-238	3.41E-06

## Haz. Waste No(s).

D005, D006, D007, D008, D009, D011, D018, D019, D021, D022, D027, D028, D030, D039, D040, D043, F001, F002, F003, F005

## TRUCON Code(s)

125/225

## Waste Stream Description

Crib and soil characterization and remediation wastes

Waste Stream ID: **RL201-01**

Appendix A

TRU Waste Inventory Profile Report

Site	Hanford (Richland) Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5000	Handling	CH
Source Cat.	Remediation/D&D Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	201C TRU Mixed Debris	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	11.6	0.0	11.6
<b>Current Form Total</b>	<b>11.6</b>	<b>0.0</b>	<b>11.6</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	11.6	0.0	11.6
<b>Final Form Total</b>	<b>11.6</b>	<b>0.0</b>	<b>11.6</b>

Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.00
Aluminum-based Metals/Alloys	0.00
Other Metals	28.57
Other Inorganic Materials	9.47
Cellulosics	66.67
Rubber	123.40
Plastics	33.33
Cements	0.00
Inorganic Matrix	0.96
Organic Matrix	0.00
Soils/gravel	325.10
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.41E+00
Cs-137	1.58E-01
Np-237	1.34E-05
Pu-238	1.15E-05
Pu-239	1.59E-01
Pu-240	3.91E-02
Pu-241	1.83E-05
Pu-242	3.42E-09
Sr-90	4.05E+00
Th-229	2.65E-13
Th-230	2.27E-12
Th-232	8.29E-18
U-233	4.97E-10
U-234	2.97E-08
U-235	2.66E-09
U-236	1.97E-08
U-238	6.08E-04

Haz. Waste No(s).

D007, D010

TRUCON Code(s)

125/225

Waste Stream Description

"The waste is generated from Remediation/D&D Waste activities at the PROCESS BUILDING, 3 HOT CELLS (DEMO'D). THE STREAM CONTAINS PLASTIC/POLYURETHANE, STAINLESS STEEL, PAPER/CARDBOARD, RUBBER, CLOTH/RAGS/NYLON."

Waste Stream ID: **RL202S-01**

Appendix A

TRU Waste Inventory Profile Report

Site	Hanford (Richland) Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5000	Handling	CH
Source Cat.	Remediation/D&D Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	202S TRU Mixed Debris	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	1.0	0.0	1.0
<b>Current Form Total</b>	<b>1.0</b>	<b>0.0</b>	<b>1.0</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	1.0	0.0	1.0
<b>Final Form Total</b>	<b>1.0</b>	<b>0.0</b>	<b>1.0</b>

Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	2.74
Aluminum-based Metals/Alloys	0.91
Other Metals	0.77
Other Inorganic Materials	0.00
Cellulosics	3.34
Rubber	0.77
Plastics	53.09
Cements	0.00
Inorganic Matrix	3.59
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	4.52E-02
Np-237	4.28E-07
Pu-238	3.50E-03
Pu-239	7.33E-02
Pu-240	1.76E-02
Pu-241	1.17E-01
Pu-242	8.11E-07
Th-229	6.71E-15
Th-230	4.71E-12
Th-232	1.29E-18
U-233	1.54E-11
U-234	1.04E-07
U-235	7.22E-10
U-236	5.23E-09
U-238	1.22E-15

Haz. Waste No(s).

D006, D007, D008, D009

TRUCON Code(s)

125/225

Waste Stream Description

The waste is generated from Remediation/D&D Waste activities at the REDOX CANYON AND SERVICE FACILITY.

Waste Stream ID: **RL209E-01**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Hanford (Richland) Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5490	Handling	CH
Source Cat.	R&D/R&D Laboratory Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	209E TRU Mixed Debris	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	23.7	0.0	23.7
85-gal Drum Dir Ld w/ Liner	3.9	0.0	3.9
Box - Misc	40.8	0.0	40.8
Uncontained	100.3	0.0	100.3
<b>Current Form Total</b>	<b>168.7</b>	<b>0.0</b>	<b>168.7</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	29.1	0.0	29.1
SWB Dir Ld w/ Liner	158.8	0.0	158.8
<b>Final Form Total</b>	<b>187.9</b>	<b>0.0</b>	<b>187.9</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	40.96
Aluminum-based Metals/Alloys	0.00
Other Metals	0.31
Other Inorganic Materials	7.11
Cellulosics	40.31
Rubber	17.10
Plastics	31.31
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	149.98
Packaging Material, Plastic	6.75
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	6.51E+00
Cs-137	7.69E-09
Np-237	9.23E-05
Pu-238	1.06E+00
Pu-239	8.84E+00
Pu-240	3.22E+00
Pu-241	1.37E+01
Pu-242	4.73E-04
Sr-90	6.88E-09
Th-229	5.68E-12
Th-230	4.04E-08
Th-232	1.04E-15
U-233	6.43E-09
U-234	2.47E-04
U-235	6.72E-06
U-236	2.01E-06
U-238	1.67E-05

## Haz. Waste No(s).

D006, D007, D008, D018, D019, D043, F002, F003, F005

## TRUCON Code(s)

125/225

## Waste Stream Description

Combustible and noncombustible debris waste generated during operations, cleanout, and D&D of the 209-E Critical Mass Laboratory (CML) at Hanford. Combustible waste may include wood, plastics, paper, and rags. Noncombustible waste may include metals, glass, concrete, and absorbed liquids.

Waste Stream ID: **RL209E-08**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Hanford (Richland) Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5490	Handling	RH
Source Cat.	R&D/R&D Laboratory Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	209E TRU RH Mixed Debris	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.2	0.0	0.2
<b>Current Form Total</b>	<b>0.2</b>	<b>0.0</b>	<b>0.2</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	0.9	0.0	0.9
<b>Final Form Total</b>	<b>0.9</b>	<b>0.0</b>	<b>0.9</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	1.69
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	0.56
Cellulosics	16.85
Rubber	2.25
Plastics	15.73
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	652.20
Packaging Material, Plastic	26.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	3.08E+00
Np-237	4.06E-05
Pu-238	5.15E-01
Pu-239	3.92E+00
Pu-240	1.37E+00
Pu-241	6.15E+00
Pu-242	1.71E-04
Th-229	2.42E-12
Th-230	3.24E-09
Th-232	4.43E-16
U-233	2.76E-09
U-234	3.34E-05
U-235	8.12E-08
U-236	8.55E-07
U-238	5.42E-13

## Haz. Waste No(s).

D006, D007, D018,  
D019, F002, F003,  
F005

## TRUCON Code(s)

325

## Waste Stream Description

Combustible and noncombustible debris waste generated during operations, cleanout, and D&D of the 209-E CML. Combustible waste may include wood, plastics, paper, and rags. Noncombustible waste items may include metals, glass, concrete, and absorbed liquids.

Waste Stream ID: **RL216Z-02**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Hanford (Richland) Site	Final Waste Form	Soils	Waste Matrix Code	S4000	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	216-Z-9 TRU Mixed Soil	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	73.0	0.0	73.0
85-gal Drum Dir Ld w/ Liner	114.6	0.0	114.6
Box - Misc	12.7	0.0	12.7
<b>Current Form Total</b>	<b>200.4</b>	<b>0.0</b>	<b>200.4</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	292.0	0.0	292.0
SWB Dir Ld w/ Liner	17.0	0.0	17.0
<b>Final Form Total</b>	<b>309.0</b>	<b>0.0</b>	<b>309.0</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	52.96
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	23.20
Cellulosics	0.00
Rubber	0.00
Plastics	5.04
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	423.18
Vitrified	0.00
Packaging Material, Steel	132.05
Packaging Material, Plastic	35.03
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	5.50E+00
Np-237	1.07E-05
Pu-238	1.40E+00
Pu-239	1.72E+01
Pu-240	4.11E+00
Pu-241	5.21E+01
Pu-242	2.45E-04
Th-229	2.48E-14
Th-230	4.58E-10
Th-232	7.52E-17
U-233	1.36E-10
U-234	2.02E-05
U-235	8.49E-08
U-236	6.09E-07
U-238	1.85E-13

## Haz. Waste No(s).

D005, D006, D007, D008, D009, D011, D039, F001, F002, F003, F005

## TRUCON Code(s)

125/225

## Waste Stream Description

RLM216Z9S waste consists of soil contaminated with large quantities of plutonium, americium, organics, and partially neutralized acid waste solutions that were removed from the 216-Z-9 Crib. Some of the original packaging material (e.g., 10-L stainless steel slip-lid cans, plastic bags, and vermiculite) is not considered waste due to deterioration and potential TRU contamination.

Waste Stream ID: RL221T-01

## Appendix A

## TRU Waste Inventory Profile Report

Site	Hanford (Richland) Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5000	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	221-T TRU Mixed Debris	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	5.0	0.0	5.0
85-gal Drum Dir Ld w/ Liner	0.6	0.0	0.6
<b>Current Form Total</b>	<b>5.6</b>	<b>0.0</b>	<b>5.6</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	6.9	0.0	6.9
<b>Final Form Total</b>	<b>6.9</b>	<b>0.0</b>	<b>6.9</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	435.40
Aluminum-based Metals/Alloys	68.62
Other Metals	0.00
Other Inorganic Materials	33.92
Cellulosics	82.82
Rubber	35.49
Plastics	84.40
Cements	0.00
Inorganic Matrix	11.83
Organic Matrix	0.00
Soils/gravel	14.20
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.11E-03
Np-237	1.13E-08
Pu-238	1.34E-04
Pu-239	6.69E-04
Pu-240	3.77E-04
Pu-241	2.70E-03
Pu-242	1.53E-08
Th-229	8.58E-16
Th-230	2.52E-12
Th-232	3.39E-19
U-233	8.13E-13
U-234	1.53E-08
U-235	2.31E-11
U-236	3.92E-10
U-238	8.05E-17

## Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D022, D027, D028, D029, D030, D034, D037, D043, F001, F002, F003, F004, F005

## TRUCON Code(s)

125/225

## Waste Stream Description

Typically, drums contain both combustible and noncombustible waste items. Combustible waste may include wood, plastics, paper, and rags. Noncombustible waste items may include metals, glass, concrete, and absorbed liquids. If present, boxes typically contain larger waste items (e.g., whole or sectioned glove boxes, ducting, and process vessels). Both drums and boxes may be used for disposal of high-efficiency particulate air filters.

Waste Stream ID: RL221U-01

## Appendix A

## TRU Waste Inventory Profile Report

Site	Hanford (Richland) Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5000	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	221U moved from RL200-01	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.2	0.0	0.2
<b>Current Form Total</b>	<b>0.2</b>	<b>0.0</b>	<b>0.2</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.2	0.0	0.2
<b>Final Form Total</b>	<b>0.2</b>	<b>0.0</b>	<b>0.2</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	214.60
Aluminum-based Metals/Alloys	29.89
Other Metals	8.98
Other Inorganic Materials	39.85
Cellulosics	22.91
Rubber	5.44
Plastics	20.21
Cements	0.00
Inorganic Matrix	3.79
Organic Matrix	0.01
Soils/gravel	4.02
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	5.05E-04
Cs-137	1.08E-01
Np-237	5.89E-09
Pu-238	4.30E-04
Pu-239	5.96E-04
Pu-240	5.65E-05
Sr-90	4.28E-02
Th-229	1.50E-11
Th-230	1.36E-07
Th-232	8.73E-14
U-233	4.58E-09
U-234	4.34E-04
U-235	1.45E-05
U-236	5.05E-05
U-238	3.18E-04

## Haz. Waste No(s).

D006, D007, D008, D009, D011, D027, D030, D032, D033, D034, D036, D037, F001, F002

## TRUCON Code(s)

125/225

## Waste Stream Description

Typically, drums contain both combustible and noncombustible waste items. Combustible waste may include wood, plastics, paper, and rags. Noncombustible waste items may include metals, glass, concrete, and absorbed liquids. If present, boxes typically contain larger waste items (e.g., whole or sectioned glove boxes, ducting, and process vessels). Both drums and boxes may be used for disposal of high-efficiency particulate air filters.



Waste Stream ID: RL222S-01

## Appendix A

## TRU Waste Inventory Profile Report

Site	Hanford (Richland) Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5000	Handling	CH
Source Cat.	R&D/R&D Laboratory Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	222S TRU Mixed Debris	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	42.2	0.0	42.2
85-gal Drum Dir Ld w/ Liner	29.0	0.0	29.0
Box - Misc	44.0	0.0	44.0
<b>Current Form Total</b>	<b>115.2</b>	<b>0.0</b>	<b>115.2</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	75.9	0.0	75.9
SWB Dir Ld w/ Liner	56.7	0.0	56.7
<b>Final Form Total</b>	<b>132.6</b>	<b>0.0</b>	<b>132.6</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	520.79
Aluminum-based Metals/Alloys	103.32
Other Metals	0.01
Other Inorganic Materials	34.67
Cellulosics	52.68
Rubber	20.80
Plastics	58.46
Cements	0.00
Inorganic Matrix	8.69
Organic Matrix	0.00
Soils/gravel	8.40
Vitrified	0.00
Packaging Material, Steel	140.51
Packaging Material, Plastic	21.69
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.59E-01
Am-243	1.35E-08
Cs-137	1.45E-03
Np-237	2.08E-05
Pu-238	1.06E-02
Pu-239	5.64E-02
Pu-240	2.59E-02
Pu-241	6.36E-01
Pu-242	1.72E-06
Sr-90	1.28E-03
Th-229	5.43E-06
Th-230	3.20E-12
Th-232	1.70E-19
U-233	1.93E-02
U-234	1.65E-07
U-235	3.44E-09
U-236	2.30E-09
U-238	9.46E-05

## Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D022, D030, D039, F001, F002, F003, F005

## TRUCON Code(s)

125/225

## Waste Stream Description

Typically, drums contain both combustible and noncombustible waste items. Combustible waste may include wood, plastics, paper, and rags. Noncombustible waste items may include metals, glass, concrete, and absorbed liquids. If present, boxes typically contain larger waste items (e.g., whole or sectioned glove boxes, ducting, and process vessels). Both drums and boxes may be used for disposal of high-efficiency particulate air filters. This waste is generated from Analytical laboratory Waste activities at the CONTROL LABORATORY.

Waste Stream ID: **RL222S-08**

Appendix A

TRU Waste Inventory Profile Report

Site	Hanford (Richland) Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5000	Handling	RH
Source Cat.	R&D/R&D Laboratory Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	222S TRU RH Mixed Debris	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.8	0.0	0.8
85-gal Drum Dir Ld w/ Liner	0.3	0.0	0.3
Box - Misc	0.1	0.0	0.1
<b>Current Form Total</b>	<b>1.3</b>	<b>0.0</b>	<b>1.3</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	3.6	0.0	3.6
<b>Final Form Total</b>	<b>3.6</b>	<b>0.0</b>	<b>3.6</b>

Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	266.20
Aluminum-based Metals/Alloys	42.03
Other Metals	0.00
Other Inorganic Materials	20.55
Cellulosics	50.50
Rubber	21.55
Plastics	51.72
Cements	0.00
Inorganic Matrix	7.40
Organic Matrix	0.00
Soils/gravel	8.72
Vitrified	0.00
Packaging Material, Steel	652.20
Packaging Material, Plastic	26.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	7.82E-02
Am-243	7.15E-03
Cs-137	8.40E-02
Np-237	3.27E-03
Pu-238	1.82E-02
Pu-239	1.80E+00
Pu-240	6.07E-02
Pu-241	5.06E+00
Pu-242	1.61E-04
Pu-244	6.53E-07
Sr-90	1.31E-01
Th-229	3.53E-05
Th-230	2.14E-12
Th-232	4.00E-19
U-233	1.26E-01
U-234	1.58E-07
U-235	6.55E-06
U-236	5.40E-09
U-238	1.10E-04

Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D039, F001, F002, F003, F004, F005

TRUCON Code(s)

325

Waste Stream Description

Typically, drums contain both combustible and noncombustible waste items. Combustible waste may include wood, plastics, paper, and rags. Noncombustible waste items may include metals, glass, concrete, and absorbed liquids. If present, boxes typically contain larger waste items (e.g., whole or sectioned glove boxes, ducting, and process vessels). Both drums and boxes may be used for disposal of high-efficiency particulate air filters. The waste is generated from Analytical Laboratory Waste activities at the CONTROL LABORATORY.

Waste Stream ID: **RL231Z-01**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Hanford (Richland) Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5490	Handling	CH
Source Cat.	R&D/R&D Laboratory Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	231-Z TRU Mixed Debris	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	83.4	0.0	83.4
85-gal Drum Dir Ld w/ Liner	50.6	0.0	50.6
Box - Misc	1174.2	0.0	1174.2
SWB Dir Ld w/ Liner	1.9	0.0	1.9
<b>Current Form Total</b>	<b>1310.1</b>	<b>0.0</b>	<b>1310.1</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	141.4	0.0	141.4
SWB Dir Ld w/ Liner	1470.4	0.0	1470.4
<b>Final Form Total</b>	<b>1611.9</b>	<b>0.0</b>	<b>1611.9</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	116.53
Aluminum-based Metals/Alloys	0.82
Other Metals	0.92
Other Inorganic Materials	9.16
Cellulosics	21.98
Rubber	5.45
Plastics	24.33
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	151.51
Packaging Material, Plastic	4.34
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.72E-01
Am-243	3.23E-06
Cs-137	3.89E-05
Np-237	1.47E-05
Pu-238	4.57E-02
Pu-239	3.91E-01
Pu-240	1.04E-01
Pu-241	1.27E+00
Pu-242	1.25E-05
Sr-90	3.54E-05
Th-229	3.01E-15
Th-230	4.99E-10
Th-232	7.62E-20
U-233	6.41E-11
U-234	5.55E-05
U-235	1.47E-06
U-236	3.09E-09
U-238	9.19E-06

## Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D019, D022, D027, D028, D029, D030, D034, D037, D043, F001, F002, F003, F004, F005

## TRUCON Code(s)

125/225

## Waste Stream Description

Combustible and noncombustible debris waste generated during operations, cleanout, and D&D activities of the 231-Z Building at Hanford. Combustible waste may include wood, plastics, paper, and rags. Noncombustible waste items may include metals, glass, concrete, and absorbed liquids. The 231-Z Building has also been called the 231-W Building, the Concentration Building, the Isolation Building, the Plutonium Metallurgical Laboratory, and the 231-Z Materials Engineering Laboratory.

Comprehensive Inventory Database ver. 1.00

Data ver. D.9.02

NOTE: Actual numerical values have been rounded for presentation purposes.

Waste Stream ID: **RL231Z-03**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Hanford (Richland) Site	Final Waste Form	Solidified Inorganics	Waste Matrix Code	S3100	Handling	CH
Source Cat.	R&D/R&D Laboratory Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	231Z TRU Mixed Solid Inorganic			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
85-gal Drum Dir Ld w/ Liner	1.6	0.0	1.6
<b>Current Form Total</b>	<b>1.6</b>	<b>0.0</b>	<b>1.6</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	1.5	0.0	1.5
<b>Final Form Total</b>	<b>1.5</b>	<b>0.0</b>	<b>1.5</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.00
Aluminum-based Metals/Alloys	0.00
Other Metals	78.74
Other Inorganic Materials	0.14
Cellulosics	4.93
Rubber	1.17
Plastics	15.44
Cements	0.00
Inorganic Matrix	70.03
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.93E-04
Np-237	2.54E-09
Pu-238	3.71E-05
Pu-239	1.79E-04
Pu-240	1.01E-04
Pu-241	9.18E-04
Pu-242	4.07E-09
Th-229	1.42E-16
Th-230	5.00E-13
Th-232	6.65E-20
U-233	1.57E-13
U-234	3.57E-09
U-235	5.29E-12
U-236	8.97E-11
U-238	1.84E-17

## Haz. Waste No(s).

D006, D007, D008,  
D009, F001, F002,  
F003, F005

## TRUCON Code(s)

122/222

## Waste Stream Description

Solidified inorganic waste generated during operations, cleanout, and D&D activities of the 231-Z Building, which has also been called the 231-W Building, the Concentration Building, the Isolation Building, the Plutonium Metallurgical Laboratory, and the 231-Z Materials Engineering Laboratory.

Waste Stream ID: **RL233S-01**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Hanford (Richland) Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5490	Handling	CH
Source Cat.	Other/Multiple Sources	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	233S TRU Mixed Debris	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	10.2	0.0	10.2
85-gal Drum Dir Ld w/ Liner	3.5	0.0	3.5
SWB Dir Ld w/ Liner	49.1	0.0	49.1
<b>Current Form Total</b>	<b>62.9</b>	<b>0.0</b>	<b>62.9</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	13.3	0.0	13.3
SWB Dir Ld w/ Liner	49.1	0.0	49.1
<b>Final Form Total</b>	<b>62.5</b>	<b>0.0</b>	<b>62.5</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	224.84
Aluminum-based Metals/Alloys	0.94
Other Metals	2.05
Other Inorganic Materials	5.12
Cellulosics	15.38
Rubber	3.33
Plastics	17.87
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.60
Vitrified	0.00
Packaging Material, Steel	148.66
Packaging Material, Plastic	8.83
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	4.85E-01
Cs-137	4.00E-05
Np-237	2.02E-04
Pu-238	9.38E-02
Pu-239	7.20E-01
Pu-240	2.34E-01
Pu-241	1.90E+00
Pu-242	7.07E-05
Sr-90	3.63E-05
Th-229	1.01E-12
Th-230	2.00E-10
Th-232	4.29E-18
U-233	4.30E-09
U-234	5.12E-06
U-235	1.30E-07
U-236	3.48E-08
U-238	1.89E-06

## Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, F002, F003

## TRUCON Code(s)

125/225

## Waste Stream Description

Combustible and noncombustible debris waste generated during cleanout, stabilization, and D&D activities of the 233-S Building (Plutonium Concentration Facility) at Hanford. Combustible waste may include wood, plastics, paper, and rags. Noncombustible waste items may include metals, glass, concrete, and absorbed liquids.

Waste Stream ID: **RL233S-03**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Hanford (Richland) Site	Final Waste Form	Solidified Inorganics	Waste Matrix Code	S3100	Handling	CH
Source Cat.	Remediation/D&D Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	233S solidified inorganic waste			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	4.4	0.0	4.4
<b>Current Form Total</b>	<b>4.4</b>	<b>0.0</b>	<b>4.4</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	5.6	0.0	5.6
<b>Final Form Total</b>	<b>5.6</b>	<b>0.0</b>	<b>5.6</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.04
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	499.07
Cellulosics	0.00
Rubber	0.04
Plastics	0.64
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.40E-01
Cs-137	1.22E-06
Np-237	1.80E-04
Pu-238	3.32E-02
Pu-239	1.34E-01
Pu-240	4.95E-02
Pu-241	5.33E-01
Pu-242	3.38E-05
Sr-90	8.96E-07
Th-229	1.52E-13
Th-230	4.82E-11
Th-232	3.25E-17
U-233	1.59E-09
U-234	2.77E-06
U-235	7.90E-08
U-236	3.31E-07
U-238	2.07E-06

## Haz. Waste No(s).

D004, D006, D007,  
D008, D009, D010,  
D011

## TRUCON Code(s)

122/222

## Waste Stream Description

Solidified inorganic CH TRU waste generated from Facility/Equipment Operation and Maintenance activities

Waste Stream ID: **RL300-01**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Hanford (Richland) Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5490	Handling	CH
Source Cat.	Other/Multiple Sources	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	300 Area TRU Mixed Debris	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	35.2	0.0	35.2
85-gal Drum Dir Ld w/ Liner	36.4	0.0	36.4
Box - Misc	90.2	0.0	90.2
SWB Dir Ld w/ Liner	3.8	0.0	3.8
<b>Current Form Total</b>	<b>165.6</b>	<b>0.0</b>	<b>165.6</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	65.5	0.0	65.5
SWB Dir Ld w/ Liner	117.2	0.0	117.2
<b>Final Form Total</b>	<b>182.7</b>	<b>0.0</b>	<b>182.7</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	72.49
Aluminum-based Metals/Alloys	0.27
Other Metals	13.97
Other Inorganic Materials	34.16
Cellulosics	21.24
Rubber	5.56
Plastics	39.45
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	145.36
Packaging Material, Plastic	14.04
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.97E+00
Am-243	3.12E-05
Cs-137	1.52E-04
Np-237	4.16E-05
Pu-238	5.44E-01
Pu-239	2.83E+00
Pu-240	1.28E+00
Pu-241	1.71E+01
Pu-242	2.42E-04
Sr-90	1.38E-04
Th-229	7.43E-14
Th-230	1.68E-08
Th-232	2.09E-06
U-233	5.32E-10
U-234	6.25E-04
U-235	2.71E-05
U-236	1.13E-07
U-238	5.64E-04

## Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D022, D027, D028, D029, D030, D034, D035, D037, D043, F001, F002, F003, F004, F005

## TRUCON Code(s)

125/225

## Waste Stream Description

Combustible and noncombustible debris waste generated from operations, including fuel fabrication, reactor operations, research and development, maintenance, and laboratory operations in the Hanford 300 Area. Combustible waste may include wood, plastics, paper, and rags. Noncombustible waste may include metals, glass, concrete, and absorbed liquids.

Waste Stream ID: **RL300-03**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Hanford (Richland) Site	Final Waste Form	Solidified Inorganics	Waste Matrix Code	S3100	Handling	CH
Source Cat.	Other/Multiple Sources	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	300 area solidified inorganics			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	2.5	0.0	2.5
85-gal Drum Dir Ld w/ Liner	0.3	0.0	0.3
<b>Current Form Total</b>	<b>2.8</b>	<b>0.0</b>	<b>2.8</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	3.1	0.0	3.1
<b>Final Form Total</b>	<b>3.1</b>	<b>0.0</b>	<b>3.1</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	2.59
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	0.00
Cellulosics	0.00
Rubber	0.00
Plastics	27.02
Cements	508.48
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.69E+00
Np-237	1.03E-05
Pu-238	6.18E-01
Pu-239	3.07E+00
Pu-240	1.65E+00
Pu-241	3.02E+01
Pu-242	2.39E-04
Th-229	7.49E-15
Th-230	5.32E-10
Th-232	4.83E-18
U-233	8.23E-11
U-234	3.13E-05
U-235	9.36E-07
U-236	9.77E-08
U-238	1.40E-05

## Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D022, D027, D028, D029, D030, D034, D037, D043, F001, F002, F003, F004, F005

## TRUCON Code(s)

122/222

## Waste Stream Description

Solidified inorganic CH TRU waste generated from operations, including fuel fabrication, reactor operations, research and development, maintenance, and laboratory operations in the Hanford 300 Area.



Waste Stream ID: **RL300-08**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Hanford (Richland) Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5000	Handling	RH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	300 Area TRU RH Mixed Debris			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	28.7	0.0	28.7
85-gal Drum Dir Ld w/ Liner	9.0	0.0	9.0
Box - Misc	201.6	0.0	201.6
SWB Dir Ld w/ Liner	3.8	0.0	3.8
Uncontained	189.0	0.0	189.0
<b>Current Form Total</b>	<b>432.1</b>	<b>0.0</b>	<b>432.1</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	682.6	0.0	682.6
<b>Final Form Total</b>	<b>682.6</b>	<b>0.0</b>	<b>682.6</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	61.00
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	467.03
Cellulosics	15.25
Rubber	0.00
Plastics	3.81
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	652.20
Packaging Material, Plastic	26.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.90E+00
Am-243	1.01E-02
Cm-244	1.48E+00
Cs-137	4.47E+02
Np-237	7.59E-05
Pu-238	7.40E-01
Pu-239	1.94E-01
Pu-240	2.25E-01
Pu-241	1.43E+01
Pu-242	7.75E-04
Pu-244	8.73E-14
Sr-90	2.66E+02
Th-229	1.34E-04
Th-230	4.54E-08
Th-232	8.88E-05
U-233	1.78E-01
U-234	6.40E-04
U-235	4.31E-06
U-236	4.64E-05
U-238	1.32E-04

## Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D027, D028, D029, D030, D033, D034, D036, D039, D040, D043, F001, F002, F003

## TRUCON Code(s)

325

## Waste Stream Description

Typically, drums contain both combustible and noncombustible waste items. Combustible waste may include wood, plastics, paper, and rags. Noncombustible waste items may include metals, glass, concrete, and absorbed liquids. If present, boxes typically contain larger waste items (e.g., whole or sectioned glove boxes, ducting, and process vessels). Both drums and boxes may be used for disposal of high-efficiency particulate air filters.

Waste Stream ID: **RL308-01**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Hanford (Richland) Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5000	Handling	CH
Source Cat.	Other/Multiple Sources	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	308 TRU Mixed Debris	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	17.9	0.0	17.9
85-gal Drum Dir Ld w/ Liner	5.5	0.0	5.5
Box - Misc	456.3	0.0	456.3
SWB Dir Ld w/ Liner	66.2	0.0	66.2
<b>Current Form Total</b>	<b>545.8</b>	<b>0.0</b>	<b>545.8</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	25.6	0.0	25.6
SWB Dir Ld w/ Liner	636.9	0.0	636.9
<b>Final Form Total</b>	<b>662.5</b>	<b>0.0</b>	<b>662.5</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	107.93
Aluminum-based Metals/Alloys	0.26
Other Metals	16.87
Other Inorganic Materials	17.08
Cellulosics	18.96
Rubber	6.05
Plastics	40.72
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	152.62
Packaging Material, Plastic	2.58
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	3.48E+01
Am-243	3.23E-06
Cs-137	3.17E-04
Np-237	2.82E-05
Pu-238	1.03E+01
Pu-239	1.65E+01
Pu-240	1.07E+01
Pu-241	2.11E+02
Pu-242	1.01E-02
Sr-90	2.87E-04
Th-229	2.44E-08
Th-230	4.97E-09
Th-232	9.23E-07
U-233	1.30E-04
U-234	3.06E-04
U-235	2.45E-05
U-236	6.34E-07
U-238	3.54E-04

## Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D019, D022, D027, D028, D029, D030, D034, D037, D043, F001, F002, F003, F004, F005

## TRUCON Code(s)

125/225

## Waste Stream Description

The RLM308D waste stream is a debris waste stream associated with the 308 Bldg. fuel development laboratory, fuel fabrication capabilities, and deactivation. Examples of waste items in this waste stream include plutonium alloys, casting skulls, clad plates, plastic mounts, plutonium-aluminum scrap, metal mounts, Pu pellets, rags, wipes, HEPA filters, batteries, stainless steel tubing, tape, thermometers, electrical wire, and a variety of other solid debris items.

Waste Stream ID: **RL325-01**

Appendix A

TRU Waste Inventory Profile Report

Site	Hanford (Richland) Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5000	Handling	CH
Source Cat.	R&D/R&D Laboratory Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	325 TRU Mixed Debris	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	564.7	0.0	564.7
85-gal Drum Dir Ld w/ Liner	173.2	0.0	173.2
Box - Misc	300.6	0.0	300.6
SWB Dir Ld w/ Liner	17.0	0.0	17.0
Uncontained	41.4	0.0	41.4
<b>Current Form Total</b>	<b>1097.0</b>	<b>0.0</b>	<b>1097.0</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	809.3	0.0	809.3
SWB Dir Ld w/ Liner	434.7	0.0	434.7
<b>Final Form Total</b>	<b>1244.0</b>	<b>0.0</b>	<b>1244.0</b>

Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	89.44
Aluminum-based Metals/Alloys	0.23
Other Metals	3.29
Other Inorganic Materials	25.68
Cellulosics	17.35
Rubber	5.49
Plastics	26.16
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.45
Vitrified	0.00
Packaging Material, Steel	138.73
Packaging Material, Plastic	24.49
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.68E+00
Am-243	4.15E-04
Cm-244	6.66E-03
Cs-137	8.60E-04
Np-237	1.85E-04
Pu-238	7.90E-01
Pu-239	1.60E+00
Pu-240	6.53E-01
Pu-241	1.10E+01
Pu-242	1.87E-04
Sr-90	8.57E-04
Th-229	9.29E-09
Th-230	5.20E-09
Th-232	1.69E-06
U-233	4.95E-05
U-234	2.91E-04
U-235	9.96E-06
U-236	3.87E-08
U-238	9.83E-05

Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D022, D027, D028, D029, D030, D033, D034, D035, D036, D037, D038, D039, D040, D043, F001, F002, F003, F004, F005
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TRUCON Code(s)

125/225
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Waste Stream Description

RLM325D waste stream is a debris waste stream containing waste materials associated with the 325 Bldg. laboratory operations, sample analysis, facility cleanout, and facility waste treatment. Operations waste includes any discarded item used in laboratory analysis (e.g., glass beakers, tweezers, latex gloves, plastic tape, glass pipettes) and facility cleanout (e.g., glassware, wipes, and equipment). Maintenance waste may include filters, wipes, and various types of gloves. Small amounts of solid sample residues (unused samples) generated during lab operations are present in the waste.

Waste Stream ID: **RL325-02**

Appendix A

TRU Waste Inventory Profile Report

Site	Hanford (Richland) Site	Final Waste Form	Soils	Waste Matrix Code	S4000	Handling	CH
Source Cat.	R&D/R&D Laboratory Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	325 TRU Soils/Absorbents			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.2	0.0	0.2
<b>Current Form Total</b>	<b>0.2</b>	<b>0.0</b>	<b>0.2</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.2	0.0	0.2
<b>Final Form Total</b>	<b>0.2</b>	<b>0.0</b>	<b>0.2</b>

Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	3.85
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	572.12
Cellulosics	0.00
Rubber	4.81
Plastics	122.12
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	3.41E-04
Np-237	1.15E-09
Pu-238	4.69E-05
Pu-239	9.73E-02
Pu-240	3.16E-03
Pu-241	7.53E-03
Pu-242	3.11E-07
Pu-244	1.45E-10
Th-229	1.40E-17
Th-230	2.13E-13
Th-232	7.50E-19
U-233	3.19E-14
U-234	2.58E-09
U-235	1.73E-09
U-236	1.69E-09
U-238	8.44E-16

No Hazardous Waste Numbers Provided

TRUCON Code(s)  
125/225

Waste Stream Description

Currently 1 drum of soils from the 6652H building.

Waste Stream ID: **RL325-03**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Hanford (Richland) Site	Final Waste Form	Solidified Inorganics	Waste Matrix Code	S3100	Handling	CH
Source Cat.	R&D/R&D Laboratory Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	325 TRU Mixed Solid Inorganic				Activity Concentrations Decayed to CY	2009	

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	4.6	0.0	4.6
85-gal Drum Dir Ld w/ Liner	10.9	0.0	10.9
<b>Current Form Total</b>	<b>15.5</b>	<b>0.0</b>	<b>15.5</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	13.9	0.0	13.9
<b>Final Form Total</b>	<b>13.9</b>	<b>0.0</b>	<b>13.9</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	103.75
Aluminum-based Metals/Alloys	0.00
Other Metals	0.01
Other Inorganic Materials	0.00
Cellulosics	2.01
Rubber	1.21
Plastics	13.47
Cements	557.28
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	52.87
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.91E+00
Am-243	8.69E-03
Cm-244	3.97E+00
Cs-137	8.47E-03
Np-237	3.17E-04
Pu-238	1.12E+00
Pu-239	3.03E+00
Pu-240	1.40E+00
Pu-241	3.76E+01
Pu-242	4.00E-04
Sr-90	9.14E-02
Th-229	1.76E-06
Th-230	1.98E-09
Th-232	9.22E-18
U-233	6.26E-03
U-234	7.81E-05
U-235	2.68E-06
U-236	1.24E-07
U-238	3.75E-05

## Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D022, D027, D028, D029, D030, D033, D034, D036, D037, D038, D039, D040, D043, F001, F002, F003, F004, F005

## TRUCON Code(s)

122/222

## Waste Stream Description

The mixed solid inorganic portion of the 325 waste stream is from liquid laboratory samples that were neutralized and solidified using nonhazardous absorbents. Small amounts of neutralized and solidified liquids from hazardous waste treatment may also be present in the waste. Corrosive liquids, such as hydrochloric acid and sodium hydroxide were neutralized and solidified in cement before being packaged as waste.

Waste Stream ID: **RL325-08**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Hanford (Richland) Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5000	Handling	RH
Source Cat.	R&D/R&D Laboratory Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	325 TRU RH Mixed Debris	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	25.2	0.0	25.2
85-gal Drum Dir Ld w/ Liner	2.9	0.0	2.9
Box - Misc	92.5	0.0	92.5
SWB Dir Ld w/ Liner	28.4	0.0	28.4
Uncontained	39.3	0.0	39.3
<b>Current Form Total</b>	<b>188.2</b>	<b>0.0</b>	<b>188.2</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	322.2	0.0	322.2
<b>Final Form Total</b>	<b>322.2</b>	<b>0.0</b>	<b>322.2</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	83.45
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	708.34
Cellulosics	0.00
Rubber	0.00
Plastics	16.69
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	652.20
Packaging Material, Plastic	26.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.07E+00
Am-243	1.38E-03
Cm-244	2.34E-01
Cs-137	2.23E+00
Np-237	9.67E-04
Pu-238	1.52E+00
Pu-239	1.84E-01
Pu-240	1.99E-01
Pu-241	1.26E+01
Pu-242	2.92E-04
Sr-90	1.58E+01
Th-229	2.15E-10
Th-230	1.30E-09
Th-232	5.39E-10
U-233	1.20E-07
U-234	3.56E-05
U-235	3.53E-06
U-236	4.94E-08
U-238	1.08E-05

## Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D022, D027, D028, D029, D030, D033, D034, D035, D036, D037, D038, D039, D040, D043, F001, F002, F003, F004, F005

## TRUCON Code(s)

325

## Waste Stream Description

Typically, drums contain both combustible and noncombustible waste items. Combustible waste may include wood, plastics, paper, and rags. Noncombustible waste items may include metals, glass, concrete, and absorbed liquids. If present, boxes typically contain larger waste items (e.g., whole or sectioned glove boxes, ducting, and process vessels). Both drums and boxes may be used for disposal of high-efficiency particulate air filters. The waste is generated from R&D/R&D Laboratory Waste activities at the RADIOCHEMISTRY BUILDING.

Comprehensive Inventory Database ver. 1.00

Data ver. D.9.02

NOTE: Actual numerical values have been rounded for presentation purposes.

Waste Stream ID: **RL325-09**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Hanford (Richland) Site	Final Waste Form	Solidified Inorganics	Waste Matrix Code	S3100	Handling	RH
Source Cat.	R&D/R&D Laboratory Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	325 TRU RH mixed solidified inorganics			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.2	0.0	0.2
<b>Current Form Total</b>	<b>0.2</b>	<b>0.0</b>	<b>0.2</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	0.9	0.0	0.9
<b>Final Form Total</b>	<b>0.9</b>	<b>0.0</b>	<b>0.9</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	67.42
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	572.25
Cellulosics	0.00
Rubber	0.00
Plastics	13.48
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	652.20
Packaging Material, Plastic	26.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.25E-02
Cm-244	7.30E-01
Cs-137	1.69E-03
Np-237	5.12E-08
Pu-238	4.63E-05
Pu-239	6.18E-05
Pu-240	6.81E-04
Pu-241	1.51E-03
Pu-242	2.25E-08
Sr-90	6.46E-04
Th-229	1.69E-16
Th-230	3.01E-14
Th-232	1.01E-20
U-233	7.71E-13
U-234	9.47E-10
U-235	1.13E-10
U-236	7.99E-11
U-238	5.62E-08

## Haz. Waste No(s).

D006, D008, D030,  
F001, F002, F003,  
F004, F005

## TRUCON Code(s)

322

## Waste Stream Description

The waste is generated from R&amp;D/R&amp;D Laboratory Waste activities at the RADIOCHEMISTRY BUILDING.

Waste Stream ID: **RL618-01**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Hanford (Richland) Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5000	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	618 - 10&11 Burial Grounds TRU Mixed Debris			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
Uncontained	249.4	0.0	249.4
<b>Current Form Total</b>	<b>249.4</b>	<b>0.0</b>	<b>249.4</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
SWB Dir Ld w/ Liner	249.5	0.0	249.5
<b>Final Form Total</b>	<b>249.5</b>	<b>0.0</b>	<b>249.5</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	13.39
Aluminum-based Metals/Alloys	0.00
Other Metals	24.10
Other Inorganic Materials	23.22
Cellulosics	1.79
Rubber	3.57
Plastics	3.57
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	8.93
Soils/gravel	8.93
Vitrified	0.00
Packaging Material, Steel	153.50
Packaging Material, Plastic	1.20
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	3.81E-02
Cs-137	2.27E+01
Np-237	3.70E-08
Pu-238	1.95E-04
Pu-239	8.30E-01
Pu-240	7.90E-02
Pu-241	6.06E-02
Pu-242	1.00E-06
Sr-90	2.07E+01
Th-229	2.27E-17
Th-230	2.28E-14
Th-232	5.20E-19
U-233	2.42E-13
U-234	1.68E-09
U-235	2.45E-09
U-236	7.02E-09
U-238	4.53E-16

No Hazardous Waste Numbers Provided

TRUCON Code(s)

125/225

## Waste Stream Description

Retrieved containerized debris waste from Burial Grounds 618 - 10 and 11

Comprehensive Inventory Database ver. 1.00

Data ver. D.9.02

NOTE: Actual numerical values have been rounded for presentation purposes.



Waste Stream ID: **RL618-07**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Hanford (Richland) Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5000	Handling	RH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	618 - 10&11 Burial Grounds TRU RH Non-mixed Debris			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
Uncontained	758.4	0.0	758.4
<b>Current Form Total</b>	<b>758.4</b>	<b>0.0</b>	<b>758.4</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	1359.9	0.0	1359.9
<b>Final Form Total</b>	<b>1359.9</b>	<b>0.0</b>	<b>1359.9</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	184.11
Aluminum-based Metals/Alloys	0.00
Other Metals	332.00
Other Inorganic Materials	356.00
Cellulosics	24.55
Rubber	49.10
Plastics	49.10
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	122.74
Soils/gravel	122.74
Vitrified	0.00
Packaging Material, Steel	652.20
Packaging Material, Plastic	26.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.67E-02
Cs-137	1.59E+01
Np-237	2.59E-08
Pu-238	1.37E-04
Pu-239	5.81E-01
Pu-240	5.54E-02
Pu-241	4.25E-02
Pu-242	7.01E-07
Sr-90	1.44E+01
Th-229	1.59E-17
Th-230	1.60E-14
Th-232	3.65E-19
U-233	1.69E-13
U-234	1.18E-09
U-235	1.72E-09
U-236	4.92E-09
U-238	3.17E-16

No Hazardous Waste Numbers Provided

TRUCON Code(s)

325

## Waste Stream Description

Retrieved containerized debris waste from Burial Grounds 618 - 10 and 11.

Comprehensive Inventory Database ver. 1.00

Data ver. D.9.02

NOTE: Actual numerical values have been rounded for presentation purposes.

Waste Stream ID: **RLARG-01**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Hanford (Richland) Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5000	Handling	CH
Source Cat.	R&D/R&D Laboratory Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Argonne Nat Lab TRU Mixed Debris			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	17.1	0.0	17.1
<b>Current Form Total</b>	<b>17.1</b>	<b>0.0</b>	<b>17.1</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	21.4	0.0	21.4
<b>Final Form Total</b>	<b>21.4</b>	<b>0.0</b>	<b>21.4</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	478.23
Aluminum-based Metals/Alloys	64.88
Other Metals	7.99
Other Inorganic Materials	32.07
Cellulosics	78.30
Rubber	33.56
Plastics	79.80
Cements	0.00
Inorganic Matrix	21.13
Organic Matrix	0.00
Soils/gravel	13.42
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	6.63E+00
Np-237	4.60E-05
Pu-238	9.06E-01
Pu-239	4.16E+00
Pu-240	2.35E+00
Pu-241	2.85E+01
Pu-242	9.48E-05
Th-229	1.65E-12
Th-230	7.56E-09
Th-232	6.78E-07
U-233	2.28E-09
U-234	6.79E-05
U-235	9.84E-08
U-236	1.67E-06
U-238	3.43E-13

No Hazardous Waste Numbers Provided

TRUCON Code(s)

125/225

## Waste Stream Description

Typically, drums contain both combustible and noncombustible waste items. Combustible waste may include wood, plastics, paper, and rags. Noncombustible waste items may include metals, glass, concrete, and absorbed liquids. If present, boxes typically contain larger waste items (e.g., whole or sectioned glove boxes, ducting, and process vessels). Both drums and boxes may be used for disposal of high-efficiency particulate air filters. The waste is generated from R&D/R&D Laboratory Waste activities at the Argonne National Laboratory - East (IL).

Waste Stream ID: **RLBART-01**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Hanford (Richland) Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5000	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Bartlesville TRU Mixed Debris	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.4	0.0	0.4
<b>Current Form Total</b>	<b>0.4</b>	<b>0.0</b>	<b>0.4</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.6	0.0	0.6
<b>Final Form Total</b>	<b>0.6</b>	<b>0.0</b>	<b>0.6</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	375.08
Aluminum-based Metals/Alloys	59.12
Other Metals	0.00
Other Inorganic Materials	29.22
Cellulosics	71.35
Rubber	30.58
Plastics	72.71
Cements	0.00
Inorganic Matrix	10.19
Organic Matrix	0.00
Soils/gravel	12.23
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

No Final Form Radionuclides Provided

No Hazardous Waste Numbers Provided

TRUCON Code(s) 125/225
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## Waste Stream Description

Typically, drums contain both combustible and noncombustible waste items. Combustible waste may include wood, plastics, paper, and rags. Noncombustible waste items may include metals, glass, concrete, and absorbed liquids. If present, boxes typically contain larger waste items (e.g., whole or sectioned glove boxes, ducting, and process vessels). Both drums and boxes may be used for disposal of high-efficiency particulate air filters.

Waste Stream ID: **RLBART-08**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Hanford (Richland) Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5000	Handling	RH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Bartlesville RH-TRU Mixed Debris	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.2	0.0	0.2
<b>Current Form Total</b>	<b>0.2</b>	<b>0.0</b>	<b>0.2</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	0.9	0.0	0.9
<b>Final Form Total</b>	<b>0.9</b>	<b>0.0</b>	<b>0.9</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	177.41
Aluminum-based Metals/Alloys	28.01
Other Metals	0.00
Other Inorganic Materials	13.70
Cellulosics	33.66
Rubber	14.36
Plastics	34.47
Cements	0.00
Inorganic Matrix	4.93
Organic Matrix	0.00
Soils/gravel	5.81
Vitrified	0.00
Packaging Material, Steel	652.20
Packaging Material, Plastic	26.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	5.03E-01
Np-237	4.67E-06
Pu-238	4.88E-07
Pu-239	3.80E-06
Pu-240	1.84E-06
Pu-241	5.48E-06
Pu-242	5.31E-10
Th-229	2.52E-13
Th-230	5.67E-15
Th-232	1.06E-21
U-233	2.86E-10
U-234	4.34E-11
U-235	1.05E-13
U-236	1.53E-12
U-238	2.24E-18

No Hazardous Waste Numbers Provided

TRUCON Code(s)

325

## Waste Stream Description

Typically, drums contain both combustible and noncombustible waste items. Combustible waste may include wood, plastics, paper, and rags. Noncombustible waste items may include metals, glass, concrete, and absorbed liquids. If present, boxes typically contain larger waste items (e.g., whole or sectioned glove boxes, ducting, and process vessels). Both drums and boxes may be used for disposal of high-efficiency particulate air filters.

Waste Stream ID: **RLBAT-01**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Hanford (Richland) Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5000	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Battelle Columbus TRU Mixed Debris	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	7.3	0.0	7.3
85-gal Drum Dir Ld w/ Liner	10.9	0.0	10.9
Box - Misc	20.4	0.0	20.4
<b>Current Form Total</b>	<b>38.6</b>	<b>0.0</b>	<b>38.6</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	18.1	0.0	18.1
SWB Dir Ld w/ Liner	26.5	0.0	26.5
<b>Final Form Total</b>	<b>44.6</b>	<b>0.0</b>	<b>44.6</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	561.11
Aluminum-based Metals/Alloys	118.24
Other Metals	0.00
Other Inorganic Materials	35.60
Cellulosics	42.97
Rubber	16.03
Plastics	50.31
Cements	0.00
Inorganic Matrix	7.58
Organic Matrix	0.00
Soils/gravel	6.35
Vitrified	0.00
Packaging Material, Steel	144.28
Packaging Material, Plastic	15.74
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.96E-01
Am-243	7.74E-08
Cs-137	5.10E-08
Np-237	2.62E-05
Pu-238	2.13E+00
Pu-239	1.88E-01
Pu-240	1.06E-01
Pu-241	1.41E+00
Pu-242	4.55E-06
Sr-90	4.67E-08
Th-229	2.45E-12
Th-230	3.08E-08
Th-232	1.07E-07
U-233	2.41E-09
U-234	2.26E-04
U-235	2.67E-06
U-236	6.92E-08
U-238	8.79E-06

## Haz. Waste No(s).

D005, D006, D007, D008, D009, D011, F001, F002, F003, F005

## TRUCON Code(s)

125/225

## Waste Stream Description

Typically, drums contain both combustible and noncombustible waste items. Combustible waste may include wood, plastics, paper, and rags. Noncombustible waste items may include metals, glass, concrete, and absorbed liquids. If present, boxes typically contain larger waste items (e.g., whole or sectioned glove boxes, ducting, and process vessels). Both drums and boxes may be used for disposal of high-efficiency particulate air filters.

Waste Stream ID: **RLBAT-08**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Hanford (Richland) Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5000	Handling	RH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	BATCO TRU RH Mixed Debris			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	4.2	0.0	4.2
Box - Misc	0.6	0.0	0.6
<b>Current Form Total</b>	<b>4.7</b>	<b>0.0</b>	<b>4.7</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	9.8	0.0	9.8
<b>Final Form Total</b>	<b>9.8</b>	<b>0.0</b>	<b>9.8</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	1046.51
Aluminum-based Metals/Alloys	0.00
Other Metals	9.35
Other Inorganic Materials	0.00
Cellulosics	0.00
Rubber	0.00
Plastics	0.00
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	652.20
Packaging Material, Plastic	26.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	4.52E-01
Am-243	2.93E-03
Cm-244	2.44E-01
Cs-137	6.72E+00
Np-237	9.66E-07
Pu-238	3.61E-01
Pu-239	4.90E-02
Pu-240	7.99E-02
Pu-241	4.59E+00
Pu-242	2.13E-04
Sr-90	4.39E+00
Th-229	8.56E-13
Th-230	2.86E-09
Th-232	2.79E-15
U-233	1.31E-09
U-234	4.91E-05
U-235	1.93E-06
U-236	8.08E-06
U-238	3.75E-05

## Haz. Waste No(s).

D006, D008, P015

## TRUCON Code(s)

325

## Waste Stream Description

Typically, drums contain both combustible and noncombustible waste items. Combustible waste may include wood, plastics, paper, and rags. Noncombustible waste items may include metals, glass, concrete, and absorbed liquids. If present, boxes typically contain larger waste items (e.g., whole or sectioned glove boxes, ducting, and process vessels). Both drums and boxes may be used for disposal of high-efficiency particulate air filters.

Waste Stream ID: **RLBET-08**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Hanford (Richland) Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5000	Handling	RH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Bettis TRU Mixed Debris	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.2	0.0	0.2
<b>Current Form Total</b>	<b>0.2</b>	<b>0.0</b>	<b>0.2</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	0.9	0.0	0.9
<b>Final Form Total</b>	<b>0.9</b>	<b>0.0</b>	<b>0.9</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	278.65
Aluminum-based Metals/Alloys	43.92
Other Metals	0.00
Other Inorganic Materials	21.71
Cellulosics	53.00
Rubber	22.72
Plastics	54.01
Cements	0.00
Inorganic Matrix	7.57
Organic Matrix	0.00
Soils/gravel	9.09
Vitrified	0.00
Packaging Material, Steel	652.20
Packaging Material, Plastic	26.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	5.59E-03
Cs-137	8.83E-05
Np-237	2.73E-08
Pu-238	2.43E-03
Pu-239	1.13E-02
Pu-240	6.37E-03
Pu-241	7.36E-02
Pu-242	2.55E-07
Th-229	6.72E-16
Th-230	2.22E-11
Th-232	2.92E-18
U-233	1.09E-12
U-234	1.91E-07
U-235	8.97E-06
U-236	4.73E-09
U-238	9.62E-16

No Hazardous Waste Numbers Provided

TRUCON Code(s)

325

## Waste Stream Description

Typically, drums contain both combustible and noncombustible waste items. Combustible waste may include wood, plastics, paper, and rags. Noncombustible waste items may include metals, glass, concrete, and absorbed liquids. Drums may be used for disposal of high-efficiency particulate air filters.

Comprehensive Inventory Database ver. 1.00

Data ver. D.9.02

NOTE: Actual numerical values have been rounded for presentation purposes.

Waste Stream ID: **RLBW-01**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Hanford (Richland) Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5490	Handling	CH
Source Cat.	Remediation/D&D Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Babcock and Wilcox TRU Mixed Debris	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	133.1	0.0	133.1
85-gal Drum Dir Ld w/ Liner	49.6	0.0	49.6
Box - Misc	127.5	0.0	127.5
<b>Current Form Total</b>	<b>310.2</b>	<b>0.0</b>	<b>310.2</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	174.5	0.0	174.5
SWB Dir Ld w/ Liner	160.7	0.0	160.7
<b>Final Form Total</b>	<b>335.2</b>	<b>0.0</b>	<b>335.2</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	62.44
Aluminum-based Metals/Alloys	0.27
Other Metals	6.41
Other Inorganic Materials	42.38
Cellulosics	24.55
Rubber	6.31
Plastics	26.78
Cements	0.00
Inorganic Matrix	1.40
Organic Matrix	0.22
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	141.68
Packaging Material, Plastic	19.84
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.66E+00
Am-243	9.53E-08
Cs-137	3.74E-04
Np-237	1.07E-05
Pu-238	3.83E-01
Pu-239	2.18E+00
Pu-240	1.04E+00
Pu-241	1.38E+01
Pu-242	1.85E-04
Sr-90	3.40E-04
Th-229	3.18E-08
Th-230	8.40E-10
Th-232	3.04E-18
U-233	1.70E-04
U-234	4.78E-05
U-235	1.22E-06
U-236	6.14E-08
U-238	2.63E-05

## Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D019, D030, D035, F001, F002, F003, F005

## TRUCON Code(s)

125/225

## Waste Stream Description

Combustible and noncombustible debris waste generated from operations and decontamination and decommissioning of the Babcock and Wilcox Parks Township Site Plutonium Facility. Combustible waste may include wood, plastics, paper, and rags. Noncombustible waste may include metals, glass, concrete, and absorbed liquids.



Waste Stream ID: **RLBW-03**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Hanford (Richland) Site	Final Waste Form	Solidified Inorganics	Waste Matrix Code	S3000	Handling	CH
Source Cat.	Remediation/D&D Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Babcock & Wilcox solidified inorganics			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.6	0.0	0.6
85-gal Drum Dir Ld w/ Liner	2.3	0.0	2.3
<b>Current Form Total</b>	<b>2.9</b>	<b>0.0</b>	<b>2.9</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	2.7	0.0	2.7
<b>Final Form Total</b>	<b>2.7</b>	<b>0.0</b>	<b>2.7</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	5.13
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	731.62
Cellulosics	0.00
Rubber	0.00
Plastics	20.52
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	5.29E+00
Cs-137	2.59E-07
Np-237	1.10E-05
Pu-238	1.17E+00
Pu-239	4.61E+00
Pu-240	2.58E+00
Pu-241	7.76E+01
Pu-242	2.00E-04
Sr-90	2.40E-07
Th-229	7.14E-15
Th-230	6.73E-10
Th-232	7.56E-18
U-233	8.10E-11
U-234	4.07E-05
U-235	1.15E-06
U-236	1.53E-07
U-238	1.71E-05

## Haz. Waste No(s).

D005, D006, D007, D008, D009, D011, D035, F001, F002, F003, F005

## TRUCON Code(s)

122/222

## Waste Stream Description

Solidified inorganic CH TRU waste generated from operations and decontamination and decommissioning of the Babcock and Wilcox Parks Township Site Plutonium Facility.

Waste Stream ID: **RLBW-08**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Hanford (Richland) Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5000	Handling	RH
Source Cat.	Remediation/D&D Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Babcock and Wilcox TRU RH Mixed Debris			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.2	0.0	0.2
85-gal Drum Dir Ld w/ Liner	0.3	0.0	0.3
<b>Current Form Total</b>	<b>0.5</b>	<b>0.0</b>	<b>0.5</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	1.8	0.0	1.8
<b>Final Form Total</b>	<b>1.8</b>	<b>0.0</b>	<b>1.8</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	2.86
Aluminum-based Metals/Alloys	0.00
Other Metals	0.14
Other Inorganic Materials	1.43
Cellulosics	19.17
Rubber	0.21
Plastics	12.88
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	652.20
Packaging Material, Plastic	26.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	5.18E-01
Np-237	3.28E-07
Pu-238	1.11E-01
Pu-239	4.27E-01
Pu-240	2.41E-01
Pu-241	8.43E+00
Pu-242	9.72E-06
Th-229	8.81E-17
Th-230	5.70E-12
Th-232	7.07E-19
U-233	1.42E-12
U-234	6.32E-07
U-235	8.42E-10
U-236	1.43E-08
U-238	2.93E-15

## Haz. Waste No(s).

D005, D006, D007, D008, D009, D011, F001, F002, F003, F005

## TRUCON Code(s)

325

## Waste Stream Description

Combustible and noncombustible debris waste generated from operations and decontamination and decommissioning of the Babcock and Wilcox Parks Township Site Plutonium Facility. Combustible waste may include wood, plastics, paper, and rags. Noncombustible waste may include metals, glass, concrete, and absorbed liquids.

Waste Stream ID: **RLCFF-01**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Hanford (Richland) Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5000	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Kerr McGee TRU Mixed Debris	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	6.2	0.0	6.2
85-gal Drum Dir Ld w/ Liner	2.9	0.0	2.9
<b>Current Form Total</b>	<b>9.1</b>	<b>0.0</b>	<b>9.1</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	8.7	0.0	8.7
<b>Final Form Total</b>	<b>8.7</b>	<b>0.0</b>	<b>8.7</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	435.15
Aluminum-based Metals/Alloys	2.03
Other Metals	0.90
Other Inorganic Materials	44.03
Cellulosics	48.93
Rubber	10.59
Plastics	69.29
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.11
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.68E+00
Cs-137	7.92E-08
Np-237	1.43E-06
Pu-238	3.32E-01
Pu-239	2.03E+00
Pu-240	1.03E+00
Pu-241	1.36E+01
Pu-242	1.67E-04
Sr-90	7.18E-08
Th-229	5.80E-16
Th-230	2.54E-10
Th-232	4.42E-09
U-233	7.74E-12
U-234	1.50E-05
U-235	4.63E-07
U-236	6.10E-08
U-238	1.23E-05

## Haz. Waste No(s).

D007, D008, D009,  
D040, F001, F002,  
F003

## TRUCON Code(s)

125/225

## Waste Stream Description

The CFFD (KM) waste stream consists of heterogeneous debris waste generated at the Cimarron Plutonium Fuel Fabrication Facility, operated by the Kerr-McGee Nuclear Corporation. This facility was a MOX fuel fabrication facility. The waste was generated during D&D activities at the facility. The waste includes typical D&D waste, e.g., paper, plastic, leaded rubber gloves, rags, glass, equipment, disassembled gloveboxes, and HEPA filters.

Waste Stream ID: **RLCFF-03**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Hanford (Richland) Site	Final Waste Form	Solidified Inorganics	Waste Matrix Code	S3000	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Kerr McGee TRU Mixed Solid Inorganic			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	4.6	0.0	4.6
<b>Current Form Total</b>	<b>4.6</b>	<b>0.0</b>	<b>4.6</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	4.8	0.0	4.8
<b>Final Form Total</b>	<b>4.8</b>	<b>0.0</b>	<b>4.8</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	31.66
Aluminum-based Metals/Alloys	0.00
Other Metals	0.08
Other Inorganic Materials	460.88
Cellulosics	8.57
Rubber	1.03
Plastics	35.60
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.36E+00
Np-237	9.20E-06
Pu-238	1.98E-01
Pu-239	1.50E+00
Pu-240	7.34E-01
Pu-241	3.64E+00
Pu-242	9.30E-05
Th-229	2.91E-13
Th-230	3.52E-09
Th-232	2.61E-16
U-233	4.29E-10
U-234	2.43E-05
U-235	5.10E-07
U-236	4.80E-07
U-238	1.02E-05

## Haz. Waste No(s).

D007, D008, D009,  
F001, F002, F003

## TRUCON Code(s)

122/222

## Waste Stream Description

The waste is generated from R&amp;D/R&amp;D Laboratory Waste activities at the Kerr McGee.

Waste Stream ID: **RLCH2-01**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Hanford (Richland) Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5000	Handling	CH
Source Cat.	Remediation/D&D Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Tank Farms TRU Mixed Debris	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.6	0.0	0.6
<b>Current Form Total</b>	<b>0.6</b>	<b>0.0</b>	<b>0.6</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.6	0.0	0.6
<b>Final Form Total</b>	<b>0.6</b>	<b>0.0</b>	<b>0.6</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	67.95
Aluminum-based Metals/Alloys	0.00
Other Metals	60.07
Other Inorganic Materials	34.97
Cellulosics	5.08
Rubber	0.03
Plastics	6.01
Cements	0.00
Inorganic Matrix	0.01
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.57E-01
Am-243	5.57E-05
Cs-137	3.47E+00
Np-237	1.77E-04
Pu-238	2.16E-02
Pu-239	1.68E-01
Pu-240	4.33E-02
Pu-241	2.94E-01
Sr-90	1.73E+01
Th-229	1.24E-05
Th-230	1.88E-11
Th-232	2.03E-18
U-233	1.65E-02
U-234	5.16E-07
U-235	2.35E-05
U-236	1.03E-08
U-238	5.11E-04

## Haz. Waste No(s).

D004, D006, D007, D008, D009, D010, F001, F002, F003, F004, F005

## TRUCON Code(s)

125/225

## Waste Stream Description

Typically, drums contain both combustible and noncombustible waste items. Combustible waste may include wood, plastics, paper, and rags. Noncombustible waste items may include metals, glass, concrete, and absorbed liquids. If present, boxes typically contain larger waste items (e.g., whole or sectioned glove boxes, ducting, and process vessels). Both drums and boxes may be used for disposal of high-efficiency particulate air filters.

Waste Stream ID: RLESG-01

## Appendix A

## TRU Waste Inventory Profile Report

Site	Hanford (Richland) Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5000	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Energy Systems Group TRU Mixed Debris	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	21.0	0.0	21.0
85-gal Drum Dir Ld w/ Liner	10.0	0.0	10.0
Box - Misc	14.9	0.0	14.9
<b>Current Form Total</b>	<b>45.9</b>	<b>0.0</b>	<b>45.9</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	30.2	0.0	30.2
SWB Dir Ld w/ Liner	18.9	0.0	18.9
<b>Final Form Total</b>	<b>49.1</b>	<b>0.0</b>	<b>49.1</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	240.93
Aluminum-based Metals/Alloys	0.71
Other Metals	8.28
Other Inorganic Materials	32.32
Cellulosics	30.76
Rubber	20.13
Plastics	39.76
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	139.55
Packaging Material, Plastic	23.21
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	8.10E-01
Cs-137	2.77E-03
Np-237	8.26E-06
Pu-238	1.10E-01
Pu-239	7.02E-01
Pu-240	3.19E-01
Pu-241	3.73E+00
Pu-242	5.96E-05
Sr-90	2.24E-03
Th-229	6.97E-14
Th-230	7.00E-08
Th-232	2.68E-07
U-233	2.21E-10
U-234	1.11E-03
U-235	2.84E-05
U-236	6.63E-08
U-238	2.77E-05

## Haz. Waste No(s).

D006, D007, D008,  
F001, F002, F003

## TRUCON Code(s)

125/225

## Waste Stream Description

RLETECD waste is composed of heterogeneous debris consisting of organic and inorganic debris material generated from glove box operations at the Energy Technology Engineering Center. Examples of waste items in this waste stream include cardboard tubes, cladding material, plastic, paper, glove port flanges, rubber air hoses, electrical connectors, wooden broom handles, plexiglass windows, steel plates, glove box ventilation piping and valves, lead, stainless steel, nickel-cadmium batteries, paint brushes and rollers, full-face respirators, sphincter cans, tools, copper, poly bottles, shoe covers, aluminum, vermiculite, soda ash, mixer components, glass, rags, molybdenum plates, drying ovens, MOX ash, gloves, fittings, gas line hookups, balance weights, cloth, pumps, castings, small quantities of neutralized/solidified liquids, and concrete.

Waste Stream ID: RLESG-08

## Appendix A

## TRU Waste Inventory Profile Report

Site	Hanford (Richland) Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5000	Handling	RH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Energy Systems Group RH TRU Mixed Debris	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	13.1	0.0	13.1
85-gal Drum Dir Ld w/ Liner	9.7	0.0	9.7
<b>Current Form Total</b>	<b>22.8</b>	<b>0.0</b>	<b>22.8</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	41.8	0.0	41.8
<b>Final Form Total</b>	<b>41.8</b>	<b>0.0</b>	<b>41.8</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	4.10
Aluminum-based Metals/Alloys	0.00
Other Metals	19.54
Other Inorganic Materials	1.85
Cellulosics	48.90
Rubber	5.80
Plastics	25.30
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	652.20
Packaging Material, Plastic	26.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.08E-01
Cs-137	3.02E-02
Np-237	2.31E-07
Pu-238	1.79E-02
Pu-239	8.15E-02
Pu-240	4.36E-02
Pu-241	1.13E+00
Pu-242	1.65E-06
Sr-90	2.85E-03
Th-229	7.33E-16
Th-230	1.16E-11
Th-232	1.57E-18
U-233	3.39E-12
U-234	3.65E-07
U-235	5.63E-10
U-236	9.05E-09
U-238	1.74E-15

## Haz. Waste No(s).

D006, D007, D008,  
F001, F002, F003

## TRUCON Code(s)

325

## Waste Stream Description

Typically, drums contain both combustible and noncombustible waste items. Combustible waste may include wood, plastics, paper, and rags. Noncombustible waste items may include metals, glass, concrete, and absorbed liquids. If present, boxes typically contain larger waste items (e.g., whole or sectioned glove boxes, ducting, and process vessels). Both drums and boxes may be used for disposal of high-efficiency particulate air filters. The waste is generated from R&D/R&D Laboratory Waste activities at the Rockwell International, Energy Systems Group (CA).

Waste Stream ID: RLEXX-01

## Appendix A

## TRU Waste Inventory Profile Report

Site	Hanford (Richland) Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5000	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Exxon TRU Mixed Debris	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	49.1	0.0	49.1
85-gal Drum Dir Ld w/ Liner	1.9	0.0	1.9
<b>Current Form Total</b>	<b>51.0</b>	<b>0.0</b>	<b>51.0</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	51.4	0.0	51.4
<b>Final Form Total</b>	<b>51.4</b>	<b>0.0</b>	<b>51.4</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	116.67
Aluminum-based Metals/Alloys	0.47
Other Metals	23.06
Other Inorganic Materials	75.63
Cellulosics	13.85
Rubber	3.19
Plastics	14.69
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	7.34E+00
Np-237	8.11E-05
Pu-238	2.24E+00
Pu-239	1.73E+00
Pu-240	1.47E+00
Pu-241	1.25E+01
Pu-242	1.80E-03
Th-229	5.84E-12
Th-230	6.49E-08
Th-232	7.88E-16
U-233	5.82E-09
U-234	3.59E-04
U-235	2.26E-06
U-236	1.18E-06
U-238	8.86E-05

## Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D019, D030

## TRUCON Code(s)

125/225

## Waste Stream Description

RLEXXOD waste is comprised of heterogeneous debris consisting of organic and inorganic debris material generated from processing, cleanout, and D&D of the Mixed Oxide Fuel Fabrication Plant. Examples of waste items in this waste stream include unirradiated MOX fuel pellets, MOX powder and scrap, cladding material, MOX standards, plastic, paper, gloves and glove rings, filters, cans, HEPA filters, cardboard, electrical components, tools, scales and scale parts, screens, paint brushes, bags, floor sweepings, pots and pans, tool boxes, steel plates and racks, grinder parts, pellet trays, conduit pipe, motors, filter and vacuum hoses, and rags.



Waste Stream ID: **RLFFTF-01**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Hanford (Richland) Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5490	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	FFTF TRU Mixed Debris			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.8	0.0	0.8
<b>Current Form Total</b>	<b>0.8</b>	<b>0.0</b>	<b>0.8</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.8	0.0	0.8
<b>Final Form Total</b>	<b>0.8</b>	<b>0.0</b>	<b>0.8</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	116.67
Aluminum-based Metals/Alloys	0.47
Other Metals	23.06
Other Inorganic Materials	75.63
Cellulosics	13.85
Rubber	3.19
Plastics	14.69
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	6.89E-02
Cs-137	2.43E-02
Np-237	2.22E-08
Pu-238	2.10E-02
Pu-239	6.39E-02
Pu-240	5.51E-02
Pu-241	5.65E-01
Th-229	1.51E-18
Th-230	2.69E-13
Th-232	4.03E-20
U-233	4.83E-14
U-234	5.97E-08
U-235	6.30E-11
U-236	1.63E-09

No Hazardous Waste Numbers Provided

TRUCON Code(s)

125/225

## Waste Stream Description

Combustible and noncombustible debris from Fast Flux Test Reactor operations, maintenance, and clean out. Combustible waste may include wood, plastics, paper, and rags. Noncombustible waste may include metals, glass, concrete, and absorbed liquids.

Waste Stream ID: **RLFFTF-08**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Hanford (Richland) Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5490	Handling	RH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	FFTF RH-TRU Mixed Debris			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
85-gal Drum Dir Ld w/ Liner	0.3	0.0	0.3
<b>Current Form Total</b>	<b>0.3</b>	<b>0.0</b>	<b>0.3</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	0.9	0.0	0.9
<b>Final Form Total</b>	<b>0.9</b>	<b>0.0</b>	<b>0.9</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	116.67
Aluminum-based Metals/Alloys	0.47
Other Metals	23.06
Other Inorganic Materials	75.63
Cellulosics	13.85
Rubber	3.19
Plastics	14.69
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	652.20
Packaging Material, Plastic	26.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.81E-03
Cs-137	6.26E-01
Pu-238	8.89E-04
Pu-239	2.64E-03
Pu-240	2.27E-03
Pu-241	4.64E-02
Sr-90	6.76E-04

No Hazardous Waste Numbers Provided

TRUCON Code(s)

325

## Waste Stream Description

Combustible and noncombustible debris from Fast Flux Test Reactor operations, maintenance, and clean out. Combustible waste may include wood, plastics, paper, and rags. Noncombustible waste may include metals, glass, concrete, and absorbed liquids.

Comprehensive Inventory Database ver. 1.00

Data ver. D.9.02

NOTE: Actual numerical values have been rounded for presentation purposes.

A - RL - 47

Waste Stream ID: **RLGEV-01**

Appendix A

TRU Waste Inventory Profile Report

Site	Hanford (Richland) Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5490	Handling	CH
Source Cat.	Remediation/D&D Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	GE San Jose and Vallecitos TRU Mixed Debris			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	16.6	0.0	16.6
85-gal Drum Dir Ld w/ Liner	14.2	0.0	14.2
Box - Misc	251.2	0.0	251.2
<b>Current Form Total</b>	<b>282.0</b>	<b>0.0</b>	<b>282.0</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	28.7	0.0	28.7
SWB Dir Ld w/ Liner	315.6	0.0	315.6
<b>Final Form Total</b>	<b>344.3</b>	<b>0.0</b>	<b>344.3</b>

Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	233.02
Aluminum-based Metals/Alloys	0.23
Other Metals	5.57
Other Inorganic Materials	21.80
Cellulosics	18.93
Rubber	4.63
Plastics	49.58
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	151.61
Packaging Material, Plastic	4.18
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	4.51E-01
Cs-137	1.31E-07
Np-237	2.15E-06
Pu-238	1.11E-01
Pu-239	5.81E-01
Pu-240	2.51E-01
Pu-241	4.17E+00
Pu-242	3.96E-05
Sr-90	1.19E-07
Th-229	4.19E-16
Th-230	2.63E-09
Th-232	1.84E-19
U-233	9.04E-12
U-234	2.92E-04
U-235	6.25E-06
U-236	7.45E-09
U-238	2.11E-04

Haz. Waste No(s).

D006, D007, D008, D011, D035

TRUCON Code(s)

125/225

Waste Stream Description

Combustible and noncombustible debris waste from decontamination and decommissioning of Building 102 at the GE-Vallecitos Nuclear Center. Combustible waste may include wood, plastics, paper, and rags. Noncombustible waste may include metals, glass, concrete, and absorbed liquids.

Waste Stream ID: **RLGEV-03**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Hanford (Richland) Site	Final Waste Form	Solidified Inorganics	Waste Matrix Code	S3000	Handling	CH
Source Cat.	Remediation/D&D Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	GE Vallecitos TRU Homogeneous Solids			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	1.2	0.0	1.2
<b>Current Form Total</b>	<b>1.2</b>	<b>0.0</b>	<b>1.2</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	1.7	0.0	1.7
<b>Final Form Total</b>	<b>1.7</b>	<b>0.0</b>	<b>1.7</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	4.72
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	0.24
Cellulosics	5.42
Rubber	0.04
Plastics	9.41
Cements	0.00
Inorganic Matrix	427.04
Organic Matrix	6.56
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	6.70E+00
Cs-137	2.50E-08
Np-237	5.04E-05
Pu-238	8.92E-01
Pu-239	4.16E+00
Pu-240	2.35E+00
Pu-241	2.59E+01
Pu-242	9.48E-05
Sr-90	2.28E-08
Th-229	2.13E-12
Th-230	9.17E-09
Th-232	1.16E-15
U-233	2.70E-09
U-234	7.44E-05
U-235	1.55E-07
U-236	1.81E-06
U-238	7.21E-07

## Haz. Waste No(s).

D006, D007, D008,  
D011, D035

## TRUCON Code(s)

122/222

## Waste Stream Description

Homogeneous solids from decontamination and decommissioning of Building 102 at the GE-Vallecitos Nuclear Center.

Waste Stream ID: **RLGEV-08**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Hanford (Richland) Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5000	Handling	RH
Source Cat.	Remediation/D&D Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	GE San Jose and Vallecitos TRU RH Mixed Debris			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
Box - Misc	5.3	0.0	5.3
<b>Current Form Total</b>	<b>5.3</b>	<b>0.0</b>	<b>5.3</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	9.8	0.0	9.8
<b>Final Form Total</b>	<b>9.8</b>	<b>0.0</b>	<b>9.8</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	744.80
Aluminum-based Metals/Alloys	117.60
Other Metals	0.00
Other Inorganic Materials	57.50
Cellulosics	141.30
Rubber	60.30
Plastics	144.70
Cements	0.00
Inorganic Matrix	20.70
Organic Matrix	0.00
Soils/gravel	24.40
Vitrified	0.00
Packaging Material, Steel	652.20
Packaging Material, Plastic	26.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Cs-137	1.01E+00
Sr-90	7.76E-01

No Hazardous Waste Numbers Provided

TRUCON Code(s)

325

## Waste Stream Description

Combustible and noncombustible debris waste from decontamination and decommissioning of Building 102 at the GE-Vallecitos Nuclear Center. Combustible waste may include wood, plastics, paper, and rags. Noncombustible waste may include metals, glass, concrete, and absorbed liquids.

Comprehensive Inventory Database ver. 1.00

Data ver. D.9.02

NOTE: Actual numerical values have been rounded for presentation purposes.

A - RL - 50

Waste Stream ID: **RLHAN-01**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Hanford (Richland) Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5490	Handling	CH
Source Cat.	Other/Multiple Sources	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Trench Designation waste stream			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	79.9	0.0	79.9
85-gal Drum Dir Ld w/ Liner	114.0	0.0	114.0
Box - Misc	270.8	0.0	270.8
<b>Current Form Total</b>	<b>464.6</b>	<b>0.0</b>	<b>464.6</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	189.7	0.0	189.7
SWB Dir Ld w/ Liner	340.2	0.0	340.2
<b>Final Form Total</b>	<b>529.9</b>	<b>0.0</b>	<b>529.9</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	21.36
Aluminum-based Metals/Alloys	0.07
Other Metals	4.98
Other Inorganic Materials	7.04
Cellulosics	18.58
Rubber	6.29
Plastics	22.45
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	145.37
Packaging Material, Plastic	14.02
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	4.15E-01
Cs-137	6.64E-08
Np-237	1.82E-06
Pu-238	5.91E-02
Pu-239	6.45E-01
Pu-240	2.25E-01
Pu-241	1.63E+00
Pu-242	3.38E-05
Sr-90	6.00E-08
Th-229	1.44E-14
Th-230	5.03E-11
Th-232	1.05E-17
U-233	4.44E-11
U-234	1.38E-06
U-235	5.09E-09
U-236	5.33E-08
U-238	4.08E-14

## Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D022, D027, D028, D029, D030, D034, D035, D037, D043, F001, F002, F003, F004, F005

## TRUCON Code(s)

125/225

## Waste Stream Description

Combustible and noncombustible TRU debris waste retrieved from the Hanford low-level burial grounds that cannot be identified or assigned to an original generator. Combustible waste may include wood, plastics, paper, absorbents, rubber, and rags. Noncombustible waste may include failed machinery, tools, glass, concrete, plumbing, and fixtures.

Waste Stream ID: **RLIAEA-01**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Hanford (Richland) Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5000	Handling	CH
Source Cat.	R&D/R&D Laboratory Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	International Atomic Energy Agency TRU Mixed Debris			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.2	0.0	0.2
<b>Current Form Total</b>	<b>0.2</b>	<b>0.0</b>	<b>0.2</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.2	0.0	0.2
<b>Final Form Total</b>	<b>0.2</b>	<b>0.0</b>	<b>0.2</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	552.00
Aluminum-based Metals/Alloys	87.00
Other Metals	0.00
Other Inorganic Materials	43.00
Cellulosics	105.00
Rubber	45.00
Plastics	107.00
Cements	0.00
Inorganic Matrix	15.00
Organic Matrix	0.00
Soils/gravel	18.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	3.83E+00
Cs-137	1.96E-04
Np-237	5.97E-05
Pu-238	2.12E+00
Pu-239	1.08E+00
Pu-240	1.40E+00
Pu-241	9.97E+00
Pu-242	2.06E-03
Th-229	4.45E-12
Th-230	1.62E-08
Th-232	5.43E-16
U-233	4.58E-09
U-234	1.52E-04
U-235	2.46E-08
U-236	9.55E-07
U-238	7.15E-12

No Hazardous Waste Numbers Provided

TRUCON Code(s)

125/225

## Waste Stream Description

Typically, drums contain both combustible and noncombustible waste items. Combustible waste may include wood, plastics, paper, and rags. Noncombustible waste items may include metals, glass, concrete, and absorbed liquids. If present, boxes typically contain larger waste items (e.g., whole or sectioned glove boxes, ducting, and process vessels). Both drums and boxes may be used for disposal of high-efficiency particulate air filters.

Waste Stream ID: **RLMLB-08**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Hanford (Richland) Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5000	Handling	RH
Source Cat.	R&D/R&D Laboratory Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Lawrence Berkeley Nat Lab TRU Mixed Debris			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.2	0.0	0.2
<b>Current Form Total</b>	<b>0.2</b>	<b>0.0</b>	<b>0.2</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	0.9	0.0	0.9
<b>Final Form Total</b>	<b>0.9</b>	<b>0.0</b>	<b>0.9</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	281.31
Aluminum-based Metals/Alloys	44.34
Other Metals	0.00
Other Inorganic Materials	21.91
Cellulosics	53.51
Rubber	22.93
Plastics	54.53
Cements	0.00
Inorganic Matrix	7.64
Organic Matrix	0.00
Soils/gravel	9.17
Vitrified	0.00
Packaging Material, Steel	652.20
Packaging Material, Plastic	26.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	9.46E-02
Cm-244	1.60E+01
Np-237	7.38E-07
Pu-238	1.24E-02
Pu-239	5.85E-02
Pu-240	1.13E-01
Pu-241	3.47E-01
Pu-242	1.33E-06
Th-229	3.35E-14
Th-230	1.34E-10
Th-232	3.57E-17
U-233	4.10E-11
U-234	1.06E-06
U-235	1.56E-09
U-236	6.40E-08
U-238	5.43E-15

## Haz. Waste No(s).

D005, D007, D008, D009, D011, D019, F002, F003, F005

## TRUCON Code(s)

325

## Waste Stream Description

Typically, drums contain both combustible and noncombustible waste items. Combustible waste may include wood, plastics, paper, and rags. Noncombustible waste items may include metals, glass, concrete, and absorbed liquids. Drums may be used for disposal of high-efficiency particulate air filters.



Waste Stream ID: **RLMLL-01**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Hanford (Richland) Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5000	Handling	CH
Source Cat.	R&D/R&D Laboratory Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Lawrence Livermore TRU Mixed Debris	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.4	0.0	0.4
85-gal Drum Dir Ld w/ Liner	0.3	0.0	0.3
<b>Current Form Total</b>	<b>0.7</b>	<b>0.0</b>	<b>0.7</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	1.0	0.0	1.0
<b>Final Form Total</b>	<b>1.0</b>	<b>0.0</b>	<b>1.0</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	393.83
Aluminum-based Metals/Alloys	62.07
Other Metals	0.00
Other Inorganic Materials	30.68
Cellulosics	74.91
Rubber	32.11
Plastics	76.34
Cements	0.00
Inorganic Matrix	10.70
Organic Matrix	0.00
Soils/gravel	12.84
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	8.33E-02
Np-237	8.72E-07
Pu-238	9.91E-03
Pu-239	5.00E-02
Pu-240	2.82E-02
Pu-241	1.93E-01
Pu-242	1.14E-06
Th-229	7.01E-14
Th-230	1.99E-10
Th-232	2.68E-17
U-233	6.45E-11
U-234	1.17E-06
U-235	1.78E-09
U-236	3.01E-08
U-238	6.19E-15

## Haz. Waste No(s).

D006, D007, D008,  
D011

## TRUCON Code(s)

125/225

## Waste Stream Description

Typically, drums contain both combustible and noncombustible waste items. Combustible waste may include wood, plastics, paper, and rags. Noncombustible waste items may include metals, glass, concrete, and absorbed liquids. If present, boxes typically contain larger waste items (e.g., whole or sectioned glove boxes, ducting, and process vessels). Both drums and boxes may be used for disposal of high-efficiency particulate air filters.

Waste Stream ID: RLPFP-01

## Appendix A

## TRU Waste Inventory Profile Report

Site	Hanford (Richland) Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5490	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	2345Z TRU Mixed Debris	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	1087.6	0.0	1087.6
85-gal Drum Dir Ld w/ Liner	529.4	0.0	529.4
Box - Misc	5042.4	0.0	5042.4
SWB Dir Ld w/ Liner	54.8	0.0	54.8
Uncontained	5920.7	0.0	5920.7
<b>Current Form Total</b>	<b>12634.9</b>	<b>0.0</b>	<b>12634.9</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	1681.1	0.0	1681.1
SWB Dir Ld w/ Liner	12279.3	0.0	12279.3
<b>Final Form Total</b>	<b>13960.4</b>	<b>0.0</b>	<b>13960.4</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	59.00
Aluminum-based Metals/Alloys	0.37
Other Metals	1.80
Other Inorganic Materials	12.01
Cellulosics	20.23
Rubber	11.44
Plastics	28.21
Cements	0.00
Inorganic Matrix	0.03
Organic Matrix	0.00
Soils/gravel	0.20
Vitrified	0.00
Packaging Material, Steel	150.77
Packaging Material, Plastic	5.51
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.81E+00
Am-243	5.16E-07
Cs-137	1.31E-05
Np-237	4.62E-05
Pu-238	7.79E-01
Pu-239	5.58E+00
Pu-240	1.84E+00
Pu-241	2.42E+01
Pu-242	3.50E-04
Sr-90	1.19E-05
Th-229	4.66E-08
Th-230	4.55E-09
Th-232	3.91E-08
U-233	2.48E-04
U-234	2.55E-04
U-235	7.17E-06
U-236	1.09E-07
U-238	1.31E-04

## Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D022, D027, D028, D030, D032, D035, D036, D037, D043, F001, F002, F003, F004, F005

## TRUCON Code(s)

125/225

## Waste Stream Description

Combustible and noncombustible debris waste generated from operations, maintenance, and D&D activities at the Plutonium Finishing Plant (PFP), which includes the 234-5Z, 232-Z, 236-Z, 2736-ZB, 242-Z, and 291-Z Buildings. Combustible waste may include wood, plastics, paper, and rags. Noncombustible waste items may include metals, glass, concrete, and absorbed liquids.

Comprehensive Inventory Database ver. 1.00

Data ver. D.9.02

NOTE: Actual numerical values have been rounded for presentation purposes.

Waste Stream ID: RLPFP-02

Appendix A

TRU Waste Inventory Profile Report

Site	Hanford (Richland) Site	Final Waste Form	Soils	Waste Matrix Code	S4000	Handling	CH
Source Cat.	Other/Multiple Sources	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	PFP Contaminated Soil			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	2.1	0.0	2.1
<b>Current Form Total</b>	<b>2.1</b>	<b>0.0</b>	<b>2.1</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	2.1	0.0	2.1
<b>Final Form Total</b>	<b>2.1</b>	<b>0.0</b>	<b>2.1</b>

Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	3.79
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	541.55
Cellulosics	3.85
Rubber	1.44
Plastics	6.78
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	5.81E-01
Cs-137	3.07E-04
Np-237	1.51E-05
Pu-238	9.19E-02
Pu-239	2.06E+00
Pu-240	5.40E-01
Pu-241	3.33E+00
Pu-242	4.10E-05
Sr-90	2.79E-04
Th-229	1.21E-14
Th-230	4.74E-12
Th-232	1.58E-18
U-233	1.30E-10
U-234	5.26E-07
U-235	4.07E-09
U-236	3.20E-08
U-238	1.24E-14

Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D019, D022, D030, F001, F002, F003, F005
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TRUCON Code(s)

125/225
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Waste Stream Description

Soil characterization and remediation wastes.

Waste Stream ID: RLPFP-03

## Appendix A

## TRU Waste Inventory Profile Report

Site	Hanford (Richland) Site	Final Waste Form	Solidified Inorganics	Waste Matrix Code	S3100	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	PFP Absorbed Plutonium Nitrate Solutions			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	14.1	0.0	14.1
85-gal Drum Dir Ld w/ Liner	0.3	0.0	0.3
<b>Current Form Total</b>	<b>14.5</b>	<b>0.0</b>	<b>14.5</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	14.8	0.0	14.8
<b>Final Form Total</b>	<b>14.8</b>	<b>0.0</b>	<b>14.8</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	4.66
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	0.24
Cellulosics	5.34
Rubber	0.04
Plastics	9.28
Cements	0.00
Inorganic Matrix	421.03
Organic Matrix	6.46
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	8.06E+00
Cs-137	3.48E-06
Np-237	5.08E-05
Pu-238	1.97E+00
Pu-239	1.45E+01
Pu-240	4.62E+00
Pu-241	5.26E+01
Pu-242	9.21E-04
Sr-90	3.16E-06
Th-229	1.02E-07
Th-230	4.87E-08
Th-232	8.46E-17
U-233	2.18E-04
U-234	1.10E-03
U-235	5.76E-06
U-236	6.85E-07
U-238	4.82E-05

## Haz. Waste No(s).

D004, D006, D007,  
D008, D010, D011

## TRUCON Code(s)

114/214

## Waste Stream Description

Solidified inorganic waste generated from operations, maintenance, and D&D activities at the 325 Laboratory, the 209-E Critical Mass Laboratory, and the Plutonium Reclamation Facility (Bldg 236-Z) at the Plutonium Finishing Plant (PFP).

Waste Stream ID: RLPFP-04

## Appendix A

## TRU Waste Inventory Profile Report

Site	Hanford (Richland) Site	Final Waste Form	Solidified Inorganics	Waste Matrix Code	S3900	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	PFP Comprehensive Homogenous Solids			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	12.3	0.0	12.3
85-gal Drum Dir Ld w/ Liner	2.6	0.0	2.6
<b>Current Form Total</b>	<b>14.8</b>	<b>0.0</b>	<b>14.8</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	15.2	0.0	15.2
<b>Final Form Total</b>	<b>15.2</b>	<b>0.0</b>	<b>15.2</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	24.83
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	117.90
Cellulosics	24.02
Rubber	0.15
Plastics	28.93
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	3.45E+00
Cs-137	6.59E-08
Np-237	9.54E-06
Pu-238	1.03E+00
Pu-239	1.14E+01
Pu-240	3.06E+00
Pu-241	6.61E+01
Pu-242	2.41E-04
Sr-90	6.11E-08
Th-229	1.36E-14
Th-230	1.24E-10
Th-232	2.01E-17
U-233	1.03E-10
U-234	9.02E-06
U-235	3.92E-08
U-236	2.72E-07
U-238	8.30E-08

## Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D019, D022, D030, D032, D033, F001, F002, F003, F005

## TRUCON Code(s)

112/212

## Waste Stream Description

Homogenous solids generated from operations, maintenance, and D&D activities at the Plutonium Finishing Plant (PFP), which includes the 234-5Z, 232-Z, 236-Z, 2736-ZB, 242-Z, and 291-Z Buildings.

Waste Stream ID: RLPFP-08

## Appendix A

## TRU Waste Inventory Profile Report

Site	Hanford (Richland) Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5490	Handling	RH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	2345Z RH-TRU Mixed Debris	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	15.2	0.0	15.2
85-gal Drum Dir Ld w/ Liner	7.4	0.0	7.4
<b>Current Form Total</b>	<b>22.6</b>	<b>0.0</b>	<b>22.6</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	40.9	0.0	40.9
<b>Final Form Total</b>	<b>40.9</b>	<b>0.0</b>	<b>40.9</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	22.12
Aluminum-based Metals/Alloys	0.00
Other Metals	12.34
Other Inorganic Materials	10.85
Cellulosics	2.64
Rubber	6.22
Plastics	15.68
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	652.20
Packaging Material, Plastic	26.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.04E+00
Cs-137	3.26E-06
Np-237	6.31E-06
Pu-238	2.55E-01
Pu-239	1.47E+00
Pu-240	5.35E-01
Pu-241	1.05E+01
Pu-242	9.77E-05
Sr-90	2.96E-06
Th-229	4.80E-15
Th-230	1.12E-10
Th-232	1.61E-18
U-233	5.21E-11
U-234	6.97E-06
U-235	1.87E-07
U-236	3.22E-08
U-238	3.64E-07

## Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D019, D022, D030, F001, F002, F003, F005

## TRUCON Code(s)

325

## Waste Stream Description

Combustible and noncombustible debris waste generated from operations, maintenance, and D&D activities at the Plutonium Finishing Plant (PFP), which includes the 234-5Z, 232-Z, 236-Z, 2736-ZB, 242-Z, and 291-Z Buildings. Combustible waste may include wood, plastics, paper, and rags. Noncombustible waste items may include metals, glass, concrete, and absorbed liquids.

Comprehensive Inventory Database ver. 1.00

Data ver. D.9.02

NOTE: Actual numerical values have been rounded for presentation purposes.

Waste Stream ID: RLPURX-01

## Appendix A

## TRU Waste Inventory Profile Report

Site	Hanford (Richland) Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5490	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	202A and 202AL TRU Mixed Debris	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	144.1	0.0	144.1
85-gal Drum Dir Ld w/ Liner	16.1	0.0	16.1
Box - Misc	315.2	0.0	315.2
SWB Dir Ld w/ Liner	1.9	0.0	1.9
<b>Current Form Total</b>	<b>477.4</b>	<b>0.0</b>	<b>477.4</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	189.5	0.0	189.5
SWB Dir Ld w/ Liner	396.9	0.0	396.9
<b>Final Form Total</b>	<b>586.4</b>	<b>0.0</b>	<b>586.4</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	38.31
Aluminum-based Metals/Alloys	0.14
Other Metals	0.43
Other Inorganic Materials	8.66
Cellulosics	15.63
Rubber	14.94
Plastics	24.87
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.02
Vitrified	0.00
Packaging Material, Steel	146.16
Packaging Material, Plastic	12.77
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	4.14E+00
Am-243	6.31E-07
Cs-137	1.48E-02
Np-237	1.15E-05
Pu-238	1.87E+00
Pu-239	9.81E+00
Pu-240	3.74E+00
Pu-241	1.11E+02
Pu-242	8.79E-04
Sr-90	1.35E-02
Th-229	4.36E-07
Th-230	1.94E-10
Th-232	1.10E-17
U-233	2.33E-03
U-234	1.61E-05
U-235	1.98E-07
U-236	2.22E-07
U-238	2.94E-06

## Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D019, D030, F001, F002, F003, F005

## TRUCON Code(s)

125/225

## Waste Stream Description

Combustible and noncombustible debris waste generated from facility/equipment operation and maintenance, and analytical laboratory waste activities at the Plutonium Uranium Extraction Facility. Combustible waste may include wood, plastics, paper, and rags. Noncombustible waste may include metals, glass, concrete, and absorbed liquids.

Comprehensive Inventory Database ver. 1.00

Data ver. D.9.02

NOTE: Actual numerical values have been rounded for presentation purposes.

A - RL - 60

Waste Stream ID: RLPURX-08

## Appendix A

## TRU Waste Inventory Profile Report

Site	Hanford (Richland) Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5490	Handling	RH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	202A & 202AL TRU RH Non-mixed Debris			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	20.0	0.0	20.0
Box - Misc	11.5	0.0	11.5
<b>Current Form Total</b>	<b>31.5</b>	<b>0.0</b>	<b>31.5</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	57.9	0.0	57.9
<b>Final Form Total</b>	<b>57.9</b>	<b>0.0</b>	<b>57.9</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	14.84
Aluminum-based Metals/Alloys	0.00
Other Metals	0.37
Other Inorganic Materials	11.13
Cellulosics	7.42
Rubber	25.23
Plastics	18.55
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	652.20
Packaging Material, Plastic	26.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	4.56E-02
Np-237	2.88E-07
Pu-238	2.05E-03
Pu-239	6.42E-03
Pu-240	1.53E-03
Pu-241	4.09E-01
Pu-242	8.34E-08
Th-229	1.12E-14
Th-230	2.96E-11
Th-232	1.08E-18
U-233	1.44E-11
U-234	2.04E-07
U-235	1.96E-10
U-236	1.41E-09
U-238	3.90E-16

## Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011

## TRUCON Code(s)

325

## Waste Stream Description

Combustible and noncombustible debris waste generated from facility/equipment operation and maintenance, and analytical laboratory waste activities at the Plutonium Uranium Extraction Facility. Combustible waste may include wood, plastics, paper, and rags. Noncombustible waste may include metals, glass, concrete, and absorbed liquids.



Waste Stream ID: RLRFET-01

## Appendix A

## TRU Waste Inventory Profile Report

Site	Hanford (Richland) Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5000	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Rocky Flats TRU Mixed Debris	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	198.0	0.0	198.0
85-gal Drum Dir Ld w/ Liner	6.8	0.0	6.8
<b>Current Form Total</b>	<b>204.8</b>	<b>0.0</b>	<b>204.8</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	253.1	0.0	253.1
<b>Final Form Total</b>	<b>253.1</b>	<b>0.0</b>	<b>253.1</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	362.70
Aluminum-based Metals/Alloys	50.51
Other Metals	15.18
Other Inorganic Materials	67.36
Cellulosics	38.72
Rubber	9.19
Plastics	34.16
Cements	0.00
Inorganic Matrix	6.41
Organic Matrix	0.01
Soils/gravel	6.80
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	3.13E-01
Np-237	2.56E-06
Pu-238	3.49E-03
Pu-239	1.61E-02
Pu-240	9.11E-03
Pu-241	1.05E-01
Pu-242	3.68E-07
Th-229	1.09E-13
Th-230	3.18E-11
Th-232	4.17E-18
U-233	1.39E-10
U-234	2.74E-07
U-235	3.98E-10
U-236	6.76E-09
U-238	1.39E-15

No Hazardous Waste Numbers Provided

TRUCON Code(s)

125/225

## Waste Stream Description

Typically, drums contain both combustible and noncombustible waste items. Combustible waste may include wood, plastics, paper, and rags. Noncombustible waste items may include metals, glass, concrete, and absorbed liquids. If present, boxes typically contain larger waste items (e.g., whole or sectioned glove boxes, ducting, and process vessels). Both drums and boxes may be used for disposal of high-efficiency particulate air filters.

Waste Stream ID: **RLSAN-01**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Hanford (Richland) Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5000	Handling	CH
Source Cat.	Remediation/D&D Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	GE San Jose TRU Mixed Debris			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	2.5	0.0	2.5
<b>Current Form Total</b>	<b>2.5</b>	<b>0.0</b>	<b>2.5</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	3.1	0.0	3.1
<b>Final Form Total</b>	<b>3.1</b>	<b>0.0</b>	<b>3.1</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	233.45
Aluminum-based Metals/Alloys	0.23
Other Metals	5.58
Other Inorganic Materials	21.84
Cellulosics	18.96
Rubber	4.64
Plastics	49.67
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.28E+01
Np-237	9.60E-05
Pu-238	1.70E+00
Pu-239	7.93E+00
Pu-240	4.48E+00
Pu-241	4.94E+01
Pu-242	1.79E-04
Th-229	4.04E-12
Th-230	1.68E-08
Th-232	2.22E-15
U-233	5.14E-09
U-234	1.39E-04
U-235	2.03E-07
U-236	3.45E-06
U-238	7.04E-13

No Hazardous Waste Numbers Provided

TRUCON Code(s)

125/225

## Waste Stream Description

Combustible and noncombustible debris waste from decontamination and decommissioning at the GE-San Jose Nuclear Center. Combustible waste may include wood, plastics, paper, and rags. Noncombustible waste may include metals, glass, concrete, and absorbed liquids.

Waste Stream ID: RLSWO-01

## Appendix A

## TRU Waste Inventory Profile Report

Site	Hanford (Richland) Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5490	Handling	CH
Source Cat.	Other/Multiple Sources	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	SWOC TRU Mixed Debris	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	24.3	0.0	24.3
85-gal Drum Dir Ld w/ Liner	13.5	0.0	13.5
Box - Misc	52.7	0.0	52.7
SWB Dir Ld w/ Liner	17.0	0.0	17.0
Uncontained	59.9	0.0	59.9
<b>Current Form Total</b>	<b>167.4</b>	<b>0.0</b>	<b>167.4</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	33.9	0.0	33.9
SWB Dir Ld w/ Liner	143.6	0.0	143.6
<b>Final Form Total</b>	<b>177.5</b>	<b>0.0</b>	<b>177.5</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	23.79
Aluminum-based Metals/Alloys	0.39
Other Metals	0.70
Other Inorganic Materials	5.33
Cellulosics	14.65
Rubber	52.13
Plastics	54.76
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	149.17
Packaging Material, Plastic	8.04
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	4.58E-01
Am-243	7.04E-08
Cs-137	3.62E-05
Np-237	5.67E-06
Pu-238	1.32E-01
Pu-239	1.01E+00
Pu-240	3.33E-01
Pu-241	4.61E+00
Pu-242	5.02E-05
Sr-90	3.29E-05
Th-229	4.48E-15
Th-230	1.42E-10
Th-232	9.74E-19
U-233	4.82E-11
U-234	8.30E-06
U-235	2.79E-07
U-236	1.97E-08
U-238	2.03E-07

## Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D022, D027, D028, D029, D030, D034, D035, D037, D043, F001, F002, F003, F004, F005

## TRUCON Code(s)

125/225

## Waste Stream Description

Combustible and noncombustible debris waste generated from operations, maintenance, and clean up at the Hanford Solid Waste Operations Complex facilities. Combustible waste may include wood, plastics, paper, and rags. Noncombustible waste may include metals, glass, concrete, and absorbed liquids.

Waste Stream ID: **RLSWO-08**

Appendix A

TRU Waste Inventory Profile Report

Site	Hanford (Richland) Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5490	Handling	RH
Source Cat.	Other/Multiple Sources	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	SWOC RH-TRU Mixed Debris			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.2	0.0	0.2
<b>Current Form Total</b>	<b>0.2</b>	<b>0.0</b>	<b>0.2</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	0.9	0.0	0.9
<b>Final Form Total</b>	<b>0.9</b>	<b>0.0</b>	<b>0.9</b>

Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	23.79
Aluminum-based Metals/Alloys	0.39
Other Metals	0.70
Other Inorganic Materials	5.33
Cellulosics	14.65
Rubber	52.13
Plastics	54.76
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	652.20
Packaging Material, Plastic	26.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	4.97E+00
Np-237	3.21E-06
Pu-238	5.12E-01
Pu-239	7.60E+00
Pu-240	2.90E+00
Pu-241	1.97E+01
Pu-242	3.21E-04
Th-229	8.72E-16
Th-230	2.64E-11
Th-232	8.49E-18
U-233	1.40E-11
U-234	2.93E-06
U-235	1.50E-08
U-236	1.72E-07
U-238	9.70E-14

Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D019, D030, F001, F002, F003, F004, F005
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TRUCON Code(s)

325
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Waste Stream Description

Combustible and noncombustible debris waste generated from operations, maintenance, and clean up at the Hanford Solid Waste Operations Complex facilities. Combustible waste may include wood, plastics, paper, and rags. Noncombustible waste may include metals, glass, concrete, and absorbed liquids.

Waste Stream ID: **RLWAR-01**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Hanford (Richland) Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5490	Handling	CH
Source Cat.	Remediation/D&D Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Ward TRU Mixed Debris	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	67.6	0.0	67.6
85-gal Drum Dir Ld w/ Liner	11.9	0.0	11.9
Box - Misc	328.3	0.0	328.3
<b>Current Form Total</b>	<b>407.9</b>	<b>0.0</b>	<b>407.9</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	80.7	0.0	80.7
SWB Dir Ld w/ Liner	412.0	0.0	412.0
<b>Final Form Total</b>	<b>492.7</b>	<b>0.0</b>	<b>492.7</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	91.07
Aluminum-based Metals/Alloys	0.10
Other Metals	2.03
Other Inorganic Materials	14.72
Cellulosics	20.18
Rubber	5.93
Plastics	29.39
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	149.78
Packaging Material, Plastic	7.06
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	7.35E-01
Cs-137	4.10E-08
Np-237	4.27E-06
Pu-238	2.65E-01
Pu-239	3.33E-01
Pu-240	2.12E-01
Pu-241	5.19E+00
Pu-242	1.66E-04
Sr-90	3.72E-08
Th-229	3.23E-15
Th-230	2.77E-09
Th-232	1.33E-08
U-233	3.51E-11
U-234	1.55E-04
U-235	5.74E-06
U-236	1.26E-08
U-238	3.17E-05

## Haz. Waste No(s).

D007, D008, D009,  
D035, F001, F002,  
F003, F005

## TRUCON Code(s)

125/225

## Waste Stream Description

Combustible and noncombustible debris waste generated during decontamination and decommissioning of the Westinghouse Advanced Reactors Division facility in Cheswick, PA. Combustible waste may include wood, plastics, paper, and rags. Noncombustible waste may include metals, glass, concrete, and absorbed liquids.

Waste Stream ID: RLWAR-03

## Appendix A

## TRU Waste Inventory Profile Report

Site	Hanford (Richland) Site	Final Waste Form	Solidified Inorganics	Waste Matrix Code	S3100	Handling	CH
Source Cat.	Remediation/D&D Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	WARD solidified inorganics			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	4.8	0.0	4.8
85-gal Drum Dir Ld w/ Liner	1.6	0.0	1.6
<b>Current Form Total</b>	<b>6.4</b>	<b>0.0</b>	<b>6.4</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	7.3	0.0	7.3
<b>Final Form Total</b>	<b>7.3</b>	<b>0.0</b>	<b>7.3</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.80
Aluminum-based Metals/Alloys	0.00
Other Metals	0.11
Other Inorganic Materials	0.00
Cellulosics	3.20
Rubber	0.00
Plastics	41.39
Cements	401.34
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	6.15E-01
Cs-137	1.06E-07
Np-237	1.96E-06
Pu-238	1.66E-01
Pu-239	5.44E-01
Pu-240	2.64E-01
Pu-241	5.63E+00
Pu-242	1.03E-04
Th-229	1.38E-15
Th-230	1.92E-09
Th-232	7.74E-19
U-233	1.53E-11
U-234	1.07E-04
U-235	5.22E-06
U-236	1.57E-08
U-238	5.00E-06

## Haz. Waste No(s).

D007, D008, D009,  
D035, F001, F002,  
F003, F005

## TRUCON Code(s)

122/222

## Waste Stream Description

Solidified inorganic waste generated during decontamination and decommissioning of the Westinghouse Advanced Reactors Division facility in Cheswick, PA.

Waste Stream ID: **RLWTP-08**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Hanford (Richland) Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5000	Handling	RH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Waste Treatment Plant TRU RH Mixed Debris			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
Uncontained	0.0	71.9	71.9
<b>Current Form Total</b>	<b>0.0</b>	<b>71.9</b>	<b>71.9</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	0.0	88.1	88.1
<b>Final Form Total</b>	<b>0.0</b>	<b>88.1</b>	<b>88.1</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	315.08
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	83.55
Cellulosics	0.00
Rubber	0.00
Plastics	0.00
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	652.20
Packaging Material, Plastic	26.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.39E-02
Am-243	1.68E-06
Cs-137	5.76E+00
Np-237	9.27E-06
Pu-238	5.83E-04
Pu-239	9.54E-03
Pu-240	1.63E-03
Pu-241	1.43E-02
Pu-242	1.11E-07
Sr-90	4.25E+00
Th-229	1.95E-08
Th-230	1.22E-09
Th-232	1.07E-16
U-233	6.91E-05
U-234	4.53E-05
U-235	1.94E-06
U-236	7.24E-07
U-238	4.31E-05

No Hazardous Waste Numbers Provided

TRUCON Code(s)

325

## Waste Stream Description

RH debris waste generated from future WTP operations

Comprehensive Inventory Database ver. 1.00

Data ver. D.9.02

NOTE: Actual numerical values have been rounded for presentation purposes.

A - RL - 68

Waste Stream ID: SA-T001

## Appendix A

## TRU Waste Inventory Profile Report

Site	Sandia National Laboratory - Albuquerque	Final Waste Form	Heterogeneous	Waste Matrix Code	S5490	Handling	CH
Source Cat.	R&D/R&D Laboratory Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	CH Lovelace ITRI Debris Waste Stream	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	6.0	0.0	6.0
85-gal Drum w/ 1 - 55-gal Drum w/ Liner	0.3	0.0	0.3
<b>Current Form Total</b>	<b>6.4</b>	<b>0.0</b>	<b>6.4</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	6.2	0.0	6.2
<b>Final Form Total</b>	<b>6.2</b>	<b>0.0</b>	<b>6.2</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	100.00
Aluminum-based Metals/Alloys	3.00
Other Metals	6.00
Other Inorganic Materials	15.00
Cellulosics	3.00
Rubber	5.00
Plastics	5.00
Cements	15.00
Inorganic Matrix	40.00
Organic Matrix	5.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	3.07E-01
Am-243	9.55E-06
Cm-244	8.34E-01
Cs-137	1.32E-06
Np-237	1.23E-04
Pu-238	1.43E-01
Pu-239	6.75E-01
Pu-240	9.72E-02
Pu-241	5.29E-01
Pu-242	2.32E-05
Sr-90	1.31E-06
Th-229	8.89E-08
Th-230	1.04E-08
Th-232	6.28E-04
U-233	6.32E-05
U-234	8.06E-05
U-235	2.78E-06
U-236	3.14E-05
U-238	9.02E-05

No Hazardous Waste Numbers Provided

TRUCON Code(s)

125/225

## Waste Stream Description

Heterogeneous CH debris laboratory waste from Pu aerosol preparation experiments



Waste Stream ID: SA-W134

## Appendix A

## TRU Waste Inventory Profile Report

Site	Sandia National Laboratory - Albuquerque	Final Waste Form	Heterogeneous	Waste Matrix Code	S5490	Handling	CH
Source Cat.	R&D/R&D Laboratory Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	CH Transuranic Debris Waste from Hot Cell Facility			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
10-gal Drum	0.0	0.0	0.0
14-gal Drum	0.1	0.0	0.1
15-gal Drum	0.1	0.0	0.1
30-gal Drum	0.1	0.0	0.1
55-gal Drum Dir Ld w/o Liner	2.7	0.0	2.7
5-gal Drum	0.1	0.0	0.1
85-gal Drum w/ 1 - 55-gal Drum w/o Liner	0.3	0.0	0.3
<b>Current Form Total</b>	<b>3.4</b>	<b>0.0</b>	<b>3.4</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	4.0	0.0	4.0
<b>Final Form Total</b>	<b>4.0</b>	<b>0.0</b>	<b>4.0</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	80.00
Aluminum-based Metals/Alloys	5.00
Other Metals	10.00
Other Inorganic Materials	1.00
Cellulosics	2.00
Rubber	2.00
Plastics	5.00
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	0.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.96E+00
Am-243	3.36E-05
Cm-244	4.37E-04
Cs-137	1.94E-02
Np-237	4.77E-03
Pu-238	8.88E-02
Pu-239	1.58E-01
Pu-240	3.41E-02
Pu-241	2.10E-01
Pu-242	5.57E-05
Sr-90	3.83E-02
Th-229	1.48E-10
Th-230	2.56E-07
Th-232	2.15E-05
U-233	2.55E-07
U-234	2.37E-03
U-235	8.66E-05
U-236	1.21E-08
U-238	1.03E-04

No Hazardous Waste Numbers Provided

TRUCON Code(s)

125/225

## Waste Stream Description

Heterogeneous CH Debris from SNL/NM Hot Cell Facility D&amp;D project and other miscellaneous waste generators.

Waste Stream ID: SA-W134M

## Appendix A

## TRU Waste Inventory Profile Report

Site	Sandia National Laboratory - Albuquerque	Final Waste Form	Heterogeneous	Waste Matrix Code	S5490	Handling	CH
Source Cat.	R&D/R&D Laboratory Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Mixed-TRU Debris Waste from SNL/NM - Contact Handled			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
2.5-gal Drum	0.0	0.0	0.0
2-gallon can	0.0	0.0	0.0
30-gal Drum	0.1	0.0	0.1
55-gal Drum Dir Ld w/o Liner	0.8	0.0	0.8
5-gal Drum	0.1	0.0	0.1
<b>Current Form Total</b>	<b>1.1</b>	<b>0.0</b>	<b>1.1</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	1.2	0.0	1.2
<b>Final Form Total</b>	<b>1.2</b>	<b>0.0</b>	<b>1.2</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	80.00
Aluminum-based Metals/Alloys	5.00
Other Metals	10.00
Other Inorganic Materials	1.00
Cellulosics	2.00
Rubber	2.00
Plastics	5.00
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	0.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	9.04E-02
Cs-137	1.30E-02
Np-237	3.79E-06
Pu-238	2.39E-03
Pu-239	1.73E-02
Pu-240	2.51E-03
Pu-241	4.11E-03
Pu-242	3.66E-07
Sr-90	7.25E-03
Th-229	1.06E-13
Th-230	3.79E-08
Th-232	3.50E-08
U-233	1.89E-10
U-234	3.51E-04
U-235	1.92E-05
U-236	8.93E-10
U-238	1.73E-05

## Haz. Waste No(s).

D006, D009, D011

## TRUCON Code(s)

125/225

## Waste Stream Description

Heterogeneous CH mixed debris from SNL/NM Hot Cell Facility D&amp;D project and other Miscellaneous waste generators.

Waste Stream ID: SA-W135

## Appendix A

## TRU Waste Inventory Profile Report

Site	Sandia National Laboratory - Albuquerque	Final Waste Form	Heterogeneous	Waste Matrix Code	S5490	Handling	RH
Source Cat.	R&D/R&D Laboratory Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	TRU Waste from SNL/NM - Remote Handled			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
30-gallon lever lock drum	0.2	0.0	0.2
55-gal Drum Dir Ld w/o Liner	1.5	0.0	1.5
Cask - Lead Lined	6.8	0.0	6.8
<b>Current Form Total</b>	<b>8.5</b>	<b>0.0</b>	<b>8.5</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/o Liner	4.5	0.0	4.5
<b>Final Form Total</b>	<b>4.5</b>	<b>0.0</b>	<b>4.5</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	80.00
Aluminum-based Metals/Alloys	5.00
Other Metals	10.00
Other Inorganic Materials	1.00
Cellulosics	2.00
Rubber	2.00
Plastics	5.00
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	652.20
Packaging Material, Plastic	0.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	3.14E+00
Am-243	6.83E-06
Cs-137	8.64E+01
Np-237	1.67E-04
Pu-238	7.28E-01
Pu-239	6.55E-01
Pu-240	1.46E-01
Pu-241	9.77E-03
Pu-242	1.61E-05
Sr-90	7.30E+01
Th-229	4.72E-12
Th-230	1.29E-07
Th-232	1.54E-17
U-233	8.43E-09
U-234	1.21E-03
U-235	8.90E-05
U-236	5.19E-08
U-238	3.04E-05

No Hazardous Waste Numbers Provided

TRUCON Code(s)

325

## Waste Stream Description

Heterogeneous RH debris from SNL/NM Hot Cell Facility D&amp;D Project and other miscellaneous waste generators.

Waste Stream ID: SA-W136

## Appendix A

## TRU Waste Inventory Profile Report

Site	Sandia National Laboratory - Albuquerque	Final Waste Form	Uncategorized Metal	Waste Matrix Code	S5110	Handling	CH
Source Cat.	R&D/R&D Laboratory Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	CH TRU Debris waste from Z-machine			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	0.6	5.6	6.2
<b>Current Form Total</b>	<b>0.6</b>	<b>5.6</b>	<b>6.2</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	0.6	5.6	6.2
<b>Final Form Total</b>	<b>0.6</b>	<b>5.6</b>	<b>6.2</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	1830.00
Aluminum-based Metals/Alloys	0.00
Other Metals	45.00
Other Inorganic Materials	0.44
Cellulosics	0.00
Rubber	2.05
Plastics	1.57
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	2.55
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	0.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	5.72E-03
Np-237	3.23E-09
Pu-238	3.30E-02
Pu-239	5.71E-01
Pu-240	1.31E-01
Pu-241	9.61E-01
Pu-242	1.52E-05
Th-229	1.24E-18
Th-230	3.85E-12
Th-232	8.63E-19
U-233	1.59E-14
U-234	2.84E-07
U-235	1.69E-09
U-236	1.16E-08
U-238	6.88E-15

No Hazardous Waste Numbers Provided

TRUCON Code(s)

125/225

## Waste Stream Description

CH debris waste from the Z-machine, Pu ICE experiments. Waste generated at SNL/NM, but is LANL waste

Waste Stream ID: SP-T001

## Appendix A

## TRU Waste Inventory Profile Report

Site	Separations Process Research Unit	Final Waste Form	Solidified Inorganics	Waste Matrix Code	S3120	Handling	RH
Source Cat.	R&D/R&D Laboratory Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	N/A	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
Tank(s)	8.2	0.0	8.2
<b>Current Form Total</b>	<b>8.2</b>	<b>0.0</b>	<b>8.2</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/o Liner	12.5	0.0	12.5
<b>Final Form Total</b>	<b>12.5</b>	<b>0.0</b>	<b>12.5</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.00
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	0.00
Cellulosics	0.00
Rubber	0.00
Plastics	0.00
Cements	0.00
Inorganic Matrix	2400.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	652.20
Packaging Material, Plastic	0.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.25E+00
Cs-137	3.02E+01
Np-237	1.48E-05
Pu-239	1.28E+01
Sr-90	4.85E+01
Th-229	4.04E-13
U-233	6.45E-10
U-235	2.52E-07

## Haz. Waste No(s).

D009

No TRUCON Codes Provided

## Waste Stream Description

Separations Process Research Unit.

Waste Stream ID: SP-T002

## Appendix A

## TRU Waste Inventory Profile Report

Site	Separations Process Research Unit	Final Waste Form	Heterogeneous	Waste Matrix Code	S5000	Handling	CH
Source Cat.	Remediation/D&D Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	N/A	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
Uncontained	41.8	0.0	41.8
<b>Current Form Total</b>	<b>41.8</b>	<b>0.0</b>	<b>41.8</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	41.8	0.0	41.8
<b>Final Form Total</b>	<b>41.8</b>	<b>0.0</b>	<b>41.8</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.00
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	0.00
Cellulosics	0.00
Rubber	0.00
Plastics	0.00
Cements	0.00
Inorganic Matrix	2400.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	0.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.25E-03
Cs-137	3.02E-02
Np-237	1.48E-08
Pu-239	1.28E-02
Sr-90	4.85E-02
Th-229	4.04E-16
U-233	6.45E-13
U-235	2.52E-10

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

## Waste Stream Description

Separations Process Research Unit.

Waste Stream ID: **SR-AGNS-HET**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Savannah River Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5000	Handling	CH
Source Cat.	R&D/R&D Laboratory Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	SR-AGNS-HET Debris	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	2.3	0.0	2.3
<b>Current Form Total</b>	<b>2.3</b>	<b>0.0</b>	<b>2.3</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	2.3	0.0	2.3
<b>Final Form Total</b>	<b>2.3</b>	<b>0.0</b>	<b>2.3</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	54.91
Aluminum-based Metals/Alloys	0.31
Other Metals	14.38
Other Inorganic Materials	23.02
Cellulosics	11.56
Rubber	4.70
Plastics	47.17
Cements	0.00
Inorganic Matrix	0.21
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.10E-01
Am-243	5.49E-07
Cs-137	2.73E-06
Np-237	5.51E-05
Pu-238	2.56E-01
Pu-239	7.48E-02
Pu-240	4.54E-02
Pu-241	2.61E-01
Pu-242	2.06E-05
Sr-90	2.68E-06
Th-229	2.72E-08
Th-230	1.67E-08
Th-232	2.52E-08
U-233	1.00E-05
U-234	7.53E-05
U-235	5.51E-07
U-236	3.91E-08
U-238	1.12E-05

## Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D011, D019, D022, D029, F002, F005

## TRUCON Code(s)

125/225

## Waste Stream Description

This waste is comprised of numerous organic and inorganic debris waste and generally consists of paper, cloth, wood, plastic, rubber, glass, and metal.

Waste Stream ID: **SR-AGNS-HOM**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Savannah River Site	Final Waste Form	Solidified Inorganics	Waste Matrix Code	S3000	Handling	CH
Source Cat.	R&D/R&D Laboratory Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	SR-AGNS-HOM	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	3.3	0.0	3.3
<b>Current Form Total</b>	<b>3.3</b>	<b>0.0</b>	<b>3.3</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	2.9	0.0	2.9
SWB w/ 4 - 55-gal Drums w/ Liners	1.9	0.0	1.9
<b>Final Form Total</b>	<b>4.8</b>	<b>0.0</b>	<b>4.8</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	61.52
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	0.00
Cellulosics	0.00
Rubber	0.00
Plastics	0.00
Cements	816.06
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	162.40
Packaging Material, Plastic	28.85
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	5.18E-01
Np-237	5.18E-04
Pu-238	4.89E-01
Pu-239	1.04E+00
Pu-240	2.44E-01
Pu-241	2.74E+00
Pu-242	4.23E-05
Th-229	8.82E-11
Th-230	2.35E-08
Th-232	1.51E-16
U-233	6.50E-08
U-234	1.12E-04
U-235	3.35E-06
U-236	2.10E-07
U-238	7.11E-05

## Haz. Waste No(s).

D004, D005, D006,  
D007, D008, D009,  
D011, F005

## TRUCON Code(s)

111/211

## Waste Stream Description

This waste is comprised of aqueous liquids solidified with lime and cement in a 55-gallon drum and aqueous liquid that had been absorbed using Florco-X and then later solidified with cement and water inside a 55-gallon drum.



Waste Stream ID: SR-AikenTech-HET

## Appendix A

## TRU Waste Inventory Profile Report

Site	Savannah River Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5000	Handling	CH
Source Cat.	Analytical Laboratory Waste	Defense Determination	Pending Determination	Inventory Date	12/31/2009		
Stream Name	Radiological Source(s) returned to EM from a local college			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
110-gal Drum	0.4	0.0	0.4
<b>Current Form Total</b>	<b>0.4</b>	<b>0.0</b>	<b>0.4</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
SWB Dir Ld w/o Liner	1.9	0.0	1.9
<b>Final Form Total</b>	<b>1.9</b>	<b>0.0</b>	<b>1.9</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	23.49
Aluminum-based Metals/Alloys	0.00
Other Metals	1.47
Other Inorganic Materials	0.00
Cellulosics	0.00
Rubber	0.00
Plastics	4.40
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	153.50
Packaging Material, Plastic	0.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.13E-03
Np-237	6.42E-09
Pu-238	3.88E+00
Pu-239	2.97E-03
Pu-240	1.63E-03
Pu-241	4.77E-02
Pu-242	1.94E-06
Th-229	5.68E-17
Th-230	8.97E-09
Th-232	2.01E-19
U-233	1.54E-13
U-234	1.51E-04
U-235	3.81E-11
U-236	6.27E-10
U-238	3.80E-15

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

## Waste Stream Description

This waste is a Plutonium 238 Source most recently used for education / research purposes by a local community college.

Waste Stream ID: SR-BCLCH-MT01

Appendix A

TRU Waste Inventory Profile Report

Site	Savannah River Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5490	Handling	CH
Source Cat.	Remediation/D&D Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	JN-4 D&D Debris Waste				Activity Concentrations Decayed to CY	2009	

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
SWB Dir Ld w/ Liner	11.3	0.0	11.3
<b>Current Form Total</b>	<b>11.3</b>	<b>0.0</b>	<b>11.3</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
SWB Dir Ld w/ Liner	11.3	0.0	11.3
<b>Final Form Total</b>	<b>11.3</b>	<b>0.0</b>	<b>11.3</b>

Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	60.00
Aluminum-based Metals/Alloys	60.00
Other Metals	60.00
Other Inorganic Materials	72.00
Cellulosics	204.50
Rubber	122.41
Plastics	240.60
Cements	62.41
Inorganic Matrix	0.00
Organic Matrix	36.05
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	153.50
Packaging Material, Plastic	1.20
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.80E+00
Np-237	2.99E-06
Pu-238	3.24E+02
Pu-239	5.49E+00
Pu-240	1.44E+00
Pu-241	5.15E+01
Pu-242	2.34E-04
Th-229	6.53E-15
Th-230	1.54E-07
Th-232	3.80E-17
U-233	3.60E-11
U-234	5.65E-03
U-235	3.25E-08
U-236	2.56E-07
U-238	2.12E-13

Haz. Waste No(s).

D005, D006, D007, D008, D009, D011, F001, F002, F005

No TRUCON Codes Provided

Waste Stream Description

JN-1 D&D Debris Waste consists of heterogeneous debris waste generated by the activities conducted in Building JN-1. The waste includes paper, plastic, rubber, paint chips, crushed metal cans, prefilters, glass, concrete, grout, lead shot, and miscellaneous laboratory equipment

Waste Stream ID: SR-BCLDP.001.001

## Appendix A

## TRU Waste Inventory Profile Report

Site	Savannah River Site	Final Waste Form	Solidified Inorganics	Waste Matrix Code	S3129	Handling	RH
Source Cat.	Remediation/D&D Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Laundry Sludge	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	1.0	0.0	1.0
<b>Current Form Total</b>	<b>1.0</b>	<b>0.0</b>	<b>1.0</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	1.8	0.0	1.8
<b>Final Form Total</b>	<b>1.8</b>	<b>0.0</b>	<b>1.8</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.49
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	19.62
Cellulosics	28.94
Rubber	0.98
Plastics	17.17
Cements	44.15
Inorganic Matrix	0.00
Organic Matrix	379.21
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	652.20
Packaging Material, Plastic	26.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.83E-01
Am-243	1.22E-03
Cm-244	1.04E-01
Cs-137	2.84E+00
Np-237	1.50E-05
Pu-238	1.50E-01
Pu-239	2.02E-02
Pu-240	3.30E-02
Pu-241	1.98E+00
Pu-242	9.84E-05
Sr-90	1.85E+00
Th-229	1.09E-12
Th-230	3.11E-09
Th-232	3.24E-15
U-233	2.13E-09
U-234	5.90E-05
U-235	8.20E-07
U-236	1.09E-05
U-238	1.59E-05

## Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D011, D019, F002, F005

## TRUCON Code(s)

321

## Waste Stream Description

Laundry sludge consists of a particulate sludge (dirt, debris, and lint) generated when the laundry system still box requires cleaning. The box is heated to boil off the water contained in the particulate material. The resulting sludge is raked into plastic bags containing Radsorb (10%-20% by weight) to absorb any water from condensation or dewatering.

Waste Stream ID: SR-BCLDP.001.002

## Appendix A

## TRU Waste Inventory Profile Report

Site	Savannah River Site	Final Waste Form	Filter	Waste Matrix Code	S5410	Handling	RH
Source Cat.	Remediation/D&D Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Pressure Wash Filters	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.8	0.0	0.8
<b>Current Form Total</b>	<b>0.8</b>	<b>0.0</b>	<b>0.8</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	1.8	0.0	1.8
<b>Final Form Total</b>	<b>1.8</b>	<b>0.0</b>	<b>1.8</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	18.91
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	159.78
Cellulosics	77.45
Rubber	4.27
Plastics	217.72
Cements	9.76
Inorganic Matrix	0.00
Organic Matrix	121.36
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	652.20
Packaging Material, Plastic	26.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.32E-01
Am-243	1.54E-03
Cm-244	1.32E-01
Cs-137	3.60E+00
Np-237	1.90E-05
Pu-238	1.90E-01
Pu-239	2.55E-02
Pu-240	4.18E-02
Pu-241	2.51E+00
Pu-242	1.24E-04
Sr-90	2.34E+00
Th-229	1.38E-12
Th-230	3.94E-09
Th-232	4.09E-15
U-233	2.70E-09
U-234	7.46E-05
U-235	1.04E-06
U-236	1.38E-05
U-238	2.02E-05

## Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D011, D019, F002, F005

## TRUCON Code(s)

321

## Waste Stream Description

Pressure Wash Filters used in the pressure wash water recovery system for filtering wash water transferred for evaporation. Three types of filter/cartridges were used. Cotton media filters consisting of cotton yarn and cotton media wound around a polypropylene core. Resin media type cartridges composed of glass and cellulose fibers combined with melamine resin, and a polypropylene sock filter consisting of polypropylene material supported by a carbon steel ring. Small quantities of sludge collected in the filter housings and settling tank bottoms are included in this waste stream. The waste matrix also includes Radsorb added to each liner.

Comprehensive Inventory Database ver. 1.00

Data ver. D.9.02

NOTE: Actual numerical values have been rounded for presentation purposes.

Waste Stream ID: SR-BCLDP.002

## Appendix A

## TRU Waste Inventory Profile Report

Site	Savannah River Site	Final Waste Form	Solidified Inorganics	Waste Matrix Code	S3150	Handling	RH
Source Cat.	Remediation/D&D Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Slugs	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.2	0.0	0.2
<b>Current Form Total</b>	<b>0.2</b>	<b>0.0</b>	<b>0.2</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	0.9	0.0	0.9
<b>Final Form Total</b>	<b>0.9</b>	<b>0.0</b>	<b>0.9</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.00
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	0.00
Cellulosics	0.00
Rubber	0.00
Plastics	3.40
Cements	16.80
Inorganic Matrix	0.00
Organic Matrix	154.50
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	652.20
Packaging Material, Plastic	26.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.08E+00
Am-243	7.17E-03
Cm-244	6.13E-01
Cs-137	1.66E+01
Np-237	8.85E-05
Pu-238	8.80E-01
Pu-239	1.19E-01
Pu-240	1.94E-01
Pu-241	1.17E+01
Pu-242	5.80E-04
Sr-90	1.09E+01
Th-229	6.42E-12
Th-230	1.82E-08
Th-232	1.90E-14
U-233	1.26E-08
U-234	3.45E-04
U-235	4.84E-06
U-236	6.40E-05
U-238	9.37E-05

## Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D011, D019, F002, F005

## TRUCON Code(s)

314

## Waste Stream Description

Slugs were produced in Alpha-Gamma Cell 7 by dissolving irradiated examination and analysis burnup fuel specimens in an acid solution, which was then diluted several times and mixed with cement and water and allowed to solidify in Styrofoam cups. The slugs will contain only limited amounts of dissolved fuel because of the dilution. The Styrofoam cups will be segregated from the slugs prior to final packaging. The waste matrix will also include Floor Dry and Radsorb added during repackaging to absorb any water from condensation or dewatering.

Waste Stream ID: **SR-BCLDP.003**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Savannah River Site	Final Waste Form	Solidified Organics	Waste Matrix Code	S3212	Handling	RH
Source Cat.	Remediation/D&D Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Hydraulic Room Sludge and Debris			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	1.5	0.0	1.5
<b>Current Form Total</b>	<b>1.5</b>	<b>0.0</b>	<b>1.5</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	2.7	0.0	2.7
<b>Final Form Total</b>	<b>2.7</b>	<b>0.0</b>	<b>2.7</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	7.90
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	23.60
Cellulosics	40.80
Rubber	7.90
Plastics	40.80
Cements	283.00
Inorganic Matrix	0.00
Organic Matrix	141.30
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	652.20
Packaging Material, Plastic	26.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.33E-02
Cm-244	4.27E-03
Cs-137	1.40E-01
Np-237	2.59E-08
Pu-238	7.55E-03
Pu-239	2.98E-03
Pu-240	3.05E-06
Sr-90	7.54E-02
Th-229	6.26E-17
Th-230	3.10E-10
Th-232	2.83E-23
U-233	3.34E-13
U-234	5.81E-06
U-235	1.76E-11
U-236	2.81E-13

## Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D011, D019, F002, F005

## TRUCON Code(s)

321

## Waste Stream Description

Hydraulic Room Sludge and Debris waste consists of rubble, sludge, and absorbent materials as well as the plastic bags that the waste is in. The hydraulic sludge was absorbed using a greater than 50% No Char and Radsorb polymers. Then the hydraulic sludge was packed in plastic bags with additional No Char, Radsob, and Floor Dry. Prior to packaging, 10 pounds of absorbent (50:50 Floor Dry and Radsorb) was added to the liner to absorb and water from condensation or dewatering.

Waste Stream ID: SR-BCLDP.004.002

## Appendix A

## TRU Waste Inventory Profile Report

Site	Savannah River Site	Final Waste Form	Filter	Waste Matrix Code	S5410	Handling	RH
Source Cat.	Remediation/D&D Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Pool Water Prefilters and Debris	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	1.0	0.0	1.0
<b>Current Form Total</b>	<b>1.0</b>	<b>0.0</b>	<b>1.0</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	1.8	0.0	1.8
<b>Final Form Total</b>	<b>1.8</b>	<b>0.0</b>	<b>1.8</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	8.40
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	379.30
Cellulosics	8.40
Rubber	8.40
Plastics	8.40
Cements	25.30
Inorganic Matrix	0.00
Organic Matrix	18.50
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	652.20
Packaging Material, Plastic	26.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	5.28E-01
Cm-244	2.21E-01
Cs-137	4.07E-01
Np-237	1.03E-06
Pu-238	5.94E-01
Pu-239	6.58E-02
Pu-240	1.07E-01
Sr-90	1.64E+01
Th-229	5.09E-12
Th-230	1.60E-08
Th-232	1.71E-14
U-233	9.05E-09
U-234	3.02E-04
U-235	4.38E-06
U-236	5.76E-05
U-238	8.34E-05

## Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D011, D019, F002, F005

## TRUCON Code(s)

321

## Waste Stream Description

Pool Water Prefilters and Debris consists of the cartridge prefilters and debris generated during the change-out of resin used for filtering the Transfer/Storage Pool water. The filter matrix is composed of glass and cellulose fibers combined with melamine resin. The end caps are polypropylene and the filters are placed in the canisters with rubber gaskets (butyl/nitrile). Other debris that may be present from the original packaging may include paper (blotter paper and Floor Dry bags), plastic liners, rubber gaskets, muslin resin bags, rubber gloves, and other miscellaneous plastic, cellulosics, and metal materials. The waste matrix will also include Floor Dry and Radsorb added during repackaging to absorb any water from condensation or dewatering.

Waste Stream ID: SR-BCLDP.004.003

## Appendix A

## TRU Waste Inventory Profile Report

Site	Savannah River Site	Final Waste Form	Filter	Waste Matrix Code	S5410	Handling	RH
Source Cat.	Remediation/D&D Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Tri-Nuc Filters	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.4	0.0	0.4
<b>Current Form Total</b>	<b>0.4</b>	<b>0.0</b>	<b>0.4</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	0.9	0.0	0.9
<b>Final Form Total</b>	<b>0.9</b>	<b>0.0</b>	<b>0.9</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	61.70
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	22.50
Cellulosics	5.60
Rubber	0.00
Plastics	39.30
Cements	72.00
Inorganic Matrix	0.00
Organic Matrix	12.40
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	652.20
Packaging Material, Plastic	26.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	4.60E+00
Am-243	3.05E-02
Cm-244	2.62E+00
Cs-137	7.08E+01
Np-237	3.76E-04
Pu-238	3.76E+00
Pu-239	5.05E-01
Pu-240	8.24E-01
Pu-241	4.97E+01
Pu-242	2.47E-03
Sr-90	4.62E+01
Th-229	2.73E-11
Th-230	7.79E-08
Th-232	8.09E-14
U-233	5.34E-08
U-234	1.48E-03
U-235	2.06E-05
U-236	2.73E-04
U-238	4.00E-04

## Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D011, D019, F002, F005

## TRUCON Code(s)

321

## Waste Stream Description

Tri-Nuc Filters consists of filter cartridges used in the underwater vacuum system for cleaning the surfaces and filtering the water of the Transfer/Storage Pool. The cartridges are 30" long and 6" in diameter and consist of media enclosed within a stainless steel screen shroud, and aluminum screen reinforced plastisol end caps. The filter media is composed of polypropylene, melt brown reinforced typar, and is available in 0.3, 1, 5, 10, and 20-micron mesh sizes. The waste matrix will also include Floor Dry (diatomaceous earth) and Radsorb (50:50 mix) added to each liner.



Waste Stream ID: SR-BCLDP.005

## Appendix A

## TRU Waste Inventory Profile Report

Site	Savannah River Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5000	Handling	RH
Source Cat.	Remediation/D&D Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Inorganic Debris - Sabotage	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.2	0.0	0.2
<b>Current Form Total</b>	<b>0.2</b>	<b>0.0</b>	<b>0.2</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	0.9	0.0	0.9
<b>Final Form Total</b>	<b>0.9</b>	<b>0.0</b>	<b>0.9</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	129.20
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	0.00
Cellulosics	14.60
Rubber	0.00
Plastics	14.60
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	652.20
Packaging Material, Plastic	26.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	5.56E+00
Am-243	7.83E-02
Cm-244	3.27E+00
Cs-137	7.00E+02
Np-237	5.03E-03
Pu-238	1.76E-02
Pu-239	1.45E-03
Pu-240	1.98E-02
Pu-241	1.48E-01
Pu-242	1.09E-05
Sr-90	3.77E+02
Th-229	3.10E-10
Th-230	3.34E-10
Th-232	3.50E-16
U-233	6.15E-07
U-234	6.34E-06
U-235	5.45E-08
U-236	1.18E-06
U-238	1.45E-06

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

## Waste Stream Description

Liner includes, 135 kg. shield, pipe 56.8 kg, dunage 2.3 kgs.

Comprehensive Inventory Database ver. 1.00

Data ver. D.9.02

NOTE: Actual numerical values have been rounded for presentation purposes.

Waste Stream ID: SR-BCLDP.NYA

## Appendix A

## TRU Waste Inventory Profile Report

Site	Savannah River Site	Final Waste Form	Unknown	Waste Matrix Code	N/A	Handling	CH
Source Cat.	Remediation/D&D Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	N/A	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.2	0.0	0.2
55-gal Drum Dir Ld w/o Liner	0.6	0.0	0.6
SWB Dir Ld w/ Liner	11.3	0.0	11.3
<b>Current Form Total</b>	<b>12.2</b>	<b>0.0</b>	<b>12.2</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.2	0.0	0.2
55-gal Drum Dir Ld w/o Liner	0.6	0.0	0.6
SWB Dir Ld w/ Liner	11.3	0.0	11.3
<b>Final Form Total</b>	<b>12.2</b>	<b>0.0</b>	<b>12.2</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	182.82
Aluminum-based Metals/Alloys	1.87
Other Metals	0.94
Other Inorganic Materials	3.74
Cellulosics	48.63
Rubber	10.75
Plastics	74.81
Cements	0.00
Inorganic Matrix	144.48
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	151.95
Packaging Material, Plastic	1.75
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.54E-02
Am-243	5.14E-06
Cm-244	2.62E-03
Cs-137	1.18E-02
Np-237	1.11E-07
Pu-238	6.34E+00
Pu-239	2.26E-02
Pu-240	1.07E-02
Pu-241	1.88E-01
Pu-242	3.63E-06
Sr-90	1.44E-01
Th-229	1.98E-14
Th-230	3.08E-09
Th-232	6.43E-17
U-233	3.63E-11
U-234	1.12E-04
U-235	3.04E-08
U-236	2.18E-07
U-238	3.50E-07

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

## Waste Stream Description

N/A

Comprehensive Inventory Database ver. 1.00

Data ver. D.9.02

NOTE: Actual numerical values have been rounded for presentation purposes.

Waste Stream ID: **SR-KAC-HET**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Savannah River Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5000	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	CH TRU Heterogeneous debris from the K Area Plutonium surveillance program			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	0.2	91.9	92.1
<b>Current Form Total</b>	<b>0.2</b>	<b>91.9</b>	<b>92.1</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	0.2	91.9	92.1
<b>Final Form Total</b>	<b>0.2</b>	<b>91.9</b>	<b>92.1</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	22.15
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	0.00
Cellulosics	1.07
Rubber	10.94
Plastics	232.67
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	0.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.01E-01
Np-237	4.78E-07
Pu-238	2.48E-02
Pu-239	9.55E-01
Pu-240	2.19E-01
Pu-241	1.27E+00
Pu-242	1.89E-05
Th-229	9.33E-17
Th-230	3.18E-13
Th-232	1.60E-19
U-233	2.01E-12
U-234	7.05E-08
U-235	1.02E-05
U-236	6.49E-09
U-238	9.58E-08

No Hazardous Waste Numbers Provided

TRUCON Code(s)

125/225

## Waste Stream Description

This waste stream consists of plutonium contaminated debris resulting from destructive and non-destructive containers used to store plutonium material

Waste Stream ID: **SR-LA-PAD1**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Savannah River Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5000	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	CH TRU Heterogeneous debris from the Los Alamos Scientific Laboratory (LASL)			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
30-gal Drum	27.2	0.0	27.2
<b>Current Form Total</b>	<b>27.2</b>	<b>0.0</b>	<b>27.2</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
SWB w/ 4 - 55-gal Drums w/o Liners	173.9	0.0	173.9
<b>Final Form Total</b>	<b>173.9</b>	<b>0.0</b>	<b>173.9</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	54.33
Aluminum-based Metals/Alloys	0.07
Other Metals	0.42
Other Inorganic Materials	2.36
Cellulosics	8.40
Rubber	3.68
Plastics	0.14
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	211.10
Packaging Material, Plastic	0.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	3.11E-01
Np-237	6.22E-06
Pu-238	1.39E+02
Pu-239	1.79E-01
Pu-240	1.09E-01
Pu-241	2.45E-01
Pu-242	1.28E-04
Th-229	1.67E-12
Th-230	1.65E-05
Th-232	3.60E-16
U-233	8.78E-10
U-234	4.24E-02
U-235	1.38E-08
U-236	2.53E-07
U-238	7.32E-13

## Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D022, F001, F002, F005

## TRUCON Code(s)

125/225, 154

## Waste Stream Description

This CH TRU waste stream consists of debris and Impure Oxide shipped to the SRS from the LASL in 1971 and 1972.

Waste Stream ID: SR-MD-HET

## Appendix A

## TRU Waste Inventory Profile Report

Site	Savannah River Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5000	Handling	CH
Source Cat.	Remediation/D&D Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	CH Mixed TRU/F listed solvents - Heterogeneous debris from offsite			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	5.4	0.0	5.4
55-gal Drum Dir Ld w/o Liner	0.8	0.0	0.8
85-gal Drum Dir Ld w/ Liner	0.3	0.0	0.3
Box - Steel	3.2	0.0	128.0
SWB Dir Ld w/o Liner	30.2	0.0	30.2
<b>Current Form Total</b>	<b>164.8</b>	<b>0.0</b>	<b>164.8</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	2.5	0.0	2.5
SWB Dir Ld w/o Liner	132.3	0.0	132.3
TDOP Dir Ld	27.0	0.0	27.0
TDOP w/ 10 - 55-gal Drums w/ Liners	9.0	0.0	9.0
<b>Final Form Total</b>	<b>170.8</b>	<b>0.0</b>	<b>170.8</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	55.56
Aluminum-based Metals/Alloys	1.32
Other Metals	8.40
Other Inorganic Materials	23.81
Cellulosics	27.81
Rubber	20.73
Plastics	40.90
Cements	0.00
Inorganic Matrix	0.07
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	160.11
Packaging Material, Plastic	1.44
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.53E-01
Am-243	1.18E-07
Cm-244	5.71E-06
Cs-137	1.17E-05
Np-237	2.92E-05
Pu-238	1.34E+01
Pu-239	3.54E-01
Pu-240	2.31E-02
Pu-241	2.74E-01
Pu-242	8.24E-06
Sr-90	1.14E-05
Th-229	2.90E-05
Th-230	1.33E-06
Th-232	1.14E-03
U-233	8.38E-03
U-234	4.77E-03
U-235	1.65E-06
U-236	2.54E-08
U-238	4.70E-05

## Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D019, D022, D027, D028, D029, D030, D032, D034, D037, D043, F002, F003, F004, F005

## TRUCON Code(s)

125/225

## Waste Stream Description

This waste stream is primarily solids consisting of booties, lab coats, floor sweeping, labware, rags, and other job control waste.

Waste Stream ID: **SR-MD-HOM-A**

Appendix A

TRU Waste Inventory Profile Report

Site	Savannah River Site	Final Waste Form	Solidified Inorganics	Waste Matrix Code	S3113	Handling	CH
Source Cat.	Remediation/D&D Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	CH Mixed TRU Solids (S3000)	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	2.3	0.0	2.3
<b>Current Form Total</b>	<b>2.3</b>	<b>0.0</b>	<b>2.3</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	2.3	0.0	2.3
<b>Final Form Total</b>	<b>2.3</b>	<b>0.0</b>	<b>2.3</b>

Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.25
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	0.00
Cellulosics	0.99
Rubber	0.00
Plastics	0.00
Cements	0.00
Inorganic Matrix	245.15
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.37E-02
Np-237	1.79E-05
Pu-238	1.92E+01
Pu-239	1.60E-02
Pu-240	1.09E-03
Pu-241	1.42E-02
Th-229	3.47E-12
Th-230	3.92E-07
Th-232	7.67E-19
U-233	2.39E-09
U-234	2.32E-03
U-235	2.74E-07
U-236	1.00E-09

Haz. Waste No(s).

D006, D007, D008

TRUCON Code(s)

111/211

Waste Stream Description

Aqueous liquids absorbed in polyethylene bottles.

Waste Stream ID: SR-MD-HOM-B

## Appendix A

## TRU Waste Inventory Profile Report

Site	Savannah River Site	Final Waste Form	Solidified Inorganics	Waste Matrix Code	S3121	Handling	CH
Source Cat.	Remediation/D&D Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	CH Mixed TRU Solids (S3000)	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.2	0.0	0.2
<b>Current Form Total</b>	<b>0.2</b>	<b>0.0</b>	<b>0.2</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.2	0.0	0.2
<b>Final Form Total</b>	<b>0.2</b>	<b>0.0</b>	<b>0.2</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.00
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	0.00
Cellulosics	3.36
Rubber	0.00
Plastics	0.00
Cements	63.84
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	4.12E-03
Np-237	4.71E-07
Pu-238	1.91E-01
Th-229	8.66E-14
Th-230	2.76E-09
U-233	6.06E-11
U-234	1.90E-05

## Haz. Waste No(s).

D004, D006, D007, D008, D009, D011, F002, F003, F006, F007, F009

## TRUCON Code(s)

111/211

## Waste Stream Description

Waste water treatment sludge.

Waste Stream ID: SR-MD-HOM-C

Appendix A

TRU Waste Inventory Profile Report

Site	Savannah River Site	Final Waste Form	Solidified Inorganics	Waste Matrix Code	S3000	Handling	CH
Source Cat.	Remediation/D&D Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	CH Mixed TRU Solids (S3000)	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	0.6	0.0	0.6
<b>Current Form Total</b>	<b>0.6</b>	<b>0.0</b>	<b>0.6</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	0.6	0.0	0.6
<b>Final Form Total</b>	<b>0.6</b>	<b>0.0</b>	<b>0.6</b>

Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	1.01
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	0.00
Cellulosics	1.01
Rubber	1.01
Plastics	5.24
Cements	0.00
Inorganic Matrix	192.31
Organic Matrix	1.01
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	0.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	4.85E-04
Np-237	4.99E-09
Pu-238	1.40E-01
Pu-242	3.64E-09
Th-229	3.30E-16
Th-230	2.02E-09
U-233	3.39E-13
U-234	1.39E-05
U-238	8.70E-18

Haz. Waste No(s).

D004, D006, D007, D008, D009, D011, F002, F003
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TRUCON Code(s)

111/211
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Waste Stream Description

Not yet incorporated into an AK Report



Waste Stream ID: **SR-MD-PAD1**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Savannah River Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5000	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	CH TRU Heterogeneous debris from the Mound Plant			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum	118.4	0.0	118.4
55-gal Drum Dir Ld w/ Liner	22.9	0.0	22.9
83-gal Drum	18.8	0.0	18.8
Box - Plywood	0.9	0.0	135.7
<b>Current Form Total</b>	<b>295.8</b>	<b>0.0</b>	<b>295.8</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
SWB Dir Ld w/o Liner	156.9	0.0	156.9
TDOP w/ 10 - 55-gal Drums w/ Liners	306.0	0.0	306.0
<b>Final Form Total</b>	<b>462.9</b>	<b>0.0</b>	<b>462.9</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	90.88
Aluminum-based Metals/Alloys	0.52
Other Metals	102.30
Other Inorganic Materials	32.72
Cellulosics	8.05
Rubber	6.23
Plastics	18.70
Cements	0.00
Inorganic Matrix	0.26
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	205.26
Packaging Material, Plastic	11.30
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.79E-01
Np-237	2.26E-06
Pu-238	2.93E+02
Pu-239	2.74E-01
Pu-240	1.54E-01
Pu-241	1.66E+00
Pu-242	1.83E-04
Th-229	1.37E-13
Th-230	6.61E-06
Th-232	1.64E-16
U-233	1.42E-10
U-234	3.68E-02
U-235	1.03E-08
U-236	1.74E-07
U-238	1.05E-12

## Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D019, D022, D027, D028, D029, D030, D032, D034, D037, D043, F002, F003, F004, F005

## TRUCON Code(s)

125/225

## Waste Stream Description

This CH TRU waste stream consists of debris shipped to the SRS from the Mound Plant in 1971 and 1972.

Waste Stream ID: **SR-MD-SOIL**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Savannah River Site	Final Waste Form	Soils	Waste Matrix Code	S4000	Handling	CH
Source Cat.	Remediation/D&D Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	CH Mixed TRU Soil / Gravel (S4000)			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	1.9	0.0	1.9
55-gal Drum Dir Ld w/o Liner	11.0	0.0	11.0
Box - Steel	4.6	0.0	14.3
SWB Dir Ld w/o Liner	5.7	0.0	5.7
<b>Current Form Total</b>	<b>32.9</b>	<b>0.0</b>	<b>32.9</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	12.9	0.0	12.9
SWB Dir Ld w/o Liner	15.1	0.0	15.1
<b>Final Form Total</b>	<b>28.0</b>	<b>0.0</b>	<b>28.0</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	14.19
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	0.00
Cellulosics	0.00
Rubber	0.00
Plastics	0.43
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	8.17
Soils/gravel	407.21
Vitrified	0.00
Packaging Material, Steel	143.05
Packaging Material, Plastic	0.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	7.40E-04
Cs-137	5.37E-07
Np-237	1.18E-06
Pu-238	2.77E-01
Pu-239	5.31E-03
Pu-242	9.07E-09
Th-229	2.29E-13
Th-230	4.00E-09
U-233	1.58E-10
U-234	2.76E-05
U-235	1.62E-10
U-238	2.17E-17

## Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, F002, F003, F004, F005, F007, F009

## TRUCON Code(s)

111/211

## Waste Stream Description

Soil mixed with absorbent and some commingled debris.

Waste Stream ID: SR-NIST-HET

## Appendix A

## TRU Waste Inventory Profile Report

Site	Savannah River Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5000	Handling	CH
Source Cat.	Analytical Laboratory Waste	Defense Determination	Pending Determination	Inventory Date	12/31/2009		
Stream Name	DOE Owned Plutonium & Uranium waste items.			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	0.2	0.0	0.2
<b>Current Form Total</b>	<b>0.2</b>	<b>0.0</b>	<b>0.2</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
SWB Dir Ld w/o Liner	1.9	0.0	1.9
<b>Final Form Total</b>	<b>1.9</b>	<b>0.0</b>	<b>1.9</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	11.75
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	0.00
Cellulosics	0.00
Rubber	0.00
Plastics	1.47
Cements	16.15
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	153.50
Packaging Material, Plastic	0.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	3.30E+00
Np-237	1.87E-05
Pu-238	3.24E+00
Pu-239	1.36E+00
Pu-240	3.22E-01
Pu-241	2.15E+00
Pu-242	5.77E-05
Th-229	3.78E-13
Th-230	1.65E-07
Th-232	3.31E-14
U-233	7.01E-10
U-234	6.59E-04
U-235	3.36E-06
U-236	4.20E-05
U-238	1.32E-07

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

## Waste Stream Description

This waste consists of various plutonium and uranium items. Some items are stabilized with concrete inside polyethylene bottles.

Waste Stream ID: SR-RH-221H.01

## Appendix A

## TRU Waste Inventory Profile Report

Site	Savannah River Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5000	Handling	RH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	RH TRU Heterogeneous debris from the HB-Line			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	3.5	0.0	3.5
Cask - Steel	5.7	0.0	5.7
<b>Current Form Total</b>	<b>9.2</b>	<b>0.0</b>	<b>9.2</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	13.4	0.0	13.4
<b>Final Form Total</b>	<b>13.4</b>	<b>0.0</b>	<b>13.4</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	37.99
Aluminum-based Metals/Alloys	2.20
Other Metals	2.85
Other Inorganic Materials	15.37
Cellulosics	12.96
Rubber	32.50
Plastics	114.84
Cements	0.00
Inorganic Matrix	0.66
Organic Matrix	0.22
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	652.20
Packaging Material, Plastic	26.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	4.21E-02
Np-237	1.49E-01
Pu-238	7.77E+01
Pu-239	7.15E-02
Pu-240	3.68E-02
Pu-241	7.84E-01
Pu-242	4.24E-05
Th-229	1.09E-08
Th-230	5.81E-07
Th-232	1.00E-15
U-233	1.23E-05
U-234	5.61E-03
U-235	3.83E-06
U-236	1.08E-06
U-238	3.36E-09

## Haz. Waste No(s).

D006, D008, D009,  
D022, D029, D039,  
D040, D043, F001,  
F002, F003, F005,  
U133

**No TRUCON  
Codes Provided**

## Waste Stream Description

This waste stream is defense related, remote handled TRU waste and is composed of metal equipment and debris

Waste Stream ID: **SR-RH-221H.02**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Savannah River Site	Final Waste Form	Filter	Waste Matrix Code	S5000	Handling	RH
Source Cat.	Discarding Excess/Expired Materials	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	RH TRU HEPA Filter from the HB-Line			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
Box - SRS Poly Box-HEPA	0.2	0.0	0.2
<b>Current Form Total</b>	<b>0.2</b>	<b>0.0</b>	<b>0.2</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	0.9	0.0	0.9
<b>Final Form Total</b>	<b>0.9</b>	<b>0.0</b>	<b>0.9</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	2.38
Aluminum-based Metals/Alloys	13.14
Other Metals	0.00
Other Inorganic Materials	5.61
Cellulosics	3.67
Rubber	0.05
Plastics	7.60
Cements	0.00
Inorganic Matrix	0.03
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	652.20
Packaging Material, Plastic	26.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.57E-01
Np-237	1.50E-06
Pu-238	2.30E+02
Pu-239	1.89E-01
Pu-240	1.04E-01
Pu-241	1.97E+00
Pu-242	1.23E-04
Th-229	4.22E-14
Th-230	1.60E-06
Th-232	3.67E-17
U-233	6.49E-11
U-234	1.57E-02
U-235	4.11E-09
U-236	6.76E-08
U-238	4.10E-13

## Haz. Waste No(s).

D006, D007, D008,  
D009, D011, D019,  
D022, D029, D035,  
D039, D040, D043

**No TRUCON  
Codes Provided**

## Waste Stream Description

This waste stream is defense related, remote handled TRU waste and is composed of 24"X24"X12" HEPA Filter

Waste Stream ID: SR-RH-235F.01

Appendix A

TRU Waste Inventory Profile Report

Site	Savannah River Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5000	Handling	RH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	RH TRU Heterogeneous debris from the 235F facility.			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	1.2	0.0	1.2
<b>Current Form Total</b>	<b>1.2</b>	<b>0.0</b>	<b>1.2</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	1.8	0.0	1.8
<b>Final Form Total</b>	<b>1.8</b>	<b>0.0</b>	<b>1.8</b>

Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	48.43
Aluminum-based Metals/Alloys	2.64
Other Metals	1.29
Other Inorganic Materials	14.07
Cellulosics	8.23
Rubber	49.46
Plastics	62.26
Cements	0.00
Inorganic Matrix	0.58
Organic Matrix	0.11
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	652.20
Packaging Material, Plastic	26.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.50E+02
Np-237	2.18E-02
Pu-238	2.07E+02
Pu-239	2.01E+00
Pu-240	5.29E-01
Pu-241	1.15E+03
Pu-242	1.89E-04
Th-229	2.89E-09
Th-230	2.05E-06
Th-232	2.62E-16
U-233	2.39E-06
U-234	1.69E-02
U-235	5.16E-08
U-236	4.08E-07
U-238	7.43E-13

Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D035, F002

TRUCON Code(s)

322, 325

Waste Stream Description

This waste stream is defense related, remote handled TRU waste and is composed of metal equipment and debris

Waste Stream ID: **SR-RH-772F.01**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Savannah River Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5000	Handling	RH
Source Cat.	Analytical Laboratory Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	RH TRU Heterogeneous debris from the 772F and 772-1F laboratories.			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	1.2	0.0	1.2
<b>Current Form Total</b>	<b>1.2</b>	<b>0.0</b>	<b>1.2</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	1.8	0.0	1.8
<b>Final Form Total</b>	<b>1.8</b>	<b>0.0</b>	<b>1.8</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	20.39
Aluminum-based Metals/Alloys	1.50
Other Metals	4.12
Other Inorganic Materials	41.16
Cellulosics	10.29
Rubber	7.67
Plastics	101.96
Cements	0.00
Inorganic Matrix	0.19
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	652.20
Packaging Material, Plastic	26.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.51E-02
Cs-137	1.26E-01
Np-237	3.70E-04
Pu-238	5.16E-01
Pu-239	4.19E-02
Pu-240	1.37E-02
Pu-241	1.70E-01
Pu-242	4.57E-05
Sr-90	5.09E-02
Th-229	7.95E-08
Th-230	1.35E-07
Th-232	3.48E-16
U-233	1.21E-04
U-234	2.15E-03
U-235	3.34E-05
U-236	1.01E-06
U-238	5.04E-05

## Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D019, D022, D028, D029, F002, F003, F005

**No TRUCON Codes Provided**

## Waste Stream Description

This waste stream is defense related remote handled mixed TRU waste. This waste stream is primarily solids consisting of booties, lab coats, floor sweeping, labware, rags, other job control waste, small HEPAs liquids, sludges and resins may also be found in this waste.

Waste Stream ID: SR-RH-773A.01

## Appendix A

## TRU Waste Inventory Profile Report

Site	Savannah River Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5000	Handling	RH
Source Cat.	Analytical Laboratory Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	RH TRU Heterogeneous debris from the SRNL			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	7.5	8.1	15.6
Box - Concrete	1.6	0.0	1.6
Box - Fiberglass	0.9	0.0	0.9
Cask - SRS CMISC	3.8	0.0	3.8
<b>Current Form Total</b>	<b>13.7</b>	<b>8.1</b>	<b>21.8</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	19.6	11.6	31.2
RH Can w/ Remov Lid w/ 3 - 55-gal w/o Liner	8.9	0.0	8.9
<b>Final Form Total</b>	<b>28.5</b>	<b>11.6</b>	<b>40.1</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	102.80
Aluminum-based Metals/Alloys	1.13
Other Metals	6.88
Other Inorganic Materials	67.68
Cellulosics	36.83
Rubber	55.78
Plastics	115.52
Cements	0.00
Inorganic Matrix	2.33
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	652.20
Packaging Material, Plastic	20.22
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.36E-01
Am-243	4.93E-02
Cm-244	5.18E+00
Cs-137	7.93E-01
Np-237	3.82E-06
Pu-238	3.38E+00
Pu-239	1.77E-02
Pu-240	2.53E-02
Pu-241	2.12E-01
Pu-242	1.77E-05
Pu-244	1.76E-15
Sr-90	5.22E-01
Th-229	1.35E-07
Th-230	1.27E-09
Th-232	1.64E-16
U-233	2.88E-04
U-234	5.26E-05
U-235	5.28E-08
U-236	6.66E-07
U-238	2.10E-09

## Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D019, D022, D027, D028, D029, D043, F002, F004, F005

## TRUCON Code(s)

321, 322, 325

## Waste Stream Description

This waste stream is defense related remote handled mixed TRU waste. This waste stream is primarily solids consisting of booties, lab coats, floor sweeping, labware, rags, other job control waste, small HEPAs liquids, sludges and resins may also be found in this waste.

Comprehensive Inventory Database ver. 1.00

Data ver. D.9.02

NOTE: Actual numerical values have been rounded for presentation purposes.



Waste Stream ID: **SR-RH-FBL.01**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Savannah River Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5000	Handling	RH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	RH TRU Heterogeneous debris from the FB-Line			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	2.9	0.0	2.9
<b>Current Form Total</b>	<b>2.9</b>	<b>0.0</b>	<b>2.9</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	4.5	0.0	4.5
<b>Final Form Total</b>	<b>4.5</b>	<b>0.0</b>	<b>4.5</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	51.60
Aluminum-based Metals/Alloys	0.59
Other Metals	1.33
Other Inorganic Materials	0.00
Cellulosics	11.40
Rubber	17.36
Plastics	67.82
Cements	23.50
Inorganic Matrix	0.16
Organic Matrix	0.86
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	652.20
Packaging Material, Plastic	26.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.36E+01
Cs-137	2.27E+00
Np-237	2.57E-04
Pu-238	1.25E+00
Pu-239	2.39E+00
Pu-240	5.52E-01
Pu-241	1.93E+01
Pu-242	9.11E-05
Sr-90	2.24E-01
Th-229	3.34E-11
Th-230	1.14E-08
Th-232	1.98E-15
U-233	9.11E-08
U-234	3.25E-04
U-235	1.08E-05
U-236	1.00E-05
U-238	3.32E-04

## Haz. Waste No(s).

D005, D006, D007, D008, D009, D011, D018, D019, D022, D029, D039, D040, D043, F002, F005, U002, U151

## TRUCON Code(s)

322, 325

## Waste Stream Description

This waste stream is primarily solids consisting of booties, lab coats, floor sweeping, rags, and other job control waste.

Waste Stream ID: **SR-RH-FTF.01**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Savannah River Site	Final Waste Form	Filter	Waste Matrix Code	S5000	Handling	RH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	RH TRU 24"X24"X12" HEPA Filter from the SRS F-Area Tank Farm			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
Box - SRS Poly Box-HEPA	0.2	0.0	0.2
<b>Current Form Total</b>	<b>0.2</b>	<b>0.0</b>	<b>0.2</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	0.9	0.0	0.9
<b>Final Form Total</b>	<b>0.9</b>	<b>0.0</b>	<b>0.9</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	18.31
Aluminum-based Metals/Alloys	0.08
Other Metals	0.00
Other Inorganic Materials	2.44
Cellulosics	0.76
Rubber	0.00
Plastics	10.81
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	652.20
Packaging Material, Plastic	26.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	3.79E-03
Am-243	5.62E-06
Cm-244	8.83E-02
Cs-137	6.23E-03
Np-237	1.27E-08
Pu-238	3.16E-02
Pu-239	5.26E-04
Pu-240	7.31E-04
Pu-241	1.98E-03
Pu-242	1.11E-07
Sr-90	7.44E-03
Th-229	9.11E-17
Th-230	4.25E-11
Th-232	5.23E-20
U-233	2.83E-13
U-234	9.33E-07
U-235	1.36E-11
U-236	2.09E-10
U-238	7.68E-10

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

## Waste Stream Description

This waste stream consists of one HEPA Filter.

Waste Stream ID: **SR-RH-SDD.01**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Savannah River Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5000	Handling	RH
Source Cat.	Source Unknown	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Remote Handled PuBe Sources			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
SWB Dir Ld w/o Liner	5.7	0.0	5.7
<b>Current Form Total</b>	<b>5.7</b>	<b>0.0</b>	<b>5.7</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/o Liner	8.9	0.0	8.9
<b>Final Form Total</b>	<b>8.9</b>	<b>0.0</b>	<b>8.9</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	213.46
Aluminum-based Metals/Alloys	0.00
Other Metals	53.37
Other Inorganic Materials	0.00
Cellulosics	0.00
Rubber	0.00
Plastics	0.00
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	652.20
Packaging Material, Plastic	0.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	8.55E-01
Np-237	4.79E-07
Pu-238	1.50E+02
Pu-239	2.28E+00
Pu-240	1.37E+00
Pu-241	7.17E+01
Pu-242	2.29E-03
Th-229	1.20E-16
Th-230	7.74E-09
Th-232	4.03E-18
U-233	1.98E-12
U-234	8.58E-04
U-235	4.49E-09
U-236	8.15E-08
U-238	6.91E-13

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

## Waste Stream Description

This waste stream consists of three PuBe sources individually packaged in SWB with polyethylene shielding.

Waste Stream ID: SR-SDD-211F-HET

## Appendix A

## TRU Waste Inventory Profile Report

Site	Savannah River Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5000	Handling	CH
Source Cat.	Remediation/D&D Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	CH TRU - Heterogeneous debris from the D&D of the 211-F-Area			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	2.1	0.0	2.1
<b>Current Form Total</b>	<b>2.1</b>	<b>0.0</b>	<b>2.1</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
TDOP w/ 10 - 55-gal Drums w/ Liners	4.5	0.0	4.5
<b>Final Form Total</b>	<b>4.5</b>	<b>0.0</b>	<b>4.5</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	79.06
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	0.00
Cellulosics	0.00
Rubber	0.00
Plastics	42.30
Cements	0.00
Inorganic Matrix	1.97
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	231.80
Packaging Material, Plastic	17.10
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.71E-04
Am-243	2.30E-07
Cm-244	2.38E-05
Np-237	1.66E-07
Pu-238	2.49E-02
Pu-239	1.73E-03
Pu-240	5.47E-04
Pu-241	7.45E-03
Pu-242	1.22E-06
Sr-90	9.18E-03
Th-229	2.48E-10
Th-230	2.90E-12
Th-232	3.61E-21
U-233	8.83E-07
U-234	2.15E-07
U-235	2.16E-10
U-236	4.87E-11
U-238	5.52E-16

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

## Waste Stream Description

This waste stream is defense related, contact handled TRU waste and is composed of metal equipment, tools and debris

Comprehensive Inventory Database ver. 1.00

Data ver. D.9.02

NOTE: Actual numerical values have been rounded for presentation purposes.

Waste Stream ID: **SR-SDD-800UGT-HET**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Savannah River Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5000	Handling	CH
Source Cat.	Remediation/D&D Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	CH TRU - Heterogeneous debris from the D&D of the F-Area 800 series under ground tanks			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
SWB Dir Ld w/o Liner	3.8	0.0	3.8
<b>Current Form Total</b>	<b>3.8</b>	<b>0.0</b>	<b>3.8</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
SWB Dir Ld w/o Liner	3.8	0.0	3.8
<b>Final Form Total</b>	<b>3.8</b>	<b>0.0</b>	<b>3.8</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	343.43
Aluminum-based Metals/Alloys	12.62
Other Metals	0.00
Other Inorganic Materials	5.79
Cellulosics	22.09
Rubber	0.00
Plastics	136.21
Cements	5.79
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	153.50
Packaging Material, Plastic	0.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	3.13E-03
Am-243	7.61E-07
Cm-244	6.75E-05
Np-237	1.39E-05
Pu-238	1.12E+00
Pu-239	6.28E-02
Pu-240	8.51E-03
Pu-241	1.43E-01
Pu-242	6.44E-06
Th-229	2.56E-14
Th-230	3.24E-10
Th-232	1.69E-17
U-233	1.82E-10
U-234	1.68E-05
U-235	1.51E-08
U-236	1.14E-07
U-238	3.27E-07

## Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011

No TRUCON Codes Provided

## Waste Stream Description

This waste stream is defense related, contact handled TRU waste and is composed of metal equipment and debris

Waste Stream ID: **SR-SDD-800UGT-HOM-A**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Savannah River Site	Final Waste Form	Solidified Organics	Waste Matrix Code	S3000	Handling	CH
Source Cat.	Remediation/D&D Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Organic Sludge from D&D of the SRS F-Area 800 Series Underground Tanks			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	5.0	0.0	5.0
<b>Current Form Total</b>	<b>5.0</b>	<b>0.0</b>	<b>5.0</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
SWB w/ 4 - 55-gal Drums w/o Liners	11.3	0.0	11.3
<b>Final Form Total</b>	<b>11.3</b>	<b>0.0</b>	<b>11.3</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.00
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	0.00
Cellulosics	0.00
Rubber	0.00
Plastics	3.76
Cements	265.02
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	211.10
Packaging Material, Plastic	0.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.34E-02
Am-243	6.82E-05
Np-237	9.72E-03
Pu-238	1.15E+00
Pu-239	1.04E-01
Pu-240	1.98E-02
Pu-241	2.58E-01
Pu-242	4.53E-02
Th-229	1.25E-05
Th-230	2.69E-06
Th-232	4.40E-14
U-233	4.43E-02
U-234	9.99E-02
U-235	7.91E-05
U-236	2.97E-04
U-238	4.81E-03

## Haz. Waste No(s).

D004, D008, D009

No TRUCON Codes Provided

## Waste Stream Description

Absorbed organic sludge packaged in 55-gallon drums

Waste Stream ID: **SR-SDD-800UGT-HOM-B**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Savannah River Site	Final Waste Form	Solidified Inorganics	Waste Matrix Code	S3000	Handling	CH
Source Cat.	Remediation/D&D Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Sludge from D&D of the SRS F-Area 800 Series Underground Tanks			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	10.4	0.0	10.4
<b>Current Form Total</b>	<b>10.4</b>	<b>0.0</b>	<b>10.4</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
TDOP w/ 10 - 55-gal Drums w/o Liners	22.5	0.0	22.5
<b>Final Form Total</b>	<b>22.5</b>	<b>0.0</b>	<b>22.5</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	42.90
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	3.10
Cellulosics	16.37
Rubber	0.00
Plastics	33.58
Cements	186.55
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	231.80
Packaging Material, Plastic	0.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.42E-01
Am-243	3.46E-05
Cm-244	3.07E-03
Np-237	6.34E-04
Pu-238	5.12E+01
Pu-239	2.86E+00
Pu-240	3.87E-01
Pu-241	6.52E+00
Pu-242	2.93E-04
Th-229	1.17E-12
Th-230	1.47E-08
Th-232	7.68E-16
U-233	8.29E-09
U-234	7.65E-04
U-235	6.85E-07
U-236	5.20E-06
U-238	1.49E-05

## Haz. Waste No(s).

D005, D006, D007, D008, D009, D010, D011

No TRUCON Codes Provided

## Waste Stream Description

Absorbed sludge packaged in 55-gallon drums

Waste Stream ID: **SR-SDD-HET-A**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Savannah River Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5000	Handling	CH
Source Cat.	Discarding Excess/Expired Materials	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Contact Handled PuBe Sources	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.8	0.0	0.8
<b>Current Form Total</b>	<b>0.8</b>	<b>0.0</b>	<b>0.8</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
SWB w/ 4 - 55-gal Drums w/ Liners	1.9	0.0	1.9
<b>Final Form Total</b>	<b>1.9</b>	<b>0.0</b>	<b>1.9</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	93.97
Aluminum-based Metals/Alloys	0.00
Other Metals	23.49
Other Inorganic Materials	0.00
Cellulosics	0.00
Rubber	0.00
Plastics	0.00
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	211.10
Packaging Material, Plastic	16.30
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	3.45E-01
Np-237	1.62E-06
Pu-238	4.68E+01
Pu-239	1.35E+00
Pu-240	3.31E-01
Pu-241	4.84E+00
Pu-242	7.92E-05
Sr-90	9.54E-09
Th-229	3.66E-14
Th-230	3.91E-07
Th-232	1.40E-16
U-233	6.15E-11
U-234	3.51E-03
U-235	3.20E-08
U-236	2.36E-07
U-238	4.80E-10

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

## Waste Stream Description

This waste stream consists PuBe and Americium sources from various facilities at the SRS



Waste Stream ID: **SR-SWMF-HET-A**

Appendix A

TRU Waste Inventory Profile Report

Site	Savannah River Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5000	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	CH Mixed TRU Debris (S5000)				Activity Concentrations Decayed to CY	2009	

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	39.7	148.1	187.8
85-gal Drum Dir Ld w/o Liner	19.6	0.0	19.6
SLB2 (5' x 5' x 8) Dir Ld	5.7	0.0	5.7
SWB Dir Ld w/o Liner	17.0	0.0	17.0
<b>Current Form Total</b>	<b>82.0</b>	<b>148.1</b>	<b>230.1</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	39.7	148.1	187.8
SLB2 (5' x 5' x 8) Dir Ld	5.7	0.0	5.7
SWB Dir Ld w/o Liner	43.5	0.0	43.5
<b>Final Form Total</b>	<b>88.9</b>	<b>148.1</b>	<b>237.0</b>

Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	17.90
Aluminum-based Metals/Alloys	2.78
Other Metals	0.00
Other Inorganic Materials	3.06
Cellulosics	8.20
Rubber	14.58
Plastics	55.01
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	137.01
Packaging Material, Plastic	0.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.22E-01
Am-243	1.27E-05
Cs-137	7.16E-05
Np-237	1.29E-04
Pu-238	4.97E+00
Pu-239	3.20E-01
Pu-240	7.67E-02
Pu-241	1.24E+00
Pu-242	8.25E-05
Sr-90	7.16E-05
Th-229	2.63E-14
Th-230	4.99E-09
Th-232	8.24E-09
U-233	5.60E-10
U-234	5.62E-04
U-235	2.18E-07
U-236	2.27E-09
U-238	1.24E-14

Haz. Waste No(s).

D008, F001, F002, F004, F005, F007, F009, U133, U151

TRUCON Code(s)

125/225

Waste Stream Description

CH Mixed TRU waste resulting from remediation and re-packaging of Mixed "defense related" TRU waste.

Waste Stream ID: SR-SWMF-HET-RH

## Appendix A

## TRU Waste Inventory Profile Report

Site	Savannah River Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5000	Handling	RH
Source Cat.	Remediation/D&D Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Remote Handled (RH) Mixed TRU Debris (S5000)			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	1.2	0.0	1.2
<b>Current Form Total</b>	<b>1.2</b>	<b>0.0</b>	<b>1.2</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	1.8	0.0	1.8
<b>Final Form Total</b>	<b>1.8</b>	<b>0.0</b>	<b>1.8</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.00
Aluminum-based Metals/Alloys	0.00
Other Metals	1260.00
Other Inorganic Materials	0.00
Cellulosics	0.00
Rubber	0.00
Plastics	99.20
Cements	0.00
Inorganic Matrix	20.70
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	652.20
Packaging Material, Plastic	26.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	8.49E-02
Am-243	5.19E-02
Cm-244	3.03E+00
Cs-137	4.01E-02
Np-237	5.30E-04
Pu-238	4.02E-01
Pu-239	2.59E-01
Pu-240	8.57E-02
Pu-241	1.35E+00
Pu-242	2.90E-05
Pu-244	1.97E-15
Sr-90	2.99E-02
Th-229	2.11E-11
Th-230	4.59E-09
Th-232	3.23E-16
U-233	3.21E-08
U-234	4.48E-05
U-235	7.47E-07
U-236	4.84E-07
U-238	1.60E-05

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

## Waste Stream Description

RH Mixed TRU waste resulting from solvent tank emptying and closure in the E-Area of SRS.

Comprehensive Inventory Database ver. 1.00

Data ver. D.9.02

NOTE: Actual numerical values have been rounded for presentation purposes.

Waste Stream ID: **SR-SWMF-SOIL**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Savannah River Site	Final Waste Form	Soils	Waste Matrix Code	S4000	Handling	CH
Source Cat.	Spill Clean-ups/Emergency Response Actions	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	CH Mixed TRU Waste Soil & Gravel			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	2.9	0.0	2.9
<b>Current Form Total</b>	<b>2.9</b>	<b>0.0</b>	<b>2.9</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	2.9	0.0	2.9
<b>Final Form Total</b>	<b>2.9</b>	<b>0.0</b>	<b>2.9</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.00
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	0.00
Cellulosics	0.00
Rubber	0.00
Plastics	0.31
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	6.05
Soils/gravel	273.56
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.33E+00
Am-243	1.68E+00
Cm-244	5.34E+01
Np-237	1.32E-05
Pu-238	2.16E+00
Pu-239	4.88E-03
Pu-240	8.96E-01
Pu-241	2.87E-01
Pu-242	5.35E-04
Pu-244	1.37E-13
Th-229	8.09E-13
Th-230	2.90E-08
Th-232	4.72E-16
U-233	8.62E-10
U-234	2.07E-04
U-235	1.23E-10
U-236	6.83E-07
U-238	2.42E-12

No Hazardous Waste Numbers Provided

TRUCON Code(s)

111/211

## Waste Stream Description

Burial Ground Soil and Gravel from spill cleanup / remediation activities.

Comprehensive Inventory Database ver. 1.00

Data ver. D.9.02

NOTE: Actual numerical values have been rounded for presentation purposes.

Waste Stream ID: SR-W026-221F-HEPA

## Appendix A

## TRU Waste Inventory Profile Report

Site	Savannah River Site	Final Waste Form	Filter	Waste Matrix Code	S5410	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	CH Mixed TRU HEPA Filters (S5000)			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
Box - SRS Poly Box	0.7	0.0	0.7
SWB Dir Ld w/o Liner	181.4	0.0	181.4
<b>Current Form Total</b>	<b>182.1</b>	<b>0.0</b>	<b>182.1</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
SWB Dir Ld w/o Liner	183.3	0.0	183.3
<b>Final Form Total</b>	<b>183.3</b>	<b>0.0</b>	<b>183.3</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	27.90
Aluminum-based Metals/Alloys	0.19
Other Metals	0.00
Other Inorganic Materials	1.68
Cellulosics	9.61
Rubber	0.00
Plastics	19.15
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	153.50
Packaging Material, Plastic	0.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.45E-01
Cs-137	1.22E-07
Np-237	2.67E-06
Pu-238	4.59E-02
Pu-239	6.93E-01
Pu-240	1.83E-01
Pu-241	9.34E-01
Pu-242	2.24E-05
Sr-90	1.20E-07
Th-229	3.37E-07
Th-230	7.96E-09
Th-232	4.86E-17
U-233	1.90E-04
U-234	4.79E-05
U-235	9.93E-07
U-236	1.03E-07
U-238	8.70E-08

## Haz. Waste No(s).

D022, D028, D029,  
F001, F002, F003,  
F005

## TRUCON Code(s)

119/219

## Waste Stream Description

HEPA Filters in Filtered Polyethylene Boxes

Waste Stream ID: SR-W026-221F-HET

## Appendix A

## TRU Waste Inventory Profile Report

Site	Savannah River Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5000	Handling	CH
Source Cat.	Materials Production/Recovery Effluents	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	CH Mixed TRU/Thirds Heterogeneous debris from 221F			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	4.6	0.0	4.6
Box - SRS B-25 OP	3.6	0.0	3.6
SWB Dir Ld w/o Liner	30.2	0.0	30.2
<b>Current Form Total</b>	<b>38.4</b>	<b>0.0</b>	<b>38.4</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	4.6	0.0	4.6
SWB Dir Ld w/o Liner	34.0	0.0	34.0
<b>Final Form Total</b>	<b>38.6</b>	<b>0.0</b>	<b>38.6</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	198.11
Aluminum-based Metals/Alloys	3.29
Other Metals	6.57
Other Inorganic Materials	34.27
Cellulosics	15.49
Rubber	49.76
Plastics	157.74
Cements	0.00
Inorganic Matrix	0.47
Organic Matrix	3.29
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	150.81
Packaging Material, Plastic	4.39
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	8.38E-01
Am-243	1.62E-07
Cm-244	1.61E-04
Cs-137	9.13E-07
Np-237	1.20E-05
Pu-238	9.75E-01
Pu-239	3.72E+00
Pu-240	1.03E+00
Pu-241	1.36E+01
Pu-242	5.69E-04
Sr-90	9.65E-07
Th-229	5.56E-14
Th-230	1.94E-08
Th-232	1.24E-07
U-233	2.42E-10
U-234	4.37E-04
U-235	5.51E-06
U-236	1.53E-07
U-238	3.91E-05

## Haz. Waste No(s).

D006, D007, D008, D009, D022, D028, D029, F001, F002, F003, F005

## TRUCON Code(s)

125/225

## Waste Stream Description

200 Areas (F and H Separations Facilities). This waste is primarily solids consisting of mainly booties, lab coats, floor sweepings, rags, labware, and other job control wastes. Small HEPAs, liquids, sludges and resins may also be found in this stream. The waste is generated primarily through separation activities in the course of plutonium production, includes small amounts of TRU waste from on site laboratories.

Waste Stream ID: SR-W026-221F-HOM

## Appendix A

## TRU Waste Inventory Profile Report

Site	Savannah River Site	Final Waste Form	Solidified Inorganics	Waste Matrix Code	S3113	Handling	CH
Source Cat.	Materials Production/Recovery Effluents	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	CH Mixed TRU Solids (S3000)	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	16.0	0.0	16.0
SWB Dir Ld w/o Liner	11.3	0.0	11.3
<b>Current Form Total</b>	<b>27.4</b>	<b>0.0</b>	<b>27.4</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	5.6	0.0	5.6
SWB Dir Ld w/o Liner	11.3	0.0	11.3
TDOP w/ 10 - 55-gal Drums w/ Liners	22.5	0.0	22.5
<b>Final Form Total</b>	<b>39.5</b>	<b>0.0</b>	<b>39.5</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	1.36
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	0.00
Cellulosics	6.45
Rubber	2.04
Plastics	20.35
Cements	0.00
Inorganic Matrix	83.45
Organic Matrix	225.59
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	194.92
Packaging Material, Plastic	15.02
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	8.52E-02
Am-243	1.83E-05
Cs-137	2.14E-04
Np-237	2.01E-06
Pu-238	1.91E-01
Pu-239	4.50E-01
Pu-240	1.08E-01
Pu-241	1.62E+00
Pu-242	7.13E-04
Sr-90	8.20E-05
Th-229	1.29E-13
Th-230	2.21E-09
Th-232	2.85E-17
U-233	1.49E-10
U-234	1.83E-05
U-235	1.35E-06
U-236	6.07E-08
U-238	3.82E-05

## Haz. Waste No(s).

D005, D006, D007, D008, D009, D011, D019, D022, D028, D029, D043, F002, F005, U151

## TRUCON Code(s)

127/227

## Waste Stream Description

Absorbed oil, neutralized acids / bases and water

Waste Stream ID: SR-W026-772F-HET

## Appendix A

## TRU Waste Inventory Profile Report

Site	Savannah River Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5000	Handling	CH
Source Cat.	R&D/R&D Laboratory Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	CH Mixed TRU/Thirds Heterogeneous debris from 772F			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	52.4	21.6	74.0
Box - SRS B-25 OP	10.8	0.0	10.8
Box - Steel	5.1	0.0	143.1
SWB Dir Ld w/o Liner	17.0	9.5	26.5
<b>Current Form Total</b>	<b>223.3</b>	<b>31.1</b>	<b>254.4</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	13.1	13.5	26.6
SWB Dir Ld w/o Liner	172.0	9.5	181.4
TDOP w/ 10 - 55-gal Drums w/ Liners	85.5	0.0	85.5
<b>Final Form Total</b>	<b>270.6</b>	<b>23.0</b>	<b>293.6</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	9.16
Aluminum-based Metals/Alloys	0.68
Other Metals	0.88
Other Inorganic Materials	19.70
Cellulosics	5.45
Rubber	4.24
Plastics	45.49
Cements	0.00
Inorganic Matrix	0.07
Organic Matrix	0.01
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	174.25
Packaging Material, Plastic	8.34
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.56E-01
Am-243	1.87E-06
Cm-244	1.02E-04
Cs-137	1.74E-04
Np-237	2.40E-04
Pu-238	9.05E+00
Pu-239	4.28E-01
Pu-240	1.06E-01
Pu-241	1.78E+00
Pu-242	4.06E-05
Sr-90	1.68E-04
Th-229	4.58E-08
Th-230	7.32E-08
Th-232	5.75E-07
U-233	8.55E-05
U-234	1.69E-03
U-235	1.70E-06
U-236	1.58E-08
U-238	1.16E-06

## Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D019, D022, D028, D029, F002, F003, F005

## TRUCON Code(s)

125/225, 154

## Waste Stream Description

Combined waste from former W027-772F-HET and T001-772F-HET. This waste stream is defense related, contact handled TRU waste and is composed of Job Control waste, sludges and resins, HEPA filters and metal equipment.

Waste Stream ID: SR-W026-CIF-HOM

## Appendix A

## TRU Waste Inventory Profile Report

Site	Savannah River Site	Final Waste Form	Solidified Inorganics	Waste Matrix Code	S3000	Handling	CH
Source Cat.	Pollution Control or Waste Treatment Process	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	CIF concreted sludge from incinerator cleanout			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
SWB w/ 4 - 55-gal Drums w/o Liners	3.8	0.0	3.8
<b>Current Form Total</b>	<b>3.8</b>	<b>0.0</b>	<b>3.8</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
SWB w/ 4 - 55-gal Drums w/o Liners	3.8	0.0	3.8
<b>Final Form Total</b>	<b>3.8</b>	<b>0.0</b>	<b>3.8</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.00
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	0.00
Cellulosics	0.00
Rubber	0.00
Plastics	0.00
Cements	438.00
Inorganic Matrix	146.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	211.10
Packaging Material, Plastic	0.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	9.69E-04
Cs-137	5.28E-04
Np-237	2.21E-05
Pu-238	4.45E-02
Pu-239	1.68E-03
Pu-241	4.22E-02
Sr-90	5.49E-05
Th-229	1.15E-08
Th-230	2.08E-09
U-233	1.54E-05
U-234	2.95E-05
U-235	1.69E-06
U-238	2.02E-05

No Hazardous Waste Numbers Provided

TRUCON Code(s)

111/211, 154

## Waste Stream Description

CH TRU waste consisting of concreted cleanout material



Waste Stream ID: SR-W026-DWPF-HET

Appendix A

TRU Waste Inventory Profile Report

Site	Savannah River Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5000	Handling	CH
Source Cat.	Analytical Laboratory Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	CH TRU - Heterogeneous debris from the DWPF laboratory			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	0.4	0.0	0.4
<b>Current Form Total</b>	<b>0.4</b>	<b>0.0</b>	<b>0.4</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	0.4	0.0	0.4
<b>Final Form Total</b>	<b>0.4</b>	<b>0.0</b>	<b>0.4</b>

Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	3.52
Aluminum-based Metals/Alloys	1.76
Other Metals	0.00
Other Inorganic Materials	7.05
Cellulosics	17.03
Rubber	0.00
Plastics	29.37
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	0.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	3.90E-04
Am-243	3.09E-06
Cm-244	2.28E-04
Cs-137	8.60E-03
Np-237	5.15E-07
Pu-238	5.63E-03
Pu-239	2.82E-04
Pu-240	1.03E-04
Pu-241	1.42E-03
Pu-242	2.15E-07
Sr-90	2.27E-01
Th-229	7.24E-10
Th-230	4.23E-11
Th-232	6.31E-18
U-233	2.57E-06
U-234	1.59E-06
U-235	1.62E-07
U-236	4.26E-08
U-238	5.15E-07

No Hazardous Waste Numbers Provided

TRUCON Code(s)  
125/225, 154

Waste Stream Description

CH TRU waste consisting of contaminated laboratory debris

Waste Stream ID: SR-W027-221F-HET-A

## Appendix A

## TRU Waste Inventory Profile Report

Site	Savannah River Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5000	Handling	CH
Source Cat.	Materials Production/Recovery Effluents	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	CH Mixed TRU/F listed solvents - Heterogeneous debris from 221F			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	5.4	0.0	5.4
Box - SRS Black Box	376.7	0.0	376.7
<b>Current Form Total</b>	<b>382.1</b>	<b>0.0</b>	<b>382.1</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	5.4	0.0	5.4
SWB Dir Ld w/o Liner	378.0	0.0	378.0
<b>Final Form Total</b>	<b>383.4</b>	<b>0.0</b>	<b>383.4</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	17.88
Aluminum-based Metals/Alloys	0.80
Other Metals	0.17
Other Inorganic Materials	9.63
Cellulosics	9.77
Rubber	7.04
Plastics	66.94
Cements	0.00
Inorganic Matrix	0.08
Organic Matrix	0.02
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	153.18
Packaging Material, Plastic	0.52
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	6.94E-01
Am-243	3.28E-08
Cm-244	2.16E-06
Cs-137	3.20E-07
Np-237	9.02E-06
Pu-238	1.85E-01
Pu-239	1.81E+00
Pu-240	5.59E-01
Pu-241	3.96E+00
Pu-242	8.36E-05
Sr-90	2.93E-07
Th-229	2.36E-07
Th-230	2.50E-08
Th-232	9.47E-08
U-233	1.10E-04
U-234	1.27E-04
U-235	1.44E-07
U-236	3.82E-07
U-238	1.04E-06

## Haz. Waste No(s).

D008, F001, F002, F003, F005

## TRUCON Code(s)

125/225, 154

## Waste Stream Description

This waste stream is primarily solids consisting of booties, lab coats, floor sweeping, labware, rags, and other job control waste. This stream differs from SR-W026 because solvent rags are suspected to be in the waste.

Waste Stream ID: SR-W027-221F-HET-C-D

## Appendix A

## TRU Waste Inventory Profile Report

Site	Savannah River Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5000	Handling	CH
Source Cat.	Materials Production/Recovery Effluents	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	CH Mixed TRU/F listed solvents - Heterogeneous debris from 221F			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.4	0.0	0.4
<b>Current Form Total</b>	<b>0.4</b>	<b>0.0</b>	<b>0.4</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.4	0.0	0.4
<b>Final Form Total</b>	<b>0.4</b>	<b>0.0</b>	<b>0.4</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	17.88
Aluminum-based Metals/Alloys	0.80
Other Metals	0.17
Other Inorganic Materials	9.63
Cellulosics	9.77
Rubber	7.04
Plastics	66.94
Cements	0.00
Inorganic Matrix	0.08
Organic Matrix	0.02
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	6.94E-01
Am-243	3.28E-08
Cm-244	2.16E-06
Cs-137	3.20E-07
Np-237	9.02E-06
Pu-238	1.85E-01
Pu-239	1.81E+00
Pu-240	5.59E-01
Pu-241	3.96E+00
Pu-242	8.36E-05
Sr-90	2.93E-07
Th-229	2.36E-07
Th-230	2.50E-08
Th-232	9.47E-08
U-233	1.10E-04
U-234	1.27E-04
U-235	1.44E-07
U-236	3.82E-07
U-238	1.04E-06

## Haz. Waste No(s).

D006, D008, F001, F002, F003, F005

## TRUCON Code(s)

125/225, 154

## Waste Stream Description

This waste stream is primarily solids consisting of booties, lab coats, floor sweeping, labware, rags, and other job control waste. This stream differs from SR-W026 because solvent rags are suspected to be in the waste.

Waste Stream ID: SR-W027-221F-HET-E

## Appendix A

## TRU Waste Inventory Profile Report

Site	Savannah River Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5000	Handling	CH
Source Cat.	Materials Production/Recovery Effluents	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	CH Mixed TRU/F listed solvents - Heterogeneous debris from 221F			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.4	0.0	0.4
<b>Current Form Total</b>	<b>0.4</b>	<b>0.0</b>	<b>0.4</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.4	0.0	0.4
<b>Final Form Total</b>	<b>0.4</b>	<b>0.0</b>	<b>0.4</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	17.88
Aluminum-based Metals/Alloys	0.80
Other Metals	0.17
Other Inorganic Materials	9.63
Cellulosics	9.77
Rubber	7.04
Plastics	66.94
Cements	0.00
Inorganic Matrix	0.08
Organic Matrix	0.02
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	6.94E-01
Am-243	3.28E-08
Cm-244	2.16E-06
Cs-137	3.20E-07
Np-237	9.02E-06
Pu-238	1.85E-01
Pu-239	1.81E+00
Pu-240	5.59E-01
Pu-241	3.96E+00
Pu-242	8.36E-05
Sr-90	2.93E-07
Th-229	2.36E-07
Th-230	2.50E-08
Th-232	9.47E-08
U-233	1.10E-04
U-234	1.27E-04
U-235	1.44E-07
U-236	3.82E-07
U-238	1.04E-06

## Haz. Waste No(s).

D008, D009, F001, F002, F003, F005

## TRUCON Code(s)

125/225, 154

## Waste Stream Description

This waste stream is primarily solids consisting of booties, lab coats, floor sweeping, labware, rags, and other job control waste. This stream differs from SR-W026 because solvent rags are suspected to be in the waste.

Waste Stream ID: SR-W027-221H-HEPA

## Appendix A

## TRU Waste Inventory Profile Report

Site	Savannah River Site	Final Waste Form	Filter	Waste Matrix Code	S5410	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	CH TRU HEPA filters	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	1.0	5.0	6.0
Box - Concrete	3.2	0.0	3.2
Box - Fiberglass	7.7	0.0	7.7
Box - SRS Poly Box	12.0	0.0	12.0
Box - Steel	5.1	0.0	5.1
SWB Dir Ld w/o Liner	113.4	22.7	136.1
<b>Current Form Total</b>	<b>142.3</b>	<b>27.7</b>	<b>170.0</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	1.0	5.0	6.0
SWB Dir Ld w/o Liner	181.4	22.7	204.1
<b>Final Form Total</b>	<b>182.5</b>	<b>27.7</b>	<b>210.2</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	26.25
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	6.18
Cellulosics	11.78
Rubber	0.03
Plastics	18.44
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	152.85
Packaging Material, Plastic	1.06
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	7.29E-03
Am-243	2.45E-07
Cs-137	6.83E-04
Np-237	5.34E-05
Pu-238	3.72E+00
Pu-239	7.66E-03
Pu-240	2.11E-03
Pu-241	4.71E-02
Pu-242	4.68E-06
Sr-90	6.81E-04
Th-229	9.82E-14
Th-230	1.86E-08
Th-232	1.39E-20
U-233	6.98E-10
U-234	7.05E-04
U-235	1.05E-07
U-236	1.88E-10
U-238	2.12E-15

## Haz. Waste No(s).

D006, D008, D009,  
D019, D022, D029,  
D035, D039, D040,  
D043

## TRUCON Code(s)

119/219

## Waste Stream Description

This waste stream is defense related, contact handled mixed TRU and is composed of HEPA filters

Waste Stream ID: SR-W027-221H-HET

## Appendix A

## TRU Waste Inventory Profile Report

Site	Savannah River Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5000	Handling	CH
Source Cat.	Materials Production/Recovery Effluents	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	CH Mixed TRU/F listed solvents - Heterogeneous debris from 221H			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	67.0	0.0	67.0
55-gal Drum Dir Ld w/o Liner	10.2	88.0	98.2
SWB Dir Ld w/o Liner	22.7	83.2	105.8
<b>Current Form Total</b>	<b>99.8</b>	<b>171.1</b>	<b>271.0</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	67.0	0.0	67.0
55-gal Drum Dir Ld w/o Liner	10.2	88.0	98.2
SWB Dir Ld w/o Liner	22.7	83.2	105.8
<b>Final Form Total</b>	<b>99.8</b>	<b>171.1</b>	<b>271.0</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	24.38
Aluminum-based Metals/Alloys	1.16
Other Metals	0.36
Other Inorganic Materials	9.20
Cellulosics	5.94
Rubber	16.94
Plastics	53.43
Cements	0.00
Inorganic Matrix	0.14
Organic Matrix	0.01
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	139.67
Packaging Material, Plastic	9.14
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.20E-01
Am-243	1.06E-06
Cm-244	3.25E-06
Cs-137	9.86E-06
Np-237	1.14E-03
Pu-238	5.38E+01
Pu-239	1.94E-01
Pu-240	4.69E-02
Pu-241	5.01E+00
Pu-242	2.97E-05
Sr-90	9.80E-06
Th-229	1.81E-07
Th-230	4.59E-07
Th-232	2.47E-06
U-233	3.87E-04
U-234	1.06E-02
U-235	2.29E-06
U-236	6.95E-09
U-238	2.47E-06

## Haz. Waste No(s).

D006, D008, D009, D019, D022, D029, D039, D040, D043, F001, F002, F003, F005, U133

## TRUCON Code(s)

125/225

## Waste Stream Description

This waste stream is primarily solids consisting of booties, lab coats, floor sweeping, labware, rags, and other job control waste. This stream differs from SR-W026 because solvent rags are suspected to be in the waste. Small HEPA filters, sludges, resins, absorbed liquids, and large metal equipment are also in these waste streams.

Waste Stream ID: SR-W027-221H-HET-C

## Appendix A

## TRU Waste Inventory Profile Report

Site	Savannah River Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5000	Handling	CH
Source Cat.	Materials Production/Recovery Effluents	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	CH Mixed TRU - Heterogeneous debris from 221H			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	5.2	0.0	5.2
55-gal Drum Dir Ld w/o Liner	11.2	0.0	11.2
<b>Current Form Total</b>	<b>16.4</b>	<b>0.0</b>	<b>16.4</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	5.2	0.0	5.2
55-gal Drum Dir Ld w/o Liner	11.2	0.0	11.2
<b>Final Form Total</b>	<b>16.4</b>	<b>0.0</b>	<b>16.4</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	11.67
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	11.90
Cellulosics	2.38
Rubber	0.00
Plastics	49.29
Cements	0.00
Inorganic Matrix	2.38
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	11.71
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	4.84E-01
Cs-137	6.50E-06
Np-237	8.28E-06
Pu-238	4.66E-01
Pu-239	1.60E+00
Pu-240	4.44E-01
Pu-241	1.96E+00
Pu-242	1.93E-05
Sr-90	6.47E-06
Th-229	3.88E-14
Th-230	1.79E-08
Th-232	8.14E-18
U-233	1.68E-10
U-234	4.02E-04
U-235	8.58E-06
U-236	6.59E-08
U-238	6.31E-06

## Haz. Waste No(s).

D006, D007, D008,  
D009, D011

## TRUCON Code(s)

125/225, 154

## Waste Stream Description

This waste stream is primarily solids consisting of booties, lab coats, floor sweeping, labware, rags, and other job control waste. This stream differs from SR-W026 because solvent rags are suspected to be in the waste. Small HEPA filters, sludges, resins, absorbed liquids, and large metal equipment are also in these waste streams.

Waste Stream ID: SR-W027-221H-HET-D

## Appendix A

## TRU Waste Inventory Profile Report

Site	Savannah River Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5000	Handling	CH
Source Cat.	Materials Production/Recovery Effluents	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	CH Mixed TRU - Heterogeneous debris from 221H			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	7.5	0.0	7.5
<b>Current Form Total</b>	<b>7.5</b>	<b>0.0</b>	<b>7.5</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	7.5	0.0	7.5
<b>Final Form Total</b>	<b>7.5</b>	<b>0.0</b>	<b>7.5</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	17.71
Aluminum-based Metals/Alloys	0.95
Other Metals	0.00
Other Inorganic Materials	0.32
Cellulosics	1.97
Rubber	0.83
Plastics	42.29
Cements	71.08
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	5.44E-02
Cs-137	2.98E-07
Np-237	6.16E-04
Pu-238	2.66E-01
Pu-239	1.02E-01
Pu-240	3.81E-02
Pu-241	3.16E-01
Pu-242	1.58E-05
Sr-90	2.97E-07
Th-229	3.08E-12
Th-230	2.65E-07
Th-232	6.98E-19
U-233	1.31E-08
U-234	5.90E-03
U-235	5.78E-04
U-236	5.65E-09
U-238	1.13E-05

## Haz. Waste No(s).

D006, D007, D008

## TRUCON Code(s)

125/225, 154

## Waste Stream Description

This waste stream is primarily solids consisting of booties, lab coats, floor sweeping, labware, rags, and other job control waste. This stream differs from SR-W026 because solvent rags are suspected to be in the waste. Small HEPA filters, sludges, resins, absorbed liquids, and large metal equipment are also in these waste streams.



Waste Stream ID: SR-W027-221H-HOM

## Appendix A

## TRU Waste Inventory Profile Report

Site	Savannah River Site	Final Waste Form	Solidified Inorganics	Waste Matrix Code	S3000	Handling	CH
Source Cat.	Materials Production/Recovery Effluents	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	CH Mixed TRU Absorbed / Stabilized Liquids			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	2.1	0.0	2.1
<b>Current Form Total</b>	<b>2.1</b>	<b>0.0</b>	<b>2.1</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	2.1	0.0	2.1
<b>Final Form Total</b>	<b>2.1</b>	<b>0.0</b>	<b>2.1</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	8.47
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	149.58
Cellulosics	5.64
Rubber	5.64
Plastics	64.91
Cements	0.00
Inorganic Matrix	45.16
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	0.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.43E-01
Am-243	7.52E-08
Cs-137	1.89E-03
Np-237	9.25E-05
Pu-238	4.04E-01
Pu-239	5.21E-01
Pu-240	1.42E-01
Pu-241	4.43E-01
Pu-242	5.07E-05
Sr-90	8.34E-03
Th-229	9.88E-09
Th-230	2.61E-07
Th-232	5.98E-15
U-233	3.64E-06
U-234	1.02E-03
U-235	1.88E-05
U-236	4.24E-06
U-238	9.89E-07

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

## Waste Stream Description

CH Mixed TRU Absorbed / Stabilized Liquids

Comprehensive Inventory Database ver. 1.00

Data ver. D.9.02

NOTE: Actual numerical values have been rounded for presentation purposes.

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Waste Stream ID: SR-W027-235F-HEPA

## Appendix A

## TRU Waste Inventory Profile Report

Site	Savannah River Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5000	Handling	CH
Source Cat.	Materials Production/Recovery Effluents	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	CH Mixed TRU consisting of HEPA Filters from the 235-F.			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
Box - SRS Poly Box	1.1	0.0	1.1
SWB Dir Ld w/o Liner	88.8	0.0	88.8
<b>Current Form Total</b>	<b>89.9</b>	<b>0.0</b>	<b>89.9</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
SWB Dir Ld w/o Liner	90.7	0.0	90.7
<b>Final Form Total</b>	<b>90.7</b>	<b>0.0</b>	<b>90.7</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	8.62
Aluminum-based Metals/Alloys	0.04
Other Metals	0.00
Other Inorganic Materials	1.15
Cellulosics	0.36
Rubber	0.00
Plastics	5.09
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	153.50
Packaging Material, Plastic	0.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	5.88E-02
Np-237	1.22E-04
Pu-238	7.65E+00
Pu-239	1.71E-02
Pu-240	3.95E-02
Pu-241	3.35E-01
Pu-242	2.28E-05
Th-229	1.68E-11
Th-230	7.58E-08
Th-232	1.96E-17
U-233	1.38E-08
U-234	6.27E-04
U-235	4.37E-10
U-236	3.05E-08
U-238	6.47E-06

## Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D035

## TRUCON Code(s)

119/219, 154

## Waste Stream Description

This waste stream is defense related, contact handled TRU waste and is composed of spent HEPA Filters

Waste Stream ID: SR-W027-235F-HET

## Appendix A

## TRU Waste Inventory Profile Report

Site	Savannah River Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5000	Handling	CH
Source Cat.	Materials Production/Recovery Effluents	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	CH Mixed TRU/F listed solvents - Heterogeneous debris from 235F			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	33.9	0.0	33.9
55-gal Drum Dir Ld w/o Liner	1.5	0.0	1.5
Box - Steel	2.7	0.0	2.7
Pipe - Steel	0.2	0.0	9.6
<b>Current Form Total</b>	<b>47.7</b>	<b>0.0</b>	<b>47.7</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	13.5	0.0	13.5
55-gal Drum Dir Ld w/o Liner	0.6	0.0	0.6
SWB Dir Ld w/o Liner	83.2	0.0	83.2
TDOP w/ 10 - 55-gal Drums w/ Liners	45.0	0.0	45.0
<b>Final Form Total</b>	<b>142.3</b>	<b>0.0</b>	<b>142.3</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	42.56
Aluminum-based Metals/Alloys	1.85
Other Metals	0.86
Other Inorganic Materials	10.38
Cellulosics	7.96
Rubber	34.23
Plastics	58.84
Cements	0.00
Inorganic Matrix	0.24
Organic Matrix	0.09
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	176.00
Packaging Material, Plastic	8.92
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.59E-01
Am-243	1.25E-06
Cm-244	1.37E-05
Cs-137	2.97E-06
Np-237	4.66E-03
Pu-238	1.12E+02
Pu-239	1.72E-01
Pu-240	7.28E-02
Pu-241	5.52E+00
Pu-242	6.81E-05
Sr-90	2.96E-06
Th-229	1.24E-07
Th-230	7.69E-07
Th-232	2.25E-06
U-233	3.30E-04
U-234	2.20E-02
U-235	4.11E-06
U-236	8.63E-09
U-238	1.94E-06

## Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D035, F002, F003

## TRUCON Code(s)

125/225, 154

## Waste Stream Description

This waste stream is defense related contact handled mixed TRU waste. This waste stream is primarily solids consisting of booties, lab coats, floor sweeping, labware, rags, and other job control waste, small HEPAs, liquids, sludges and resins may also be found in this stream..

Waste Stream ID: SR-W027-235F-HOMO

## Appendix A

## TRU Waste Inventory Profile Report

Site	Savannah River Site	Final Waste Form	Solidified Inorganics	Waste Matrix Code	S3000	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	CH mixed TRU S3000 solids from 235F			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	3.3	0.0	3.3
<b>Current Form Total</b>	<b>3.3</b>	<b>0.0</b>	<b>3.3</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	3.3	0.0	3.3
<b>Final Form Total</b>	<b>3.3</b>	<b>0.0</b>	<b>3.3</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	3.50
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	3.50
Cellulosics	3.50
Rubber	3.50
Plastics	10.51
Cements	0.00
Inorganic Matrix	325.87
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.24E-01
Np-237	1.07E-06
Pu-238	2.25E+02
Pu-239	1.82E-01
Pu-240	9.89E-02
Pu-241	2.25E+00
Pu-242	1.17E-04
Th-229	2.02E-14
Th-230	1.02E-06
Th-232	2.35E-17
U-233	3.79E-11
U-234	1.24E-02
U-235	3.23E-09
U-236	5.28E-08
U-238	3.18E-13

## Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, F002

No TRUCON Codes Provided

## Waste Stream Description

This waste consists of sludge from tank cleanup.

Waste Stream ID: SR-W027-643G-HET

## Appendix A

## TRU Waste Inventory Profile Report

Site	Savannah River Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5000	Handling	CH
Source Cat.	Spill Clean-ups/Emergency Response Actions	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	CH Mixed TRU Debris (S5000)	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	4.2	0.0	4.2
<b>Current Form Total</b>	<b>4.2</b>	<b>0.0</b>	<b>4.2</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	2.1	0.0	2.1
TDOP w/ 10 - 55-gal Drums w/ Liners	4.5	0.0	4.5
<b>Final Form Total</b>	<b>6.6</b>	<b>0.0</b>	<b>6.6</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	15.61
Aluminum-based Metals/Alloys	0.53
Other Metals	25.62
Other Inorganic Materials	2.13
Cellulosics	19.21
Rubber	12.41
Plastics	56.97
Cements	0.00
Inorganic Matrix	0.13
Organic Matrix	0.67
Soils/gravel	0.13
Vitrified	0.00
Packaging Material, Steel	199.87
Packaging Material, Plastic	23.39
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	3.14E-01
Am-243	2.22E-02
Cm-244	1.40E+00
Cs-137	4.90E-03
Np-237	1.62E-04
Pu-238	1.02E-01
Pu-239	1.04E-01
Pu-240	3.43E-02
Pu-241	6.38E-01
Pu-242	1.13E-05
Pu-244	6.23E-16
Sr-90	3.45E-03
Th-229	4.71E-12
Th-230	2.00E-10
Th-232	3.47E-18
U-233	8.37E-09
U-234	3.64E-06
U-235	1.23E-09
U-236	1.18E-08
U-238	2.04E-14

No Hazardous Waste Numbers Provided

TRUCON Code(s)

125/225, 154

## Waste Stream Description

CH Mixed TRU waste resulting from remediation and re-packaging of Mixed "defense related" TRU waste.

Comprehensive Inventory Database ver. 1.00

Data ver. D.9.02

NOTE: Actual numerical values have been rounded for presentation purposes.

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Waste Stream ID: **SR-W027-773A-HEPA**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Savannah River Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5000	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	CH Mixed TRU consisting of HEPA Filters from the SRNL.			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
SWB Dir Ld w/o Liner	11.3	0.0	11.3
<b>Current Form Total</b>	<b>11.3</b>	<b>0.0</b>	<b>11.3</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
SWB Dir Ld w/o Liner	11.3	0.0	11.3
<b>Final Form Total</b>	<b>11.3</b>	<b>0.0</b>	<b>11.3</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	25.12
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	9.57
Cellulosics	6.74
Rubber	0.10
Plastics	21.45
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	153.50
Packaging Material, Plastic	0.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.04E-06
Pu-238	2.26E-02
Pu-239	1.57E-05
Pu-240	8.57E-06
Pu-241	4.70E-04
Pu-242	1.02E-08

No Hazardous Waste Numbers Provided

TRUCON Code(s)

119/219, 154

## Waste Stream Description

This waste stream is defense related, contact handled TRU waste and is composed of spent HEPA Filters

Waste Stream ID: SR-W027-773A-HET

## Appendix A

## TRU Waste Inventory Profile Report

Site	Savannah River Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5000	Handling	CH
Source Cat.	R&D/R&D Laboratory Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	CH Mixed TRU/F listed solvents - Heterogeneous debris from 773A			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	29.5	0.0	29.5
55-gal Drum Dir Ld w/o Liner	8.7	71.6	80.3
Box - Fiberglass	3.4	0.0	3.4
Box - Plywood	0.9	0.0	0.9
Box - Steel	10.2	0.0	112.2
Cask - Concrete	10.3	0.0	10.3
Cask - SRS CMISC	2.5	0.0	2.5
SWB Dir Ld w/o Liner	0.0	30.2	30.2
<b>Current Form Total</b>	<b>167.5</b>	<b>101.8</b>	<b>269.3</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	11.9	0.0	11.9
55-gal Drum Dir Ld w/o Liner	3.5	71.6	75.1
SWB Dir Ld w/o Liner	130.4	30.2	160.7
TDOP w/ 10 - 55-gal Drums w/ Liners	49.5	0.0	49.5
<b>Final Form Total</b>	<b>195.3</b>	<b>101.8</b>	<b>297.1</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	32.96
Aluminum-based Metals/Alloys	0.57
Other Metals	1.50
Other Inorganic Materials	18.64
Cellulosics	9.23
Rubber	9.29
Plastics	35.08
Cements	0.00
Inorganic Matrix	0.23
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	159.90
Packaging Material, Plastic	4.33
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.94E-01
Am-243	1.54E-03
Cm-244	8.57E-02
Cs-137	3.64E-04
Np-237	2.88E-04
Pu-238	1.13E+01
Pu-239	4.61E-01
Pu-240	1.05E-01
Pu-241	1.84E+00
Pu-242	1.12E-05
Sr-90	3.63E-04
Th-229	2.22E-08
Th-230	7.62E-08
Th-232	7.91E-07
U-233	5.93E-05
U-234	2.18E-03
U-235	1.20E-06
U-236	1.24E-08
U-238	1.53E-05

## Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D019, D022, D027, D028, D029, D043, F002, F003, F004, F005

## TRUCON Code(s)

125/225

## Waste Stream Description

This waste stream is defense related contact handled mixed TRU waste. This waste stream is primarily solids consisting of booties, lab coats, floor sweeping, labware, rags, other job control waste, small HEPAs liquids, sludges and resins may also be found in this waste.

Waste Stream ID: **SR-W027-776A-HET**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Savannah River Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5000	Handling	CH
Source Cat.	Materials Production/Recovery Effluents	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	CH Mixed TRU/F listed solvents - Heterogeneous debris from 776A			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
Box - SRS B-25 OP	7.2	0.0	7.2
Box - Steel	61.2	0.0	61.2
<b>Current Form Total</b>	<b>68.4</b>	<b>0.0</b>	<b>68.4</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
SWB Dir Ld w/o Liner	68.0	0.0	68.0
<b>Final Form Total</b>	<b>68.0</b>	<b>0.0</b>	<b>68.0</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	22.83
Aluminum-based Metals/Alloys	1.09
Other Metals	2.84
Other Inorganic Materials	11.27
Cellulosics	6.69
Rubber	3.93
Plastics	23.92
Cements	0.00
Inorganic Matrix	0.07
Organic Matrix	0.07
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	153.50
Packaging Material, Plastic	0.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.58E-04
Cs-137	1.13E-02
Np-237	5.72E-10
Pu-238	1.75E-01
Pu-239	4.83E-04
Pu-240	1.57E-04
Pu-241	3.17E-03
Pu-242	1.05E-07
Sr-90	7.92E-03
Th-229	8.03E-18
Th-230	8.90E-10
Th-232	4.17E-20
U-233	1.71E-14
U-234	1.02E-05
U-235	9.05E-12
U-236	8.88E-11
U-238	3.02E-16

No Hazardous Waste Numbers Provided

TRUCON Code(s)

125/225, 154

## Waste Stream Description

This waste stream is defense related contact handled mixed TRU waste. This waste stream is primarily solids consisting of booties, lab coats, floor sweeping, labware, rags, other job control waste, small HEPAs liquids, sludges and resins may also be found in this waste.



Waste Stream ID: **SR-W027-FB-Pre86-C**

## Appendix A

## TRU Waste Inventory Profile Report

Site	Savannah River Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5000	Handling	CH
Source Cat.	Materials Production/Recovery Effluents	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	CH Mixed TRU - Heterogeneous debris from 221H			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	31.0	0.0	31.0
Box - Steel	0.2	0.0	37.9
<b>Current Form Total</b>	<b>68.9</b>	<b>0.0</b>	<b>68.9</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	12.3	0.0	12.3
SWB Dir Ld w/o Liner	39.7	0.0	39.7
TDOP w/ 10 - 55-gal Drums w/ Liners	40.5	0.0	40.5
<b>Final Form Total</b>	<b>92.5</b>	<b>0.0</b>	<b>92.5</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	12.98
Aluminum-based Metals/Alloys	0.13
Other Metals	0.17
Other Inorganic Materials	4.37
Cellulosics	4.34
Rubber	4.32
Plastics	30.45
Cements	0.00
Inorganic Matrix	0.09
Organic Matrix	0.02
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	184.78
Packaging Material, Plastic	12.40
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	4.85E-01
Am-243	3.33E-07
Cm-244	2.49E-04
Cs-137	8.82E-07
Np-237	2.60E-05
Pu-238	1.34E-01
Pu-239	1.23E+00
Pu-240	3.54E-01
Pu-241	1.80E+00
Pu-242	6.40E-05
Sr-90	8.70E-07
Th-229	1.37E-08
Th-230	6.45E-09
Th-232	3.76E-08
U-233	6.36E-06
U-234	3.58E-05
U-235	1.14E-07
U-236	2.41E-07
U-238	4.08E-07

## Haz. Waste No(s).

D005, D006, D007, D008, D009, D011, D018, D019, D022, D029, D039, D040, D043, F001, F002, F003, F005, U002, U151

## TRUCON Code(s)

125/225, 133/233, 154

## Waste Stream Description

This waste stream is primarily solids consisting of booties, lab coats, floor sweeping, labware, rags, and other job control waste. This stream differs from SR-W026 because solvent rags are suspected to be in the waste. Small HEPA filters, sludges, resins, absorbed liquids, and large metal equipment are also in these waste streams.

Waste Stream ID: **SR-W027-HBL-Box-A**

Appendix A

TRU Waste Inventory Profile Report

Site	Savannah River Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5000	Handling	CH
Source Cat.	Remediation/D&D Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	CH mixed TRU from 221H	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
Box - Concrete	4.7	0.0	4.7
Box - Fiberglass	3.4	0.0	3.4
Box - SRS B-25 OP	36.0	0.0	36.0
Box - SRS Black Box	207.4	0.0	207.4
Box - Steel	1.2	0.0	51.5
Box - Steel SS	1.2	0.0	28.8
SLB2 (5' x 5' x 8) Dir Ld	984.8	0.0	984.8
<b>Current Form Total</b>	<b>1316.7</b>	<b>0.0</b>	<b>1316.7</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
SWB Dir Ld w/o Liner	1317.3	0.0	1317.3
<b>Final Form Total</b>	<b>1317.3</b>	<b>0.0</b>	<b>1317.3</b>

Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	113.16
Aluminum-based Metals/Alloys	7.74
Other Metals	12.40
Other Inorganic Materials	12.40
Cellulosics	18.55
Rubber	1.16
Plastics	13.78
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	153.50
Packaging Material, Plastic	0.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	4.21E-03
Cs-137	6.05E-04
Np-237	1.29E-04
Pu-238	7.92E+00
Pu-239	6.98E-03
Pu-240	3.64E-03
Pu-241	7.92E-02
Pu-242	4.16E-06
Sr-90	3.48E-04
Th-229	8.72E-10
Th-230	4.05E-08
Th-232	4.74E-17
U-233	4.95E-07
U-234	4.61E-04
U-235	4.98E-09
U-236	5.16E-08
U-238	1.92E-07

Haz. Waste No(s).

D006, D007, D008, D009, D011, D019, D022, D029, D043, F002, F005, U133

TRUCON Code(s)

125/225, 154

Waste Stream Description

This waste stream has been separated from its parent waste stream SR-W027-HBL-Box because a small fraction of the parent waste stream contains sensitive waste. Waste Stream SR-W027-HBL-Box-A contains no sensitive waste. This waste stream is defense related debris consisting of large equipment and job control waste packaged in large steel boxes

Waste Stream ID: VN-GEVNC.02

Appendix A

TRU Waste Inventory Profile Report

Site	GE - Vallecitos Nuclear Center	Final Waste Form	Heterogeneous	Waste Matrix Code	S5400	Handling	CH
Source Cat.	Remediation/D&D Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Heterogeneous debris			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	1.5	0.0	1.5
<b>Current Form Total</b>	<b>1.5</b>	<b>0.0</b>	<b>1.5</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	1.5	0.0	1.5
<b>Final Form Total</b>	<b>1.5</b>	<b>0.0</b>	<b>1.5</b>

Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	12.40
Aluminum-based Metals/Alloys	2.83
Other Metals	2.54
Other Inorganic Materials	2.54
Cellulosics	3.96
Rubber	0.85
Plastics	2.27
Cements	0.00
Inorganic Matrix	0.28
Organic Matrix	0.57
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	0.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	6.50E-01
Cs-137	6.90E-01
Pu-238	7.76E-03
Pu-239	5.40E-02
Pu-240	2.50E-02
Pu-241	2.92E-01
Pu-242	1.49E-05
Sr-90	2.06E-01
U-233	4.00E-07
U-234	1.04E-04
U-235	3.70E-06
U-236	1.70E-06
U-238	1.80E-06

Haz. Waste No(s).

D007, D008, D009, F002, F005

TRUCON Code(s)

125/225

Waste Stream Description

This waste will be generated from refurbishment of an alpha high-level hot cell.

**APPENDIX B: Emplaced Waste**

The following WSPs contain information on waste streams emplaced in the WIPP as of the inventory date, December 31, 2009.

The TRU waste sites that have shipped TRU waste to the WIPP are:

Argonne National Laboratory – East	AE
Idaho National Laboratory	IN
Los Alamos National Laboratory	LA
Lawrence Livermore National Laboratory	LL
Nevada Test Site	NT
Oak Ridge National Laboratory	OR
Rocky Flats Environmental Technology Site	RF
Hanford (Richland Operations) Site	RL
Savannah River Site	SR
General Electric Vallecitos Nuclear Center	VN

Waste Stream ID: **WP-AECHDM**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Argonne National Laboratory - East	Final Waste Form	Heterogeneous	Waste Matrix Code	S5400	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	HETEROGENEOUS MIXED DEBRIS			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/ Liner	AECHDM-S	56.6
55-gal Drum Dir Ld w/o Liner	AECHDM-S	0.2
TDOP w/ 10 - 55-gal Drums w/ Liners	AECHDM-S	45.0
<b>Emplaced Total</b>		<b>101.8</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	78.91
Aluminum-based Metals/Alloys	1.45
Other Metals	6.32
Other Inorganic Materials	6.55
Cellulosics	5.70
Rubber	11.27
Plastics	41.18
Cements	0.00
Inorganic Matrix	1.94
Organic Matrix	0.91
Soils/gravel	0.11
Vitrified	0.00
Packaging Material, Steel	175.45
Packaging Material, Plastic	28.13
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	5.35E-01
Am-243	1.85E-02
Cm-244	1.06E-03
Cs-137	1.66E-02
Np-237	1.20E-03
Pu-238	6.18E-01
Pu-239	8.40E-01
Pu-240	6.35E-01
Pu-241	8.03E-01
Pu-242	2.57E-04
Pu-244	6.37E-19
Sr-90	1.73E-02
Th-229	8.40E-05
Th-230	4.18E-08
Th-232	1.67E-17
U-233	4.13E-04
U-234	7.81E-04
U-235	1.47E-05
U-236	1.13E-07
U-238	4.33E-04

## Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D011, D021, D027, D028, D030, D037, F001, F002, F003, F004, F005

No TRUCON Codes Provided

## Waste Stream Description

N/A

Comprehensive Inventory Database ver. 1.00

Data ver. D.9.02

NOTE: Actual numerical values have been rounded for presentation purposes.

B - AE - 1

Waste Stream ID: **WP-AECHHM**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Argonne National Laboratory - East	Final Waste Form	Solidified Inorganics	Waste Matrix Code	S3110	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	ANL-E CH HOMONGENEOUS MIXED SOLID WASTE			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/ Liner	AECHHM-S	9.4
TDOP w/ 10 - 55-gal Drums w/ Liners	AECHHM-S	4.5
<b>Emplaced Total</b>		<b>13.9</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.00
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	0.00
Cellulosics	0.00
Rubber	0.00
Plastics	0.00
Cements	0.00
Inorganic Matrix	355.56
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	163.59
Packaging Material, Plastic	30.54
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.05E+00
Am-243	3.71E-04
Cs-137	9.58E-05
Np-237	1.24E-04
Pu-238	3.16E-01
Pu-239	2.98E+00
Pu-240	1.19E+00
Pu-241	1.21E-12
Pu-242	1.46E-04
Sr-90	9.98E-05
Th-229	2.32E-05
Th-230	2.09E-08
Th-232	3.13E-17
U-233	3.17E-09
U-234	3.90E-04
U-235	7.63E-06
U-236	2.11E-07
U-238	1.94E-04

## Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D021, D027, D028, D030, D035, D036, D037, F001, F002, F003, F004, F005

**No TRUCON Codes Provided**

## Waste Stream Description

N/A

Comprehensive Inventory Database ver. 1.00

Data ver. D.9.02

NOTE: Actual numerical values have been rounded for presentation purposes.

B - AE - 2

Waste Stream ID: **WP-AERHDM**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Argonne National Laboratory - East	Final Waste Form	Heterogeneous	Waste Matrix Code	S5400	Handling	RH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	HETEROGENEOUS MIXED DEBRIS			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	AERHDM-S	21.4
RH Can w/ Remov Lid w/ 3 - 55-gal w/o Liner	AERHDM-S	3.6
<b>Emplaced Total</b>		<b>24.9</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.00
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	0.00
Cellulosics	0.00
Rubber	0.00
Plastics	80.17
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	652.20
Packaging Material, Plastic	22.29
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	3.63E-01
Cs-137	8.41E+00
Np-237	1.16E-07
Pu-238	6.00E-01
Pu-239	2.14E-01
Pu-240	1.44E-01
Pu-241	7.94E+00
Pu-242	3.11E-04
Sr-90	5.46E+00
Th-229	2.92E-12
Th-230	6.20E-09
Th-232	1.05E-19
U-233	3.12E-08
U-234	6.90E-04
U-235	2.17E-05
U-236	4.26E-09
U-238	2.32E-05

## Haz. Waste No(s).

D004, D005, D006,  
D007, D008, D009,  
D010, D011, D019,  
D028, D029, F002,  
F005

**No TRUCON  
Codes Provided**

## Waste Stream Description

N/A



Waste Stream ID: **WP-MU-W002**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Argonne National Laboratory - East	Final Waste Form	Heterogeneous	Waste Matrix Code	S5400	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	HETEROGENEOUS DEBRIS			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
TDOP w/ 10 - 55-gal Drums w/ Liners	MU-W002-S	4.5
<b>Emplaced Total</b>		<b>4.5</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	7.11
Aluminum-based Metals/Alloys	2.31
Other Metals	0.02
Other Inorganic Materials	2.91
Cellulosics	0.11
Rubber	0.00
Plastics	2.84
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	231.80
Packaging Material, Plastic	17.10
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.55E+00
Am-243	2.53E-04
Cs-137	3.55E-07
Np-237	8.58E-04
Pu-239	5.04E-03
Sr-90	3.69E-07
Th-229	2.44E-04
Th-230	1.74E-15
U-233	2.20E-08
U-234	6.45E-11
U-235	2.98E-11
U-238	3.85E-06

## Haz. Waste No(s).

D006, D011

No TRUCON  
Codes Provided

## Waste Stream Description

N/A

Waste Stream ID: **WP-BN004**

Appendix B

TRU Waste Inventory Profile Report

Site	Idaho National Laboratory	Final Waste Form	Solidified Inorganics	Waste Matrix Code	S3150	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	SOLIDIFIED INORGANICS - SPECIAL SETUPS			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/ Liner	BN004-S	7.1
SWB w/ 4 - 55-gal Drums w/ Liners	BN004-S	253.3
TDOP w/ 10 - 55-gal Drums w/ Liners	BN004-S	81.0
<b>Emplaced Total</b>		<b>341.3</b>

Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.02
Aluminum-based Metals/Alloys	0.00
Other Metals	0.01
Other Inorganic Materials	2.44
Cellulosics	0.03
Rubber	0.02
Plastics	1.79
Cements	0.00
Inorganic Matrix	487.97
Organic Matrix	1.40
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	214.35
Packaging Material, Plastic	16.92
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.09E+00
Cm-244	4.55E-03
Cs-137	6.90E-06
Np-237	5.06E-04
Pu-238	1.45E-01
Pu-239	3.59E+00
Pu-240	8.13E-01
Pu-241	6.12E+00
Pu-242	7.40E-05
Sr-90	1.16E-05
Th-229	2.67E-07
Th-230	1.17E-09
Th-232	9.53E-18
U-233	7.12E-04
U-234	3.35E-05
U-235	7.35E-06
U-236	9.64E-08
U-238	5.68E-06

Haz. Waste No(s).

D006, D007, D008, D011, D029, F001, F002, F005, F006, F007, F009

**No TRUCON Codes Provided**

Waste Stream Description

N/A

Waste Stream ID: **WP-BN161**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Idaho National Laboratory	Final Waste Form	Inorganic Non-Metal	Waste Matrix Code	S5123	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	CERAMIC DEBRIS	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/ Liner	BN161-S	0.6
SWB w/ 4 - 55-gal Drums w/ Liners	BN161-S	3.8
TDOP w/ 10 - 55-gal Drums w/ Liners	BN161-S	54.0
<b>Emplaced Total</b>		<b>58.4</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.41
Aluminum-based Metals/Alloys	0.00
Other Metals	0.08
Other Inorganic Materials	135.39
Cellulosics	10.80
Rubber	0.00
Plastics	2.19
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	229.38
Packaging Material, Plastic	17.26
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	8.50E-01
Np-237	1.09E-05
Pu-238	1.65E-01
Pu-239	4.00E+00
Pu-240	9.15E-01
Pu-241	5.72E+00
Pu-242	7.38E-05
Th-229	3.25E-14
Th-230	4.67E-11
Th-232	1.07E-17
U-233	1.76E-10
U-234	2.24E-06
U-235	6.25E-08
U-236	1.08E-07
U-238	4.45E-14

## Haz. Waste No(s).

D004, D005, D006,  
D007, D008, D009,  
D010, D011, D022,  
D028, D029, F001,  
F002, F005

**No TRUCON  
Codes Provided**

## Waste Stream Description

N/A

Waste Stream ID: **WP-BN211**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Idaho National Laboratory	Final Waste Form	Filter	Waste Matrix Code	S5410	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	FILTER DEBRIS			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/ Liner	BN211-S	8.7
SWB w/ 4 - 55-gal Drums w/ Liners	BN211-S	54.8
TDOP w/ 10 - 55-gal Drums w/ Liners	BN211-S	459.0
<b>Emplaced Total</b>		<b>522.5</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.30
Aluminum-based Metals/Alloys	1.80
Other Metals	0.41
Other Inorganic Materials	77.01
Cellulosics	26.02
Rubber	0.02
Plastics	4.13
Cements	0.00
Inorganic Matrix	0.28
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	227.94
Packaging Material, Plastic	17.35
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	9.38E-01
Am-243	9.80E-09
Cs-137	2.49E-09
Np-237	4.94E-05
Pu-238	1.66E-01
Pu-239	3.96E+00
Pu-240	9.14E-01
Pu-241	5.51E+00
Pu-242	7.63E-05
Sr-90	4.21E-09
Th-229	2.18E-08
Th-230	2.32E-10
Th-232	1.07E-17
U-233	5.82E-05
U-234	7.39E-06
U-235	1.22E-06
U-236	1.08E-07
U-238	8.80E-09

## Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D022, D028, D029, F001, F002, F005, F006, F007, F009

**No TRUCON Codes Provided**

## Waste Stream Description

N/A

Comprehensive Inventory Database ver. 1.00

Data ver. D.9.02

NOTE: Actual numerical values have been rounded for presentation purposes.

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Waste Stream ID: **WP-BN243**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Idaho National Laboratory	Final Waste Form	Inorganic Non-Metal	Waste Matrix Code	S5122	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	GLASS DEBRIS	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/ Liner	BN243-S	2.9
SWB w/ 4 - 55-gal Drums w/ Liners	BN243-S	7.6
TDOP w/ 10 - 55-gal Drums w/ Liners	BN243-S	139.5
<b>Emplaced Total</b>		<b>150.0</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	1.05
Aluminum-based Metals/Alloys	0.00
Other Metals	4.29
Other Inorganic Materials	93.81
Cellulosics	0.09
Rubber	0.14
Plastics	14.44
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	228.80
Packaging Material, Plastic	17.45
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.74E-01
Cm-244	7.77E-03
Cs-137	8.82E-10
Np-237	1.77E-05
Pu-238	3.70E-02
Pu-239	7.89E-01
Pu-240	1.77E-01
Pu-241	1.14E+00
Pu-242	1.77E-05
Sr-90	1.49E-09
Th-229	5.57E-14
Th-230	2.25E-10
Th-232	2.08E-18
U-233	2.98E-10
U-234	6.47E-06
U-235	1.61E-06
U-236	2.10E-08
U-238	1.07E-14

## Haz. Waste No(s).

D005, D008, D009,  
D022, D028, D029,  
F001, F002, F005**No TRUCON  
Codes Provided**

## Waste Stream Description

N/A

Comprehensive Inventory Database ver. 1.00

Data ver. D.9.02

NOTE: Actual numerical values have been rounded for presentation purposes.

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Waste Stream ID: **WP-BN252**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Idaho National Laboratory	Final Waste Form	Heterogeneous	Waste Matrix Code	S5311	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	LEADED RUBBER DEBRIS	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/ Liner	BN252-S	16.6
SWB w/ 4 - 55-gal Drums w/ Liners	BN252-S	58.6
TDOP w/ 10 - 55-gal Drums w/ Liners	BN252-S	103.5
<b>Emplaced Total</b>		<b>178.7</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.03
Aluminum-based Metals/Alloys	0.00
Other Metals	30.92
Other Inorganic Materials	2.38
Cellulosics	0.11
Rubber	237.57
Plastics	1.54
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	215.61
Packaging Material, Plastic	18.69
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.04E+00
Cs-137	2.33E-09
Np-237	3.44E-04
Pu-238	2.19E-01
Pu-239	6.36E+00
Pu-240	1.37E+00
Pu-241	1.14E+01
Pu-242	1.48E-04
Sr-90	3.70E-09
Th-229	1.09E-12
Th-230	1.43E-10
Th-232	1.60E-17
U-233	5.83E-09
U-234	5.24E-06
U-235	1.33E-06
U-236	1.62E-07
U-238	8.96E-14

## Haz. Waste No(s).

D008, D022, D028,  
D029, F001, F002,  
F005, F006, F007,  
F009

**No TRUCON  
Codes Provided**

## Waste Stream Description

N/A

Waste Stream ID: **WP-BN296**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Idaho National Laboratory	Final Waste Form	Lead/Cadmium Metal Waste	Waste Matrix Code	S5112	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	NON-SS METAL DEBRIS			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/ Liner	BN296-S	32.0
SWB w/ 4 - 55-gal Drums w/ Liners	BN296-S	28.4
TDOP w/ 10 - 55-gal Drums w/ Liners	BN296-S	414.0
<b>Emplaced Total</b>		<b>474.4</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	81.20
Aluminum-based Metals/Alloys	0.39
Other Metals	100.88
Other Inorganic Materials	3.05
Cellulosics	2.81
Rubber	0.62
Plastics	1.55
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	223.74
Packaging Material, Plastic	18.40
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.46E+00
Cm-244	2.33E-03
Cs-137	1.83E-08
Np-237	8.41E-05
Pu-238	1.77E-01
Pu-239	3.75E+00
Pu-240	8.34E-01
Pu-241	5.11E+00
Pu-242	8.42E-05
Sr-90	3.28E-08
Th-229	4.46E-09
Th-230	1.09E-10
Th-232	9.78E-18
U-233	1.19E-05
U-234	4.05E-06
U-235	2.11E-03
U-236	9.90E-08
U-238	1.42E-06

## Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D022, D028, D029, F001, F002, F005, F006, F007, F009

**No TRUCON Codes Provided**

## Waste Stream Description

N/A

Comprehensive Inventory Database ver. 1.00

Data ver. D.9.02

NOTE: Actual numerical values have been rounded for presentation purposes.

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Waste Stream ID: **WP-BN304**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Idaho National Laboratory	Final Waste Form	Heterogeneous	Waste Matrix Code	S5490	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	HETEROGENEOUS DEBRIS (MOUND)			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/ Liner	BN304-S	4.8
SWB w/ 4 - 55-gal Drums w/ Liners	BN304-S	20.8
TDOP w/ 10 - 55-gal Drums w/ Liners	BN304-S	279.0
<b>Emplaced Total</b>		<b>304.6</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	17.05
Aluminum-based Metals/Alloys	0.03
Other Metals	24.82
Other Inorganic Materials	4.74
Cellulosics	5.09
Rubber	8.27
Plastics	6.55
Cements	0.00
Inorganic Matrix	0.01
Organic Matrix	0.00
Soils/gravel	0.09
Vitrified	0.00
Packaging Material, Steel	228.80
Packaging Material, Plastic	17.36
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.78E-01
Cs-137	1.30E-06
Np-237	8.04E-06
Pu-238	4.97E+01
Pu-239	1.00E-01
Pu-240	7.54E-02
Pu-241	7.44E-01
Pu-242	6.37E-05
Sr-90	2.63E-06
Th-229	2.51E-14
Th-230	1.06E-08
Th-232	8.83E-19
U-233	1.34E-10
U-234	5.80E-04
U-235	1.42E-07
U-236	8.94E-09
U-238	7.84E-05

## Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D022, D029, F001, F002, F005, F007, F009

**No TRUCON Codes Provided**

## Waste Stream Description

N/A



Waste Stream ID: **WP-BN510**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Idaho National Laboratory	Final Waste Form	Heterogeneous	Waste Matrix Code	S5490	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	HETEROGENEOUS SUPERCOMPACTED DEBRIS			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
100-gal Drum Dir Ld w/o Liner	BN510-S	7942.3
SWB Dir Ld w/o Liner	BN510-S	51.0
SWB w/ 4 - 55-gal Drums w/o Liners	BN510-S	1.9
<b>Emplaced Total</b>		<b>7995.2</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	348.66
Aluminum-based Metals/Alloys	1.86
Other Metals	2.39
Other Inorganic Materials	19.22
Cellulosics	154.33
Rubber	8.47
Plastics	154.14
Cements	0.00
Inorganic Matrix	0.04
Organic Matrix	0.05
Soils/gravel	0.02
Vitrified	0.00
Packaging Material, Steel	113.98
Packaging Material, Plastic	0.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	3.42E-01
Am-243	8.23E-08
Cm-244	2.89E-04
Cs-137	1.29E-07
Np-237	1.37E-05
Pu-238	2.15E-01
Pu-239	1.41E+00
Pu-240	3.07E-01
Pu-241	2.21E+00
Pu-242	2.82E-05
Sr-90	2.31E-07
Th-229	1.96E-09
Th-230	2.45E-09
Th-232	9.00E-19
U-233	1.05E-05
U-234	1.37E-04
U-235	1.27E-04
U-236	1.82E-08
U-238	4.22E-06

## Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D022, D028, D029, F001, F002, F005, F006, F007, F009

**No TRUCON Codes Provided**

## Waste Stream Description

N/A

Comprehensive Inventory Database ver. 1.00

Data ver. D.9.02

NOTE: Actual numerical values have been rounded for presentation purposes.

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Waste Stream ID: **WP-BN835**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Idaho National Laboratory	Final Waste Form	Solidified Inorganics	Waste Matrix Code	S3113	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	SOLIDIFIED INORGANICS			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/ Liner	BN835-S	18.7
SWB w/ 4 - 55-gal Drums w/ Liners	BN835-S	15.1
TDOP w/ 10 - 55-gal Drums w/ Liners	BN835-S	1021.5
<b>Emplaced Total</b>		<b>1055.3</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.02
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	0.68
Cellulosics	0.98
Rubber	0.01
Plastics	0.54
Cements	0.00
Inorganic Matrix	239.56
Organic Matrix	0.08
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	229.71
Packaging Material, Plastic	17.44
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	4.01E-02
Cs-137	8.41E-08
Np-237	6.15E-06
Pu-238	1.63E+00
Pu-239	3.26E-03
Pu-240	2.09E-03
Pu-241	3.32E-02
Pu-242	2.12E-06
Sr-90	1.47E-07
Th-229	1.95E-14
Th-230	3.40E-10
Th-232	2.45E-20
U-233	1.04E-10
U-234	1.88E-05
U-235	1.40E-10
U-236	2.48E-10
U-238	2.03E-07

## Haz. Waste No(s).

D007, D008, D009,  
F001, F002**No TRUCON  
Codes Provided**

## Waste Stream Description

N/A

Waste Stream ID: **WP-BN836**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Idaho National Laboratory	Final Waste Form	Solidified Inorganics	Waste Matrix Code	S3121	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	CEMENTED SLUDGE	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/ Liner	BN836-S	43.9
SWB w/ 4 - 55-gal Drums w/ Liners	BN836-S	1687.8
<b>Emplaced Total</b>		<b>1731.7</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.00
Aluminum-based Metals/Alloys	0.00
Other Metals	0.01
Other Inorganic Materials	0.11
Cellulosics	0.09
Rubber	0.00
Plastics	0.19
Cements	0.00
Inorganic Matrix	551.74
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	209.06
Packaging Material, Plastic	16.82
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.36E-03
Cs-137	2.63E-07
Np-237	1.27E-06
Pu-238	1.02E+00
Pu-239	1.60E-03
Pu-240	1.08E-03
Pu-241	4.77E-03
Pu-242	1.24E-06
Sr-90	4.32E-07
Th-229	2.34E-15
Th-230	1.23E-10
Th-232	7.12E-21
U-233	1.66E-11
U-234	8.95E-06
U-235	1.89E-08
U-236	9.61E-11
U-238	7.76E-09

## Haz. Waste No(s).

D004, D005, D006,  
D007, D008, D009,  
D010, D011, F001,  
F002, F005

**No TRUCON  
Codes Provided**

## Waste Stream Description

N/A

Waste Stream ID: **WP-BNINW216**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Idaho National Laboratory	Final Waste Form	Solidified Inorganics	Waste Matrix Code	S3121	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	FIRST/SECOND STAGE SOLIDIFIED SLUDGE			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/ Liner	BNINW216-S	142.9
SWB w/ 4 - 55-gal Drums w/ Liners	BNINW216-S	1001.7
TDOP w/ 10 - 55-gal Drums w/ Liners	BNINW216-S	3699.0
<b>Emplaced Total</b>		<b>4843.6</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.03
Aluminum-based Metals/Alloys	0.00
Other Metals	0.06
Other Inorganic Materials	4.98
Cellulosics	0.01
Rubber	0.02
Plastics	0.47
Cements	0.00
Inorganic Matrix	395.17
Organic Matrix	0.26
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	224.54
Packaging Material, Plastic	17.52
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	6.70E+00
Cs-137	1.77E-08
Np-237	8.31E-05
Pu-238	4.30E-02
Pu-239	4.08E-01
Pu-240	1.04E-01
Pu-241	1.07E+00
Pu-242	5.69E-05
Sr-90	2.88E-08
Th-229	2.46E-13
Th-230	1.40E-09
Th-232	1.22E-18
U-233	1.34E-09
U-234	3.91E-05
U-235	6.87E-06
U-236	1.24E-08
U-238	3.87E-04

## Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D022, F001, F002, F003, F005, F006, F007, F009

**No TRUCON Codes Provided**

## Waste Stream Description

N/A

Waste Stream ID: **WP-BNINW218**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Idaho National Laboratory	Final Waste Form	Solidified Inorganics	Waste Matrix Code	S3121	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	SOLIDIFIED SLUDGE (B374)			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
SWB w/ 4 - 55-gal Drums w/ Liners	BNINW218-S	60.5
TDOP w/ 10 - 55-gal Drums w/ Liners	BNINW218-S	409.5
<b>Emplaced Total</b>		<b>470.0</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.03
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	32.17
Cellulosics	0.01
Rubber	0.01
Plastics	2.77
Cements	0.00
Inorganic Matrix	350.10
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	229.14
Packaging Material, Plastic	17.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	9.11E-02
Cs-137	2.07E-08
Np-237	5.56E-04
Pu-238	4.84E-03
Pu-239	9.77E-02
Pu-240	2.01E-02
Pu-241	1.76E-01
Pu-242	2.95E-06
Sr-90	3.38E-08
Th-229	2.78E-12
Th-230	2.92E-09
Th-232	3.69E-19
U-233	1.18E-08
U-234	6.48E-05
U-235	6.19E-06
U-236	2.99E-09
U-238	5.88E-04

## Haz. Waste No(s).

D006, D007, D008,  
D009, D010, D011,  
D032, F001, F002,  
F005, F006, F007,  
F009

**No TRUCON  
Codes Provided**

## Waste Stream Description

N/A

Waste Stream ID: **WP-ID-ANLE-S5000**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Idaho National Laboratory	Final Waste Form	Heterogeneous	Waste Matrix Code	S5400	Handling	RH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	RH MIXED HETEROGENEOUS DEBRIS WASTE FROM ANL-E			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	ID-ANLE-S5000-S	125.5
RH Can w/ Remov Lid w/ 3 - 55-gal w/o Liner	ID-ANLE-S5000-S	51.6
<b>Emplaced Total</b>		<b>177.1</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.00
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	0.00
Cellulosics	0.00
Rubber	0.00
Plastics	83.53
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	652.20
Packaging Material, Plastic	18.42
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.78E-01
Cs-137	3.12E+00
Np-237	1.13E-07
Pu-238	9.07E-02
Pu-239	3.29E-01
Pu-240	1.74E-01
Pu-241	2.44E+00
Pu-242	5.01E-03
Sr-90	2.34E+00
Th-229	1.63E-07
Th-230	1.91E-08
Th-232	5.10E-19
U-233	8.70E-04
U-234	1.06E-03
U-235	3.76E-05
U-236	1.03E-08
U-238	6.38E-06

## Haz. Waste No(s).

D004, D005, D006,  
D007, D008, D009,  
D010, D011, D019,  
D028, D029, F002,  
F005

**No TRUCON  
Codes Provided**

## Waste Stream Description

N/A

Waste Stream ID: **WP-ID-NTLBL-S3900**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Idaho National Laboratory	Final Waste Form	Solidified Organics	Waste Matrix Code	S3900	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	HOMOGENEOUS SOLIDS FROM NTLBL			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
SWB w/ 4 - 55-gal Drums w/ Liners	ID-NTLBL-S3900-S	1.9
<b>Emplaced Total</b>		<b>1.9</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.00
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	0.00
Cellulosics	0.00
Rubber	0.00
Plastics	0.53
Cements	0.00
Inorganic Matrix	2.01
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	211.10
Packaging Material, Plastic	16.30
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.02E-01
Cs-137	3.67E-06
Np-237	1.16E-05
Pu-238	5.51E-02
Pu-239	3.12E-01
Pu-240	7.23E-02
Pu-241	8.89E-01
Pu-242	2.18E-05
Sr-90	4.04E-06

## Haz. Waste No(s).

D004, D005, D006,  
D007, D008, D009,  
D010, D011, D022,  
D028, F002, F005

**No TRUCON  
Codes Provided**

## Waste Stream Description

N/A

Waste Stream ID: **WP-ID-NTLBL-S5400**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Idaho National Laboratory	Final Waste Form	Heterogeneous	Waste Matrix Code	S5400	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	HETEROGENEOUS DEBRIS FROM NTLBL			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/ Liner	ID-NTLBL-S5400-S	0.2
SWB Dir Ld w/o Liner	ID-NTLBL-S5400-S	1.9
<b>Emplaced Total</b>		<b>2.1</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	110.44
Aluminum-based Metals/Alloys	0.00
Other Metals	1.56
Other Inorganic Materials	12.49
Cellulosics	1.24
Rubber	0.00
Plastics	13.84
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	151.25
Packaging Material, Plastic	3.67
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	7.81E-01
Cs-137	2.98E-07
Np-237	1.57E-04
Pu-238	1.62E-01
Pu-239	2.76E-02
Pu-240	2.89E-02
Pu-241	6.25E+00
Pu-242	1.02E-04
Sr-90	3.28E-07

## Haz. Waste No(s).

D004, D005, D006,  
D007, D008, D009,  
D010, D011, D022,  
D028, F002, F005

**No TRUCON  
Codes Provided**

## Waste Stream Description

N/A



Waste Stream ID: **WP-ID-NTLLNL-S3900**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Idaho National Laboratory	Final Waste Form	Solidified Organics	Waste Matrix Code	S3900	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	HOMOGENEOUS SOLIDS FROM LLNL			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/ Liner	ID-NTLLNL-S3900-S	7.7
55-gal Drum Dir Ld w/o Liner	ID-NTLLNL-S3900-S	2.7
SWB w/ 4 - 55-gal Drums w/ Liners	ID-NTLLNL-S3900-S	7.6
<b>Emplaced Total</b>		<b>18.0</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	4.99
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	20.41
Cellulosics	6.73
Rubber	0.17
Plastics	11.75
Cements	0.00
Inorganic Matrix	242.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	164.60
Packaging Material, Plastic	22.72
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.23E+00
Cm-244	6.10E-03
Cs-137	4.49E-05
Np-237	2.46E-05
Pu-238	7.51E-02
Pu-239	3.05E-01
Pu-240	7.49E-02
Pu-241	7.45E-01
Pu-242	1.05E-05
Sr-90	4.94E-05
U-233	1.06E-03
U-234	2.52E-05
U-235	1.14E-06
U-238	3.02E-06

## Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D022, D027, D028, D029, F001, F002, F004, F005

**No TRUCON Codes Provided**

## Waste Stream Description

N/A

Waste Stream ID: **WP-ID-NTLLNL-S5400**

Appendix B

TRU Waste Inventory Profile Report

Site	Idaho National Laboratory	Final Waste Form	Heterogeneous	Waste Matrix Code	S5400	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	HETEROGENEOUS DEBRIS			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/ Liner	ID-NTLLNL-S5400-S	1.0
55-gal Drum Dir Ld w/o Liner	ID-NTLLNL-S5400-S	1.2
SWB Dir Ld w/o Liner	ID-NTLLNL-S5400-S	134.2
SWB w/ 4 - 55-gal Drums w/ Liners	ID-NTLLNL-S5400-S	1.9
SWB w/ 4 - 55-gal Drums w/o Liners	ID-NTLLNL-S5400-S	1.9
<b>Emplaced Total</b>		<b>140.3</b>

Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	184.29
Aluminum-based Metals/Alloys	0.03
Other Metals	0.73
Other Inorganic Materials	1.75
Cellulosics	12.11
Rubber	0.22
Plastics	10.32
Cements	0.00
Inorganic Matrix	0.14
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	154.68
Packaging Material, Plastic	0.49
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.77E-01
Am-243	1.91E-06
Cm-244	9.99E-02
Cs-137	6.42E-08
Np-237	8.16E-06
Pu-238	7.45E-02
Pu-239	2.87E-01
Pu-240	8.07E-02
Pu-241	4.95E+00
Pu-242	3.60E-05
Sr-90	7.06E-08
U-233	3.40E-04
U-234	4.69E-06
U-235	2.16E-07

Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D022, D027, D028, D029, F001, F002, F004, F005

No TRUCON Codes Provided

Waste Stream Description

N/A

Waste Stream ID: **WP-ID-RF-BNL-ASH**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Idaho National Laboratory	Final Waste Form	Solidified Inorganics	Waste Matrix Code	S3111	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	INCINERATOR ASH	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/o Liner	ID-RF-BNL-ASH-S	0.2
<b>Emplaced Total</b>		<b>0.2</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	9.62
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	37.02
Cellulosics	0.00
Rubber	0.00
Plastics	7.69
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	0.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	7.09E-01
Np-237	9.50E-06
Pu-238	1.16E-01
Pu-239	3.52E+00
Pu-240	8.08E-01
Pu-241	4.55E+00
Pu-242	6.47E-05
Th-229	2.84E-14
Th-230	2.42E-11
Th-232	9.47E-18
U-233	1.54E-10
U-234	1.34E-06
U-235	1.39E-08
U-236	9.59E-08
U-238	3.90E-14

## Haz. Waste No(s).

D004, D005, D006,  
D007, D008, D009,  
D010, D011, F001,  
F002, F005

**No TRUCON  
Codes Provided**

## Waste Stream Description

N/A

Waste Stream ID: **WP-ID-RF-S3114**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Idaho National Laboratory	Final Waste Form	Solidified Organics	Waste Matrix Code	S3114	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	SOLIDIFIED ORGANICS			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
SWB Dir Ld w/o Liner	ID-RF-S3114-S	66.2
SWB w/ 4 - 55-gal Drums w/ Liners	ID-RF-S3114-S	37.8
TDOP w/ 10 - 55-gal Drums w/ Liners	ID-RF-S3114-S	733.5
<b>Emplaced Total</b>		<b>837.5</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	4.61
Aluminum-based Metals/Alloys	0.00
Other Metals	0.90
Other Inorganic Materials	4.21
Cellulosics	0.06
Rubber	0.57
Plastics	2.40
Cements	0.00
Inorganic Matrix	0.19
Organic Matrix	352.92
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	224.68
Packaging Material, Plastic	15.71
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.72E-02
Am-243	5.27E-09
Cs-137	1.03E-08
Np-237	6.30E-07
Pu-238	3.21E-03
Pu-239	9.09E-02
Pu-240	1.84E-02
Pu-241	1.72E-01
Pu-242	2.01E-06
Sr-90	1.10E-07
Th-229	1.13E-15
Th-230	9.73E-11
Th-232	1.21E-19
U-233	8.06E-12
U-234	3.62E-06
U-235	1.04E-07
U-236	1.64E-09
U-238	5.87E-06

## Haz. Waste No(s).

D022, D026, D027,  
D028, D029, D030,  
D032, D034, D036,  
D037, F001, F002,  
F005

**No TRUCON  
Codes Provided**

## Waste Stream Description

N/A

Comprehensive Inventory Database ver. 1.00

Data ver. D.9.02

NOTE: Actual numerical values have been rounded for presentation purposes.

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Waste Stream ID: **WP-ID-RF-S3150-A**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Idaho National Laboratory	Final Waste Form	Solidified Inorganics	Waste Matrix Code	S3150	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	SOLIDIFIED ORGANIC SLUDGES			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/ Liner	ID-RF-S3150-A-S	91.1
SWB w/ 4 - 55-gal Drums w/ Liners	ID-RF-S3150-A-S	92.6
TDOP w/ 10 - 55-gal Drums w/ Liners	ID-RF-S3150-A-S	18.0
<b>Emplaced Total</b>		<b>201.7</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.01
Aluminum-based Metals/Alloys	0.00
Other Metals	21.17
Other Inorganic Materials	4.29
Cellulosics	0.00
Rubber	1.93
Plastics	3.23
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	666.31
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	176.68
Packaging Material, Plastic	25.72
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.88E-01
Cs-137	8.36E-08
Np-237	8.73E-06
Pu-238	3.42E-02
Pu-239	7.55E-01
Pu-240	1.66E-01
Pu-241	1.45E+00
Pu-242	1.41E-05
Sr-90	1.42E-07
Th-229	2.73E-14
Th-230	1.01E-07
Th-232	1.94E-18
U-233	1.46E-10
U-234	2.79E-03
U-235	4.89E-07
U-236	1.97E-08
U-238	9.14E-07

## Haz. Waste No(s).

D022, D028, D029,  
D030, D032, D034,  
D036, D043, F001,  
F002, F005

**No TRUCON  
Codes Provided**

## Waste Stream Description

N/A

Waste Stream ID: **WP-ID-RF-S5100-A**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Idaho National Laboratory	Final Waste Form	Heterogeneous	Waste Matrix Code	S5100	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	RASCHIG RINGS - DEBRIS			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/ Liner	ID-RF-S5100-A-S	162.7
SWB w/ 4 - 55-gal Drums w/ Liners	ID-RF-S5100-A-S	7.6
TDOP w/ 10 - 55-gal Drums w/ Liners	ID-RF-S5100-A-S	459.0
<b>Emplaced Total</b>		<b>629.2</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.03
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	122.14
Cellulosics	14.92
Rubber	0.01
Plastics	8.59
Cements	0.00
Inorganic Matrix	0.97
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	205.44
Packaging Material, Plastic	22.23
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.45E-01
Cs-137	2.10E-08
Np-237	2.67E-06
Pu-238	3.20E-02
Pu-239	9.77E-01
Pu-240	2.07E-01
Pu-241	1.13E+00
Pu-242	1.77E-05
Sr-90	3.17E-08
Th-229	1.69E-09
Th-230	1.21E-10
Th-232	2.42E-18
U-233	4.50E-06
U-234	3.54E-06
U-235	1.43E-07
U-236	2.45E-08
U-238	7.15E-09

## Haz. Waste No(s).

D008, D009, D022,  
F001, F002, F005**No TRUCON  
Codes Provided**

## Waste Stream Description

N/A

Waste Stream ID: **WP-ID-RF-S5126**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Idaho National Laboratory	Final Waste Form	Heterogeneous	Waste Matrix Code	S5126	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	GRAPHITE DEBRIS	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/ Liner	ID-RF-S5126-S	79.9
55-gal Drum Dir Ld w/o Liner	ID-RF-S5126-S	0.4
SWB w/ 4 - 55-gal Drums w/ Liners	ID-RF-S5126-S	7.6
TDOP w/ 10 - 55-gal Drums w/ Liners	ID-RF-S5126-S	144.0
<b>Emplaced Total</b>		<b>231.8</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.48
Aluminum-based Metals/Alloys	0.00
Other Metals	0.03
Other Inorganic Materials	239.38
Cellulosics	5.59
Rubber	0.05
Plastics	4.80
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	196.15
Packaging Material, Plastic	23.90
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	6.88E-01
Cs-137	4.02E-03
Np-237	1.19E-05
Pu-238	1.30E-01
Pu-239	3.63E+00
Pu-240	8.45E-01
Pu-241	5.80E+00
Pu-242	7.74E-05
Sr-90	8.11E-08
Th-229	2.65E-07
Th-230	1.96E-09
Th-232	5.57E-18
U-233	9.41E-04
U-234	7.30E-05
U-235	6.34E-08
U-236	7.52E-08
U-238	6.87E-06

## Haz. Waste No(s).

D008, D029, F001,  
F002, F005**No TRUCON  
Codes Provided**

## Waste Stream Description

N/A

Waste Stream ID: **WP-ID-RF-S5300-A**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Idaho National Laboratory	Final Waste Form	Heterogeneous	Waste Matrix Code	S5300	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	COMBUSTIBLES & PLASTIC DEBRIS			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
SWB w/ 4 - 55-gal Drums w/ Liners	ID-RF-S5300-A-S	60.5
SWB w/ 4 - 55-gal Drums w/o Liners	ID-RF-S5300-A-S	1.9
TDOP w/ 10 - 55-gal Drums w/ Liners	ID-RF-S5300-A-S	2650.5
TDOP w/ 10 - 55-gal Drums w/o Liners	ID-RF-S5300-A-S	31.5
<b>Emplaced Total</b>		<b>2744.4</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	4.31
Aluminum-based Metals/Alloys	0.20
Other Metals	0.45
Other Inorganic Materials	6.37
Cellulosics	56.11
Rubber	4.93
Plastics	48.44
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.01
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	231.33
Packaging Material, Plastic	16.87
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	3.16E-02
Am-243	6.24E-12
Cm-244	1.72E-04
Cs-137	8.34E-09
Np-237	1.48E-06
Pu-238	2.87E-03
Pu-239	8.76E-02
Pu-240	1.97E-02
Pu-241	1.20E-01
Pu-242	1.89E-05
Sr-90	1.11E-08
Th-229	3.04E-08
Th-230	2.24E-10
Th-232	1.30E-19
U-233	1.08E-04
U-234	8.30E-06
U-235	2.18E-07
U-236	1.75E-09
U-238	3.19E-07

## Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D022, D028, D029, F001, F002, F005, F006, F007, F009

No TRUCON Codes Provided

## Waste Stream Description

N/A

Comprehensive Inventory Database ver. 1.00

Data ver. D.9.02

NOTE: Actual numerical values have been rounded for presentation purposes.



Waste Stream ID: **WP-ID-SDA-DEBRIS**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Idaho National Laboratory	Final Waste Form	Heterogeneous	Waste Matrix Code	S5400	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	HETEROGENEOUS DEBRIS			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/ Liner	ID-SDA-DEBRIS-S	116.9
<b>Emplaced Total</b>		<b>116.9</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.56
Aluminum-based Metals/Alloys	0.80
Other Metals	0.00
Other Inorganic Materials	183.96
Cellulosics	103.81
Rubber	0.06
Plastics	11.02
Cements	0.00
Inorganic Matrix	0.33
Organic Matrix	0.46
Soils/gravel	2.87
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	5.42E-01
Cs-137	2.04E-07
Np-237	7.30E-06
Pu-238	7.37E-02
Pu-239	1.86E+00
Pu-240	4.21E-01
Pu-241	2.09E+00
Pu-242	9.74E-05
Sr-90	2.30E-07
Th-229	8.35E-09
Th-230	1.70E-09
Th-232	1.23E-18
U-233	4.45E-05
U-234	9.48E-05
U-235	2.41E-06
U-236	2.50E-08
U-238	7.54E-05

## Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D022, D027, D028, D029, D030, D032, D033, D034, D037, D038, D043, F001, F002, F004, F005, F006, F007, F009

**No TRUCON Codes Provided**

## Waste Stream Description

N/A

Waste Stream ID: **WP-ID-SDA-SLUDGE**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Idaho National Laboratory	Final Waste Form	Solidified Organics	Waste Matrix Code	S3900	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	SOLIDIFIED ORGANICS			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/ Liner	ID-SDA-SLUDGE-S	1848.5
85-gal Drum w/ 1 - 55-gal Drum w/ Liner	ID-SDA-SLUDGE-S	0.6
<b>Emplaced Total</b>		<b>1849.1</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.22
Aluminum-based Metals/Alloys	0.00
Other Metals	0.04
Other Inorganic Materials	45.75
Cellulosics	0.41
Rubber	0.01
Plastics	0.62
Cements	0.00
Inorganic Matrix	88.23
Organic Matrix	548.34
Soils/gravel	0.01
Vitrified	0.00
Packaging Material, Steel	130.82
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.30E+00
Cs-137	4.58E-07
Np-237	1.94E-05
Pu-238	1.74E-02
Pu-239	4.07E-01
Pu-240	9.00E-02
Pu-241	6.59E-01
Pu-242	1.42E-05
Sr-90	5.16E-07
Th-229	7.44E-10
Th-230	1.36E-09
Th-232	6.59E-20
U-233	7.93E-06
U-234	1.51E-04
U-235	3.90E-06
U-236	2.67E-09
U-238	4.34E-04

## Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D022, D027, D028, D029, D030, D032, D033, D034, D037, D038, D043, F001, F002, F004, F005, F006, F007, F009, P098, P106

**No TRUCON Codes Provided**

## Waste Stream Description

N/A

Waste Stream ID: **WP-ID-SDA-SOIL**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Idaho National Laboratory	Final Waste Form	Soils	Waste Matrix Code	S4200	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	SOILS	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/ Liner	ID-SDA-SOIL-S	229.2
<b>Emplaced Total</b>		<b>229.2</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	1.03
Aluminum-based Metals/Alloys	0.02
Other Metals	0.06
Other Inorganic Materials	28.18
Cellulosics	10.91
Rubber	0.12
Plastics	6.89
Cements	0.00
Inorganic Matrix	5.22
Organic Matrix	1.42
Soils/gravel	606.03
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	8.45E-01
Cs-137	5.37E-07
Np-237	1.26E-05
Pu-238	1.88E-02
Pu-239	4.51E-01
Pu-240	9.96E-02
Pu-241	6.49E-01
Pu-242	1.55E-05
Sr-90	5.99E-07
Th-229	1.00E-14
Th-230	3.38E-09
Th-232	2.92E-19
U-233	1.08E-10
U-234	1.88E-04
U-235	4.68E-06
U-236	5.91E-09
U-238	4.55E-04

## Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D022, D027, D028, D029, D030, D032, D033, D034, D037, D038, D043, F001, F002, F004, F005, F006, F007, F009

**No TRUCON Codes Provided**

## Waste Stream Description

N/A

Waste Stream ID: **WP-INW161.001**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Idaho National Laboratory	Final Waste Form	Inorganic Non-Metal	Waste Matrix Code	S5123	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	FIREBRICK DEBRIS	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/ Liner	INW161.001-S	19.1
<b>Emplaced Total</b>		<b>19.1</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.05
Aluminum-based Metals/Alloys	0.00
Other Metals	0.43
Other Inorganic Materials	247.58
Cellulosics	24.03
Rubber	0.00
Plastics	6.05
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.36E+00
Np-237	2.89E-06
Pu-238	2.71E-01
Pu-239	8.21E+00
Pu-240	1.86E+00
Pu-241	1.48E+01
Pu-242	1.84E-04
Th-229	9.14E-15
Th-230	1.18E-09
Th-232	6.67E-17
U-233	4.23E-11
U-234	2.15E-05
U-235	4.64E-06
U-236	3.86E-07
U-238	2.90E-07

## Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, F001, F002, F003, F005, F006, F007, F009

**No TRUCON Codes Provided**

## Waste Stream Description

N/A

Waste Stream ID: **WP-INW169.001**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Idaho National Laboratory	Final Waste Form	Heterogeneous	Waste Matrix Code	S5330	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	COMBUSTIBLE DEBRIS WASTE			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/ Liner	INW169.001-S	19.1
<b>Emplaced Total</b>		<b>19.1</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.24
Aluminum-based Metals/Alloys	0.05
Other Metals	3.52
Other Inorganic Materials	7.37
Cellulosics	130.27
Rubber	0.73
Plastics	7.38
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.49E-01
Np-237	5.39E-07
Pu-238	3.38E-02
Pu-239	1.03E+00
Pu-240	2.29E-01
Pu-241	2.06E+00
Pu-242	3.09E-05
Th-229	1.72E-15
Th-230	1.00E-09
Th-232	8.24E-18
U-233	7.95E-12
U-234	1.62E-05
U-235	3.78E-06
U-236	4.76E-08
U-238	2.29E-07

## Haz. Waste No(s).

D006, D007, D008,  
D009, D011, D022,  
F001, F002, F003,  
F005, F006, F007,  
F009

**No TRUCON  
Codes Provided**

## Waste Stream Description

N/A

Waste Stream ID: **WP-INW198.001**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Idaho National Laboratory	Final Waste Form	Heterogeneous	Waste Matrix Code	S5310	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	PLASTICS DEBRIS	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/ Liner	INW198.001-S	49.1
<b>Emplaced Total</b>		<b>49.1</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.17
Aluminum-based Metals/Alloys	0.00
Other Metals	2.55
Other Inorganic Materials	13.60
Cellulosics	0.44
Rubber	0.53
Plastics	86.81
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.28E-01
Np-237	2.73E-07
Pu-238	2.38E-02
Pu-239	7.70E-01
Pu-240	1.72E-01
Pu-241	1.40E+00
Pu-242	1.81E-05
Th-229	3.48E-09
Th-230	1.97E-10
Th-232	6.17E-18
U-233	5.30E-06
U-234	3.37E-06
U-235	7.31E-07
U-236	3.57E-08
U-238	1.20E-06

## Haz. Waste No(s).

D006, D007, D008,  
D009, D011, D022,  
F001, F002, F003,  
F005, F006, F007,  
F009

**No TRUCON  
Codes Provided**

## Waste Stream Description

N/A

Waste Stream ID: **WP-INW211.001**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Idaho National Laboratory	Final Waste Form	Filter	Waste Matrix Code	S5410	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	FILTER DEBRIS WASTE			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/ Liner	INW211.001-S	299.9
55-gal Drum Dir Ld w/o Liner	INW211.001-S	0.2
SWB w/ 4 - 55-gal Drums w/ Liners	INW211.001-S	3.8
<b>Emplaced Total</b>		<b>303.9</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.05
Aluminum-based Metals/Alloys	8.60
Other Metals	0.41
Other Inorganic Materials	22.38
Cellulosics	136.35
Rubber	0.08
Plastics	7.29
Cements	0.00
Inorganic Matrix	0.01
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	131.80
Packaging Material, Plastic	36.72
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.54E+00
Np-237	5.41E-06
Pu-238	4.27E-01
Pu-239	1.20E+01
Pu-240	2.67E+00
Pu-241	2.78E+01
Pu-242	4.62E-04
Th-229	2.80E-08
Th-230	1.05E-09
Th-232	9.58E-17
U-233	4.26E-05
U-234	2.11E-05
U-235	3.18E-06
U-236	5.54E-07
U-238	4.84E-06

## Haz. Waste No(s).

D005, D007, D008,  
D009, D011, D022,  
F001, F002, F005,  
F006, F007, F009

**No TRUCON  
Codes Provided**

## Waste Stream Description

N/A

Waste Stream ID: **WP-INW216.001**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Idaho National Laboratory	Final Waste Form	Solidified Inorganics	Waste Matrix Code	S3121	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	SOLIDIFIED SLUDGE			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/ Liner	INW216.001-S	1227.4
85-gal Drum w/ 1 - 55-gal Drum w/ Liner	INW216.001-S	0.6
SWB Dir Ld w/o Liner	INW216.001-S	11.3
SWB w/ 4 - 55-gal Drums w/ Liners	INW216.001-S	5.7
<b>Emplaced Total</b>		<b>1245.1</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.01
Aluminum-based Metals/Alloys	0.00
Other Metals	0.08
Other Inorganic Materials	12.65
Cellulosics	0.19
Rubber	0.01
Plastics	0.53
Cements	0.00
Inorganic Matrix	829.38
Organic Matrix	0.18
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	131.41
Packaging Material, Plastic	36.56
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	4.56E+01
Np-237	1.19E-04
Pu-238	8.80E-02
Pu-239	2.62E+00
Pu-240	5.88E-01
Pu-241	5.66E+00
Pu-242	9.49E-05
Th-229	2.02E-08
Th-230	3.60E-08
Th-232	2.76E-17
U-233	2.69E-05
U-234	5.01E-04
U-235	8.28E-05
U-236	1.39E-07
U-238	3.12E-03

## Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D022, F001, F002, F005, F006, F007, F009

**No TRUCON Codes Provided**

## Waste Stream Description

N/A



Waste Stream ID: **WP-INW218.001**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Idaho National Laboratory	Final Waste Form	Solidified Inorganics	Waste Matrix Code	S3121	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	SLUDGE - BLDG. 374				Activity Concentrations Decayed to CY	2009	

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/ Liner	INW218.001-S	833.0
SWB Dir Ld w/o Liner	INW218.001-S	275.9
SWB w/ 4 - 55-gal Drums w/ Liners	INW218.001-S	1.9
<b>Emplaced Total</b>		<b>1110.9</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.00
Aluminum-based Metals/Alloys	0.00
Other Metals	0.01
Other Inorganic Materials	16.30
Cellulosics	0.16
Rubber	0.01
Plastics	1.25
Cements	0.00
Inorganic Matrix	753.19
Organic Matrix	0.19
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	136.58
Packaging Material, Plastic	27.77
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	7.46E-01
Np-237	1.93E-06
Pu-238	1.47E-02
Pu-239	4.48E-01
Pu-240	1.00E-01
Pu-241	9.54E-01
Pu-242	1.53E-05
Th-229	7.52E-09
Th-230	5.99E-08
Th-232	4.69E-18
U-233	1.00E-05
U-234	8.32E-04
U-235	9.20E-05
U-236	2.38E-08
U-238	7.87E-03

## Haz. Waste No(s).

D006, D007, D008,  
D009, D010, D011,  
D032, F001, F002,  
F005, F006, F007,  
F009

**No TRUCON  
Codes Provided**

## Waste Stream Description

N/A

Waste Stream ID: **WP-INW222.001**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Idaho National Laboratory	Final Waste Form	Solidified Inorganics	Waste Matrix Code	S3150	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	MISC. CEMENTED SLUDGES			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/ Liner	INW222.001-S	65.1
<b>Emplaced Total</b>		<b>65.1</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.00
Aluminum-based Metals/Alloys	0.00
Other Metals	0.03
Other Inorganic Materials	0.76
Cellulosics	0.04
Rubber	0.00
Plastics	16.36
Cements	0.00
Inorganic Matrix	566.62
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	8.51E-01
Np-237	1.82E-06
Pu-238	1.49E-01
Pu-239	4.36E+00
Pu-240	9.80E-01
Pu-241	8.69E+00
Pu-242	1.14E-04
Th-229	5.77E-15
Th-230	9.25E-10
Th-232	3.52E-17
U-233	2.67E-11
U-234	1.62E-05
U-235	1.63E-06
U-236	2.03E-07
U-238	1.08E-04

## Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D022, F001, F002, F003, F005, F006, F007, F009

**No TRUCON Codes Provided**

## Waste Stream Description

N/A

Waste Stream ID: **WP-INW243.001**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Idaho National Laboratory	Final Waste Form	Inorganic Non-Metal	Waste Matrix Code	S5122	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	GLASS DEBRIS	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/ Liner	INW243.001-S	73.8
55-gal Drum Dir Ld w/o Liner	INW243.001-S	1.0
<b>Emplaced Total</b>		<b>74.9</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.37
Aluminum-based Metals/Alloys	0.01
Other Metals	11.00
Other Inorganic Materials	163.61
Cellulosics	0.58
Rubber	0.10
Plastics	23.80
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	36.49
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.02E+00
Np-237	2.53E-06
Pu-238	1.34E-01
Pu-239	3.16E+00
Pu-240	7.07E-01
Pu-241	6.65E+00
Pu-242	9.10E-05
Th-229	2.48E-08
Th-230	1.88E-09
Th-232	3.31E-17
U-233	3.30E-05
U-234	2.77E-05
U-235	6.00E-06
U-236	1.68E-07
U-238	4.24E-06

## Haz. Waste No(s).

D005, D008, D009,  
D022, F001, F002,  
F005**No TRUCON  
Codes Provided**

## Waste Stream Description

N/A

Waste Stream ID: **WP-INW247.001R1**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Idaho National Laboratory	Final Waste Form	Inorganic Non-Metal	Waste Matrix Code	S5122	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	RASHIG RINGS - GLASS DEBRIS			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/ Liner	INW247.001R1-S	112.7
55-gal Drum Dir Ld w/o Liner	INW247.001R1-S	4.2
<b>Emplaced Total</b>		<b>116.9</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.15
Aluminum-based Metals/Alloys	0.00
Other Metals	0.01
Other Inorganic Materials	233.57
Cellulosics	19.55
Rubber	0.00
Plastics	1.28
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	35.68
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	7.69E-01
Np-237	1.86E-06
Pu-238	2.04E-01
Pu-239	3.55E+00
Pu-240	8.10E-01
Pu-241	7.77E+00
Pu-242	6.77E-05
Th-229	4.84E-08
Th-230	1.88E-10
Th-232	3.80E-17
U-233	6.45E-05
U-234	4.98E-06
U-235	7.93E-08
U-236	1.92E-07
U-238	8.18E-14

## Haz. Waste No(s).

D008, F001, F002

No TRUCON Codes Provided

## Waste Stream Description

N/A

Waste Stream ID: **WP-INW252.001**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Idaho National Laboratory	Final Waste Form	Heterogeneous	Waste Matrix Code	S5311	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	LEADED RUBBER GLOVES & APRONS - DEBRIS			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/ Liner	INW252.001-S	60.9
<b>Emplaced Total</b>		<b>60.9</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.00
Aluminum-based Metals/Alloys	0.00
Other Metals	207.33
Other Inorganic Materials	4.03
Cellulosics	0.10
Rubber	208.17
Plastics	3.38
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	9.38E-01
Np-237	1.92E-06
Pu-238	1.93E-01
Pu-239	4.95E+00
Pu-240	1.12E+00
Pu-241	1.50E+01
Pu-242	1.12E-04
Th-229	5.97E-15
Th-230	9.20E-10
Th-232	4.03E-17
U-233	2.78E-11
U-234	1.66E-05
U-235	3.73E-06
U-236	2.33E-07
U-238	1.18E-13

## Haz. Waste No(s).

D008, D022, F001, F002, F003, F005, F006, F007, F009

No TRUCON Codes Provided

## Waste Stream Description

N/A

Waste Stream ID: **WP-INW276.001**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Idaho National Laboratory	Final Waste Form	Heterogeneous	Waste Matrix Code	S5126	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	GRAPHITE MOLDS DEBRIS			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/ Liner	INW276.001-S	10.2
<b>Emplaced Total</b>		<b>10.2</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.00
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	329.28
Cellulosics	4.61
Rubber	0.00
Plastics	3.73
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	5.65E-01
Np-237	1.90E-06
Pu-238	2.21E-01
Pu-239	3.12E+00
Pu-240	7.11E-01
Pu-241	6.89E+00
Pu-242	6.42E-05
Th-229	1.69E-14
Th-230	4.32E-10
Th-232	7.50E-17
U-233	4.65E-11
U-234	7.88E-06
U-235	6.25E-08
U-236	2.53E-07
U-238	1.16E-13

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

## Waste Stream Description

N/A

Waste Stream ID: **WP-INW276.002**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Idaho National Laboratory	Final Waste Form	Heterogeneous	Waste Matrix Code	S5126	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	GRAPHITE MOLDS DEBRIS			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/ Liner	INW276.002-S	16.0
<b>Emplaced Total</b>		<b>16.0</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.00
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	320.62
Cellulosics	8.74
Rubber	0.00
Plastics	0.00
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	5.67E-01
Np-237	1.78E-06
Pu-238	2.12E-01
Pu-239	2.98E+00
Pu-240	6.79E-01
Pu-241	6.88E+00
Pu-242	6.13E-05
Th-229	4.70E-08
Th-230	3.66E-10
Th-232	6.02E-17
U-233	4.56E-05
U-234	7.11E-06
U-235	7.98E-08
U-236	2.21E-07
U-238	1.02E-13

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

## Waste Stream Description

N/A

Waste Stream ID: **WP-INW276.003**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Idaho National Laboratory	Final Waste Form	Heterogeneous	Waste Matrix Code	S5126	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	GRAPHITE WASTE DEBRIS			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/ Liner	INW276.003-S	182.6
55-gal Drum Dir Ld w/o Liner	INW276.003-S	4.0
<b>Emplaced Total</b>		<b>186.6</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.04
Aluminum-based Metals/Alloys	0.00
Other Metals	0.04
Other Inorganic Materials	329.25
Cellulosics	8.62
Rubber	0.00
Plastics	1.35
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	36.22
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.80E+00
Np-237	4.71E-06
Pu-238	6.74E-01
Pu-239	9.25E+00
Pu-240	2.11E+00
Pu-241	2.39E+01
Pu-242	1.96E-04
Th-229	2.36E-07
Th-230	8.05E-10
Th-232	1.25E-16
U-233	2.79E-04
U-234	1.88E-05
U-235	2.92E-07
U-236	5.63E-07
U-238	6.00E-09

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

## Waste Stream Description

N/A



Waste Stream ID: **WP-INW276.004**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Idaho National Laboratory	Final Waste Form	Heterogeneous	Waste Matrix Code	S5126	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	GRAPHITE WASTE DEBRIS			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/ Liner	INW276.004-S	42.4
55-gal Drum Dir Ld w/o Liner	INW276.004-S	4.4
<b>Emplaced Total</b>		<b>46.8</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.25
Aluminum-based Metals/Alloys	0.00
Other Metals	0.17
Other Inorganic Materials	327.99
Cellulosics	2.14
Rubber	0.00
Plastics	3.07
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	33.55
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.74E+00
Np-237	4.62E-06
Pu-238	5.62E-01
Pu-239	7.84E+00
Pu-240	1.79E+00
Pu-241	1.99E+01
Pu-242	1.63E-04
Th-229	8.18E-07
Th-230	8.48E-10
Th-232	1.06E-16
U-233	9.69E-04
U-234	1.78E-05
U-235	6.75E-07
U-236	4.77E-07
U-238	2.22E-13

## Haz. Waste No(s).

D008, D029, D040,  
F001, F002, F005**No TRUCON  
Codes Provided**

## Waste Stream Description

N/A

Waste Stream ID: **WP-INW296.001**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Idaho National Laboratory	Final Waste Form	Lead/Cadmium Metal Waste	Waste Matrix Code	S5112	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	METAL DEBRIS	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/ Liner	INW296.001-S	93.2
55-gal Drum Dir Ld w/o Liner	INW296.001-S	4.6
<b>Emplaced Total</b>		<b>97.8</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	5.43
Aluminum-based Metals/Alloys	0.39
Other Metals	220.74
Other Inorganic Materials	11.39
Cellulosics	0.93
Rubber	1.78
Plastics	4.31
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	35.27
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.61E+00
Np-237	3.98E-06
Pu-238	2.87E-01
Pu-239	5.25E+00
Pu-240	1.19E+00
Pu-241	1.16E+01
Pu-242	1.13E-04
Th-229	7.78E-08
Th-230	7.38E-10
Th-232	5.58E-17
U-233	1.04E-04
U-234	1.36E-05
U-235	1.59E-06
U-236	2.82E-07
U-238	4.05E-06

## Haz. Waste No(s).

D006, D007, D008,  
D009, D011, D028,  
F001, F002, F003,  
F005, F006, F007,  
F009

**No TRUCON  
Codes Provided**

## Waste Stream Description

N/A

Waste Stream ID: **WP-LA-CIN02.001**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Los Alamos National Laboratory	Final Waste Form	Solidified Inorganics	Waste Matrix Code	S3150	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	SOLIDIFIED HOMOGENOUS SOLIDS			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/ Liner	LA-CIN02.001-S	1.2
55-gal Drum Dir Ld w/o Liner	LA-CIN02.001-S	21.8
TDOP w/ 10 - 55-gal Drums w/o Liners	LA-CIN02.001-S	4.5
<b>Emplaced Total</b>		<b>27.6</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.00
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	0.00
Cellulosics	0.00
Rubber	0.00
Plastics	0.00
Cements	0.00
Inorganic Matrix	1012.16
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	147.27
Packaging Material, Plastic	1.67
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	8.79E+00
Am-243	1.11E-04
Cs-137	2.11E-05
Np-237	2.57E-04
Pu-238	1.01E+00
Pu-239	4.58E+00
Pu-240	1.34E+00
Pu-241	1.21E+01
Pu-242	3.37E-04
Sr-90	2.11E-05
Th-229	2.07E-13
Th-230	2.61E-09
Th-232	3.92E-18
U-233	2.22E-09
U-234	1.48E-04
U-235	3.53E-06
U-236	7.94E-08
U-238	1.02E-13

## Haz. Waste No(s).

D004, D005, D006,  
D007, D008, D009,  
D010, D011, D022,  
F001, F002, F005

**No TRUCON  
Codes Provided**

## Waste Stream Description

N/A

Comprehensive Inventory Database ver. 1.00

Data ver. D.9.02

NOTE: Actual numerical values have been rounded for presentation purposes.

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Waste Stream ID: **WP-LA-MHD01.001**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Los Alamos National Laboratory	Final Waste Form	Heterogeneous	Waste Matrix Code	S5400	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	HETEROGENEOUS DEBRIS			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/ Liner	LA-MHD01.001-S	250.4
55-gal Drum Dir Ld w/o Liner	LA-MHD01.001-S	452.2
55-gal POC - 12" w/ Liner	LA-MHD01.001-S	23.7
55-gal POC - 12" w/o Liner	LA-MHD01.001-S	1.5
SWB w/ 4 - 55-gal Drums w/ Liners	LA-MHD01.001-S	744.7
SWB w/ 4 - 55-gal Drums w/o Liners	LA-MHD01.001-S	591.6
<b>Emplaced Total</b>		<b>2064.0</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	53.95
Aluminum-based Metals/Alloys	0.27
Other Metals	5.13
Other Inorganic Materials	23.74
Cellulosics	6.74
Rubber	10.59
Plastics	21.92
Cements	0.00
Inorganic Matrix	0.39
Organic Matrix	0.02
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	187.62
Packaging Material, Plastic	10.80
Packaging Material, Cellulosics	1.68
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.83E+00
Am-243	5.01E-04
Cm-244	4.33E-03
Cs-137	9.70E-07
Np-237	1.31E-04
Pu-238	2.77E+01
Pu-239	7.98E+00
Pu-240	2.11E+00
Pu-241	1.97E+01
Pu-242	2.02E-03
Sr-90	9.25E-04
Th-229	8.74E-08
Th-230	4.20E-06
Th-232	2.19E-09
U-233	4.66E-04
U-234	4.95E-03
U-235	2.79E-06
U-236	1.25E-07
U-238	6.58E-06

## Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D021, D022, D035, D038, D039, D040, F001, F002, F005

**No TRUCON Codes Provided**

## Waste Stream Description

N/A

Comprehensive Inventory Database ver. 1.00

Data ver. D.9.02

NOTE: Actual numerical values have been rounded for presentation purposes.

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Waste Stream ID: **WP-LA-MHD02.001**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Los Alamos National Laboratory	Final Waste Form	Heterogeneous	Waste Matrix Code	S5400	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	HETEROGENEOUS DEBRIS			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/ Liner	LA-MHD02.001-S	5.0
55-gal Drum Dir Ld w/o Liner	LA-MHD02.001-S	8.5
<b>Emplaced Total</b>		<b>13.5</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	78.72
Aluminum-based Metals/Alloys	0.00
Other Metals	3.17
Other Inorganic Materials	17.11
Cellulosics	3.40
Rubber	25.27
Plastics	31.33
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	13.66
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.33E-01
Am-243	2.96E-06
Cs-137	1.68E-07
Np-237	6.25E-06
Pu-238	1.29E+02
Pu-239	1.03E-01
Pu-240	5.19E-02
Pu-241	4.36E-01
Pu-242	5.31E-05
Sr-90	1.68E-07
Th-229	5.32E-11
Th-230	6.77E-07
Th-232	3.42E-19
U-233	1.89E-07
U-234	2.56E-02
U-235	4.70E-08
U-236	4.61E-09
U-238	2.40E-14

## Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D021, D022, D035, D038, D039, D040, F001, F002, F005

**No TRUCON Codes Provided**

## Waste Stream Description

N/A

Waste Stream ID: **WP-LA-MHD03.001**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Los Alamos National Laboratory	Final Waste Form	Heterogeneous	Waste Matrix Code	S5400	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	HETEROGENEOUS DEBRIS			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/ Liner	LA-MHD03.001-S	5.6
55-gal Drum Dir Ld w/o Liner	LA-MHD03.001-S	254.8
SWB w/ 4 - 55-gal Drums w/ Liners	LA-MHD03.001-S	3.8
SWB w/ 4 - 55-gal Drums w/o Liners	LA-MHD03.001-S	22.7
<b>Emplaced Total</b>		<b>286.9</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	14.87
Aluminum-based Metals/Alloys	0.13
Other Metals	1.64
Other Inorganic Materials	25.89
Cellulosics	20.08
Rubber	1.62
Plastics	55.24
Cements	0.00
Inorganic Matrix	0.06
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	138.21
Packaging Material, Plastic	0.94
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.74E-01
Am-243	1.25E-04
Cm-244	2.54E-03
Cs-137	2.28E-05
Np-237	7.17E-05
Pu-238	5.43E+00
Pu-239	7.64E-01
Pu-240	2.09E-01
Pu-241	2.82E+00
Pu-242	3.50E-04
Sr-90	2.26E-05
Th-229	9.30E-09
Th-230	1.46E-08
Th-232	6.13E-19
U-233	4.96E-05
U-234	8.26E-04
U-235	1.18E-06
U-236	1.24E-08
U-238	3.12E-06

## Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D021, D022, D026, D027, D028, D029, D030, D035, D036, D037, D038, D039, D040, D043, F001, F002, F004, F005

**No TRUCON Codes Provided**

## Waste Stream Description

N/A

Waste Stream ID: **WP-LA-MHD03.002**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Los Alamos National Laboratory	Final Waste Form	Heterogeneous	Waste Matrix Code	S5400	Handling	RH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	RH DEBRIS WASTE FROM LANL CMR FACILITY			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
RH Can w/ Fxd Lid - Dir Ld	LA-MHD03.002-S	14.2
<b>Emplaced Total</b>		<b>14.2</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	2.78
Aluminum-based Metals/Alloys	0.27
Other Metals	0.13
Other Inorganic Materials	0.10
Cellulosics	0.08
Rubber	0.02
Plastics	476.63
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.08
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	433.70
Packaging Material, Plastic	0.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	464.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.34E+00
Cs-137	3.83E+01
Np-237	1.49E-06
Pu-238	1.46E+00
Pu-239	3.43E+00
Pu-240	2.00E+00
Pu-241	2.58E+01
Pu-242	1.23E-03
Sr-90	2.64E+01
Th-229	1.46E-06
Th-230	1.53E-07
Th-232	5.85E-18
U-233	7.80E-03
U-234	8.52E-03
U-235	3.05E-04
U-236	1.18E-07
U-238	3.48E-05

## Haz. Waste No(s).

D005, D006, D007, D008, D009, D011, F002, F005

No TRUCON Codes Provided

## Waste Stream Description

N/A

Waste Stream ID: **WP-LA-MHD04.001**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Los Alamos National Laboratory	Final Waste Form	Heterogeneous	Waste Matrix Code	S5400	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	HETEROGENEOUS DEBRIS			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/ Liner	LA-MHD04.001-S	0.4
55-gal Drum Dir Ld w/o Liner	LA-MHD04.001-S	0.6
SWB w/ 4 - 55-gal Drums w/o Liners	LA-MHD04.001-S	3.8
<b>Emplaced Total</b>		<b>4.8</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	29.83
Aluminum-based Metals/Alloys	0.19
Other Metals	0.10
Other Inorganic Materials	6.78
Cellulosics	6.20
Rubber	3.32
Plastics	7.10
Cements	0.00
Inorganic Matrix	0.04
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	193.77
Packaging Material, Plastic	3.19
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.26E-01
Am-243	3.55E-05
Cs-137	3.55E-08
Np-237	6.99E-05
Pu-238	9.39E+01
Pu-239	1.34E-01
Pu-240	5.40E-02
Pu-241	4.87E-01
Pu-242	4.39E-05
Sr-90	3.55E-08
Th-229	1.43E-14
Th-230	1.34E-07
Th-232	3.95E-20
U-233	3.04E-10
U-234	1.50E-02
U-235	1.33E-10
U-236	1.60E-09
U-238	6.63E-15

## Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D022, F001, F002, F005

**No TRUCON Codes Provided**

## Waste Stream Description

N/A



Waste Stream ID: **WP-LA-MIN03-NC.001**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Los Alamos National Laboratory	Final Waste Form	Solidified Inorganics	Waste Matrix Code	S3120	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	HOMOGENEOUS INORGANIC SOLIDS (TA-50)			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/ Liner	LA-MIN03-NC.001-S	598.8
55-gal Drum Dir Ld w/o Liner	LA-MIN03-NC.001-S	0.4
85-gal Drum w/ 1 - 55-gal Drum w/ Liner	LA-MIN03-NC.001-S	0.3
SWB w/ 4 - 55-gal Drums w/ Liners	LA-MIN03-NC.001-S	24.6
<b>Emplaced Total</b>		<b>624.1</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	2.16
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	0.32
Cellulosics	0.00
Rubber	0.00
Plastics	5.93
Cements	0.00
Inorganic Matrix	730.81
Organic Matrix	3.06
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	134.00
Packaging Material, Plastic	36.15
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	4.76E-01
Am-243	5.08E-06
Cs-137	9.66E-05
Np-237	5.80E-06
Pu-238	1.94E-02
Pu-239	3.29E-01
Pu-240	4.65E-02
Pu-241	7.57E-01
Pu-242	2.88E-05
Sr-90	8.47E-05
Th-229	6.14E-14
Th-230	9.81E-10
Th-232	1.36E-19
U-233	3.52E-10
U-234	5.46E-05
U-235	1.37E-06
U-236	2.76E-09
U-238	1.18E-06

## Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D022, D028, D037, F001, F002, F004, F005, F006, F007, F009

**No TRUCON Codes Provided**

## Waste Stream Description

N/A

Comprehensive Inventory Database ver. 1.00

Data ver. D.9.02

NOTE: Actual numerical values have been rounded for presentation purposes.

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Waste Stream ID: **WP-LA-OS-00-01**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Los Alamos National Laboratory	Final Waste Form	Heterogeneous	Waste Matrix Code	S5100	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	OSR SEALED SOURCES			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal POC - 12" w/o Liner	LA-OS-00-01-S	0.4
<b>Emplaced Total</b>		<b>0.4</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	130.77
Aluminum-based Metals/Alloys	0.00
Other Metals	0.96
Other Inorganic Materials	0.00
Cellulosics	137.50
Rubber	0.00
Plastics	0.00
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	527.40
Packaging Material, Plastic	0.00
Packaging Material, Cellulosics	137.50
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	6.34E+00
Cs-137	5.90E-04
Np-237	4.26E-05
Pu-238	4.10E+00
Pu-239	1.15E+01
Pu-240	1.17E+01
Pu-241	1.22E+01
Pu-242	2.32E-04
Sr-90	5.50E-04
Th-229	3.27E-13
Th-230	2.24E-01
Th-232	4.20E-16
U-233	1.07E-09
U-234	8.37E-05
U-235	7.93E-08
U-236	2.43E-06
U-238	2.45E-13

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

## Waste Stream Description

N/A

Waste Stream ID: **WP-LA-OS-00-01.001**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Los Alamos National Laboratory	Final Waste Form	Heterogeneous	Waste Matrix Code	S5100	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	WIPP ELIGIBLE OSR SEALED SOURCES			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal POC - 12" w/ Liner	LA-OS-00-01.001-S	65.9
55-gal S100 POC - 6" w/ Liner	LA-OS-00-01.001-S	43.9
55-gal S300 POC - 12" w/ Liner	LA-OS-00-01.001-S	2.1
<b>Emplaced Total</b>		<b>111.9</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.00
Aluminum-based Metals/Alloys	0.00
Other Metals	21.14
Other Inorganic Materials	0.00
Cellulosics	0.00
Rubber	0.00
Plastics	0.00
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	446.33
Packaging Material, Plastic	305.65
Packaging Material, Cellulosics	110.91
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.72E+01
Cs-137	6.46E-03
Np-237	1.68E-05
Pu-238	7.34E+01
Pu-239	6.96E+00
Pu-240	2.09E+00
Pu-241	6.58E+00
Pu-242	5.74E-04
Sr-90	1.59E-02
Th-229	1.68E-12
Th-230	1.74E-07
Th-232	1.38E-17
U-233	6.04E-09
U-234	6.78E-03
U-235	3.08E-07
U-236	1.86E-07
U-238	9.86E-09

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

## Waste Stream Description

N/A

Waste Stream ID: **WP-LA-TA-55-19.01**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Los Alamos National Laboratory	Final Waste Form	Heterogeneous	Waste Matrix Code	S5400	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	COMBUSTIBLE WASTE, MIXED DEBRIS			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/ Liner	LA-TA-55-19.01-S	0.2
55-gal Drum Dir Ld w/o Liner	LA-TA-55-19.01-S	5.6
SWB Dir Ld w/o Liner	LA-TA-55-19.01-S	75.6
<b>Emplaced Total</b>		<b>81.4</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	51.12
Aluminum-based Metals/Alloys	0.03
Other Metals	0.10
Other Inorganic Materials	0.27
Cellulosics	6.20
Rubber	2.18
Plastics	26.49
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	151.88
Packaging Material, Plastic	0.09
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	8.32E-01
Am-243	5.37E-05
Cs-137	1.05E-08
Np-237	4.95E-05
Pu-238	2.44E-01
Pu-239	3.06E+00
Pu-240	7.56E-01
Pu-241	6.47E+00
Pu-242	2.05E-03
Th-229	7.84E-13
Th-230	4.58E-07
Th-232	4.48E-17
U-233	1.87E-09
U-234	1.46E-03
U-235	2.81E-06
U-236	2.02E-07
U-238	4.75E-06

## Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D021, D022, D035, D038, D039, D040, F001, F002, F003, F005

**No TRUCON Codes Provided**

## Waste Stream Description

N/A

Waste Stream ID: **WP-LA-TA-55-19.02**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Los Alamos National Laboratory	Final Waste Form	Heterogeneous	Waste Matrix Code	S5300	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	MIXED COMBUSTIBLE DEBRIS			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/ Liner	LA-TA-55-19.02-S	16.0
55-gal Drum Dir Ld w/o Liner	LA-TA-55-19.02-S	171.4
SWB Dir Ld w/o Liner	LA-TA-55-19.02-S	13.2
SWB w/ 4 - 55-gal Drums w/ Liners	LA-TA-55-19.02-S	1.9
SWB w/ 4 - 55-gal Drums w/o Liners	LA-TA-55-19.02-S	26.5
<b>Emplaced Total</b>		<b>229.0</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	10.64
Aluminum-based Metals/Alloys	0.02
Other Metals	0.66
Other Inorganic Materials	3.05
Cellulosics	39.08
Rubber	4.67
Plastics	62.20
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.03
Soils/gravel	0.18
Vitrified	0.00
Packaging Material, Steel	142.05
Packaging Material, Plastic	2.72
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.69E+00
Am-243	3.38E-04
Cs-137	2.26E-06
Np-237	9.61E-05
Pu-238	8.71E-01
Pu-239	3.57E+00
Pu-240	9.96E-01
Pu-241	1.20E+01
Pu-242	5.43E-03
Sr-90	2.09E-06
Th-229	1.30E-08
Th-230	7.56E-06
Th-232	8.99E-08
U-233	1.98E-05
U-234	3.53E-03
U-235	4.18E-06
U-236	2.07E-07
U-238	6.67E-06

## Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D021, D022, D035, D038, D039, D040, F001, F002, F003, F005

**No TRUCON Codes Provided**

## Waste Stream Description

N/A

Comprehensive Inventory Database ver. 1.00

Data ver. D.9.02

NOTE: Actual numerical values have been rounded for presentation purposes.

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Waste Stream ID: **WP-LA-TA-55-30**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Los Alamos National Laboratory	Final Waste Form	Heterogeneous	Waste Matrix Code	S5400	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	NONCOMBUSTIBLE AND COMBUSTIBLE DEBRIS			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/ Liner	LA-TA-55-30-S	10.6
55-gal Drum Dir Ld w/o Liner	LA-TA-55-30-S	79.0
SWB w/ 4 - 55-gal Drums w/o Liners	LA-TA-55-30-S	5.7
<b>Emplaced Total</b>		<b>95.3</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	213.70
Aluminum-based Metals/Alloys	0.41
Other Metals	2.45
Other Inorganic Materials	18.28
Cellulosics	11.63
Rubber	1.41
Plastics	14.23
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.75
Vitrified	0.00
Packaging Material, Steel	135.58
Packaging Material, Plastic	4.12
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.24E+00
Am-243	6.83E-05
Cs-137	8.05E-05
Np-237	8.39E-05
Pu-238	4.63E-01
Pu-239	2.59E+00
Pu-240	7.30E-01
Pu-241	7.50E+00
Pu-242	6.28E-04
Sr-90	8.01E-05
Th-229	7.47E-08
Th-230	7.65E-09
Th-232	3.44E-07
U-233	9.96E-05
U-234	1.12E-04
U-235	2.28E-06
U-236	1.73E-07
U-238	5.85E-06

## Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D021, D022, D035, D038, D039, D040, F001, F002, F003, F005

**No TRUCON Codes Provided**

## Waste Stream Description

N/A

Comprehensive Inventory Database ver. 1.00

Data ver. D.9.02

NOTE: Actual numerical values have been rounded for presentation purposes.

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Waste Stream ID: **WP-LA-TA-55-43.01**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Los Alamos National Laboratory	Final Waste Form	Heterogeneous	Waste Matrix Code	S5400	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	COMBUSTIBLE DEBRIS WASTE			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
SWB Dir Ld w/o Liner	LA-TA-55-43.01-S	190.9
<b>Emplaced Total</b>		<b>190.9</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	45.68
Aluminum-based Metals/Alloys	0.11
Other Metals	0.38
Other Inorganic Materials	0.13
Cellulosics	1.22
Rubber	0.19
Plastics	8.86
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	153.50
Packaging Material, Plastic	0.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.81E-03
Am-243	7.54E-08
Np-237	2.06E-07
Pu-238	2.74E+00
Pu-239	2.44E-03
Pu-240	4.00E-03
Pu-241	2.48E-02
Pu-242	2.79E-06
Th-229	4.88E-15
Th-230	2.18E-08
Th-232	2.40E-08
U-233	9.54E-12
U-234	2.65E-04
U-235	2.65E-11
U-236	1.31E-09
U-238	4.64E-15

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

## Waste Stream Description

N/A

Waste Stream ID: **WP-BLCHDN.001**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Lawrence Livermore National Laboratory	Final Waste Form	Heterogeneous	Waste Matrix Code	S5440	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	TRM HETEROGENEOUS DEBRIS			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/ Liner	BLCHDN.001-S	0.2
55-gal Drum Dir Ld w/o Liner	BLCHDN.001-S	1.5
<b>Emplaced Total</b>		<b>1.7</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	61.42
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	13.70
Cellulosics	5.41
Rubber	1.80
Plastics	40.99
Cements	0.00
Inorganic Matrix	11.12
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	4.63
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	6.55E-02
Am-243	1.34E-03
Cm-244	1.09E-01
Np-237	5.38E-04
Pu-238	5.16E-02
Pu-239	5.35E-07
Pu-240	6.35E-05
Pu-241	3.45E-05
Th-229	2.69E-12
Th-230	1.69E-11
Th-232	4.06E-22
U-233	1.15E-08
U-234	7.47E-07
U-235	1.34E-15
U-236	4.86E-12

## Haz. Waste No(s).

F005

No TRUCON Codes Provided

## Waste Stream Description

N/A



Waste Stream ID: **WP-LL-M001-S5400**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Lawrence Livermore National Laboratory	Final Waste Form	Heterogeneous	Waste Matrix Code	S5400	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	HETEROGENEOUS MIXED DEBRIS			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/ Liner	LL-M001-S5400-S	136.4
55-gal Drum Dir Ld w/o Liner	LL-M001-S5400-S	2.9
SWB w/ 4 - 55-gal Drums w/ Liners	LL-M001-S5400-S	3.8
<b>Emplaced Total</b>		<b>143.1</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	88.62
Aluminum-based Metals/Alloys	2.36
Other Metals	3.76
Other Inorganic Materials	7.07
Cellulosics	5.01
Rubber	11.09
Plastics	57.87
Cements	0.00
Inorganic Matrix	14.54
Organic Matrix	3.08
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	132.92
Packaging Material, Plastic	35.70
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.08E+00
Am-243	9.47E-05
Cm-244	1.97E-01
Cs-137	1.37E-07
Np-237	5.12E-04
Pu-238	2.45E+00
Pu-239	4.18E+00
Pu-240	1.17E+00
Pu-241	1.31E+01
Pu-242	2.21E-04
Sr-90	1.35E-07
Th-229	2.55E-12
Th-230	6.68E-09
Th-232	2.15E-17
U-233	1.09E-08
U-234	1.66E-04
U-235	3.48E-06
U-236	1.74E-07
U-238	2.47E-05

## Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D022, D028, D029, D035, D040, F001, F002, F005

No TRUCON Codes Provided

## Waste Stream Description

N/A

Waste Stream ID: **WP-NTLBL-S5400**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Nevada Test Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5400	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	HETEROGENEOUS DEBRIS			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/ Liner	NTLBL-S5400-S	1.2
55-gal Drum Dir Ld w/o Liner	NTLBL-S5400-S	0.4
<b>Emplaced Total</b>		<b>1.7</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	68.85
Aluminum-based Metals/Alloys	0.00
Other Metals	19.04
Other Inorganic Materials	35.81
Cellulosics	8.37
Rubber	4.61
Plastics	18.87
Cements	0.00
Inorganic Matrix	1.74
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	27.75
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	6.35E-01
Am-243	3.48E-03
Cm-244	5.00E-01
Cs-137	2.97E-05
Np-237	4.07E-04
Pu-238	8.65E-02
Pu-239	4.04E-01
Pu-240	9.17E-02
Pu-241	1.84E+00
Pu-242	1.27E-05
Sr-90	2.96E-05
Th-229	1.29E-12
Th-230	1.80E-11
Th-232	1.07E-18
U-233	6.90E-09
U-234	9.98E-07
U-235	1.59E-09
U-236	1.09E-08
U-238	7.67E-15

## Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D022, D028, F001, F002, F003, F005

**No TRUCON Codes Provided**

## Waste Stream Description

N/A

Waste Stream ID: **WP-NTLRC-S5400**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Nevada Test Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5400	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	HETEROGENEOUS DEBRIS			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/ Liner	NTLRC-S5400-S	3.1
<b>Emplaced Total</b>		<b>3.1</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	48.02
Aluminum-based Metals/Alloys	10.80
Other Metals	9.85
Other Inorganic Materials	18.63
Cellulosics	26.85
Rubber	31.38
Plastics	73.04
Cements	0.00
Inorganic Matrix	9.45
Organic Matrix	0.57
Soils/gravel	0.17
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.57E+00
Am-243	1.13E-05
Cs-137	3.43E-07
Np-237	7.98E-05
Pu-238	1.81E-01
Pu-239	2.31E+00
Pu-240	8.46E-01
Pu-241	9.71E+00
Pu-242	9.39E-05
Sr-90	3.42E-07
Th-229	2.50E-13
Th-230	5.12E-08
Th-232	9.92E-18
U-233	1.34E-09
U-234	1.42E-03
U-235	4.74E-05
U-236	1.00E-07
U-238	3.37E-05

## Haz. Waste No(s).

D005, D008, D009, D011, D019, D035, D040, F001, F005

No TRUCON Codes Provided

## Waste Stream Description

N/A

Waste Stream ID: **WP-NT-RF-BERYLLIUM**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Nevada Test Site	Final Waste Form	Uncategorized Metal	Waste Matrix Code	S5111	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	RFETS BERYLLIUM DEBRIS	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/ Liner	NT-RF-BERYLLIUM-S	29.3
<b>Emplaced Total</b>		<b>29.3</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	3.88
Aluminum-based Metals/Alloys	4.01
Other Metals	158.30
Other Inorganic Materials	1.17
Cellulosics	8.92
Rubber	0.09
Plastics	15.77
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.35E-01
Am-243	3.13E-08
Np-237	1.48E-06
Pu-238	3.19E-02
Pu-239	8.27E-01
Pu-240	1.88E-01
Pu-241	1.33E+00
Pu-242	1.47E-05
Th-229	7.60E-08
Th-230	1.11E-09
Th-232	2.20E-18
U-233	2.03E-04
U-234	3.11E-05
U-235	6.13E-07
U-236	2.23E-08
U-238	7.89E-06

## Haz. Waste No(s).

D007, F002

No TRUCON Codes Provided

## Waste Stream Description

N/A

Waste Stream ID: **WP-NT-RF-GRAPHITE**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Nevada Test Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5126	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	GRAPHITE DEBRIS WASTE			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/ Liner	NT-RF-GRAPHITE-S	3.7
<b>Emplaced Total</b>		<b>3.7</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.32
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	291.08
Cellulosics	2.30
Rubber	0.61
Plastics	12.55
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	9.49E-01
Np-237	9.25E-06
Pu-238	3.15E-01
Pu-239	1.04E+01
Pu-240	1.92E+00
Pu-241	1.57E+01
Pu-242	1.40E-04
Th-229	2.69E-14
Th-230	6.11E-10
Th-232	2.25E-17
U-233	1.47E-10
U-234	1.88E-05
U-235	4.09E-08
U-236	2.28E-07
U-238	7.58E-06

## Haz. Waste No(s).

D008

No TRUCON  
Codes Provided

## Waste Stream Description

N/A

Waste Stream ID: **WP-NT-RF-METAL**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Nevada Test Site	Final Waste Form	Uncategorized Metal	Waste Matrix Code	S5111	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	METAL AND HEAVY METAL DEBRIS (NON-SS)			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/ Liner	NT-RF-METAL-S	5.6
55-gal Drum Dir Ld w/o Liner	NT-RF-METAL-S	0.4
<b>Emplaced Total</b>		<b>6.0</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	166.64
Aluminum-based Metals/Alloys	25.59
Other Metals	4.59
Other Inorganic Materials	0.24
Cellulosics	7.26
Rubber	0.65
Plastics	21.28
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	34.45
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.24E-01
Am-243	4.51E-07
Np-237	1.98E-06
Pu-238	3.48E-02
Pu-239	1.12E+00
Pu-240	2.77E-01
Pu-241	2.29E+00
Pu-242	2.24E-05
Th-229	5.98E-15
Th-230	2.66E-07
Th-232	3.24E-18
U-233	3.23E-11
U-234	7.39E-03
U-235	4.54E-06
U-236	3.28E-08
U-238	3.70E-03

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

## Waste Stream Description

N/A

Waste Stream ID: **WP-NTS54332R0**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Nevada Test Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5400	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	HETEROGENEOUS DEBRIS			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/ Liner	NTS54332R0-S	235.0
55-gal Drum Dir Ld w/o Liner	NTS54332R0-S	47.6
SWB w/ 4 - 55-gal Drums w/ Liners	NTS54332R0-S	24.6
<b>Emplaced Total</b>		<b>307.2</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	45.13
Aluminum-based Metals/Alloys	2.90
Other Metals	3.84
Other Inorganic Materials	6.28
Cellulosics	13.22
Rubber	11.05
Plastics	46.10
Cements	0.00
Inorganic Matrix	10.47
Organic Matrix	3.40
Soils/gravel	0.08
Vitrified	0.00
Packaging Material, Steel	137.22
Packaging Material, Plastic	29.61
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	4.04E-01
Am-243	4.23E-05
Cm-244	8.87E-03
Cs-137	7.39E-07
Np-237	4.68E-05
Pu-238	8.03E-02
Pu-239	1.20E+00
Pu-240	3.14E-01
Pu-241	3.13E+00
Pu-242	3.38E-05
Sr-90	7.52E-07
Th-229	3.32E-07
Th-230	4.09E-09
Th-232	5.76E-18
U-233	7.08E-04
U-234	9.15E-05
U-235	3.25E-03
U-236	4.66E-08
U-238	3.29E-05

## Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D019, D022, D027, D028, D029, D040, F001, F002, F003, F004, F005

**No TRUCON Codes Provided**

## Waste Stream Description

N/A

Comprehensive Inventory Database ver. 1.00

Data ver. D.9.02

NOTE: Actual numerical values have been rounded for presentation purposes.

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Waste Stream ID: WP-NTS54COMRO

## Appendix B

## TRU Waste Inventory Profile Report

Site	Nevada Test Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5400	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	HETEROGENEOUS DEBRIS			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/ Liner	NTS54COMRO-S	39.5
55-gal Drum Dir Ld w/o Liner	NTS54COMRO-S	8.9
SWB w/ 4 - 55-gal Drums w/ Liners	NTS54COMRO-S	1.9
<b>Emplaced Total</b>		<b>50.4</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	50.86
Aluminum-based Metals/Alloys	4.45
Other Metals	5.66
Other Inorganic Materials	8.36
Cellulosics	20.52
Rubber	12.84
Plastics	55.40
Cements	0.00
Inorganic Matrix	3.71
Organic Matrix	0.66
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	133.81
Packaging Material, Plastic	29.65
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	6.85E-01
Am-243	4.16E-04
Cm-244	4.55E-01
Cs-137	1.57E-06
Np-237	9.73E-05
Pu-238	4.18E-01
Pu-239	1.02E+00
Pu-240	2.42E-01
Pu-241	2.17E+00
Pu-242	3.66E-05
Sr-90	1.56E-06
Th-229	2.43E-06
Th-230	1.95E-09
Th-232	4.44E-18
U-233	5.19E-03
U-234	4.63E-05
U-235	2.65E-07
U-236	3.59E-08
U-238	1.75E-05

## Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D019, D022, D027, D028, D029, D040, F001, F002, F003, F004, F005

No TRUCON Codes Provided

## Waste Stream Description

N/A

Comprehensive Inventory Database ver. 1.00

Data ver. D.9.02

NOTE: Actual numerical values have been rounded for presentation purposes.

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Waste Stream ID: **WP-NTS54MIX1R0**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Nevada Test Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5400	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	HETEROGENEOUS DEBRIS - LLNL BLDG. 332 & 251			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/ Liner	NTS54MIX1R0-S	0.4
<b>Emplaced Total</b>		<b>0.4</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	33.89
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	2.40
Cellulosics	38.46
Rubber	41.59
Plastics	38.46
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	8.35E-03
Am-243	2.30E-04
Cs-137	1.69E-04
Np-237	1.91E-06
Pu-238	9.53E-04
Pu-239	6.96E-02
Pu-240	1.67E-02
Pu-241	4.93E-02
Pu-242	1.64E-06
Th-229	1.87E-14
Th-230	6.18E-13
Th-232	6.01E-19
U-233	5.71E-11
U-234	1.95E-08
U-235	4.80E-10
U-236	3.47E-09
U-238	1.73E-15

## Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D019, D022, D027, D028, D029, D040, F001, F002, F003, F004, F005

**No TRUCON Codes Provided**

## Waste Stream Description

N/A

Waste Stream ID: **WP-OR-NFS-CH-HET**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Oak Ridge National Laboratory	Final Waste Form	Heterogeneous	Waste Matrix Code	S5400	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	DEBRIS FROM NUCLEAR FUEL SERVICES			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/ Liner	OR-NFS-CH-HET-S	1.0
55-gal Drum Dir Ld w/o Liner	OR-NFS-CH-HET-S	22.3
<b>Emplaced Total</b>		<b>23.3</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	76.07
Aluminum-based Metals/Alloys	8.66
Other Metals	0.28
Other Inorganic Materials	2.39
Cellulosics	16.46
Rubber	1.38
Plastics	56.20
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	1.65
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.07E-01
Cs-137	4.48E-08
Np-237	6.87E-07
Pu-238	1.49E-02
Pu-239	1.89E-01
Pu-240	5.75E-02
Pu-241	4.62E-01
Pu-242	8.86E-06
Sr-90	4.47E-08
Th-229	2.33E-09
Th-230	3.04E-11
Th-232	1.68E-19
U-233	1.24E-05
U-234	1.73E-06
U-235	6.54E-08
U-236	3.41E-09
U-238	3.98E-05

## Haz. Waste No(s).

D006, D008, D009, D011

No TRUCON Codes Provided

## Waste Stream Description

N/A

Comprehensive Inventory Database ver. 1.00

Data ver. D.9.02

NOTE: Actual numerical values have been rounded for presentation purposes.

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Waste Stream ID: **WP-OR-REDC-CH-HET**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Oak Ridge National Laboratory	Final Waste Form	Heterogeneous	Waste Matrix Code	S5400	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	DEBRIS FROM RADIOCHEM ENG. DEVELOPMENT CENTER			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/o Liner	OR-REDC-CH-HET-S	24.8
<b>Emplaced Total</b>		<b>24.8</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	33.35
Aluminum-based Metals/Alloys	2.57
Other Metals	2.86
Other Inorganic Materials	25.20
Cellulosics	4.55
Rubber	5.56
Plastics	66.54
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.03
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	0.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.98E-02
Am-243	3.37E-03
Cm-244	2.59E+00
Cs-137	6.53E-03
Np-237	2.29E-05
Pu-238	3.25E-02
Pu-239	1.19E-02
Pu-240	2.30E-02
Pu-241	3.47E-01
Pu-242	4.83E-04
Sr-90	1.13E-01
U-234	2.29E-05
U-235	4.42E-07
U-238	3.90E-06

## Haz. Waste No(s).

D004, D005, D006,  
D007, D008, D009,  
D010, D011, D019,  
F002, F005

**No TRUCON  
Codes Provided**

## Waste Stream Description

N/A

Waste Stream ID: **WP-OR-REDC-RH-HET**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Oak Ridge National Laboratory	Final Waste Form	Heterogeneous	Waste Matrix Code	S5400	Handling	RH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	RH DEBRIS WASTE FROM REDC HOT CELL FACILITY			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
RH Can w/ Remov Lid w/ 3 - 55-gal w/o Liner	OR-REDC-RH-HET-S	9.8
<b>Emplaced Total</b>		<b>9.8</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	1.76
Aluminum-based Metals/Alloys	0.02
Other Metals	0.18
Other Inorganic Materials	0.50
Cellulosics	0.20
Rubber	0.05
Plastics	132.45
Cements	0.00
Inorganic Matrix	0.04
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	652.20
Packaging Material, Plastic	0.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.08E-01
Am-243	6.43E-02
Cm-244	1.85E+01
Cs-137	3.67E-01
Pu-238	3.50E-01
Pu-239	5.56E-04
Pu-240	9.09E-02
Pu-241	3.19E+00
Pu-242	4.63E-03
Sr-90	6.92E+00

## Haz. Waste No(s).

D004, D005, D006,  
D007, D008, D009,  
D010, D011, D019,  
F002, F005

**No TRUCON  
Codes Provided**

## Waste Stream Description

N/A

Waste Stream ID: **WP-RF001.01**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Rocky Flats Environmental Technology Site	Final Waste Form	Combustible	Waste Matrix Code	S5390	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	CLOTH/PAPER FROM GLOVEBOX CLEANUP			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/ Liner	RF001.01-S	745.1
55-gal Drum Dir Ld w/o Liner	RF001.01-S	92.4
SWB Dir Ld w/o Liner	RF001.01-S	100.2
SWB w/ 4 - 55-gal Drums w/ Liners	RF001.01-S	37.8
SWB w/ 4 - 55-gal Drums w/o Liners	RF001.01-S	3.8
<b>Emplaced Total</b>		<b>979.2</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	1.08
Aluminum-based Metals/Alloys	0.01
Other Metals	0.24
Other Inorganic Materials	2.65
Cellulosics	27.92
Rubber	0.74
Plastics	78.05
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.02
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	136.53
Packaging Material, Plastic	28.78
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.56E+00
Am-243	1.21E-06
Np-237	5.71E-05
Pu-238	1.46E-01
Pu-239	3.44E+00
Pu-240	7.98E-01
Pu-241	1.02E+01
Pu-242	1.20E-04
Th-229	6.49E-08
Th-230	1.66E-08
Th-232	4.74E-17
U-233	7.70E-05
U-234	2.07E-04
U-235	9.80E-06
U-236	2.13E-07
U-238	2.26E-06

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

## Waste Stream Description

N/A

Comprehensive Inventory Database ver. 1.00

Data ver. D.9.02

NOTE: Actual numerical values have been rounded for presentation purposes.

B - RF - 1

Waste Stream ID: **WP-RF002.01**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Rocky Flats Environmental Technology Site	Final Waste Form	Uncategorized Metal	Waste Matrix Code	S5111	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	METAL AND HEAVY METAL DEBRIS (NON-SS)			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/ Liner	RF002.01-S	399.4
55-gal Drum Dir Ld w/o Liner	RF002.01-S	32.2
55-gal POC - 12" w/ Liner	RF002.01-S	13.7
SWB Dir Ld w/o Liner	RF002.01-S	984.7
SWB w/ 4 - 55-gal Drums w/ Liners	RF002.01-S	17.0
TDOP w/ 1 SWB w/o Liners	RF002.01-S	13.5
<b>Emplaced Total</b>		<b>1460.5</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	230.92
Aluminum-based Metals/Alloys	1.27
Other Metals	10.50
Other Inorganic Materials	0.49
Cellulosics	7.19
Rubber	0.20
Plastics	4.85
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.01
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	151.74
Packaging Material, Plastic	10.65
Packaging Material, Cellulosics	1.29
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	9.03E-01
Am-243	7.25E-07
Cs-137	2.04E-07
Np-237	8.82E-06
Pu-238	1.45E-01
Pu-239	3.02E+00
Pu-240	7.11E-01
Pu-241	1.11E+01
Pu-242	8.39E-05
Th-229	1.12E-08
Th-230	6.45E-09
Th-232	3.33E-17
U-233	1.50E-05
U-234	9.14E-05
U-235	4.82E-06
U-236	1.69E-07
U-238	1.94E-04

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

## Waste Stream Description

N/A

Comprehensive Inventory Database ver. 1.00

Data ver. D.9.02

NOTE: Actual numerical values have been rounded for presentation purposes.

B - RF - 2

Waste Stream ID: **WP-RF003.01**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Rocky Flats Environmental Technology Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5126	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	GRAPHITE DEBRIS WASTE			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/ Liner	RF003.01-S	65.9
55-gal Drum Dir Ld w/o Liner	RF003.01-S	0.4
55-gal POC - 12" w/ Liner	RF003.01-S	275.8
SWB w/ 4 - 55-gal Drums w/ Liners	RF003.01-S	9.5
SWB w/ 4 - 55-gal Drums w/o Liners	RF003.01-S	3.8
<b>Emplaced Total</b>		<b>355.4</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	13.10
Aluminum-based Metals/Alloys	0.00
Other Metals	0.07
Other Inorganic Materials	70.17
Cellulosics	1.84
Rubber	0.00
Plastics	2.72
Cements	0.00
Inorganic Matrix	0.30
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	441.58
Packaging Material, Plastic	36.01
Packaging Material, Cellulosics	106.71
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	6.65E+00
Np-237	3.03E-05
Pu-238	1.44E+00
Pu-239	3.57E+01
Pu-240	8.63E+00
Pu-241	8.84E+01
Pu-242	8.25E-04
Th-229	2.39E-08
Th-230	5.00E-09
Th-232	5.12E-16
U-233	2.84E-05
U-234	8.06E-05
U-235	1.71E-06
U-236	2.30E-06
U-238	3.67E-06

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

## Waste Stream Description

N/A

Comprehensive Inventory Database ver. 1.00

Data ver. D.9.02

NOTE: Actual numerical values have been rounded for presentation purposes.

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Waste Stream ID: **WP-RF004.01**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Rocky Flats Environmental Technology Site	Final Waste Form	Inorganic Non-Metal	Waste Matrix Code	S5122	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	GLASS DEBRIS WASTE	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/ Liner	RF004.01-S	263.3
55-gal Drum Dir Ld w/o Liner	RF004.01-S	7.9
55-gal POC - 12" w/ Liner	RF004.01-S	2.3
SWB Dir Ld w/o Liner	RF004.01-S	1.9
SWB w/ 4 - 55-gal Drums w/ Liners	RF004.01-S	5.7
SWB w/ 4 - 55-gal Drums w/o Liners	RF004.01-S	1.9
<b>Emplaced Total</b>		<b>283.0</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.60
Aluminum-based Metals/Alloys	0.02
Other Metals	0.46
Other Inorganic Materials	464.77
Cellulosics	11.91
Rubber	0.00
Plastics	4.75
Cements	0.00
Inorganic Matrix	0.04
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	136.30
Packaging Material, Plastic	35.06
Packaging Material, Cellulosics	1.11
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	7.66E-01
Am-243	3.12E-09
Np-237	5.84E-06
Pu-238	1.13E-01
Pu-239	2.43E+00
Pu-240	5.62E-01
Pu-241	9.61E+00
Pu-242	6.77E-05
Th-229	4.68E-14
Th-230	4.63E-09
Th-232	2.02E-17
U-233	1.51E-10
U-234	7.46E-05
U-235	2.35E-06
U-236	1.17E-07
U-238	2.66E-06

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

## Waste Stream Description

N/A

Comprehensive Inventory Database ver. 1.00

Data ver. D.9.02

NOTE: Actual numerical values have been rounded for presentation purposes.

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Waste Stream ID: **WP-RF005.01**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Rocky Flats Environmental Technology Site	Final Waste Form	Salt Waste	Waste Matrix Code	S3141	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	STABILIZED PYROCHEMICAL SALTS			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal POC - 12" w/ Liner	RF005.01-S	119.4
<b>Emplaced Total</b>		<b>119.4</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	19.04
Aluminum-based Metals/Alloys	0.00
Other Metals	3.07
Other Inorganic Materials	19.27
Cellulosics	0.00
Rubber	0.00
Plastics	1.73
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	527.40
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	137.50
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	4.44E+01
Np-237	1.80E-04
Pu-238	1.69E+00
Pu-239	4.01E+01
Pu-240	1.03E+01
Pu-241	5.86E+01
Pu-242	8.47E-04
Th-229	1.82E-12
Th-230	2.76E-09
Th-232	9.13E-16
U-233	4.78E-09
U-234	5.50E-05
U-235	1.12E-06
U-236	3.36E-06
U-238	1.41E-12

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

## Waste Stream Description

N/A

Comprehensive Inventory Database ver. 1.00

Data ver. D.9.02

NOTE: Actual numerical values have been rounded for presentation purposes.

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Waste Stream ID: **WP-RF005.02**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Rocky Flats Environmental Technology Site	Final Waste Form	Salt Waste	Waste Matrix Code	S3141	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	STABILIZED PYROCHEMICAL SALTS			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal POC - 12" w/ Liner	RF005.02-S	78.4
<b>Emplaced Total</b>		<b>78.4</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	13.92
Aluminum-based Metals/Alloys	0.00
Other Metals	0.23
Other Inorganic Materials	27.49
Cellulosics	0.00
Rubber	0.00
Plastics	0.00
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	527.40
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	137.50
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	8.22E+01
Np-237	2.97E-04
Pu-238	1.52E+00
Pu-239	3.70E+01
Pu-240	9.73E+00
Pu-241	4.92E+01
Pu-242	8.23E-04
Th-229	2.40E-12
Th-230	2.73E-09
Th-232	7.13E-16
U-233	7.04E-09
U-234	5.25E-05
U-235	6.12E-07
U-236	2.88E-06
U-238	2.19E-09

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

## Waste Stream Description

N/A

Waste Stream ID: **WP-RF006.01**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Rocky Flats Environmental Technology Site	Final Waste Form	Inorganic Non-Metal	Waste Matrix Code	S5123	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	MAGNESIUM OXIDE & LECO CRUCIBLES			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/ Liner	RF006.01-S	2.7
55-gal POC - 12" w/ Liner	RF006.01-S	233.0
<b>Emplaced Total</b>		<b>235.7</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	8.48
Aluminum-based Metals/Alloys	0.00
Other Metals	0.06
Other Inorganic Materials	32.83
Cellulosics	0.03
Rubber	0.00
Plastics	0.67
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	522.85
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	135.92
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	7.80E+00
Np-237	5.04E-05
Pu-238	1.90E+00
Pu-239	3.91E+01
Pu-240	9.45E+00
Pu-241	1.11E+02
Pu-242	1.26E-03
Th-229	1.57E-12
Th-230	1.08E-08
Th-232	2.00E-15
U-233	2.37E-09
U-234	1.19E-04
U-235	1.46E-06
U-236	4.77E-06
U-238	5.89E-09

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

## Waste Stream Description

N/A

Waste Stream ID: **WP-RF008.01**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Rocky Flats Environmental Technology Site	Final Waste Form	Inorganic Non-Metal	Waste Matrix Code	S5123	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	INORGANIC NONMETAL DEBRIS /CERAMICS			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/ Liner	RF008.01-S	4.4
55-gal Drum Dir Ld w/o Liner	RF008.01-S	0.2
55-gal POC - 12" w/ Liner	RF008.01-S	90.7
SWB w/ 4 - 55-gal Drums w/ Liners	RF008.01-S	1.9
<b>Emplaced Total</b>		<b>97.2</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	5.36
Aluminum-based Metals/Alloys	0.10
Other Metals	1.39
Other Inorganic Materials	56.30
Cellulosics	0.36
Rubber	0.00
Plastics	1.05
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	502.57
Packaging Material, Plastic	36.52
Packaging Material, Cellulosics	128.35
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.02E+01
Np-237	1.66E-04
Pu-238	1.98E+00
Pu-239	3.49E+01
Pu-240	9.58E+00
Pu-241	9.57E+01
Pu-242	1.40E-03
Th-229	2.95E-12
Th-230	2.91E-09
Th-232	7.02E-16
U-233	6.50E-09
U-234	6.13E-05
U-235	6.27E-07
U-236	2.84E-06
U-238	7.77E-10

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

## Waste Stream Description

N/A

Comprehensive Inventory Database ver. 1.00

Data ver. D.9.02

NOTE: Actual numerical values have been rounded for presentation purposes.

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Waste Stream ID: **WP-RF009.01**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Rocky Flats Environmental Technology Site	Final Waste Form	Salt Waste	Waste Matrix Code	S3141	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	REPACKAGED PYROCHEMICAL SALTS			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/ Liner	RF009.01-S	3.3
55-gal Drum Dir Ld w/o Liner	RF009.01-S	8.5
55-gal POC - 12" w/ Liner	RF009.01-S	1311.2
SWB w/ 4 - 55-gal Drums w/o Liners	RF009.01-S	3.8
<b>Emplaced Total</b>		<b>1326.9</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	10.46
Aluminum-based Metals/Alloys	0.00
Other Metals	4.01
Other Inorganic Materials	17.82
Cellulosics	0.04
Rubber	0.00
Plastics	0.93
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	522.96
Packaging Material, Plastic	36.66
Packaging Material, Cellulosics	135.88
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	5.06E+01
Np-237	4.11E-04
Pu-238	1.44E+00
Pu-239	4.14E+01
Pu-240	1.03E+01
Pu-241	6.22E+01
Pu-242	1.03E-03
Th-229	5.12E-12
Th-230	2.14E-09
Th-232	6.10E-16
U-233	1.31E-08
U-234	4.53E-05
U-235	5.99E-07
U-236	2.75E-06
U-238	2.05E-09

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

## Waste Stream Description

N/A

Comprehensive Inventory Database ver. 1.00

Data ver. D.9.02

NOTE: Actual numerical values have been rounded for presentation purposes.

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Waste Stream ID: **WP-RF010.01**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Rocky Flats Environmental Technology Site	Final Waste Form	Filter	Waste Matrix Code	S5410	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	TRU FILTER DEBRIS (NON-MIXED)			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/ Liner	RF010.01-S	274.6
55-gal Drum Dir Ld w/o Liner	RF010.01-S	12.9
SWB Dir Ld w/o Liner	RF010.01-S	264.6
SWB w/ 4 - 55-gal Drums w/ Liners	RF010.01-S	62.4
SWB w/ 4 - 55-gal Drums w/o Liners	RF010.01-S	15.1
<b>Emplaced Total</b>		<b>629.5</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	12.18
Aluminum-based Metals/Alloys	8.77
Other Metals	0.98
Other Inorganic Materials	8.04
Cellulosics	36.45
Rubber	3.69
Plastics	9.49
Cements	0.00
Inorganic Matrix	0.29
Organic Matrix	0.03
Soils/gravel	0.13
Vitrified	0.00
Packaging Material, Steel	150.22
Packaging Material, Plastic	17.75
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.36E+00
Am-243	6.52E-08
Np-237	1.44E-05
Pu-238	3.90E-01
Pu-239	9.94E+00
Pu-240	2.32E+00
Pu-241	2.57E+01
Pu-242	2.53E-04
Th-229	1.36E-13
Th-230	1.45E-08
Th-232	1.09E-16
U-233	3.94E-10
U-234	2.06E-04
U-235	6.41E-06
U-236	5.51E-07
U-238	5.68E-06

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

## Waste Stream Description

N/A

Comprehensive Inventory Database ver. 1.00

Data ver. D.9.02

NOTE: Actual numerical values have been rounded for presentation purposes.

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Waste Stream ID: **WP-RF011.01**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Rocky Flats Environmental Technology Site	Final Waste Form	Inorganic Non-Metal	Waste Matrix Code	S5129	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	TRU FIRE BLANKET & INSULATION			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/ Liner	RF011.01-S	49.5
55-gal Drum Dir Ld w/o Liner	RF011.01-S	1.7
SWB w/ 4 - 55-gal Drums w/ Liners	RF011.01-S	28.4
<b>Emplaced Total</b>		<b>79.5</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	10.77
Aluminum-based Metals/Alloys	0.01
Other Metals	0.04
Other Inorganic Materials	17.84
Cellulosics	1.61
Rubber	0.00
Plastics	1.75
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	159.43
Packaging Material, Plastic	28.85
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.95E+00
Np-237	9.66E-06
Pu-238	7.72E-01
Pu-239	1.87E+01
Pu-240	4.50E+00
Pu-241	4.29E+01
Pu-242	3.85E-04
Th-229	5.40E-14
Th-230	1.06E-09
Th-232	1.61E-16
U-233	1.95E-10
U-234	2.47E-05
U-235	4.16E-07
U-236	9.33E-07
U-238	5.29E-08

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

## Waste Stream Description

N/A

Waste Stream ID: **WP-RF015.01**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Rocky Flats Environmental Technology Site	Final Waste Form	Inorganic Non-Metal	Waste Matrix Code	S5123	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	TRU FIREBRICK DEBRIS	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/ Liner	RF015.01-S	1.7
<b>Emplaced Total</b>		<b>1.7</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	19.17
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	5.05
Cellulosics	12.98
Rubber	0.00
Plastics	1.62
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.29E+00
Np-237	5.24E-05
Pu-238	5.58E-01
Pu-239	1.13E+01
Pu-240	2.63E+00
Pu-241	5.06E+01
Pu-242	3.50E-04
Th-229	4.86E-13
Th-230	3.62E-10
Th-232	9.45E-17
U-233	1.50E-09
U-234	1.14E-05
U-235	7.78E-08
U-236	5.47E-07
U-238	3.69E-13

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

## Waste Stream Description

N/A



Waste Stream ID: **WP-RF029.01**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Rocky Flats Environmental Technology Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5490	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	HETEROGENEOUS DEBRIS			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/ Liner	RF029.01-S	13.9
55-gal Drum Dir Ld w/o Liner	RF029.01-S	2.7
55-gal POC - 12" w/ Liner	RF029.01-S	3.1
SWB Dir Ld w/o Liner	RF029.01-S	4316.8
SWB w/ 4 - 55-gal Drums w/o Liners	RF029.01-S	5.7
TDOP w/ 1 SWB w/o Liners	RF029.01-S	4.5
<b>Emplaced Total</b>		<b>4346.7</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	168.15
Aluminum-based Metals/Alloys	1.51
Other Metals	0.58
Other Inorganic Materials	13.97
Cellulosics	17.25
Rubber	1.33
Plastics	30.02
Cements	0.00
Inorganic Matrix	0.01
Organic Matrix	0.03
Soils/gravel	0.16
Vitrified	0.00
Packaging Material, Steel	153.84
Packaging Material, Plastic	0.15
Packaging Material, Cellulosics	0.10
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	5.10E-01
Am-243	3.33E-07
Cs-137	5.74E-09
Np-237	6.05E-06
Pu-238	8.31E-02
Pu-239	1.58E+00
Pu-240	3.79E-01
Pu-241	7.69E+00
Pu-242	5.09E-05
Pu-244	7.69E-21
Sr-90	3.91E-11
Th-229	3.92E-14
Th-230	1.05E-09
Th-232	1.00E-17
U-233	1.43E-10
U-234	2.02E-05
U-235	6.15E-07
U-236	6.75E-08
U-238	2.89E-07

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

## Waste Stream Description

N/A

Comprehensive Inventory Database ver. 1.00

Data ver. D.9.02

NOTE: Actual numerical values have been rounded for presentation purposes.

Waste Stream ID: **WP-RF031.01**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Rocky Flats Environmental Technology Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5313	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	ORGANIC RESINS/TRU	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/ Liner	RF031.01-S	15.2
55-gal Drum Dir Ld w/o Liner	RF031.01-S	5.0
55-gal POC - 12" w/ Liner	RF031.01-S	0.4
<b>Emplaced Total</b>		<b>20.6</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.34
Aluminum-based Metals/Alloys	0.00
Other Metals	0.23
Other Inorganic Materials	1.10
Cellulosics	9.68
Rubber	0.00
Plastics	46.42
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	6.07
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	138.81
Packaging Material, Plastic	28.03
Packaging Material, Cellulosics	2.78
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	4.75E-01
Np-237	2.87E-06
Pu-238	1.11E-01
Pu-239	2.34E+00
Pu-240	5.42E-01
Pu-241	1.01E+01
Pu-242	6.42E-05
Th-229	1.20E-14
Th-230	1.99E-09
Th-232	9.92E-18
U-233	5.35E-11
U-234	4.50E-05
U-235	1.43E-06
U-236	8.03E-08
U-238	1.99E-06

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

## Waste Stream Description

N/A

Comprehensive Inventory Database ver. 1.00

Data ver. D.9.02

NOTE: Actual numerical values have been rounded for presentation purposes.

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Waste Stream ID: **WP-RF032.01**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Rocky Flats Environmental Technology Site	Final Waste Form	Inorganic Non-Metal	Waste Matrix Code	S5129	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	SAND, SLAG & CRUCIBLE	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/ Liner	RF032.01-S	3.1
55-gal POC - 12" w/ Liner	RF032.01-S	206.1
<b>Emplaced Total</b>		<b>209.2</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	15.54
Aluminum-based Metals/Alloys	0.00
Other Metals	0.23
Other Inorganic Materials	31.96
Cellulosics	0.04
Rubber	0.00
Plastics	0.06
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	521.49
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	135.45
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.13E+01
Np-237	1.29E-04
Pu-238	1.46E+00
Pu-239	4.12E+01
Pu-240	9.66E+00
Pu-241	7.85E+01
Pu-242	7.24E-04
Th-229	1.42E-12
Th-230	1.85E-09
Th-232	4.53E-16
U-233	3.94E-09
U-234	4.27E-05
U-235	5.97E-07
U-236	2.29E-06
U-238	2.41E-09

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

## Waste Stream Description

N/A

Waste Stream ID: **WP-RF033.01**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Rocky Flats Environmental Technology Site	Final Waste Form	Solidified Inorganics	Waste Matrix Code	S3119	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	TRU SS&C HEEL	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/ Liner	RF033.01-S	12.1
55-gal Drum Dir Ld w/o Liner	RF033.01-S	1.7
55-gal POC - 12" w/ Liner	RF033.01-S	11.9
<b>Emplaced Total</b>		<b>25.6</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	16.37
Aluminum-based Metals/Alloys	0.00
Other Metals	1.27
Other Inorganic Materials	109.77
Cellulosics	0.20
Rubber	0.00
Plastics	27.33
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.09
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	314.59
Packaging Material, Plastic	34.59
Packaging Material, Cellulosics	63.72
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	4.82E+00
Np-237	3.44E-05
Pu-238	1.33E+00
Pu-239	3.12E+01
Pu-240	7.28E+00
Pu-241	9.93E+01
Pu-242	7.19E-04
Th-229	2.74E-13
Th-230	1.63E-09
Th-232	2.62E-16
U-233	8.83E-10
U-234	3.93E-05
U-235	6.31E-07
U-236	1.51E-06
U-238	2.34E-06

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

## Waste Stream Description

N/A

Comprehensive Inventory Database ver. 1.00

Data ver. D.9.02

NOTE: Actual numerical values have been rounded for presentation purposes.

Waste Stream ID: **WP-RF036.01**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Rocky Flats Environmental Technology Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5420	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	TRU BLACKTOP, DIRT, CONCRETE & SAND			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/ Liner	RF036.01-S	44.1
<b>Emplaced Total</b>		<b>44.1</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	1.12
Aluminum-based Metals/Alloys	0.79
Other Metals	0.00
Other Inorganic Materials	488.73
Cellulosics	7.07
Rubber	0.00
Plastics	12.67
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.29
Soils/gravel	4.40
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.11E+00
Am-243	1.85E-06
Np-237	8.95E-06
Pu-238	3.00E-01
Pu-239	6.00E+00
Pu-240	1.40E+00
Pu-241	2.96E+01
Pu-242	1.85E-04
Th-229	3.92E-14
Th-230	2.61E-09
Th-232	2.56E-17
U-233	1.73E-10
U-234	6.01E-05
U-235	2.53E-06
U-236	2.08E-07
U-238	6.76E-05

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

## Waste Stream Description

N/A

Waste Stream ID: **WP-RF101.01**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Rocky Flats Environmental Technology Site	Final Waste Form	Combustible	Waste Matrix Code	S5390	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	COMBUSTIBLE WASTE	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/ Liner	RF101.01-S	114.6
55-gal Drum Dir Ld w/o Liner	RF101.01-S	13.1
SWB Dir Ld w/o Liner	RF101.01-S	24.6
SWB w/ 4 - 55-gal Drums w/ Liners	RF101.01-S	22.7
<b>Emplaced Total</b>		<b>175.0</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	2.53
Aluminum-based Metals/Alloys	0.02
Other Metals	0.39
Other Inorganic Materials	15.34
Cellulosics	62.57
Rubber	1.27
Plastics	30.20
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.84
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	144.40
Packaging Material, Plastic	26.35
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.09E+00
Am-243	6.04E-06
Np-237	1.48E-05
Pu-238	4.53E-01
Pu-239	9.64E+00
Pu-240	2.26E+00
Pu-241	3.52E+01
Pu-242	2.64E-04
Th-229	1.17E-13
Th-230	1.53E-08
Th-232	8.10E-17
U-233	3.77E-10
U-234	2.47E-04
U-235	7.78E-06
U-236	4.69E-07
U-238	4.88E-06

## Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D022, D028, D029, D043, F001, F002, F005, F006, F007, F009, P030, P098, P099, P106, U003, U103, U108

**No TRUCON Codes Provided**

## Waste Stream Description

N/A

Waste Stream ID: **WP-RF101.29**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Rocky Flats Environmental Technology Site	Final Waste Form	Combustible	Waste Matrix Code	S5390	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	COMBUSTIBLE WASTE	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/ Liner	RF101.29-S	25.4
55-gal Drum Dir Ld w/o Liner	RF101.29-S	3.1
SWB Dir Ld w/o Liner	RF101.29-S	1.9
<b>Emplaced Total</b>		<b>30.4</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	1.43
Aluminum-based Metals/Alloys	0.03
Other Metals	0.00
Other Inorganic Materials	12.48
Cellulosics	51.65
Rubber	5.43
Plastics	47.43
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	132.21
Packaging Material, Plastic	30.90
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.08E+00
Np-237	7.12E-06
Pu-238	2.49E-01
Pu-239	5.15E+00
Pu-240	1.20E+00
Pu-241	1.75E+01
Pu-242	1.39E-04
Th-229	6.97E-14
Th-230	1.33E-08
Th-232	5.61E-17
U-233	2.00E-10
U-234	1.87E-04
U-235	5.94E-06
U-236	2.84E-07
U-238	6.71E-06

## Haz. Waste No(s).

F001

No TRUCON  
Codes Provided

## Waste Stream Description

N/A

Waste Stream ID: **WP-RF101.30**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Rocky Flats Environmental Technology Site	Final Waste Form	Combustible	Waste Matrix Code	S5390	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	COMBUSTIBLE DEBRIS	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/ Liner	RF101.30-S	79.5
55-gal Drum Dir Ld w/o Liner	RF101.30-S	5.8
SWB Dir Ld w/o Liner	RF101.30-S	3.8
SWB w/ 4 - 55-gal Drums w/ Liners	RF101.30-S	24.6
SWB w/ 4 - 55-gal Drums w/o Liners	RF101.30-S	3.8
<b>Emplaced Total</b>		<b>117.4</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.84
Aluminum-based Metals/Alloys	0.00
Other Metals	0.09
Other Inorganic Materials	2.31
Cellulosics	40.50
Rubber	0.80
Plastics	37.94
Cements	0.00
Inorganic Matrix	0.04
Organic Matrix	0.03
Soils/gravel	0.01
Vitrified	0.00
Packaging Material, Steel	150.92
Packaging Material, Plastic	28.45
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	3.17E+00
Am-243	2.67E-06
Np-237	2.48E-05
Pu-238	3.23E-01
Pu-239	7.49E+00
Pu-240	1.76E+00
Pu-241	2.29E+01
Pu-242	2.16E-04
Th-229	2.52E-13
Th-230	1.03E-08
Th-232	8.25E-17
U-233	7.17E-10
U-234	1.48E-04
U-235	4.57E-06
U-236	4.18E-07
U-238	1.57E-06

## Haz. Waste No(s).

F001, F002

No TRUCON Codes Provided

## Waste Stream Description

N/A



Waste Stream ID: **WP-RF101.31**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Rocky Flats Environmental Technology Site	Final Waste Form	Combustible	Waste Matrix Code	S5390	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	TRM COMBUSTIBLE AND PLASTIC WASTES			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/ Liner	RF101.31-S	43.9
55-gal Drum Dir Ld w/o Liner	RF101.31-S	5.4
SWB Dir Ld w/o Liner	RF101.31-S	9.5
SWB w/ 4 - 55-gal Drums w/ Liners	RF101.31-S	3.8
<b>Emplaced Total</b>		<b>62.5</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	4.86
Aluminum-based Metals/Alloys	0.00
Other Metals	0.12
Other Inorganic Materials	2.09
Cellulosics	65.86
Rubber	0.69
Plastics	43.00
Cements	0.00
Inorganic Matrix	0.02
Organic Matrix	0.02
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	139.09
Packaging Material, Plastic	26.96
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.15E+00
Am-243	2.18E-07
Np-237	6.43E-06
Pu-238	1.65E-01
Pu-239	3.74E+00
Pu-240	8.88E-01
Pu-241	1.09E+01
Pu-242	1.32E-04
Th-229	7.07E-14
Th-230	7.46E-09
Th-232	5.27E-17
U-233	1.88E-10
U-234	9.44E-05
U-235	2.95E-06
U-236	2.37E-07
U-238	1.33E-06

## Haz. Waste No(s).

F001, F002, F005

No TRUCON Codes Provided

## Waste Stream Description

N/A

Waste Stream ID: **WP-RF101.35**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Rocky Flats Environmental Technology Site	Final Waste Form	Combustible	Waste Matrix Code	S5390	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	TRM COMBUSTIBLE & PLASTIC WASTE			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/ Liner	RF101.35-S	51.2
55-gal Drum Dir Ld w/o Liner	RF101.35-S	17.1
SWB Dir Ld w/o Liner	RF101.35-S	3.8
SWB w/ 4 - 55-gal Drums w/ Liners	RF101.35-S	7.6
<b>Emplaced Total</b>		<b>79.6</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.72
Aluminum-based Metals/Alloys	0.00
Other Metals	0.57
Other Inorganic Materials	2.66
Cellulosics	48.15
Rubber	0.47
Plastics	58.97
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	139.51
Packaging Material, Plastic	25.34
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	3.10E+00
Np-237	2.83E-05
Pu-238	3.66E-01
Pu-239	8.02E+00
Pu-240	1.87E+00
Pu-241	2.83E+01
Pu-242	2.62E-04
Th-229	2.99E-13
Th-230	7.67E-08
Th-232	8.78E-17
U-233	8.41E-10
U-234	1.07E-03
U-235	3.42E-05
U-236	4.44E-07
U-238	2.75E-06

## Haz. Waste No(s).

F005

No TRUCON Codes Provided

## Waste Stream Description

N/A

Waste Stream ID: **WP-RF102.01**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Rocky Flats Environmental Technology Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5119	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	UNCATEGORIZED METAL - TOOLS AND HEAVY SCRAP METAL			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/ Liner	RF102.01-S	45.3
55-gal Drum Dir Ld w/o Liner	RF102.01-S	0.6
SWB Dir Ld w/o Liner	RF102.01-S	175.8
SWB w/ 4 - 55-gal Drums w/ Liners	RF102.01-S	1.9
<b>Emplaced Total</b>		<b>223.6</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	234.12
Aluminum-based Metals/Alloys	0.50
Other Metals	9.83
Other Inorganic Materials	1.88
Cellulosics	6.47
Rubber	0.25
Plastics	4.10
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	149.32
Packaging Material, Plastic	7.64
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	7.09E-01
Am-243	8.91E-07
Cs-137	4.20E-05
Np-237	7.14E-06
Pu-238	1.30E-01
Pu-239	2.56E+00
Pu-240	6.10E-01
Pu-241	1.15E+01
Pu-242	7.93E-05
Th-229	6.06E-14
Th-230	1.24E-09
Th-232	2.19E-17
U-233	1.92E-10
U-234	2.10E-05
U-235	6.26E-07
U-236	1.27E-07
U-238	1.78E-06

## Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D022, D028, D029, F001, F002, F005, F006, F007, F009, P030, P098, P099, P106, U003, U103, U108

**No TRUCON Codes Provided**

## Waste Stream Description

N/A

Waste Stream ID: **WP-RF102.31**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Rocky Flats Environmental Technology Site	Final Waste Form	Lead/Cadmium Metal Waste	Waste Matrix Code	S5112	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	TRM METAL DEBRIS W/LEAD SHIELDING			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/ Liner	RF102.31-S	22.3
55-gal Drum Dir Ld w/o Liner	RF102.31-S	1.0
55-gal POC - 12" w/ Liner	RF102.31-S	0.6
SWB Dir Ld w/o Liner	RF102.31-S	96.4
SWB w/ 4 - 55-gal Drums w/ Liners	RF102.31-S	3.8
<b>Emplaced Total</b>		<b>124.1</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	189.33
Aluminum-based Metals/Alloys	0.36
Other Metals	147.87
Other Inorganic Materials	0.16
Cellulosics	5.66
Rubber	1.89
Plastics	3.08
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	152.87
Packaging Material, Plastic	7.32
Packaging Material, Cellulosics	0.69
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.16E+00
Am-243	1.55E-07
Np-237	9.58E-06
Pu-238	1.08E-01
Pu-239	2.21E+00
Pu-240	5.24E-01
Pu-241	9.15E+00
Pu-242	6.82E-05
Th-229	7.77E-14
Th-230	4.09E-09
Th-232	1.88E-17
U-233	2.49E-10
U-234	6.60E-05
U-235	2.23E-06
U-236	1.09E-07
U-238	1.72E-05

## Haz. Waste No(s).

D008

No TRUCON Codes Provided

## Waste Stream Description

N/A

Waste Stream ID: **WP-RF104.01**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Rocky Flats Environmental Technology Site	Final Waste Form	Inorganic Non-Metal	Waste Matrix Code	S5122	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	TRM GLASS DEBRIS	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/ Liner	RF104.01-S	35.2
55-gal Drum Dir Ld w/o Liner	RF104.01-S	2.1
55-gal POC - 12" w/ Liner	RF104.01-S	7.7
SWB Dir Ld w/o Liner	RF104.01-S	5.7
SWB w/ 4 - 55-gal Drums w/ Liners	RF104.01-S	1.9
SWB w/ 4 - 55-gal Drums w/o Liners	RF104.01-S	1.9
<b>Emplaced Total</b>		<b>54.4</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	5.65
Aluminum-based Metals/Alloys	0.01
Other Metals	1.43
Other Inorganic Materials	213.89
Cellulosics	7.04
Rubber	0.06
Plastics	5.63
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	194.88
Packaging Material, Plastic	29.72
Packaging Material, Cellulosics	19.46
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.30E+00
Am-243	4.19E-06
Np-237	2.02E-05
Pu-238	2.91E-01
Pu-239	7.52E+00
Pu-240	1.77E+00
Pu-241	2.14E+01
Pu-242	1.72E-04
Th-229	1.25E-13
Th-230	9.73E-10
Th-232	4.67E-17
U-233	4.62E-10
U-234	2.05E-05
U-235	5.67E-07
U-236	3.15E-07
U-238	2.58E-06

## Haz. Waste No(s).

D005, D008, D009,  
D022, F001, F002,  
F005**No TRUCON  
Codes Provided**

## Waste Stream Description

N/A

Comprehensive Inventory Database ver. 1.00

Data ver. D.9.02

NOTE: Actual numerical values have been rounded for presentation purposes.

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Waste Stream ID: **WP-RF107.01**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Rocky Flats Environmental Technology Site	Final Waste Form	Solidified Inorganics	Waste Matrix Code	S3190	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	TRM SOLIDIFIED INORGANIC WASTE			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/ Liner	RF107.01-S	63.4
<b>Emplaced Total</b>		<b>63.4</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.17
Aluminum-based Metals/Alloys	0.00
Other Metals	0.73
Other Inorganic Materials	13.61
Cellulosics	0.00
Rubber	0.00
Plastics	1.11
Cements	0.00
Inorganic Matrix	776.54
Organic Matrix	11.45
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	4.12E+01
Np-237	2.88E-04
Pu-238	1.47E-01
Pu-239	3.01E+00
Pu-240	6.97E-01
Pu-241	1.45E+01
Pu-242	9.12E-05
Th-229	1.22E-12
Th-230	1.22E-08
Th-232	1.28E-17
U-233	5.44E-09
U-234	2.73E-04
U-235	1.75E-05
U-236	1.03E-07
U-238	9.43E-04

## Haz. Waste No(s).

D006, D007, D008,  
D009, D011**No TRUCON  
Codes Provided**

## Waste Stream Description

N/A

Waste Stream ID: **WP-RF107.03**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Rocky Flats Environmental Technology Site	Final Waste Form	Solidified Inorganics	Waste Matrix Code	S3190	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	B374/774 BYPASS/SOLIDIFIED SLUDGE			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/ Liner	RF107.03-S	60.7
55-gal Drum Dir Ld w/o Liner	RF107.03-S	0.2
<b>Emplaced Total</b>		<b>60.9</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.45
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	0.00
Cellulosics	0.00
Rubber	0.00
Plastics	1.09
Cements	0.00
Inorganic Matrix	819.47
Organic Matrix	0.04
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	36.87
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.41E-01
Np-237	2.17E-06
Pu-238	1.87E-02
Pu-239	3.80E-01
Pu-240	8.83E-02
Pu-241	1.85E+00
Pu-242	1.16E-05
Th-229	9.60E-15
Th-230	5.71E-08
Th-232	1.62E-18
U-233	4.23E-11
U-234	1.27E-03
U-235	1.50E-04
U-236	1.31E-08
U-238	1.13E-02

## Haz. Waste No(s).

F001, F002, F005,  
F006, F007, F009No TRUCON  
Codes Provided

## Waste Stream Description

N/A

Waste Stream ID: **WP-RF107.04**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Rocky Flats Environmental Technology Site	Final Waste Form	Solidified Inorganics	Waste Matrix Code	S3190	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	B374/774 BYPASS/SOLIDIFIED SLUDGE			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/ Liner	RF107.04-S	100.9
55-gal Drum Dir Ld w/o Liner	RF107.04-S	1.9
SWB w/ 4 - 55-gal Drums w/ Liners	RF107.04-S	7.6
<b>Emplaced Total</b>		<b>110.3</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.01
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	0.00
Cellulosics	0.07
Rubber	0.00
Plastics	1.64
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	954.33
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	136.30
Packaging Material, Plastic	34.95
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	5.41E-01
Np-237	4.89E-06
Pu-238	3.68E-02
Pu-239	7.55E-01
Pu-240	1.75E-01
Pu-241	3.65E+00
Pu-242	2.29E-05
Th-229	2.16E-14
Th-230	8.71E-10
Th-232	3.21E-18
U-233	9.52E-11
U-234	1.96E-05
U-235	1.92E-06
U-236	2.60E-08
U-238	1.40E-04

## Haz. Waste No(s).

D022, D028, D029, D030, D032, D034, F001, F002, F005

No TRUCON Codes Provided

## Waste Stream Description

N/A



Waste Stream ID: **WP-RF107.05**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Rocky Flats Environmental Technology Site	Final Waste Form	Solidified Inorganics	Waste Matrix Code	S3190	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	SOLIDIFIED INORGANICS			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/ Liner	RF107.05-S	4.4
<b>Emplaced Total</b>		<b>4.4</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.00
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	0.63
Cellulosics	8.65
Rubber	0.00
Plastics	2.35
Cements	0.00
Inorganic Matrix	601.28
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.15E+00
Np-237	6.87E-06
Pu-238	2.29E-01
Pu-239	4.67E+00
Pu-240	1.09E+00
Pu-241	2.27E+01
Pu-242	1.42E-04
Th-229	2.85E-14
Th-230	1.02E-07
Th-232	1.99E-17
U-233	1.28E-10
U-234	2.26E-03
U-235	7.28E-05
U-236	1.61E-07
U-238	6.43E-07

## Haz. Waste No(s).

D004, D005, D009, D010, D022, D027, D028, D029, D032, D033, D034, D043, F001, F002, F005, F006, F007, F009, P030, P098, P099, P106, U003, U103, U108

**No TRUCON Codes Provided**

## Waste Stream Description

N/A

Waste Stream ID: **WP-RF107.06**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Rocky Flats Environmental Technology Site	Final Waste Form	Solidified Inorganics	Waste Matrix Code	S3190	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	TRM SOLIDIFIED INORGANIC WASTE			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/ Liner	RF107.06-S	14.4
<b>Emplaced Total</b>		<b>14.4</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.49
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	0.00
Cellulosics	0.00
Rubber	0.00
Plastics	8.25
Cements	0.00
Inorganic Matrix	873.52
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	3.23E-02
Np-237	8.10E-08
Pu-238	1.04E-02
Pu-239	2.13E-01
Pu-240	4.94E-02
Pu-241	1.03E+00
Pu-242	6.46E-06
Th-229	2.48E-16
Th-230	7.24E-09
Th-232	9.04E-19
U-233	1.22E-12
U-234	1.61E-04
U-235	1.83E-05
U-236	7.32E-09
U-238	1.40E-03

## Haz. Waste No(s).

F001, F002, F005,  
F006, F007, F009,  
P030, P098, P099,  
P106, U003, U103,  
U108

**No TRUCON  
Codes Provided**

## Waste Stream Description

N/A

Waste Stream ID: **WP-RF107.07**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Rocky Flats Environmental Technology Site	Final Waste Form	Solidified Inorganics	Waste Matrix Code	S3190	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	TRM SOLIDIFIED INORGANIC WASTE			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/ Liner	RF107.07-S	57.0
SWB w/ 4 - 55-gal Drums w/ Liners	RF107.07-S	1.9
<b>Emplaced Total</b>		<b>58.9</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.00
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	0.00
Cellulosics	0.00
Rubber	0.00
Plastics	3.51
Cements	0.00
Inorganic Matrix	1172.21
Organic Matrix	4.62
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	133.38
Packaging Material, Plastic	36.34
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	5.01E+00
Am-243	2.88E-05
Np-237	4.48E-05
Pu-238	6.14E-01
Pu-239	1.23E+01
Pu-240	2.87E+00
Pu-241	6.04E+01
Pu-242	3.79E-04
Th-229	1.98E-13
Th-230	1.04E-07
Th-232	5.25E-17
U-233	8.72E-10
U-234	2.33E-03
U-235	7.51E-05
U-236	4.25E-07
U-238	3.74E-05

## Haz. Waste No(s).

F001, F002, F005,  
F006, F007, F009,  
P030, P098, P099,  
P106, U003, U103,  
U108

**No TRUCON  
Codes Provided**

## Waste Stream Description

N/A

Waste Stream ID: **WP-RF110.01**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Rocky Flats Environmental Technology Site	Final Waste Form	Filter	Waste Matrix Code	S5410	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	FILTERS & FILTER MEDIA/TRM			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/ Liner	RF110.01-S	8.3
55-gal Drum Dir Ld w/o Liner	RF110.01-S	0.6
55-gal POC - 12" w/ Liner	RF110.01-S	0.2
<b>Emplaced Total</b>		<b>9.2</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	4.57
Aluminum-based Metals/Alloys	5.49
Other Metals	0.08
Other Inorganic Materials	9.72
Cellulosics	50.40
Rubber	4.90
Plastics	26.12
Cements	0.00
Inorganic Matrix	0.07
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	139.81
Packaging Material, Plastic	34.48
Packaging Material, Cellulosics	3.13
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	7.28E+00
Am-243	1.88E-04
Np-237	3.12E-05
Pu-238	6.66E-01
Pu-239	1.37E+01
Pu-240	3.20E+00
Pu-241	5.00E+01
Pu-242	7.16E-04
Th-229	2.02E-13
Th-230	6.44E-09
Th-232	1.15E-16
U-233	6.94E-10
U-234	1.09E-04
U-235	3.36E-06
U-236	6.64E-07
U-238	2.12E-05

## Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D022, D029, F001, F002, F005, F006, F007, F009, P030, P098, P099, P106, U003, U103, U108

**No TRUCON Codes Provided**

## Waste Stream Description

N/A

Waste Stream ID: **WP-RF110.05**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Rocky Flats Environmental Technology Site	Final Waste Form	Filter	Waste Matrix Code	S5410	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	FILTERS & FILTER MEDIA TRM			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/ Liner	RF110.05-S	16.6
55-gal Drum Dir Ld w/o Liner	RF110.05-S	1.7
SWB w/ 4 - 55-gal Drums w/ Liners	RF110.05-S	11.3
SWB w/ 4 - 55-gal Drums w/o Liners	RF110.05-S	1.9
<b>Emplaced Total</b>		<b>31.5</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	7.11
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	7.40
Cellulosics	6.35
Rubber	0.07
Plastics	17.62
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.23
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	164.49
Packaging Material, Plastic	25.39
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.63E+00
Np-237	8.63E-06
Pu-238	6.36E-01
Pu-239	1.46E+01
Pu-240	3.38E+00
Pu-241	3.31E+01
Pu-242	3.25E-04
Th-229	5.62E-14
Th-230	1.18E-08
Th-232	1.59E-16
U-233	1.86E-10
U-234	1.72E-04
U-235	5.16E-06
U-236	8.02E-07
U-238	5.28E-07

## Haz. Waste No(s).

D022, F001, F002

No TRUCON Codes Provided

## Waste Stream Description

N/A

Waste Stream ID: **WP-RF113.01**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Rocky Flats Environmental Technology Site	Final Waste Form	Solidified Organics	Waste Matrix Code	S3114	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	TRM ABSORBED LIQUIDS	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/ Liner	RF113.01-S	0.4
<b>Emplaced Total</b>		<b>0.4</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.00
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	108.89
Cellulosics	0.48
Rubber	0.00
Plastics	12.02
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.54E-01
Np-237	2.50E-06
Pu-238	4.30E-02
Pu-239	8.91E-01
Pu-240	2.07E-01
Pu-241	3.92E+00
Pu-242	2.71E-05
Th-229	2.26E-14
Th-230	2.79E-11
Th-232	7.42E-18
U-233	7.04E-11
U-234	8.77E-07
U-235	6.15E-09
U-236	4.29E-08
U-238	2.86E-14

## Haz. Waste No(s).

D007, D010, F005

No TRUCON  
Codes Provided

## Waste Stream Description

N/A

Waste Stream ID: **WP-RF115.01**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Rocky Flats Environmental Technology Site	Final Waste Form	Inorganic Non-Metal	Waste Matrix Code	S5123	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	TRM FIREBRICK	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/ Liner	RF115.01-S	17.3
55-gal Drum Dir Ld w/o Liner	RF115.01-S	1.5
55-gal POC - 12" w/ Liner	RF115.01-S	86.7
SWB w/ 4 - 55-gal Drums w/ Liners	RF115.01-S	5.7
SWB w/ 4 - 55-gal Drums w/o Liners	RF115.01-S	3.8
<b>Emplaced Total</b>		<b>114.9</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	16.78
Aluminum-based Metals/Alloys	0.01
Other Metals	11.65
Other Inorganic Materials	53.37
Cellulosics	2.41
Rubber	0.01
Plastics	3.38
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.01
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	436.77
Packaging Material, Plastic	34.29
Packaging Material, Cellulosics	103.79
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	4.27E+00
Np-237	1.80E-05
Pu-238	8.90E-01
Pu-239	2.20E+01
Pu-240	5.13E+00
Pu-241	3.95E+01
Pu-242	4.30E-04
Th-229	1.16E-13
Th-230	1.02E-09
Th-232	1.84E-16
U-233	4.01E-10
U-234	2.52E-05
U-235	4.26E-07
U-236	1.06E-06
U-238	5.44E-06

## Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, F001, F002, F005

**No TRUCON Codes Provided**

## Waste Stream Description

N/A

Waste Stream ID: **WP-RF116.01**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Rocky Flats Environmental Technology Site	Final Waste Form	Solidified Inorganics	Waste Matrix Code	S3119	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	TRM FIREBRICK HEEL			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal POC - 12" w/ Liner	RF116.01-S	4.0
<b>Emplaced Total</b>		<b>4.0</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	19.23
Aluminum-based Metals/Alloys	0.00
Other Metals	16.09
Other Inorganic Materials	32.79
Cellulosics	0.00
Rubber	0.00
Plastics	3.23
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	527.40
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	137.50
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	5.53E+00
Np-237	3.97E-05
Pu-238	6.34E-01
Pu-239	2.48E+01
Pu-240	5.75E+00
Pu-241	2.87E+01
Pu-242	3.84E-04
Th-229	3.11E-13
Th-230	4.11E-10
Th-232	2.06E-16
U-233	1.01E-09
U-234	1.29E-05
U-235	1.71E-07
U-236	1.19E-06
U-238	4.05E-13

## Haz. Waste No(s).

D004, D005, D006,  
D007, D008, D009,  
D010, D011, F001,  
F002, F005

**No TRUCON  
Codes Provided**

## Waste Stream Description

N/A



Waste Stream ID: **WP-RF117.01**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Rocky Flats Environmental Technology Site	Final Waste Form	Inorganic Non-Metal	Waste Matrix Code	S5123	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	TRM INORGANIC NONMETAL DEBRIS - GRIT			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/ Liner	RF117.01-S	1.7
55-gal Drum Dir Ld w/o Liner	RF117.01-S	0.2
<b>Emplaced Total</b>		<b>1.9</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	1.50
Aluminum-based Metals/Alloys	0.00
Other Metals	1.28
Other Inorganic Materials	93.11
Cellulosics	8.65
Rubber	0.00
Plastics	8.22
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	32.89
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.79E+00
Np-237	2.37E-05
Pu-238	6.43E-01
Pu-239	1.31E+01
Pu-240	3.04E+00
Pu-241	5.89E+01
Pu-242	3.90E-04
Th-229	1.47E-13
Th-230	4.24E-08
Th-232	8.02E-17
U-233	5.44E-10
U-234	7.91E-04
U-235	2.52E-05
U-236	5.41E-07
U-238	2.22E-07

## Haz. Waste No(s).

D007

No TRUCON Codes Provided

## Waste Stream Description

N/A

Waste Stream ID: **WP-RF118.01**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Rocky Flats Environmental Technology Site	Final Waste Form	Solidified Inorganics	Waste Matrix Code	S3111	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	INCINERATOR ASH & PROCESS RESIDUES			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/ Liner	RF118.01-S	1.0
55-gal POC - 12" w/ Liner	RF118.01-S	1431.0
55-gal POC - 12" w/o Liner	RF118.01-S	0.2
<b>Emplaced Total</b>		<b>1432.3</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	11.29
Aluminum-based Metals/Alloys	0.00
Other Metals	1.26
Other Inorganic Materials	16.19
Cellulosics	0.00
Rubber	0.00
Plastics	1.32
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	527.11
Packaging Material, Plastic	36.99
Packaging Material, Cellulosics	137.40
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	9.57E+00
Am-243	8.75E-07
Np-237	6.31E-05
Pu-238	2.85E+00
Pu-239	4.66E+01
Pu-240	1.25E+01
Pu-241	1.24E+02
Pu-242	1.52E-03
Th-229	7.50E-13
Th-230	1.87E-08
Th-232	7.44E-16
U-233	1.94E-09
U-234	2.68E-04
U-235	6.62E-06
U-236	3.35E-06
U-238	1.40E-07

## Haz. Waste No(s).

D004, D005, D006,  
D007, D008, D009,  
D010, D011, F001,  
F002, F005

**No TRUCON  
Codes Provided**

## Waste Stream Description

N/A

Waste Stream ID: **WP-RF119.01**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Rocky Flats Environmental Technology Site	Final Waste Form	Solidified Inorganics	Waste Matrix Code	S3129	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	TRM INCINERATOR SLUDGE			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/ Liner	RF119.01-S	19.3
55-gal Drum Dir Ld w/o Liner	RF119.01-S	3.7
55-gal POC - 12" w/ Liner	RF119.01-S	1.0
<b>Emplaced Total</b>		<b>24.1</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	57.80
Aluminum-based Metals/Alloys	0.02
Other Metals	0.85
Other Inorganic Materials	8.24
Cellulosics	0.30
Rubber	0.00
Plastics	15.73
Cements	0.00
Inorganic Matrix	245.52
Organic Matrix	1.90
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	147.89
Packaging Material, Plastic	31.26
Packaging Material, Cellulosics	5.93
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.56E+00
Np-237	1.25E-05
Pu-238	3.02E-01
Pu-239	6.09E+00
Pu-240	1.43E+00
Pu-241	2.85E+01
Pu-242	1.85E-04
Th-229	5.47E-14
Th-230	9.76E-10
Th-232	2.63E-17
U-233	2.42E-10
U-234	2.39E-05
U-235	7.40E-07
U-236	2.13E-07
U-238	8.83E-06

## Haz. Waste No(s).

D004, D005, D006,  
D007, D008, D009,  
D010, D011, F001,  
F002, F005

**No TRUCON  
Codes Provided**

## Waste Stream Description

N/A

Waste Stream ID: **WP-RF121.01**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Rocky Flats Environmental Technology Site	Final Waste Form	Inorganic Non-Metal	Waste Matrix Code	S5129	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	TRM INORGANIC NONMETAL DEBRIS			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal POC - 12" w/ Liner	RF121.01-S	46.0
<b>Emplaced Total</b>		<b>46.0</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	5.55
Aluminum-based Metals/Alloys	0.00
Other Metals	6.66
Other Inorganic Materials	11.10
Cellulosics	0.00
Rubber	0.00
Plastics	1.33
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	527.40
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	137.50
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	5.36E+00
Np-237	1.07E-05
Pu-238	1.37E+00
Pu-239	4.29E+01
Pu-240	1.03E+01
Pu-241	6.17E+01
Pu-242	6.64E-04
Th-229	2.95E-14
Th-230	1.39E-09
Th-232	2.71E-16
U-233	1.47E-10
U-234	3.77E-05
U-235	6.98E-07
U-236	1.83E-06
U-238	3.94E-09

## Haz. Waste No(s).

D007, D008

No TRUCON Codes Provided

## Waste Stream Description

N/A

Waste Stream ID: **WP-RF122.01**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Rocky Flats Environmental Technology Site	Final Waste Form	Solidified Inorganics	Waste Matrix Code	S3129	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	TRM INORGANIC SLUDGE	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/ Liner	RF122.01-S	0.2
55-gal Drum Dir Ld w/o Liner	RF122.01-S	1.5
55-gal POC - 12" w/ Liner	RF122.01-S	33.9
<b>Emplaced Total</b>		<b>35.6</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	10.47
Aluminum-based Metals/Alloys	0.00
Other Metals	12.08
Other Inorganic Materials	21.10
Cellulosics	0.00
Rubber	0.00
Plastics	2.56
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	508.85
Packaging Material, Plastic	35.49
Packaging Material, Cellulosics	131.07
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	7.01E+00
Np-237	1.60E-03
Pu-238	1.73E+00
Pu-239	3.86E+01
Pu-240	9.28E+00
Pu-241	7.01E+01
Pu-242	9.78E-04
Th-229	1.56E-11
Th-230	1.12E-09
Th-232	3.33E-16
U-233	4.77E-08
U-234	3.53E-05
U-235	2.66E-07
U-236	1.93E-06
U-238	1.03E-12

## Haz. Waste No(s).

D006, D007, D008,  
D009, F001, F002,  
F005No TRUCON  
Codes Provided

## Waste Stream Description

N/A

Waste Stream ID: **WP-RF122.03**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Rocky Flats Environmental Technology Site	Final Waste Form	Solidified Inorganics	Waste Matrix Code	S3129	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	TRM INORGANIC SLUDGE	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/ Liner	RF122.03-S	4.4
<b>Emplaced Total</b>		<b>4.4</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.00
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	424.32
Cellulosics	0.00
Rubber	0.00
Plastics	6.64
Cements	0.00
Inorganic Matrix	163.06
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	7.64E+00
Np-237	9.80E-05
Pu-238	1.58E-01
Pu-239	3.25E+00
Pu-240	7.54E-01
Pu-241	1.57E+01
Pu-242	9.85E-05
Th-229	4.49E-13
Th-230	9.30E-08
Th-232	1.38E-17
U-233	1.96E-09
U-234	2.07E-03
U-235	1.39E-04
U-236	1.12E-07
U-238	7.77E-03

## Haz. Waste No(s).

D004, D005, D009,  
D010, F001, F002,  
F005, F006, F007,  
F009

**No TRUCON  
Codes Provided**

## Waste Stream Description

N/A

Waste Stream ID: **WP-RF122.04**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Rocky Flats Environmental Technology Site	Final Waste Form	Solidified Inorganics	Waste Matrix Code	S3129	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	TRM INORGANIC SLUDGE	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/ Liner	RF122.04-S	54.1
<b>Emplaced Total</b>		<b>54.1</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.00
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	662.72
Cellulosics	0.28
Rubber	0.00
Plastics	8.45
Cements	0.00
Inorganic Matrix	1.50
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	5.75E+00
Np-237	7.26E-05
Pu-238	1.46E-01
Pu-239	2.98E+00
Pu-240	6.92E-01
Pu-241	1.44E+01
Pu-242	9.06E-05
Th-229	3.32E-13
Th-230	2.75E-08
Th-232	1.27E-17
U-233	1.45E-09
U-234	6.13E-04
U-235	6.47E-05
U-236	1.03E-07
U-238	4.33E-03

## Haz. Waste No(s).

D006, D007, D008,  
D009, D011**No TRUCON  
Codes Provided**

## Waste Stream Description

N/A

Waste Stream ID: **WP-RF122.05**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Rocky Flats Environmental Technology Site	Final Waste Form	Solidified Inorganics	Waste Matrix Code	S3129	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	TRM INORGANIC SLUDGE	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/ Liner	RF122.05-S	16.2
<b>Emplaced Total</b>		<b>16.2</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.00
Aluminum-based Metals/Alloys	0.00
Other Metals	0.15
Other Inorganic Materials	519.58
Cellulosics	0.00
Rubber	0.00
Plastics	49.09
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.86E-01
Np-237	9.51E-07
Pu-238	1.66E-02
Pu-239	3.37E-01
Pu-240	7.83E-02
Pu-241	1.64E+00
Pu-242	1.03E-05
Th-229	3.78E-15
Th-230	5.57E-08
Th-232	1.43E-18
U-233	1.71E-11
U-234	1.24E-03
U-235	6.46E-05
U-236	1.16E-08
U-238	2.40E-03

## Haz. Waste No(s).

D006, D007, D008,  
D009, D011, F001,  
F002, F005, F006,  
F007, F009

**No TRUCON  
Codes Provided**

## Waste Stream Description

N/A



Waste Stream ID: **WP-RF122.06**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Rocky Flats Environmental Technology Site	Final Waste Form	Solidified Inorganics	Waste Matrix Code	S3129	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	TRM INORGANIC SLUDGE	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/ Liner	RF122.06-S	0.4
55-gal POC - 12" w/ Liner	RF122.06-S	6.9
<b>Emplaced Total</b>		<b>7.3</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	9.30
Aluminum-based Metals/Alloys	0.00
Other Metals	12.03
Other Inorganic Materials	48.94
Cellulosics	0.00
Rubber	0.00
Plastics	2.65
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	504.74
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	129.64
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	7.98E+00
Np-237	6.15E-05
Pu-238	1.35E+00
Pu-239	3.47E+01
Pu-240	8.19E+00
Pu-241	6.18E+01
Pu-242	8.75E-04
Th-229	4.91E-13
Th-230	3.64E-09
Th-232	2.94E-16
U-233	1.58E-09
U-234	7.15E-05
U-235	2.02E-06
U-236	1.70E-06
U-238	3.86E-05

## Haz. Waste No(s).

D006, D007, D008,  
D009, D011**No TRUCON  
Codes Provided**

## Waste Stream Description

N/A

Waste Stream ID: **WP-RF123.01**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Rocky Flats Environmental Technology Site	Final Waste Form	Solidified Inorganics	Waste Matrix Code	S3119	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	TRM INORGANIC SOLIDS	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal POC - 12" w/ Liner	RF123.01-S	7.5
SWB w/ 4 - 55-gal Drums w/ Liners	RF123.01-S	1.9
<b>Emplaced Total</b>		<b>9.4</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	5.09
Aluminum-based Metals/Alloys	0.00
Other Metals	5.89
Other Inorganic Materials	9.14
Cellulosics	0.00
Rubber	0.00
Plastics	1.18
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	463.65
Packaging Material, Plastic	32.83
Packaging Material, Cellulosics	109.79
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	6.92E+00
Np-237	2.20E-05
Pu-238	1.06E+00
Pu-239	3.23E+01
Pu-240	7.51E+00
Pu-241	5.98E+01
Pu-242	5.30E-04
Th-229	1.18E-13
Th-230	2.99E-09
Th-232	2.70E-16
U-233	4.33E-10
U-234	5.83E-05
U-235	1.63E-06
U-236	1.56E-06
U-238	1.06E-08

## Haz. Waste No(s).

D006, D007, D008,  
D009, D018, D019,  
D022, D028, D029,  
D043, F001, F002,  
F005

**No TRUCON  
Codes Provided**

## Waste Stream Description

N/A

Waste Stream ID: **WP-RF123.02**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Rocky Flats Environmental Technology Site	Final Waste Form	Solidified Inorganics	Waste Matrix Code	S3119	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	TRM INORGANIC SOLIDS	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/ Liner	RF123.02-S	0.6
55-gal Drum Dir Ld w/o Liner	RF123.02-S	0.2
<b>Emplaced Total</b>		<b>0.8</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	29.16
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	128.43
Cellulosics	6.49
Rubber	0.00
Plastics	2.51
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	27.75
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.92E-02
Np-237	2.78E-08
Pu-238	4.96E-03
Pu-239	9.99E-02
Pu-240	2.33E-02
Pu-241	4.89E-01
Pu-242	3.07E-06
Th-229	4.34E-17
Th-230	1.26E-08
Th-232	4.26E-19
U-233	2.84E-13
U-234	2.81E-04
U-235	3.24E-05
U-236	3.45E-09
U-238	2.52E-03

## Haz. Waste No(s).

D010, F001, F002, F005, F006, F007, F009

No TRUCON Codes Provided

## Waste Stream Description

N/A

Waste Stream ID: **WP-RF123.03**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Rocky Flats Environmental Technology Site	Final Waste Form	Solidified Inorganics	Waste Matrix Code	S3119	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	TRM INORGANIC SOLIDS	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/ Liner	RF123.03-S	11.9
55-gal Drum Dir Ld w/o Liner	RF123.03-S	0.2
<b>Emplaced Total</b>		<b>12.1</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	5.34
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	25.98
Cellulosics	11.41
Rubber	0.00
Plastics	2.72
Cements	0.00
Inorganic Matrix	0.96
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	36.36
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.50E+01
Np-237	2.33E-04
Pu-238	8.39E-01
Pu-239	1.71E+01
Pu-240	3.97E+00
Pu-241	7.94E+01
Pu-242	5.23E-04
Th-229	1.45E-12
Th-230	1.13E-09
Th-232	1.05E-16
U-233	5.36E-09
U-234	2.82E-05
U-235	1.67E-06
U-236	7.06E-07
U-238	1.22E-04

## Haz. Waste No(s).

D006, D007, D008,  
D009No TRUCON  
Codes Provided

## Waste Stream Description

N/A

Waste Stream ID: **WP-RF123.04**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Rocky Flats Environmental Technology Site	Final Waste Form	Solidified Inorganics	Waste Matrix Code	S3119	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	TRM INORGANIC SOLIDS	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/ Liner	RF123.04-S	44.5
<b>Emplaced Total</b>		<b>44.5</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.39
Aluminum-based Metals/Alloys	0.00
Other Metals	0.01
Other Inorganic Materials	17.76
Cellulosics	1.10
Rubber	0.00
Plastics	0.27
Cements	0.00
Inorganic Matrix	0.76
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	3.38E+00
Np-237	2.45E-05
Pu-238	8.97E-01
Pu-239	1.81E+01
Pu-240	4.23E+00
Pu-241	8.48E+01
Pu-242	5.59E-04
Th-229	1.48E-13
Th-230	1.39E-09
Th-232	1.11E-16
U-233	5.52E-10
U-234	3.35E-05
U-235	7.38E-07
U-236	7.52E-07
U-238	5.86E-06

## Haz. Waste No(s).

D007, D008, F005

No TRUCON Codes Provided

## Waste Stream Description

N/A

Waste Stream ID: **WP-RF124.01**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Rocky Flats Environmental Technology Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5311	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	LEADED RUBBER GLOVES	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/ Liner	RF124.01-S	91.5
55-gal Drum Dir Ld w/o Liner	RF124.01-S	0.8
SWB Dir Ld w/o Liner	RF124.01-S	1.9
<b>Emplaced Total</b>		<b>94.2</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.02
Aluminum-based Metals/Alloys	0.01
Other Metals	223.31
Other Inorganic Materials	0.82
Cellulosics	0.75
Rubber	129.33
Plastics	8.27
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	131.26
Packaging Material, Plastic	35.93
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	5.49E-01
Am-243	4.78E-08
Np-237	1.59E-05
Pu-238	1.17E-01
Pu-239	2.62E+00
Pu-240	6.03E-01
Pu-241	9.85E+00
Pu-242	6.99E-05
Th-229	1.94E-13
Th-230	5.44E-09
Th-232	2.83E-17
U-233	5.25E-10
U-234	7.70E-05
U-235	1.34E-06
U-236	1.43E-07
U-238	1.51E-06

## Haz. Waste No(s).

D008

No TRUCON  
Codes Provided

## Waste Stream Description

N/A

Waste Stream ID: **WP-RF124.02**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Rocky Flats Environmental Technology Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5311	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	TRM LEADED DRYBOX GLOVES			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/ Liner	RF124.02-S	13.1
55-gal Drum Dir Ld w/o Liner	RF124.02-S	0.2
<b>Emplaced Total</b>		<b>13.3</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.26
Aluminum-based Metals/Alloys	0.00
Other Metals	207.17
Other Inorganic Materials	2.78
Cellulosics	0.98
Rubber	123.26
Plastics	8.93
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	36.42
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.00E+00
Np-237	1.15E-05
Pu-238	2.35E-01
Pu-239	5.01E+00
Pu-240	1.15E+00
Pu-241	1.93E+01
Pu-242	1.38E-04
Th-229	1.28E-13
Th-230	1.86E-09
Th-232	5.38E-17
U-233	3.54E-10
U-234	2.86E-05
U-235	7.84E-07
U-236	2.72E-07
U-238	6.59E-09

## Haz. Waste No(s).

D008, D022, D028,  
F001, F002No TRUCON  
Codes Provided

## Waste Stream Description

N/A

Waste Stream ID: **WP-RF125.01**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Rocky Flats Environmental Technology Site	Final Waste Form	Solidified Organics	Waste Matrix Code	S3900	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	TRM MISC. HOMOGENEOUS SOLIDS	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/ Liner	RF125.01-S	3.3
55-gal Drum Dir Ld w/o Liner	RF125.01-S	1.0
55-gal POC - 12" w/ Liner	RF125.01-S	6.2
SWB w/ 4 - 55-gal Drums w/ Liners	RF125.01-S	3.8
<b>Emplaced Total</b>		<b>14.4</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	10.07
Aluminum-based Metals/Alloys	0.00
Other Metals	2.84
Other Inorganic Materials	2.40
Cellulosics	0.76
Rubber	0.00
Plastics	1.35
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	11.23
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	323.90
Packaging Material, Plastic	28.89
Packaging Material, Cellulosics	59.63
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.56E+01
Np-237	3.28E-04
Pu-238	1.06E+00
Pu-239	2.69E+01
Pu-240	6.21E+00
Pu-241	6.75E+01
Pu-242	5.32E-04
Th-229	2.23E-12
Th-230	3.33E-08
Th-232	1.64E-16
U-233	8.05E-09
U-234	6.25E-04
U-235	2.00E-05
U-236	1.11E-06
U-238	4.37E-05

## Haz. Waste No(s).

D004, D005, D009, D010, D022, D027, D028, D029, D032, D033, D034, D043, F001, F002, F005, F006, F007, F009, P030, P098, P099, P106, U003, U103, U108

**No TRUCON Codes Provided**

## Waste Stream Description

N/A



Waste Stream ID: **WP-RF126.01**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Rocky Flats Environmental Technology Site	Final Waste Form	Solidified Organics	Waste Matrix Code	S3229	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	SOLIDIFIED ORGANICS			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal POC - 12" w/ Liner	RF126.01-S	1.0
<b>Emplaced Total</b>		<b>1.0</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	8.65
Aluminum-based Metals/Alloys	0.00
Other Metals	11.54
Other Inorganic Materials	0.00
Cellulosics	0.00
Rubber	0.00
Plastics	2.31
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	13.94
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	527.40
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	137.50
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	4.52E+00
Np-237	8.07E-06
Pu-238	1.43E+00
Pu-239	3.73E+01
Pu-240	8.35E+00
Pu-241	7.40E+01
Pu-242	5.23E-04
Th-229	1.85E-14
Th-230	2.75E-09
Th-232	2.20E-16
U-233	1.00E-10
U-234	6.33E-05
U-235	1.46E-06
U-236	1.49E-06
U-238	1.10E-08

## Haz. Waste No(s).

D007

No TRUCON  
Codes Provided

## Waste Stream Description

N/A

Waste Stream ID: **WP-RF126.04**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Rocky Flats Environmental Technology Site	Final Waste Form	Solidified Organics	Waste Matrix Code	S3229	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	TRM SOLIDIFIED ORGANICS			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal POC - 12" w/ Liner	RF126.04-S	2.1
<b>Emplaced Total</b>		<b>2.1</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	6.06
Aluminum-based Metals/Alloys	0.00
Other Metals	8.08
Other Inorganic Materials	0.00
Cellulosics	0.00
Rubber	0.00
Plastics	1.62
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	11.15
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	527.40
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	137.50
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	5.59E+00
Np-237	1.03E-05
Pu-238	1.18E+00
Pu-239	3.40E+01
Pu-240	7.85E+00
Pu-241	6.27E+01
Pu-242	6.09E-04
Th-229	2.40E-14
Th-230	3.92E-09
Th-232	2.07E-16
U-233	1.29E-10
U-234	8.29E-05
U-235	1.83E-06
U-236	1.40E-06
U-238	1.51E-08

## Haz. Waste No(s).

D007, D008, F001, F002

No TRUCON Codes Provided

## Waste Stream Description

N/A

Waste Stream ID: **WP-RF128.01**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Rocky Flats Environmental Technology Site	Final Waste Form	Solidified Inorganics	Waste Matrix Code	S3119	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	TRM PU FLOURIDE (SOLIDIFIED INORGANICS)			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal POC - 12" w/ Liner	RF128.01-S	198.2
<b>Emplaced Total</b>		<b>198.2</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	4.71
Aluminum-based Metals/Alloys	0.00
Other Metals	5.88
Other Inorganic Materials	9.14
Cellulosics	0.00
Rubber	0.00
Plastics	1.18
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	527.40
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	137.50
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	5.15E+00
Np-237	2.31E-05
Pu-238	1.86E+00
Pu-239	4.29E+01
Pu-240	1.04E+01
Pu-241	8.15E+01
Pu-242	7.61E-04
Th-229	1.93E-13
Th-230	1.62E-09
Th-232	4.88E-16
U-233	5.82E-10
U-234	4.41E-05
U-235	3.55E-07
U-236	2.47E-06
U-238	1.47E-10

## Haz. Waste No(s).

D005, D006, D007,  
D008, D010, D011**No TRUCON  
Codes Provided**

## Waste Stream Description

N/A

Waste Stream ID: **WP-RF129.01**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Rocky Flats Environmental Technology Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5490	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	TRM HETEROGENEOUS DEBRIS			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/ Liner	RF129.01-S	8.3
55-gal Drum Dir Ld w/o Liner	RF129.01-S	0.6
55-gal POC - 12" w/ Liner	RF129.01-S	3.3
SWB Dir Ld w/o Liner	RF129.01-S	455.5
<b>Emplaced Total</b>		<b>467.8</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	151.84
Aluminum-based Metals/Alloys	1.45
Other Metals	23.51
Other Inorganic Materials	20.31
Cellulosics	14.40
Rubber	2.70
Plastics	26.27
Cements	0.00
Inorganic Matrix	0.22
Organic Matrix	0.61
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	155.73
Packaging Material, Plastic	0.92
Packaging Material, Cellulosics	0.98
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	5.82E-01
Am-243	2.19E-07
Cs-137	2.13E-07
Np-237	5.07E-06
Pu-238	9.52E-02
Pu-239	1.86E+00
Pu-240	4.44E-01
Pu-241	8.66E+00
Pu-242	5.81E-05
Pu-244	2.97E-23
Th-229	3.15E-14
Th-230	4.53E-09
Th-232	1.17E-17
U-233	1.16E-10
U-234	8.47E-05
U-235	2.93E-06
U-236	7.90E-08
U-238	1.33E-06

## Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D022, D028, D029, F001, F002, F005, F006, F007, F009

**No TRUCON Codes Provided**

## Waste Stream Description

N/A

Comprehensive Inventory Database ver. 1.00

Data ver. D.9.02

NOTE: Actual numerical values have been rounded for presentation purposes.

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Waste Stream ID: **WP-RF129.05**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Rocky Flats Environmental Technology Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5490	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	TRM HETEROGENEOUS DEBRIS (D008)			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/ Liner	RF129.05-S	2.1
55-gal Drum Dir Ld w/o Liner	RF129.05-S	0.2
SWB Dir Ld w/o Liner	RF129.05-S	446.0
<b>Emplaced Total</b>		<b>448.3</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	182.14
Aluminum-based Metals/Alloys	0.66
Other Metals	61.87
Other Inorganic Materials	6.36
Cellulosics	8.09
Rubber	2.72
Plastics	22.28
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.26
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	153.38
Packaging Material, Plastic	0.17
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	7.82E-01
Am-243	7.64E-07
Np-237	2.31E-05
Pu-238	8.96E-02
Pu-239	1.68E+00
Pu-240	4.04E-01
Pu-241	8.37E+00
Pu-242	5.51E-05
Th-229	1.60E-13
Th-230	7.33E-10
Th-232	1.07E-17
U-233	5.74E-10
U-234	1.44E-05
U-235	4.24E-07
U-236	7.19E-08
U-238	1.41E-07

## Haz. Waste No(s).

D008

No TRUCON Codes Provided

## Waste Stream Description

N/A

Waste Stream ID: **WP-RF130.01**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Rocky Flats Environmental Technology Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5490	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	COMBUSTIBLE WASTE	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/ Liner	RF130.01-S	25.4
55-gal Drum Dir Ld w/o Liner	RF130.01-S	1.9
SWB w/ 4 - 55-gal Drums w/ Liners	RF130.01-S	11.3
<b>Emplaced Total</b>		<b>38.6</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	13.34
Aluminum-based Metals/Alloys	1.41
Other Metals	6.65
Other Inorganic Materials	8.05
Cellulosics	0.81
Rubber	0.13
Plastics	7.57
Cements	0.00
Inorganic Matrix	2.91
Organic Matrix	7.06
Soils/gravel	0.03
Vitrified	0.00
Packaging Material, Steel	154.40
Packaging Material, Plastic	29.12
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	7.44E+00
Cm-244	3.22E-09
Cs-137	1.66E-05
Np-237	2.17E-04
Pu-238	6.35E-01
Pu-239	1.28E+01
Pu-240	2.99E+00
Pu-241	6.00E+01
Pu-242	3.95E-04
Pu-244	9.21E-18
Sr-90	8.06E-04
Th-229	1.50E-12
Th-230	1.57E-07
Th-232	1.18E-10
U-233	5.40E-09
U-234	1.05E-03
U-235	4.11E-05
U-236	5.32E-07
U-238	5.93E-05

## Haz. Waste No(s).

D004, D005, D008, D009, D010, D022, D027, D028, D029, D032, D033, D034, D043, F001, F002, F005, F006, F007, F009, P030, P098, P099, P106, U003, U103, U108

**No TRUCON Codes Provided**

## Waste Stream Description

N/A

Comprehensive Inventory Database ver. 1.00

Data ver. D.9.02

NOTE: Actual numerical values have been rounded for presentation purposes.

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Waste Stream ID: **WP-RF134.02**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Rocky Flats Environmental Technology Site	Final Waste Form	Soils	Waste Matrix Code	S4200	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	TRM SOIL	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
SWB Dir Ld w/o Liner	RF134.02-S	11.3
<b>Emplaced Total</b>		<b>11.3</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	3.35
Aluminum-based Metals/Alloys	2.23
Other Metals	0.00
Other Inorganic Materials	0.63
Cellulosics	10.66
Rubber	0.00
Plastics	10.56
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	666.10
Vitrified	0.00
Packaging Material, Steel	153.50
Packaging Material, Plastic	0.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.99E-02
Np-237	3.50E-08
Pu-238	3.98E-03
Pu-239	8.16E-02
Pu-240	1.90E-02
Pu-241	3.78E-01
Pu-242	2.49E-06
Th-229	7.96E-17
Th-230	1.89E-12
Th-232	5.00E-19
U-233	4.33E-13
U-234	6.95E-08
U-235	4.83E-10
U-236	3.37E-09
U-238	2.25E-15

## Haz. Waste No(s).

F001, F002, F005

No TRUCON Codes Provided

## Waste Stream Description

N/A

Waste Stream ID: **WP-RF135.01**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Rocky Flats Environmental Technology Site	Final Waste Form	Solidified Organics	Waste Matrix Code	S3290	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	SOLIDIFIED ORGANICS			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/ Liner	RF135.01-S	2.3
<b>Emplaced Total</b>		<b>2.3</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.00
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	0.00
Cellulosics	0.00
Rubber	0.00
Plastics	5.51
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	802.10
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.20E+00
Np-237	2.40E-05
Pu-238	6.96E-02
Pu-239	1.45E+00
Pu-240	3.35E-01
Pu-241	6.65E+00
Pu-242	4.38E-05
Th-229	1.53E-13
Th-230	7.62E-09
Th-232	8.84E-18
U-233	5.62E-10
U-234	1.42E-04
U-235	1.63E-05
U-236	5.97E-08
U-238	1.26E-03

## Haz. Waste No(s).

D022, D026, D027,  
D029, D030, D032,  
D034, D036, D037,  
F001, F002

**No TRUCON  
Codes Provided**

## Waste Stream Description

N/A



Waste Stream ID: **WP-RF135.02**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Rocky Flats Environmental Technology Site	Final Waste Form	Solidified Organics	Waste Matrix Code	S3290	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	SOLIDIFIED ORGANICS			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/ Liner	RF135.02-S	10.4
<b>Emplaced Total</b>		<b>10.4</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	1.82
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	0.00
Cellulosics	0.61
Rubber	0.00
Plastics	0.42
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	446.57
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.41E-01
Np-237	1.35E-06
Pu-238	2.90E-02
Pu-239	5.94E-01
Pu-240	1.38E-01
Pu-241	2.87E+00
Pu-242	1.80E-05
Th-229	6.06E-15
Th-230	1.78E-08
Th-232	2.52E-18
U-233	2.66E-11
U-234	3.96E-04
U-235	1.28E-05
U-236	2.04E-08
U-238	1.13E-07

## Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D022, D026, D027, D028, D029, D030, D032, D034, D036, D043, F001, F002, F005

**No TRUCON Codes Provided**

## Waste Stream Description

N/A

Waste Stream ID: **WP-RF137.01**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Rocky Flats Environmental Technology Site	Final Waste Form	Solidified Inorganics	Waste Matrix Code	S3119	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	SOLIDIFIED INORGANICS			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/ Liner	RF137.01-S	0.4
<b>Emplaced Total</b>		<b>0.4</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	29.18
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	240.94
Cellulosics	0.00
Rubber	1.49
Plastics	20.22
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	6.53E-01
Np-237	8.93E-06
Pu-238	7.80E-02
Pu-239	1.64E+00
Pu-240	3.79E-01
Pu-241	7.46E+00
Pu-242	4.92E-05
Th-229	5.87E-14
Th-230	3.70E-11
Th-232	9.99E-18
U-233	2.14E-10
U-234	1.36E-06
U-235	9.70E-09
U-236	6.74E-08
U-238	4.45E-14

## Haz. Waste No(s).

D007, D008

No TRUCON Codes Provided

## Waste Stream Description

N/A

Waste Stream ID: **WP-RF139.01**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Rocky Flats Environmental Technology Site	Final Waste Form	Solidified Inorganics	Waste Matrix Code	S3121	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	TRM WASTEWATER TREATMENT SLUDGE			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/ Liner	RF139.01-S	11.6
<b>Emplaced Total</b>		<b>11.6</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.00
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	44.57
Cellulosics	0.00
Rubber	0.00
Plastics	4.14
Cements	0.00
Inorganic Matrix	744.45
Organic Matrix	14.88
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	3.12E+01
Np-237	3.07E-04
Pu-238	1.39E-01
Pu-239	2.87E+00
Pu-240	6.66E-01
Pu-241	1.38E+01
Pu-242	8.68E-05
Th-229	1.36E-12
Th-230	9.47E-09
Th-232	1.22E-17
U-233	6.00E-09
U-234	2.12E-04
U-235	1.71E-05
U-236	9.87E-08
U-238	1.11E-03

## Haz. Waste No(s).

D004, D005, D009,  
D010, F001, F002,  
F005, F006, F007,  
F009

**No TRUCON  
Codes Provided**

## Waste Stream Description

N/A

Waste Stream ID: **WP-RF140.01**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Rocky Flats Environmental Technology Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5420	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	TRM HETEROGENEOUS DEBRIS			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/ Liner	RF140.01-S	4.0
SWB Dir Ld w/o Liner	RF140.01-S	168.2
<b>Emplaced Total</b>		<b>172.2</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	149.72
Aluminum-based Metals/Alloys	2.38
Other Metals	60.72
Other Inorganic Materials	47.21
Cellulosics	4.14
Rubber	1.58
Plastics	5.57
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.02
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	152.98
Packaging Material, Plastic	0.85
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	3.13E-01
Am-243	7.89E-08
Np-237	2.63E-06
Pu-238	7.69E-02
Pu-239	1.44E+00
Pu-240	3.49E-01
Pu-241	7.17E+00
Pu-242	4.72E-05
Th-229	1.63E-14
Th-230	7.49E-11
Th-232	9.20E-18
U-233	6.04E-11
U-234	2.05E-06
U-235	3.15E-08
U-236	6.21E-08
U-238	2.03E-10

## Haz. Waste No(s).

D005, D008, D009,  
D011, F001, F002,  
F005, F006, F007,  
F009

**No TRUCON  
Codes Provided**

## Waste Stream Description

N/A

Waste Stream ID: **WP-RF141.01**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Rocky Flats Environmental Technology Site	Final Waste Form	Solidified Inorganics	Waste Matrix Code	S3119	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	SOLIDIFIED INORGANICS			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal POC - 12" w/ Liner	RF141.01-S	45.6
<b>Emplaced Total</b>		<b>45.6</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	7.30
Aluminum-based Metals/Alloys	0.00
Other Metals	8.83
Other Inorganic Materials	14.35
Cellulosics	0.00
Rubber	0.00
Plastics	1.77
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.01
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	527.40
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	137.50
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	4.07E+00
Np-237	7.07E-06
Pu-238	1.54E+00
Pu-239	3.99E+01
Pu-240	9.35E+00
Pu-241	8.56E+01
Pu-242	6.16E-04
Th-229	1.59E-14
Th-230	3.16E-07
Th-232	2.47E-16
U-233	8.70E-11
U-234	5.87E-03
U-235	1.88E-04
U-236	1.66E-06
U-238	1.66E-06

## Haz. Waste No(s).

D006, D007, D008

No TRUCON  
Codes Provided

## Waste Stream Description

N/A

Waste Stream ID: **WP-RF141.02**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Rocky Flats Environmental Technology Site	Final Waste Form	Solidified Inorganics	Waste Matrix Code	S3119	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	TRM LOW-GRADE OXIDES	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal POC - 12" w/ Liner	RF141.02-S	176.0
<b>Emplaced Total</b>		<b>176.0</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	5.27
Aluminum-based Metals/Alloys	0.01
Other Metals	6.35
Other Inorganic Materials	11.00
Cellulosics	0.00
Rubber	0.00
Plastics	1.27
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	527.40
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	137.50
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	9.44E+00
Np-237	1.40E-03
Pu-238	1.56E+00
Pu-239	4.22E+01
Pu-240	1.01E+01
Pu-241	8.09E+01
Pu-242	8.65E-04
Th-229	1.00E-11
Th-230	9.03E-08
Th-232	2.66E-16
U-233	3.57E-08
U-234	1.69E-03
U-235	5.37E-05
U-236	1.79E-06
U-238	4.73E-07

## Haz. Waste No(s).

D007, D008

No TRUCON  
Codes Provided

## Waste Stream Description

N/A

Waste Stream ID: **WP-RLCBWD.001**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Hanford (Richland) Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5490	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	B&W HETEROGENEOUS DEBRIS			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/ Liner	RLCBWD.001-S	41.8
55-gal Drum Dir Ld w/o Liner	RLCBWD.001-S	45.6
TDOP w/ 10 - 55-gal Drums w/ Liners	RLCBWD.001-S	4.5
TDOP w/ 10 - 55-gal Drums w/o Liners	RLCBWD.001-S	67.5
<b>Emplaced Total</b>		<b>159.4</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	54.67
Aluminum-based Metals/Alloys	0.31
Other Metals	4.10
Other Inorganic Materials	39.54
Cellulosics	19.45
Rubber	4.87
Plastics	21.88
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	176.43
Packaging Material, Plastic	10.19
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.60E+00
Am-243	1.29E-07
Cs-137	7.31E-05
Np-237	1.13E-05
Pu-238	3.74E-01
Pu-239	2.10E+00
Pu-240	1.01E+00
Pu-241	1.36E+01
Pu-242	1.78E-04
Sr-90	6.64E-05
Th-229	3.66E-08
Th-230	8.49E-10
Th-232	2.94E-18
U-233	1.95E-04
U-234	4.83E-05
U-235	1.23E-06
U-236	5.96E-08
U-238	2.31E-05

## Haz. Waste No(s).

D005, D006, D007,  
D008, D009, D011,  
F001, F002, F003,  
F005

**No TRUCON  
Codes Provided**

## Waste Stream Description

N/A

Comprehensive Inventory Database ver. 1.00

Data ver. D.9.02

NOTE: Actual numerical values have been rounded for presentation purposes.

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Waste Stream ID: **WP-RLCFFD.001**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Hanford (Richland) Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5490	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	HETEROGENEOUS DEBRIS			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/ Liner	RLCFFD.001-S	200.1
55-gal Drum Dir Ld w/o Liner	RLCFFD.001-S	14.8
TDOP w/ 10 - 55-gal Drums w/ Liners	RLCFFD.001-S	63.0
<b>Emplaced Total</b>		<b>277.9</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	373.15
Aluminum-based Metals/Alloys	1.87
Other Metals	0.37
Other Inorganic Materials	37.28
Cellulosics	41.88
Rubber	9.06
Plastics	58.97
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.06
Vitrified	0.00
Packaging Material, Steel	153.70
Packaging Material, Plastic	30.52
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.83E+00
Cs-137	6.96E-08
Np-237	2.67E-06
Pu-238	3.48E-01
Pu-239	2.17E+00
Pu-240	1.10E+00
Pu-241	1.33E+01
Pu-242	1.68E-04
Sr-90	6.31E-08
Th-229	3.54E-15
Th-230	5.98E-10
Th-232	4.70E-09
U-233	2.55E-11
U-234	1.86E-05
U-235	4.92E-07
U-236	1.30E-07
U-238	1.08E-05

## Haz. Waste No(s).

D007, D008, D009,  
F001, F002, F003,  
F005**No TRUCON  
Codes Provided**

## Waste Stream Description

N/A



Waste Stream ID: **WP-RLHMOX.001**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Hanford (Richland) Site	Final Waste Form	Inorganic Non-Metal	Waste Matrix Code	S5120	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	PFP MIXED OXIDES	Activity Concentrations Decayed to CY			2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal POC - 12" w/ Liner	RLHMOX.001-S	182.6
55-gal POC - 12" w/o Liner	RLHMOX.001-S	11.2
<b>Emplaced Total</b>		<b>193.9</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.00
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	17.10
Cellulosics	0.00
Rubber	0.00
Plastics	0.00
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	527.40
Packaging Material, Plastic	34.86
Packaging Material, Cellulosics	137.50
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	4.71E+01
Am-243	2.22E-06
Cs-137	3.05E-06
Np-237	2.16E-03
Pu-238	8.54E+00
Pu-239	4.00E+01
Pu-240	2.03E+01
Pu-241	2.79E+02
Pu-242	1.01E-02
Sr-90	2.74E-06
Th-229	1.52E-11
Th-230	2.13E-07
Th-232	5.34E-16
U-233	5.44E-08
U-234	4.03E-03
U-235	2.50E-04
U-236	3.61E-06
U-238	3.07E-03

## Haz. Waste No(s).

D005, D006, D007,  
D008, D011No TRUCON  
Codes Provided

## Waste Stream Description

N/A

Waste Stream ID: **WP-RLM231ZD.001**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Hanford (Richland) Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5490	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	RICHLAND 231-Z MIXED DEBRIS			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/o Liner	RLM231ZD.001-S	1.2
TDOP w/ 10 - 55-gal Drums w/o Liners	RLM231ZD.001-S	4.5
<b>Emplaced Total</b>		<b>5.7</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	118.69
Aluminum-based Metals/Alloys	0.00
Other Metals	0.97
Other Inorganic Materials	6.65
Cellulosics	17.28
Rubber	2.81
Plastics	17.04
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	209.87
Packaging Material, Plastic	0.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.63E-01
Am-243	3.31E-06
Cs-137	5.06E-05
Np-237	2.03E-05
Pu-238	4.57E-02
Pu-239	3.84E-01
Pu-240	1.00E-01
Pu-241	1.15E+00
Pu-242	9.87E-06
Sr-90	4.60E-05
Th-229	3.71E-14
Th-230	8.06E-10
Th-232	6.61E-19
U-233	2.64E-10
U-234	3.01E-05
U-235	2.94E-07
U-236	8.92E-09
U-238	1.18E-05

## Haz. Waste No(s).

D006, D007, D008,  
D009, F001, F002,  
F003, F005**No TRUCON  
Codes Provided**

## Waste Stream Description

N/A

Comprehensive Inventory Database ver. 1.00

Data ver. D.9.02

NOTE: Actual numerical values have been rounded for presentation purposes.

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Waste Stream ID: WP-RLM233SD.001

## Appendix B

## TRU Waste Inventory Profile Report

Site	Hanford (Richland) Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5490	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	HETEROGENEOUS DEBRIS (RLM233SD)			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/ Liner	RLM233SD.001-S	0.6
55-gal Drum Dir Ld w/o Liner	RLM233SD.001-S	14.8
SWB Dir Ld w/o Liner	RLM233SD.001-S	5.7
<b>Emplaced Total</b>		<b>21.1</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	367.61
Aluminum-based Metals/Alloys	1.33
Other Metals	0.07
Other Inorganic Materials	130.92
Cellulosics	10.45
Rubber	1.40
Plastics	24.38
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	1.66
Vitrified	0.00
Packaging Material, Steel	136.91
Packaging Material, Plastic	1.10
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.74E-01
Cs-137	1.17E-05
Np-237	2.07E-04
Pu-238	6.89E-02
Pu-239	5.81E-01
Pu-240	1.69E-01
Pu-241	1.30E+00
Pu-242	4.70E-05
Sr-90	1.06E-05
Th-229	3.80E-13
Th-230	4.24E-11
Th-232	1.11E-18
U-233	2.70E-09
U-234	1.87E-06
U-235	4.41E-08
U-236	1.50E-08
U-238	6.36E-07

## Haz. Waste No(s).

D004, D005, D006,  
D007, D008, D009,  
D010, D011, F002,  
F003

**No TRUCON  
Codes Provided**

## Waste Stream Description

N/A

Comprehensive Inventory Database ver. 1.00

Data ver. D.9.02

NOTE: Actual numerical values have been rounded for presentation purposes.

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Waste Stream ID: **WP-RLM308D.001**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Hanford (Richland) Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5490	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	HETEROGENEOUS DEBRIS - BLDG. 308			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/o Liner	RLM308D.001-S	19.8
55-gal POC - 12" w/ Liner	RLM308D.001-S	24.8
TDOP w/ 10 - 55-gal Drums w/o Liners	RLM308D.001-S	31.5
<b>Emplaced Total</b>		<b>76.0</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	60.49
Aluminum-based Metals/Alloys	0.18
Other Metals	7.71
Other Inorganic Materials	8.97
Cellulosics	10.34
Rubber	3.28
Plastics	21.81
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	301.80
Packaging Material, Plastic	12.05
Packaging Material, Cellulosics	44.77
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.59E+01
Am-243	1.54E-05
Cs-137	5.23E-04
Np-237	2.82E-04
Pu-238	7.44E+00
Pu-239	1.32E+01
Pu-240	8.26E+00
Pu-241	1.45E+02
Pu-242	7.65E-03
Sr-90	4.74E-04
Th-229	7.58E-08
Th-230	2.78E-08
Th-232	2.37E-06
U-233	2.02E-04
U-234	8.15E-04
U-235	2.57E-05
U-236	9.80E-07
U-238	3.43E-04

## Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D011, F001, F002, F003

**No TRUCON Codes Provided**

## Waste Stream Description

N/A

Comprehensive Inventory Database ver. 1.00

Data ver. D.9.02

NOTE: Actual numerical values have been rounded for presentation purposes.

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Waste Stream ID: **WP-RLM325D.001**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Hanford (Richland) Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5490	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	HETEROGENEOUS DEBRIS WASTE - BLDG 325			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/ Liner	RLM325D.001-S	14.1
55-gal Drum Dir Ld w/o Liner	RLM325D.001-S	35.2
TDOP w/ 10 - 55-gal Drums w/ Liners	RLM325D.001-S	4.5
TDOP w/ 10 - 55-gal Drums w/o Liners	RLM325D.001-S	9.0
<b>Emplaced Total</b>		<b>62.8</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	70.11
Aluminum-based Metals/Alloys	0.13
Other Metals	3.13
Other Inorganic Materials	44.92
Cellulosics	15.64
Rubber	6.44
Plastics	31.01
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	152.51
Packaging Material, Plastic	9.56
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.51E+00
Am-243	5.87E-04
Cs-137	8.69E-04
Np-237	1.47E-04
Pu-238	1.16E+00
Pu-239	2.06E+00
Pu-240	8.49E-01
Pu-241	1.46E+01
Pu-242	2.67E-04
Sr-90	7.89E-04
Th-229	8.28E-09
Th-230	4.99E-09
Th-232	3.00E-06
U-233	4.41E-05
U-234	2.81E-04
U-235	1.05E-05
U-236	5.03E-08
U-238	8.96E-05

## Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D022, D027, D028, D029, D030, D034, D037, D043, F001, F002, F003, F004, F005

**No TRUCON Codes Provided**

## Waste Stream Description

N/A

Comprehensive Inventory Database ver. 1.00

Data ver. D.9.02

NOTE: Actual numerical values have been rounded for presentation purposes.

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Waste Stream ID: **WP-RLMHASH.001**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Hanford (Richland) Site	Final Waste Form	Solidified Inorganics	Waste Matrix Code	S3111	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	INCINERATOR ASH & PROCESS RESIDUES			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal POC - 12" w/ Liner	RLMHASH.001-S	62.0
55-gal POC - 12" w/o Liner	RLMHASH.001-S	0.2
<b>Emplaced Total</b>		<b>62.2</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.00
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	16.75
Cellulosics	0.00
Rubber	0.00
Plastics	0.00
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	527.40
Packaging Material, Plastic	36.88
Packaging Material, Cellulosics	137.50
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.23E+01
Cs-137	5.62E-08
Np-237	3.15E-05
Pu-238	1.22E+00
Pu-239	3.93E+01
Pu-240	9.73E+00
Pu-241	4.92E+01
Pu-242	1.31E-03
Sr-90	2.65E-08
Th-229	2.09E-08
Th-230	1.04E-09
Th-232	4.56E-16
U-233	2.78E-05
U-234	2.86E-05
U-235	3.21E-07
U-236	2.31E-06
U-238	1.59E-12

## Haz. Waste No(s).

D005, D006, D007,  
D008, D011**No TRUCON  
Codes Provided**

## Waste Stream Description

N/A

Waste Stream ID: **WP-RLMPDT.001**

Appendix B

TRU Waste Inventory Profile Report

Site	Hanford (Richland) Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5490	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	HETEROGENEOUS DEBRIS (MPFPD)			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/ Liner	RLMPDT.001-S	152.9
55-gal Drum Dir Ld w/o Liner	RLMPDT.001-S	443.2
55-gal POC - 12" w/ Liner	RLMPDT.001-S	40.6
SWB Dir Ld w/o Liner	RLMPDT.001-S	500.9
TDOP w/ 10 - 55-gal Drums w/ Liners	RLMPDT.001-S	27.0
TDOP w/ 10 - 55-gal Drums w/o Liners	RLMPDT.001-S	747.0
<b>Emplaced Total</b>		<b>1911.5</b>

Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	52.14
Aluminum-based Metals/Alloys	0.26
Other Metals	5.79
Other Inorganic Materials	8.29
Cellulosics	12.86
Rubber	9.56
Plastics	19.80
Cements	0.00
Inorganic Matrix	0.16
Organic Matrix	0.02
Soils/gravel	0.21
Vitrified	0.00
Packaging Material, Steel	186.06
Packaging Material, Plastic	3.99
Packaging Material, Cellulosics	2.92
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.19E+00
Am-243	2.03E-06
Cs-137	1.34E-05
Np-237	7.46E-05
Pu-238	5.97E-01
Pu-239	4.17E+00
Pu-240	1.37E+00
Pu-241	1.82E+01
Pu-242	2.64E-04
Sr-90	1.21E-05
Th-229	8.92E-08
Th-230	8.94E-10
Th-232	5.20E-09
U-233	2.38E-04
U-234	2.83E-05
U-235	7.05E-07
U-236	1.63E-07
U-238	6.55E-06

Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D019, D030

**No TRUCON Codes Provided**

Waste Stream Description

N/A

Waste Stream ID: **WP-RLMPURX.001**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Hanford (Richland) Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5490	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	HETEROGENEOUS DEBRIS (MPUREXD)			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/ Liner	RLMPURX.001-S	9.2
55-gal Drum Dir Ld w/o Liner	RLMPURX.001-S	44.3
TDOP w/ 10 - 55-gal Drums w/o Liners	RLMPURX.001-S	81.0
<b>Emplaced Total</b>		<b>134.5</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	44.10
Aluminum-based Metals/Alloys	0.25
Other Metals	0.84
Other Inorganic Materials	7.59
Cellulosics	10.19
Rubber	23.02
Plastics	23.35
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.09
Vitrified	0.00
Packaging Material, Steel	191.65
Packaging Material, Plastic	2.52
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	4.17E+00
Am-243	8.59E-07
Cs-137	1.35E-04
Np-237	1.83E-05
Pu-238	1.61E+00
Pu-239	8.82E+00
Pu-240	3.36E+00
Pu-241	8.52E+01
Pu-242	7.92E-04
Sr-90	1.18E-04
Th-229	1.15E-06
Th-230	7.03E-10
Th-232	6.16E-17
U-233	2.45E-03
U-234	2.72E-05
U-235	1.71E-07
U-236	4.99E-07
U-238	1.94E-06

## Haz. Waste No(s).

D005, D006, D008,  
D009, D011**No TRUCON  
Codes Provided**

## Waste Stream Description

N/A

Comprehensive Inventory Database ver. 1.00

Data ver. D.9.02

NOTE: Actual numerical values have been rounded for presentation purposes.

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Waste Stream ID: **WP-RLMSSC.001**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Hanford (Richland) Site	Final Waste Form	Inorganic Non-Metal	Waste Matrix Code	S5123	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	SAND, SLAG & CRUCIBLE			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal POC - 12" w/ Liner	RLMSSC.001-S	64.7
<b>Emplaced Total</b>		<b>64.7</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.00
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	49.32
Cellulosics	0.00
Rubber	0.00
Plastics	0.00
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	527.40
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	137.50
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.07E+01
Np-237	2.41E-05
Pu-238	3.22E+00
Pu-239	4.31E+01
Pu-240	9.58E+00
Pu-241	1.51E+02
Pu-242	1.12E-03
Th-229	8.74E-14
Th-230	2.28E-09
Th-232	3.44E-16
U-233	3.78E-10
U-234	6.88E-05
U-235	3.97E-07
U-236	1.99E-06
U-238	6.08E-06

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

## Waste Stream Description

N/A

Waste Stream ID: **WP-RLMWARD.001**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Hanford (Richland) Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5490	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	RICHLAND WESTINGHOUSE ARD DEBRIS			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/ Liner	RLMWARD.001-S	20.4
55-gal Drum Dir Ld w/o Liner	RLMWARD.001-S	36.2
<b>Emplaced Total</b>		<b>56.6</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	74.04
Aluminum-based Metals/Alloys	0.14
Other Metals	3.30
Other Inorganic Materials	13.00
Cellulosics	28.94
Rubber	7.87
Plastics	36.86
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	13.33
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.02E+00
Cs-137	7.85E-08
Np-237	6.99E-06
Pu-238	3.77E-01
Pu-239	4.46E-01
Pu-240	3.02E-01
Pu-241	7.40E+00
Pu-242	2.46E-04
Sr-90	7.13E-08
Th-229	5.35E-15
Th-230	2.53E-09
Th-232	3.40E-08
U-233	5.81E-11
U-234	1.42E-04
U-235	4.93E-06
U-236	1.79E-08
U-238	2.93E-05

## Haz. Waste No(s).

D007, D008, D009,  
F001, F002, F003,  
F005**No TRUCON  
Codes Provided**

## Waste Stream Description

N/A

Waste Stream ID: **WP-RLNPDT.002**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Hanford (Richland) Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5490	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	DEBRIS WASTES - PLASTICS (NFPFD)			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/ Liner	RLNPDT.002-S	62.4
55-gal Drum Dir Ld w/o Liner	RLNPDT.002-S	267.9
TDOP w/ 10 - 55-gal Drums w/ Liners	RLNPDT.002-S	4.5
TDOP w/ 10 - 55-gal Drums w/o Liners	RLNPDT.002-S	103.5
<b>Emplaced Total</b>		<b>438.3</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	55.24
Aluminum-based Metals/Alloys	0.93
Other Metals	0.79
Other Inorganic Materials	25.15
Cellulosics	19.19
Rubber	8.43
Plastics	42.96
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.05
Vitrified	0.00
Packaging Material, Steel	155.69
Packaging Material, Plastic	5.44
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.43E+00
Am-243	7.95E-06
Cs-137	3.06E-06
Np-237	7.44E-06
Pu-238	4.47E-01
Pu-239	4.59E+00
Pu-240	1.10E+00
Pu-241	1.45E+01
Pu-242	1.91E-04
Sr-90	2.10E-06
Th-229	6.56E-14
Th-230	1.10E-09
Th-232	1.42E-10
U-233	1.95E-10
U-234	2.05E-05
U-235	3.96E-07
U-236	2.60E-07
U-238	9.91E-07

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

## Waste Stream Description

N/A

Comprehensive Inventory Database ver. 1.00

Data ver. D.9.02

NOTE: Actual numerical values have been rounded for presentation purposes.

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Waste Stream ID: **WP-RLNPURX.001**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Hanford (Richland) Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5490	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	HETEROGENEOUS DEBRIS (NPUREXD)			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/o Liner	RLNPURX.001-S	34.3
TDOP w/ 10 - 55-gal Drums w/o Liners	RLNPURX.001-S	4.5
<b>Emplaced Total</b>		<b>38.8</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	52.54
Aluminum-based Metals/Alloys	1.02
Other Metals	1.00
Other Inorganic Materials	18.32
Cellulosics	5.92
Rubber	8.89
Plastics	25.30
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	142.51
Packaging Material, Plastic	0.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	5.51E+00
Am-243	1.06E-06
Cs-137	4.75E-05
Np-237	1.05E-05
Pu-238	2.52E+00
Pu-239	1.06E+01
Pu-240	4.13E+00
Pu-241	1.48E+02
Pu-242	1.29E-03
Sr-90	3.03E-05
Th-229	3.08E-14
Th-230	1.63E-09
Th-232	1.48E-16
U-233	1.46E-10
U-234	5.14E-05
U-235	7.33E-08
U-236	8.57E-07
U-238	1.37E-12

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

## Waste Stream Description

N/A

Comprehensive Inventory Database ver. 1.00

Data ver. D.9.02

NOTE: Actual numerical values have been rounded for presentation purposes.

Waste Stream ID: **WP-RLRFETS.001**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Hanford (Richland) Site	Final Waste Form	Solidified Inorganics	Waste Matrix Code	S3111	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	INCINERATOR ASH & PROCESS RESIDUES			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal POC - 12" w/ Liner	RLRFETS.001-S	63.9
<b>Emplaced Total</b>		<b>63.9</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.00
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	17.91
Cellulosics	0.00
Rubber	0.00
Plastics	0.00
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	527.40
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	137.50
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	8.88E+00
Cs-137	2.85E-07
Np-237	2.18E-05
Pu-238	1.24E+00
Pu-239	5.97E+01
Pu-240	9.91E+00
Pu-241	7.13E+01
Pu-242	1.02E-03
Sr-90	2.90E-08
Th-229	8.82E-08
Th-230	6.64E-09
Th-232	4.65E-16
U-233	1.18E-04
U-234	1.07E-04
U-235	3.21E-06
U-236	2.35E-06
U-238	1.23E-12

## Haz. Waste No(s).

D004, D005, D006,  
D007, D008, D009,  
D010, D011, F001,  
F002, F005

**No TRUCON  
Codes Provided**

## Waste Stream Description

N/A

Waste Stream ID: WP-RLSWOCD.001

## Appendix B

## TRU Waste Inventory Profile Report

Site	Hanford (Richland) Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5490	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	HETEROGENEOUS DEBRIS			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/o Liner	RLSWOCD.001-S	18.9
TDOP w/ 10 - 55-gal Drums w/o Liners	RLSWOCD.001-S	4.5
<b>Emplaced Total</b>		<b>23.4</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	26.56
Aluminum-based Metals/Alloys	0.60
Other Metals	0.72
Other Inorganic Materials	4.94
Cellulosics	12.62
Rubber	49.59
Plastics	49.33
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	150.20
Packaging Material, Plastic	0.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	3.67E-01
Am-243	2.38E-07
Cs-137	5.58E-05
Np-237	6.06E-06
Pu-238	9.56E-02
Pu-239	1.07E+00
Pu-240	3.09E-01
Pu-241	3.18E+00
Pu-242	3.09E-05
Sr-90	5.06E-05
Th-229	4.82E-15
Th-230	3.48E-11
Th-232	9.05E-19
U-233	5.18E-11
U-234	2.21E-06
U-235	6.34E-08
U-236	1.83E-08
U-238	6.47E-10

## Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D019, D022, D027, D028, D029, D030, D034, D037, D043, F001, F002, F003, F004, F005

**No TRUCON Codes Provided**

## Waste Stream Description

N/A

Waste Stream ID: **WP-RLVIPAC.001**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Hanford (Richland) Site	Final Waste Form	Uncategorized Metal	Waste Matrix Code	S5111	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	HETEROGENEOUS DEBRIS (RLVIPAC)			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
SWB Dir Ld w/o Liner	RLVIPAC.001-S	155.0
<b>Emplaced Total</b>		<b>155.0</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	15.18
Aluminum-based Metals/Alloys	1.69
Other Metals	1.35
Other Inorganic Materials	5.42
Cellulosics	0.00
Rubber	0.00
Plastics	0.00
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	153.50
Packaging Material, Plastic	0.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.34E+00
Am-243	1.10E-07
Cs-137	1.20E-05
Np-237	2.18E-05
Pu-238	9.84E-01
Pu-239	6.31E+00
Pu-240	1.93E+00
Pu-241	8.82E+00
Pu-242	5.69E-04
Sr-90	1.09E-05
Th-229	2.81E-08
Th-230	9.09E-08
Th-232	1.27E-17
U-233	1.00E-04
U-234	3.37E-03
U-235	8.81E-05
U-236	1.72E-07
U-238	1.69E-03

## Haz. Waste No(s).

D005, D006, D007,  
D008, D011**No TRUCON  
Codes Provided**

## Waste Stream Description

N/A

Comprehensive Inventory Database ver. 1.00

Data ver. D.9.02

NOTE: Actual numerical values have been rounded for presentation purposes.

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Waste Stream ID: **WP-SR2001.001.00**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Savannah River Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5300	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	NON-HAZ DEBRIS WASTE 221FBL			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/ Liner	SR2001.001.00-S	61.2
<b>Emplaced Total</b>		<b>61.2</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	11.89
Aluminum-based Metals/Alloys	0.00
Other Metals	0.29
Other Inorganic Materials	8.37
Cellulosics	7.74
Rubber	1.00
Plastics	86.03
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.41E-02
Cs-137	7.82E-08
Np-237	2.91E-08
Pu-238	1.73E-02
Pu-239	1.58E-01
Pu-240	3.14E-02
Pu-241	4.04E-01
Pu-242	3.16E-06
Th-229	1.08E-16
Th-230	1.47E-11
Th-232	1.47E-18
U-233	4.55E-13
U-234	4.05E-07
U-235	1.25E-09
U-236	7.45E-09
U-238	3.82E-15

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

## Waste Stream Description

N/A



Waste Stream ID: **WP-SR2002.002.00**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Savannah River Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5440	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	HETEROGENEOUS DEBRIS			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/ Liner	SR2002.002.00-S	69.9
<b>Emplaced Total</b>		<b>69.9</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	8.65
Aluminum-based Metals/Alloys	0.40
Other Metals	0.32
Other Inorganic Materials	6.82
Cellulosics	6.82
Rubber	1.36
Plastics	81.40
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	5.17E-02
Cs-137	2.34E-07
Np-237	1.06E-07
Pu-238	6.57E-03
Pu-239	1.62E-01
Pu-240	3.75E-02
Pu-241	8.41E-01
Pu-242	5.11E-06
Sr-90	1.98E-08
Th-229	8.32E-07
Th-230	4.26E-12
Th-232	1.35E-18
U-233	1.27E-03
U-234	1.34E-07
U-235	1.12E-09
U-236	7.79E-09
U-238	5.40E-15

## Haz. Waste No(s).

D008, F001, F002,  
F003, F005**No TRUCON  
Codes Provided**

## Waste Stream Description

N/A

Comprehensive Inventory Database ver. 1.00

Data ver. D.9.02

NOTE: Actual numerical values have been rounded for presentation purposes.

B - SR - 2

Waste Stream ID: **WP-SR-AGNS-HET**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Savannah River Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5400	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	ALLIED GENERAL NUCLEAR SERVICES DEBRIS			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/ Liner	SR-AGNS-HET-S	7.5
55-gal Drum Dir Ld w/o Liner	SR-AGNS-HET-S	6.7
SWB w/ 4 - 55-gal Drums w/ Liners	SR-AGNS-HET-S	1.9
TDOP w/ 10 - 55-gal Drums w/ Liners	SR-AGNS-HET-S	36.0
TDOP w/ 10 - 55-gal Drums w/o Liners	SR-AGNS-HET-S	4.5
<b>Emplaced Total</b>		<b>56.5</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	33.04
Aluminum-based Metals/Alloys	0.18
Other Metals	8.65
Other Inorganic Materials	13.85
Cellulosics	6.96
Rubber	2.83
Plastics	28.38
Cements	0.00
Inorganic Matrix	0.13
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	205.84
Packaging Material, Plastic	16.33
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	6.54E-02
Am-243	3.88E-07
Cs-137	3.66E-06
Np-237	3.88E-05
Pu-238	2.30E-01
Pu-239	5.37E-02
Pu-240	3.34E-02
Pu-241	7.03E-01
Pu-242	1.57E-05
Sr-90	3.66E-06
Th-229	1.36E-09
Th-230	6.96E-10
Th-232	1.80E-08
U-233	7.26E-06
U-234	3.94E-05
U-235	4.18E-07
U-236	1.98E-09
U-238	8.53E-06

## Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D011, D019, D022, D029, F002, F005

**No TRUCON Codes Provided**

## Waste Stream Description

N/A

Comprehensive Inventory Database ver. 1.00

Data ver. D.9.02

NOTE: Actual numerical values have been rounded for presentation purposes.

B - SR - 3

Waste Stream ID: **WP-SR-MD-HET**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Savannah River Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5400	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	DEBRIS FROM MOUND SITE			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/ Liner	SR-MD-HET-S	21.8
55-gal Drum Dir Ld w/o Liner	SR-MD-HET-S	5.6
TDOP w/ 10 - 55-gal Drums w/ Liners	SR-MD-HET-S	4.5
<b>Emplaced Total</b>		<b>32.0</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	51.48
Aluminum-based Metals/Alloys	1.22
Other Metals	7.78
Other Inorganic Materials	22.06
Cellulosics	25.77
Rubber	19.21
Plastics	37.90
Cements	0.00
Inorganic Matrix	0.06
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	145.02
Packaging Material, Plastic	27.70
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.35E-01
Am-243	1.37E-07
Cm-244	2.46E-05
Cs-137	2.95E-05
Np-237	3.06E-05
Pu-238	1.96E+01
Pu-239	3.96E-01
Pu-240	2.84E-02
Pu-241	1.83E+00
Pu-242	9.20E-06
Sr-90	2.95E-05
Th-229	8.66E-07
Th-230	3.15E-08
Th-232	1.25E-03
U-233	9.23E-03
U-234	3.53E-03
U-235	1.87E-06
U-236	8.43E-10
U-238	5.32E-05

## Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D019, D022, D027, D028, D029, D030, D032, D034, D037, D043, F002, F003, F004, F005, F007, F009

**No TRUCON Codes Provided**

## Waste Stream Description

N/A

Comprehensive Inventory Database ver. 1.00

Data ver. D.9.02

NOTE: Actual numerical values have been rounded for presentation purposes.

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Waste Stream ID: **WP-SR-RL-BCLDP.001**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Savannah River Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5400	Handling	RH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	RH DEBRIS WASTE FROM JN-1 HOT CELL AT BCLDP			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
RH Can w/ Fxd Lid - Dir Ld	SR-RL-BCLDP.001-S	1.8
RH Can w/ Remov Lid - Dir Ld	SR-RL-BCLDP.001-S	0.9
RH Can w/ Remov Lid w/ 3 - 55-gal w/o Liner	SR-RL-BCLDP.001-S	22.3
<b>Emplaced Total</b>		<b>24.9</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	6.42
Aluminum-based Metals/Alloys	1.01
Other Metals	0.12
Other Inorganic Materials	0.27
Cellulosics	2.58
Rubber	0.26
Plastics	279.65
Cements	0.00
Inorganic Matrix	0.73
Organic Matrix	0.55
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	633.32
Packaging Material, Plastic	0.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	33.14

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.17E+00
Cm-244	7.48E-01
Cs-137	2.96E+01
Np-237	6.99E-07
Pu-238	1.31E+00
Pu-239	2.12E-01
Pu-240	3.42E-01
Pu-241	1.97E+01
Pu-242	1.97E-02
Sr-90	2.01E+01
Th-229	2.72E-07
Th-230	9.47E-09
Th-232	2.51E-19
U-233	2.90E-03
U-234	1.05E-03
U-235	1.56E-05
U-236	1.02E-08
U-238	2.15E-04

## Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D011, D019, F002, F005

**No TRUCON Codes Provided**

## Waste Stream Description

N/A

Comprehensive Inventory Database ver. 1.00

Data ver. D.9.02

NOTE: Actual numerical values have been rounded for presentation purposes.

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Waste Stream ID: **WP-SR-SWMF-HET-A**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Savannah River Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5400	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	DEBRIS FROM SWMF			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/ Liner	SR-SWMF-HET-A-S	9.6
55-gal Drum Dir Ld w/o Liner	SR-SWMF-HET-A-S	15.6
TDOP w/ 10 - 55-gal Drums w/ Liners	SR-SWMF-HET-A-S	13.5
TDOP w/ 10 - 55-gal Drums w/o Liners	SR-SWMF-HET-A-S	18.0
<b>Emplaced Total</b>		<b>56.7</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	12.67
Aluminum-based Metals/Alloys	1.97
Other Metals	0.00
Other Inorganic Materials	2.16
Cellulosics	5.80
Rubber	10.32
Plastics	38.94
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	186.94
Packaging Material, Plastic	10.32
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.07E-01
Am-243	1.06E-05
Cs-137	5.89E-05
Np-237	1.06E-04
Pu-238	4.18E+00
Pu-239	2.67E-01
Pu-240	6.49E-02
Pu-241	1.07E+00
Pu-242	6.92E-05
Sr-90	5.89E-05
Th-229	2.16E-14
Th-230	4.21E-09
Th-232	6.85E-09
U-233	4.61E-10
U-234	4.74E-04
U-235	2.08E-07
U-236	1.92E-09
U-238	1.04E-14

## Haz. Waste No(s).

D008, F001, F002, F004, F005, F007, F009, U133, U151

No TRUCON Codes Provided

## Waste Stream Description

N/A

Comprehensive Inventory Database ver. 1.00

Data ver. D.9.02

NOTE: Actual numerical values have been rounded for presentation purposes.

B - SR - 6

Waste Stream ID: **WP-SR-W026-221F-HEPA**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Savannah River Site	Final Waste Form	Filter	Waste Matrix Code	S5410	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	HEPA FILTER WASTE FROM FB-LINE BLDG. 221F			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
SWB Dir Ld w/o Liner	SR-W026-221F-HEPA-	238.1
<b>Emplaced Total</b>		<b>238.1</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	27.75
Aluminum-based Metals/Alloys	0.19
Other Metals	0.00
Other Inorganic Materials	1.67
Cellulosics	9.56
Rubber	0.00
Plastics	19.05
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	153.50
Packaging Material, Plastic	0.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.40E-01
Cs-137	2.10E-07
Np-237	1.34E-06
Pu-238	5.89E-02
Pu-239	7.62E-01
Pu-240	2.02E-01
Pu-241	2.57E+00
Pu-242	2.53E-05
Sr-90	2.10E-07
U-233	2.22E-04
U-234	4.77E-05
U-235	1.04E-06
U-238	9.50E-08

## Haz. Waste No(s).

D005, D007, D009,  
D011, D019, D022,  
D028, D029, D043,  
F002, F005

**No TRUCON  
Codes Provided**

## Waste Stream Description

N/A

Waste Stream ID: **WP-SR-W026-221F-HET**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Savannah River Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5300	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	HETEROGENEOUS DEBRIS - FB LINE			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/ Liner	SR-W026-221F-HET-S	2.3
55-gal Drum Dir Ld w/o Liner	SR-W026-221F-HET-S	5.0
SWB w/ 4 - 55-gal Drums w/ Liners	SR-W026-221F-HET-S	32.1
SWB w/ 4 - 55-gal Drums w/o Liners	SR-W026-221F-HET-S	3.8
TDOP w/ 10 - 55-gal Drums w/ Liners	SR-W026-221F-HET-S	558.0
<b>Emplaced Total</b>		<b>601.2</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	29.96
Aluminum-based Metals/Alloys	0.55
Other Metals	0.27
Other Inorganic Materials	6.79
Cellulosics	2.47
Rubber	8.29
Plastics	24.50
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.03
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	229.34
Packaging Material, Plastic	16.88
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	5.15E-01
Am-243	9.35E-08
Cm-244	1.23E-04
Cs-137	5.44E-07
Np-237	9.63E-06
Pu-238	5.57E-01
Pu-239	2.13E+00
Pu-240	5.98E-01
Pu-241	8.44E+00
Pu-242	3.26E-04
Sr-90	5.76E-07
Th-229	2.93E-14
Th-230	9.36E-09
Th-232	7.14E-08
U-233	1.58E-10
U-234	2.63E-04
U-235	3.13E-06
U-236	7.09E-08
U-238	2.18E-05

## Haz. Waste No(s).

D006, D007, D008, D009, D022, D028, D029, F001, F002, F003, F005

**No TRUCON Codes Provided**

## Waste Stream Description

N/A

Waste Stream ID: **WP-SR-W026-772F-HET**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Savannah River Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5300	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	CLAB COMBUSTIBLE DEBRIS			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/ Liner	SR-W026-772F-HET-S	24.5
55-gal Drum Dir Ld w/o Liner	SR-W026-772F-HET-S	22.9
SWB w/ 4 - 55-gal Drums w/ Liners	SR-W026-772F-HET-S	35.9
TDOP w/ 10 - 55-gal Drums w/ Liners	SR-W026-772F-HET-S	1530.0
<b>Emplaced Total</b>		<b>1613.3</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	4.42
Aluminum-based Metals/Alloys	0.33
Other Metals	0.42
Other Inorganic Materials	9.50
Cellulosics	2.63
Rubber	2.04
Plastics	21.93
Cements	0.00
Inorganic Matrix	0.03
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	228.37
Packaging Material, Plastic	17.14
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.49E-01
Am-243	1.16E-06
Cm-244	5.96E-05
Cs-137	9.90E-05
Np-237	1.36E-04
Pu-238	5.23E+00
Pu-239	2.48E-01
Pu-240	6.38E-02
Pu-241	1.13E+00
Pu-242	2.41E-05
Sr-90	9.63E-05
Th-229	2.17E-08
Th-230	3.33E-08
Th-232	3.43E-07
U-233	4.92E-05
U-234	9.54E-04
U-235	1.00E-06
U-236	7.56E-09
U-238	6.82E-07

## Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D019, D022, D028, D029, F002, F003, F005

**No TRUCON Codes Provided**

## Waste Stream Description

N/A

Comprehensive Inventory Database ver. 1.00

Data ver. D.9.02

NOTE: Actual numerical values have been rounded for presentation purposes.

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Waste Stream ID: **WP-SR-W027-221F-HETA**

Appendix B

TRU Waste Inventory Profile Report

Site	Savannah River Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5440	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	HETEROGENEOUS DEBRIS - FB LINE			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/ Liner	SR-W027-221F-HETA-	174.7
55-gal Drum Dir Ld w/o Liner	SR-W027-221F-HETA-	14.8
SWB w/ 4 - 55-gal Drums w/ Liners	SR-W027-221F-HETA-	230.6
SWB w/ 4 - 55-gal Drums w/o Liners	SR-W027-221F-HETA-	1.9
TDOP w/ 10 - 55-gal Drums w/ Liners	SR-W027-221F-HETA-	1750.5
<b>Emplaced Total</b>		<b>2172.5</b>

Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	9.12
Aluminum-based Metals/Alloys	0.41
Other Metals	0.09
Other Inorganic Materials	4.91
Cellulosics	4.98
Rubber	3.59
Plastics	34.13
Cements	0.00
Inorganic Matrix	0.04
Organic Matrix	0.01
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	220.78
Packaging Material, Plastic	18.48
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	3.72E-01
Am-243	4.87E-08
Cm-244	2.54E-06
Cs-137	9.87E-04
Np-237	5.19E-06
Pu-238	3.02E-01
Pu-239	1.12E+00
Pu-240	3.47E-01
Pu-241	5.68E+00
Pu-242	5.57E-05
Sr-90	2.78E-07
Th-229	4.06E-08
Th-230	6.36E-09
Th-232	5.75E-08
U-233	7.21E-05
U-234	1.21E-04
U-235	7.16E-08
U-236	6.18E-08
U-238	1.04E-06

Haz. Waste No(s).

D008, F001, F002, F003, F005

No TRUCON Codes Provided

Waste Stream Description

N/A

Waste Stream ID: **WP-SR-W027-221H-HEPA**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Savannah River Site	Final Waste Form	Filter	Waste Matrix Code	S5410	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	HEPA FILTER WASTE FROM HBL FACILITY H-CANYON BLDG.			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/ Liner	SR-W027-221H-HEPA-	1.5
SWB Dir Ld w/o Liner	SR-W027-221H-HEPA-	122.9
<b>Emplaced Total</b>		<b>124.3</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	26.11
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	6.15
Cellulosics	11.72
Rubber	0.03
Plastics	18.35
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	153.23
Packaging Material, Plastic	0.43
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	8.06E-03
Am-243	2.90E-07
Cs-137	7.78E-04
Np-237	5.59E-05
Pu-238	4.47E+00
Pu-239	8.71E-03
Pu-240	2.55E-03
Pu-241	6.53E-02
Pu-242	5.49E-06
Sr-90	7.78E-04
U-234	7.87E-04
U-235	1.14E-07

## Haz. Waste No(s).

D006, D007, D008, D009, D011, D019, D022, D029, D035, D039, D040, D043

**No TRUCON Codes Provided**

## Waste Stream Description

N/A

Waste Stream ID: **WP-SR-W027-221H-HET**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Savannah River Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5440	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	HETEROGENEOUS DEBRIS - 221H			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/ Liner	SR-W027-221H-HET-S	73.6
55-gal Drum Dir Ld w/o Liner	SR-W027-221H-HET-S	39.7
SWB w/ 4 - 55-gal Drums w/ Liners	SR-W027-221H-HET-S	344.0
SWB w/ 4 - 55-gal Drums w/o Liners	SR-W027-221H-HET-S	1.9
TDOP w/ 10 - 55-gal Drums w/ Liners	SR-W027-221H-HET-S	2736.0
TDOP w/ 10 - 55-gal Drums w/o Liners	SR-W027-221H-HET-S	22.5
<b>Emplaced Total</b>		<b>3217.7</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	11.71
Aluminum-based Metals/Alloys	0.56
Other Metals	0.17
Other Inorganic Materials	4.42
Cellulosics	2.85
Rubber	8.14
Plastics	25.66
Cements	0.00
Inorganic Matrix	0.07
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	226.02
Packaging Material, Plastic	17.13
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	6.96E-02
Am-243	7.75E-06
Cm-244	2.48E-06
Cs-137	5.75E-06
Np-237	6.51E-04
Pu-238	3.13E+01
Pu-239	1.14E-01
Pu-240	2.90E-02
Pu-241	3.40E+00
Pu-242	1.75E-05
Sr-90	5.72E-06
Th-229	8.66E-08
Th-230	2.11E-07
Th-232	1.74E-06
U-233	2.31E-04
U-234	6.03E-03
U-235	1.33E-06
U-236	3.44E-09
U-238	1.50E-06

## Haz. Waste No(s).

D006, D008, D009,  
D019, D022, D029,  
D039, D040, D043,  
F001, F002, F003,  
F005, U133

**No TRUCON  
Codes Provided**

## Waste Stream Description

N/A

Comprehensive Inventory Database ver. 1.00

Data ver. D.9.02

NOTE: Actual numerical values have been rounded for presentation purposes.

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Waste Stream ID: **WP-SR-W027-221H-HET-C**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Savannah River Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5400	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	HETEROGENEOUS DEBRIS FROM HBL H-CANYON BLDG.			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/o Liner	SR-W027-221H-HET-C	0.4
<b>Emplaced Total</b>		<b>0.4</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	11.78
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	12.02
Cellulosics	2.40
Rubber	0.00
Plastics	49.76
Cements	0.00
Inorganic Matrix	2.40
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	0.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	5.56E-01
Cs-137	8.67E-06
Np-237	8.84E-06
Pu-238	6.06E-01
Pu-239	1.92E+00
Pu-240	5.42E-01
Pu-241	3.26E+00
Pu-242	2.37E-05
Sr-90	8.67E-06
U-234	4.71E-04
U-235	1.02E-05
U-238	7.49E-06

## Haz. Waste No(s).

D006, D007, D008,  
D009, D011**No TRUCON  
Codes Provided**

## Waste Stream Description

N/A

Waste Stream ID: **WP-SR-W027-235F-HET**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Savannah River Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5400	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	HETEROGENEOUS DEBRIS - 235F			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/ Liner	SR-W027-235F-HET-S	48.7
55-gal Drum Dir Ld w/o Liner	SR-W027-235F-HET-S	8.9
SWB w/ 4 - 55-gal Drums w/ Liners	SR-W027-235F-HET-S	77.5
TDOP w/ 10 - 55-gal Drums w/ Liners	SR-W027-235F-HET-S	486.0
<b>Emplaced Total</b>		<b>621.1</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	21.81
Aluminum-based Metals/Alloys	0.95
Other Metals	0.44
Other Inorganic Materials	5.32
Cellulosics	4.08
Rubber	17.54
Plastics	30.16
Cements	0.00
Inorganic Matrix	0.12
Organic Matrix	0.05
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	219.85
Packaging Material, Plastic	18.31
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.58E-01
Am-243	8.83E-07
Cm-244	8.49E-06
Cs-137	1.88E-06
Np-237	2.82E-03
Pu-238	6.97E+01
Pu-239	1.08E-01
Pu-240	4.62E-02
Pu-241	3.72E+00
Pu-242	4.25E-05
Sr-90	1.88E-06
Th-229	6.83E-08
Th-230	3.53E-07
Th-232	1.41E-06
U-233	2.43E-04
U-234	1.34E-02
U-235	2.54E-06
U-236	4.11E-09
U-238	1.25E-06

## Haz. Waste No(s).

D004, D005, D006,  
D007, D008, D009,  
D010, D011, D018,  
D019, D035, F002,  
F003

**No TRUCON  
Codes Provided**

## Waste Stream Description

N/A

Comprehensive Inventory Database ver. 1.00

Data ver. D.9.02

NOTE: Actual numerical values have been rounded for presentation purposes.

Waste Stream ID: **WP-SR-W027-773A-HET**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Savannah River Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5400	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	HETEROGENEOUS DEBRIS - 773A			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/ Liner	SR-W027-773A-HET-S	16.2
55-gal Drum Dir Ld w/o Liner	SR-W027-773A-HET-S	25.2
SWB w/ 4 - 55-gal Drums w/ Liners	SR-W027-773A-HET-S	3.8
TDOP w/ 10 - 55-gal Drums w/ Liners	SR-W027-773A-HET-S	549.0
TDOP w/ 10 - 55-gal Drums w/o Liners	SR-W027-773A-HET-S	13.5
<b>Emplaced Total</b>		<b>607.7</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	16.59
Aluminum-based Metals/Alloys	0.29
Other Metals	0.75
Other Inorganic Materials	9.39
Cellulosics	4.65
Rubber	4.68
Plastics	17.66
Cements	0.00
Inorganic Matrix	0.12
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	224.79
Packaging Material, Plastic	16.54
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.21E-01
Am-243	9.12E-04
Cm-244	5.43E-02
Cs-137	2.22E-04
Np-237	3.38E-04
Pu-238	7.00E+00
Pu-239	2.80E-01
Pu-240	6.65E-02
Pu-241	1.22E+00
Pu-242	7.25E-06
Sr-90	2.21E-04
Th-229	1.18E-08
Th-230	3.47E-08
Th-232	4.91E-07
U-233	4.18E-05
U-234	1.32E-03
U-235	7.47E-07
U-236	5.91E-09
U-238	9.25E-06

## Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D019, D022, D027, D028, D029, D043, F002, F003, F004, F005

**No TRUCON Codes Provided**

## Waste Stream Description

N/A

Comprehensive Inventory Database ver. 1.00

Data ver. D.9.02

NOTE: Actual numerical values have been rounded for presentation purposes.

B - SR - 15

Waste Stream ID: **WP-SR-W027-FB-PRE86-C**

## Appendix B

## TRU Waste Inventory Profile Report

Site	Savannah River Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5300	Handling	CH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	PRE-1986 ORGANIC DEBRIS - FB LINE			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
55-gal Drum Dir Ld w/ Liner	SR-W027-FB-PRE86-C-	213.2
55-gal Drum Dir Ld w/o Liner	SR-W027-FB-PRE86-C-	32.0
SWB w/ 4 - 55-gal Drums w/ Liners	SR-W027-FB-PRE86-C-	652.1
SWB w/ 4 - 55-gal Drums w/o Liners	SR-W027-FB-PRE86-C-	18.9
TDOP w/ 10 - 55-gal Drums w/ Liners	SR-W027-FB-PRE86-C-	2070.0
TDOP w/ 10 - 55-gal Drums w/o Liners	SR-W027-FB-PRE86-C-	4.5
<b>Emplaced Total</b>		<b>2990.7</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	12.72
Aluminum-based Metals/Alloys	0.13
Other Metals	0.16
Other Inorganic Materials	4.28
Cellulosics	4.25
Rubber	4.23
Plastics	29.82
Cements	0.00
Inorganic Matrix	0.09
Organic Matrix	0.02
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	218.87
Packaging Material, Plastic	18.03
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	5.06E-01
Am-243	4.19E-07
Cm-244	5.87E-04
Cs-137	1.58E-06
Np-237	4.28E-05
Pu-238	1.92E-01
Pu-239	1.66E+00
Pu-240	4.24E-01
Pu-241	5.32E+00
Pu-242	8.71E-05
Sr-90	1.57E-06
Th-229	3.79E-09
Th-230	2.11E-09
Th-232	4.46E-08
U-233	8.09E-06
U-234	4.82E-05
U-235	1.12E-07
U-236	6.28E-08
U-238	4.88E-07

## Haz. Waste No(s).

D005, D006, D007, D008, D009, D011, D018, D019, D022, D029, D039, D040, D043, F001, F002, F003, F005, U002, U151

**No TRUCON Codes Provided**

## Waste Stream Description

N/A

Comprehensive Inventory Database ver. 1.00

Data ver. D.9.02

NOTE: Actual numerical values have been rounded for presentation purposes.

B - SR - 16

Waste Stream ID: **WP-GEVNC.01**

## Appendix B

## TRU Waste Inventory Profile Report

Site	GE - Vallecitos Nuclear Center	Final Waste Form	Heterogeneous	Waste Matrix Code	S5400	Handling	RH
Source Cat.	N/A	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	RH HOT CELL DEBRIS WASTE			Activity Concentrations Decayed to CY	2009		

Waste Volume Detail (m<sup>3</sup>)

Emplaced Volumes		
Container Type	Ref. Waste Stream	Volume
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	GEVNC.01-S	12.5
RH Can w/ Remov Lid w/ 3 - 55-gal w/o Liner	GEVNC.01-S	6.2
<b>Emplaced Total</b>		<b>18.7</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.00
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	0.00
Cellulosics	0.00
Rubber	0.00
Plastics	128.15
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	652.20
Packaging Material, Plastic	17.33
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	3.18E+00
Cs-137	2.86E+00
Pu-238	3.31E-02
Pu-239	2.35E-01
Pu-240	1.09E-01
Pu-241	1.24E+00
Pu-242	6.39E-05
Sr-90	8.79E-01
U-233	1.99E-06
U-234	4.57E-04
U-235	1.66E-05
U-238	8.36E-06

## Haz. Waste No(s).

D007, D008, D009,  
F002, F005**No TRUCON  
Codes Provided**

## Waste Stream Description

N/A



**APPENDIX C: Potential WIPP Waste**

The following WSPs contain information on potential TRU waste streams as of the inventory date, December 31, 2009. These waste streams have been placed in the potential category for various reasons as stated in Section 4.0 of this report.

The TRU waste sites that have reported potential TRU waste streams are:

Material and Fuels Complex	AW
Babcock and Wilcox Nuclear Energy Services	BL
Bettis Atomic Power Laboratory	BT
Idaho National Laboratory	IN
Los Alamos National Laboratory	LA
Hanford (Richland Operations) Site	RL
Hanford (Office of River Protection)	RP
Savannah River Site	SR
West Valley Demonstration Project	WV

Waste Stream ID: **AW-IN-TRA-BE-01**

## Appendix C

## TRU Waste Inventory Profile Report

Site	Argonne National Laboratory - West	Final Waste Form	Uncategorized Metal	Waste Matrix Code	S5000	Handling	RH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	TRA Beryllium Blocks	Activity Concentrations Decayed to CY			2001		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
Beryllium Reflector Block	9.0	10.8	19.8
Shim Control Cylinder	6.2	5.4	11.5
<b>Current Form Total</b>	<b>15.2</b>	<b>16.2</b>	<b>31.3</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid - Dir Ld	15.1	16.0	31.2
<b>Final Form Total</b>	<b>15.1</b>	<b>16.0</b>	<b>31.2</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.00
Aluminum-based Metals/Alloys	0.00
Other Metals	429.85
Other Inorganic Materials	0.00
Cellulosics	0.00
Rubber	0.00
Plastics	0.00
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	560.60
Packaging Material, Plastic	0.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	4.90E-02
Cs-137	6.12E+00
Pu-238	2.96E-02
Pu-239	5.91E-03
Pu-240	1.54E-02
Pu-241	1.97E+00
Pu-242	3.24E-04
Sr-90	1.80E+00
U-233	2.15E-05
U-234	5.51E-06
U-238	1.88E-06

No Hazardous Waste Numbers Provided

TRUCON Code(s)

317

## Waste Stream Description

This waste stream consists of beryllium reflector blocks and outer shim control cylinders (OSCCs) removed from the Advanced Test Reactor (ATR) at INL.

Waste Stream ID: **AW-W018**

## Appendix C

## TRU Waste Inventory Profile Report

Site	Argonne National Laboratory - West	Final Waste Form	Uncategorized Metal	Waste Matrix Code	X7520	Handling	RH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Defense Determination	Likely Defense-Related	Inventory Date	12/31/2009		
Stream Name	SODIUM - TRU			Activity Concentrations Decayed to CY	1996		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
Liner - RSWF	0.6	0.0	4.0
<b>Current Form Total</b>	<b>4.0</b>	<b>0.0</b>	<b>4.0</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid - Dir Ld	4.5	0.0	4.5
<b>Final Form Total</b>	<b>4.5</b>	<b>0.0</b>	<b>4.5</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	1829.21
Aluminum-based Metals/Alloys	0.00
Other Metals	228.67
Other Inorganic Materials	114.34
Cellulosics	114.34
Rubber	0.00
Plastics	0.00
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	560.60
Packaging Material, Plastic	0.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.30E+02
Cs-137	6.03E+04
Pu-238	3.25E+02
Pu-239	5.76E+03
Pu-240	9.68E+02
Pu-241	2.40E+04
Sr-90	2.47E+04

No Hazardous Waste Numbers Provided

TRUCON Code(s)

317

## Waste Stream Description

Sodium was used as a primary and secondary coolant for the EBR-II reactor. Waste sodium metal is a hazardous constituent (D001/D003) of some of the TRU waste stored at the ANL-W Radioactive Scrap and Waste Facility (RSWF). The waste was generated during maintenance and operational activities. The sodium typically coats waste metal equipment, experiments, and components removed during reactor operations and maintenance activities or is contained in blanket elements. This waste will require treatment (EPA technology code DEACT) to remove sodium from the TRU waste prior to disposal at WIPP. Final waste form has not been determined yet, but the sodium will be removed from the waste. Once removed, the resulting waste may not be considered TRU, especially in the case of sodium-bonded blanket fuels.

Waste Stream ID: **AW-W019**

## Appendix C

## TRU Waste Inventory Profile Report

Site	Argonne National Laboratory - West	Final Waste Form	Uncategorized Metal	Waste Matrix Code	X7520	Handling	RH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Defense Determination	Likely Defense-Related	Inventory Date	12/31/2009		
Stream Name	SODIUM POTASSIUM -NaK- TRU			Activity Concentrations Decayed to CY	1996		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
Liner - RSWF	0.2	0.0	0.2
<b>Current Form Total</b>	<b>0.2</b>	<b>0.0</b>	<b>0.2</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid - Dir Ld	0.9	0.0	0.9
<b>Final Form Total</b>	<b>0.9</b>	<b>0.0</b>	<b>0.9</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	466.88
Aluminum-based Metals/Alloys	0.00
Other Metals	58.36
Other Inorganic Materials	29.21
Cellulosics	29.21
Rubber	0.00
Plastics	0.00
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	560.60
Packaging Material, Plastic	0.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	4.07E+01
Cs-137	1.88E+04
Pu-238	1.01E+02
Pu-239	1.80E+03
Pu-240	3.02E+02
Pu-241	7.49E+03
Sr-90	7.69E+03

No Hazardous Waste Numbers Provided

TRUCON Code(s)

317

## Waste Stream Description

Sodium potassium alloy (NaK) was used as a coolant for some components of the EBR-II Reactor. Waste NaK metal is a hazardous constituent (D003) of some transuranic wastes stored at the ANL-W Radioactive Scrap and Waste Facility (RSWF). The remote-handled NaK waste at RSWF is contained in stainless steel capsules or tubing and placed inside carbon steel waste cans which then are placed in stainless steel outer cans. The entire package is then stored in RSWF storage liners (carbon steel soil storage vaults). The NaK was generated during maintenance and operational activities. NaK waste is in canisters with TRU waste metal pieces and rods from reactor experiments. This waste will require treatment (EPA technology code DEACT) to remove NaK from the TRU waste prior to disposal at WIPP. Final waste form has not been determined yet.

Waste Stream ID: **AW-W029**

## Appendix C

## TRU Waste Inventory Profile Report

Site	Argonne National Laboratory - West	Final Waste Form	Uncategorized Metal	Waste Matrix Code	S5111	Handling	RH
Source Cat.	R&D/R&D Laboratory Waste	Defense Determination	Likely Defense-Related	Inventory Date	12/31/2009		
Stream Name	RSWF TRANSURANIC WASTE			Activity Concentrations Decayed to CY	1996		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
Liner - RSWF	0.3	0.0	4.7
<b>Current Form Total</b>	<b>4.7</b>	<b>0.0</b>	<b>4.7</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/o Liner	8.9	0.0	8.9
<b>Final Form Total</b>	<b>8.9</b>	<b>0.0</b>	<b>8.9</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	61.79
Aluminum-based Metals/Alloys	1.17
Other Metals	129.76
Other Inorganic Materials	7.11
Cellulosics	4.04
Rubber	0.24
Plastics	2.63
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	652.20
Packaging Material, Plastic	0.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	8.72E+01
Cs-137	4.03E+04
Pu-238	2.17E+02
Pu-239	3.86E+03
Pu-240	6.48E+02
Pu-241	1.61E+04
Sr-90	1.65E+04

No Hazardous Waste Numbers Provided

TRUCON Code(s)

317

## Waste Stream Description

Radioactive Scrap and Waste Facility (RSWF) Waste containers storing TRU waste from various facilities. Waste includes analytical samples, EBR-I waste and subassembly hardware.

Waste Stream ID: **BL-Parks**

## Appendix C

## TRU Waste Inventory Profile Report

Site	Babcock and Wilcox Nuclear Energy Services	Final Waste Form	Heterogeneous	Waste Matrix Code	S5000	Handling	CH
Source Cat.	Source Information Not Compiled	Defense Determination	Pending Determination	Inventory Date	12/31/2009		
Stream Name	Parks Township TRU Orphan Waste				Activity Concentrations Decayed to CY	2000	

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	4.0	0.0	4.0
Box - Steel	5.7	0.0	5.7
<b>Current Form Total</b>	<b>9.6</b>	<b>0.0</b>	<b>9.6</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	4.0	0.0	4.0
SWB Dir Ld w/o Liner	5.7	0.0	5.7
<b>Final Form Total</b>	<b>9.6</b>	<b>0.0</b>	<b>9.6</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.00
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	0.00
Cellulosics	0.00
Rubber	0.00
Plastics	0.00
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	144.18
Packaging Material, Plastic	0.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	7.99E+00
Cs-137	4.11E-03
Pu-238	3.44E+00
Pu-239	1.82E+01
Pu-240	6.85E+00
Pu-241	1.83E+02
Pu-242	4.04E-03
U-234	3.08E-05
U-235	1.40E-06
U-238	2.79E-06

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

## Waste Stream Description

10.05 m3 of waste from Parks Township ROD 63FR3629, 65FR82985, 69FR39446 amended 27 February 2008 Point of Contact William Spurgeon (Any reference to 45m3, Matt Hutmaker, B&amp;W is not related to BL-Parks)

Waste Stream ID: **BL-Parks-A**

## Appendix C

## TRU Waste Inventory Profile Report

Site	Babcock and Wilcox Nuclear Energy Services	Final Waste Form	Heterogeneous	Waste Matrix Code	S5000	Handling	RH
Source Cat.	Source Information Not Compiled	Defense Determination	Pending Determination	Inventory Date	12/31/2009		
Stream Name	Parks Township TRU Orphan Waste	Activity Concentrations Decayed to CY			2000		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.2	0.0	0.2
Box - Misc	0.2	0.0	0.2
<b>Current Form Total</b>	<b>0.4</b>	<b>0.0</b>	<b>0.4</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/o Liner	0.9	0.0	0.9
<b>Final Form Total</b>	<b>0.9</b>	<b>0.0</b>	<b>0.9</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.00
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	0.00
Cellulosics	0.00
Rubber	0.00
Plastics	0.00
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	652.20
Packaging Material, Plastic	0.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.35E-01
Pu-239	4.41E+00

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

## Waste Stream Description

10.05 m3 of waste from Parks Township ROD 63FR3629, 65FR82985, 69FR39446 amended 27 February 2008 Point of Contact William Spurgeon (Any reference to 45m3, Matt Hutmaker, B&amp;W is not related to BL-Parks)



Waste Stream ID: **BT-T006**

## Appendix C

## TRU Waste Inventory Profile Report

Site	Bettis Atomic Power Laboratory	Final Waste Form	Heterogeneous	Waste Matrix Code	S5000	Handling	CH
Source Cat.	Discarding Excess/Expired Materials	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Neutron Sources	Activity Concentrations Decayed to CY			1967		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
Shipping Assembly	49.1	0.0	49.1
<b>Current Form Total</b>	<b>49.1</b>	<b>0.0</b>	<b>49.1</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
SLB2 (5' x 5' x 8) Dir Ld	50.9	0.0	50.9
<b>Final Form Total</b>	<b>50.9</b>	<b>0.0</b>	<b>50.9</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	373.00
Aluminum-based Metals/Alloys	0.37
Other Metals	501.00
Other Inorganic Materials	0.00
Cellulosics	0.00
Rubber	0.12
Plastics	353.00
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	216.30
Packaging Material, Plastic	0.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	9.77E-02
Cm-244	2.26E-11
Cs-137	1.89E-08
Pu-238	7.08E+01
Pu-239	6.27E-02
Pu-240	4.07E-03
Pu-241	1.52E+00
Sr-90	1.87E-08
U-234	4.89E-03
U-235	1.63E-09

## Haz. Waste No(s).

D008

## TRUCON Code(s)

320

## Waste Stream Description

Neutron sources--(current form Source Capsule)

Waste Stream ID: **IN-BN050**

## Appendix C

## TRU Waste Inventory Profile Report

Site	Idaho National Laboratory	Final Waste Form	Solidified Inorganics	Waste Matrix Code	S3113	Handling	CH
Source Cat.	Source Information Not Compiled	Defense Determination	Unknown	Inventory Date	12/31/2009		
Stream Name	Solidified Solutions	Activity Concentrations Decayed to CY			1989		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.2	0.0	0.2
<b>Current Form Total</b>	<b>0.2</b>	<b>0.0</b>	<b>0.2</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.2	0.0	0.2
<b>Final Form Total</b>	<b>0.2</b>	<b>0.0</b>	<b>0.2</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.00
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	461.00
Cellulosics	0.00
Rubber	0.00
Plastics	4.24
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Np-237	3.33E-04
Pu-239	1.20E-01

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

## Waste Stream Description

This waste stream is from Bettis Atomic Power Laboratory. No more information is available, but the waste is thought to be solidified inorganic solutions.

Waste Stream ID: **IN-BN811**

## Appendix C

## TRU Waste Inventory Profile Report

Site	Idaho National Laboratory	Final Waste Form	Solidified Inorganics	Waste Matrix Code	S3125	Handling	CH
Source Cat.	Pollution Control or Waste Treatment Process	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Evaporator and Dissolver Sludge	Activity Concentrations Decayed to CY			1989		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.8	0.0	0.8
<b>Current Form Total</b>	<b>0.8</b>	<b>0.0</b>	<b>0.8</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
SWB w/ 4 - 55-gal Drums w/ Liners	1.9	0.0	1.9
<b>Final Form Total</b>	<b>1.9</b>	<b>0.0</b>	<b>1.9</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.00
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	0.00
Cellulosics	0.00
Rubber	0.00
Plastics	0.00
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	211.10
Packaging Material, Plastic	16.30
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Pu-238	7.88E+02
Pu-239	5.85E+00

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

## Waste Stream Description

"This waste stream, generated at Mound Laboratory, consists of dry evaporator and dissolver sludge in the form of powder or sand-like particles. Waste may also contain <50% by volume debris (metal, glass, filters, graphite, rust, floor sweepings, plastic, combustibles, etc.). Waste may also contain limited amounts of mercury and beryllium-contaminated wastes. "

Waste Stream ID: **IN-ID-RTC-S5000**

## Appendix C

## TRU Waste Inventory Profile Report

Site	Idaho National Laboratory	Final Waste Form	Heterogeneous	Waste Matrix Code	S5400	Handling	RH
Source Cat.	Remediation/D&D Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	RH TRU Debris waste from Reactor Technology Complex at the INL			Activity Concentrations Decayed to CY	N/A		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	10.4	0.0	10.4
<b>Current Form Total</b>	<b>10.4</b>	<b>0.0</b>	<b>10.4</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	15.1	0.0	15.1
<b>Final Form Total</b>	<b>15.1</b>	<b>0.0</b>	<b>15.1</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.00
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	0.00
Cellulosics	0.00
Rubber	0.00
Plastics	0.00
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	652.20
Packaging Material, Plastic	26.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## No Final Form Radionuclides Provided

## Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D019, F002, F005, U134

## No TRUCON Codes Provided

## Waste Stream Description

Draft AK report is being prepared to assure that the D&D waste stream meets WIPP requirements. The waste is planned to be packaged in future (2011-2012). Approximately 50 drums (55 gallon) are expected from this waste stream.

Waste Stream ID: **IN-SBW-01A**

## Appendix C

## TRU Waste Inventory Profile Report

Site	Idaho National Laboratory	Final Waste Form	Solidified Inorganics	Waste Matrix Code	S3100	Handling	RH
Source Cat.	Materials Production/Recovery Effluents	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	SBW Treatment - Steam Reforming - Carbonate Waste Form			Activity Concentrations Decayed to CY	2006		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
Tank(s)	3520.0	0.0	3520.0
<b>Current Form Total</b>	<b>3520.0</b>	<b>0.0</b>	<b>3520.0</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid - Dir Ld	599.0	0.0	599.0
<b>Final Form Total</b>	<b>599.0</b>	<b>0.0</b>	<b>599.0</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.00
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	0.00
Cellulosics	0.00
Rubber	0.00
Plastics	0.00
Cements	0.00
Inorganic Matrix	1334.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	560.60
Packaging Material, Plastic	0.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	5.27E-01
Am-243	2.85E-04
Cm-244	2.02E-03
Cs-137	2.90E+02
Np-237	4.03E-03
Pu-238	6.22E+00
Pu-239	6.75E-01
Pu-240	2.50E-01
Pu-241	2.54E+00
Pu-242	1.29E-04
Sr-90	1.90E+02
U-233	5.64E-05
U-234	8.98E-03
U-235	2.20E-04
U-238	2.16E-04

## Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, F001, F002, F005, U134

No TRUCON Codes Provided

## Waste Stream Description

The liquid SBW would be transferred from the storage tanks to the steam reforming process over a 1.0-year period. The steam reforming process is a fluidized bed reactor that converts the metals dissolved in the nitric acid into a dry granular powder. The fluidized bed operates at temperature between 600 and 1000 degrees centigrade. The carbonate waste form would be removed from the fluidized bed and transferred to the canning facility and placed by 90% loading in to 72-B canisters (direct loaded). The carbonate waste form would be RH-TRU waste, dried to 1% moisture, and would generate approximately 673 canisters with a surface dose rate <100 Rem/hr.

Waste Stream ID: **IN-SBW-01B**

Appendix C

TRU Waste Inventory Profile Report

Site	Idaho National Laboratory	Final Waste Form	Heterogeneous	Waste Matrix Code	S5400	Handling	RH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	SBW Treatment - Steam Reforming Process - Debris			Activity Concentrations Decayed to CY	2010		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid - Dir Ld	0.0	89.0	89.0
<b>Current Form Total</b>	<b>0.0</b>	<b>89.0</b>	<b>89.0</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid - Dir Ld	0.0	89.0	89.0
<b>Final Form Total</b>	<b>0.0</b>	<b>89.0</b>	<b>89.0</b>

Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	700.00
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	2.00
Cellulosics	0.00
Rubber	0.00
Plastics	0.00
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	560.60
Packaging Material, Plastic	0.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	5.27E-03
Am-243	2.85E-06
Cm-244	2.02E-05
Cs-137	2.90E+00
Np-237	4.03E-05
Pu-238	6.22E-02
Pu-239	6.75E-03
Pu-240	2.50E-03
Pu-241	2.54E-02
Pu-242	1.29E-06
Sr-90	1.90E+00
U-233	5.64E-07
U-234	8.98E-05
U-235	2.20E-06
U-238	2.16E-06

Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, F001, F002, F005, U134

No TRUCON Codes Provided

Waste Stream Description

The debris from the steam reforming process would include spent HEPA filters and other failed equipment.

Waste Stream ID: **IN-W269**

Appendix C

TRU Waste Inventory Profile Report

Site	Idaho National Laboratory	Final Waste Form	Heterogeneous	Waste Matrix Code	S5490	Handling	CH
Source Cat.	R&D/R&D Laboratory Waste	Defense Determination	Pending Determination	Inventory Date	12/31/2009		
Stream Name	Laboratory Waste	Activity Concentrations Decayed to CY			1989		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	28.7	0.0	28.7
<b>Current Form Total</b>	<b>28.7</b>	<b>0.0</b>	<b>28.7</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	28.7	0.0	28.7
<b>Final Form Total</b>	<b>28.7</b>	<b>0.0</b>	<b>28.7</b>

Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.00
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	0.00
Cellulosics	0.00
Rubber	0.00
Plastics	0.00
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	5.71E+00
Pu-238	6.67E+00
Pu-239	5.86E+01
Pu-240	6.07E+00
Pu-241	2.23E-01
Pu-242	2.07E-05
U-235	1.02E-02
U-238	6.25E-05

Haz. Waste No(s).

D008

No TRUCON Codes Provided

Waste Stream Description

This waste stream, generated at the INL, contains laboratory waste from ANL-W including fluxwire, fission counters, HEDL samples, analytical samples, dissolved and absorbed oil-dri, glassware, vials, miscellaneous waste from gloveboxes, dissolved pellets absorbed in Oil Dri, enriched and normal U308 pellets, aluminum foil and capsules, TREAT waste capsules, chlorinated ion exchange esins, Pu sources, and irradiated Ge caps. Lab waste from ICPP includes kimwipes, trash, glassware, dissolved samples absorbed in Oil Dri, analytical samples, gloves, etc. The organic content is usually less than 14 lb/ft3. No sludges or free liquids should be present. Absorbents were added if moisture was detected in any wastes. No explosive or pyrophoric materials should be in this waste.

Waste Stream ID: **IN-W322**

## Appendix C

## TRU Waste Inventory Profile Report

Site	Idaho National Laboratory	Final Waste Form	Uncategorized Metal	Waste Matrix Code	S5000	Handling	CH
Source Cat.	Other/Multiple Sources	Defense Determination	Unknown	Inventory Date	12/31/2009		
Stream Name	Actinide Neutron Sources	Activity Concentrations Decayed to CY			1989		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	2.1	0.0	2.1
<b>Current Form Total</b>	<b>2.1</b>	<b>0.0</b>	<b>2.1</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
SWB w/ 4 - 55-gal Drums w/ Liners	5.7	0.0	5.7
<b>Final Form Total</b>	<b>5.7</b>	<b>0.0</b>	<b>5.7</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.00
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	139.10
Cellulosics	0.00
Rubber	0.00
Plastics	0.00
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	211.10
Packaging Material, Plastic	16.30
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Pu-239	4.83E+00
Pu-240	1.00E+00
U-235	1.31E-04

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

## Waste Stream Description

This waste stream was generated at the INEL. These wastes include actinide neutron sources, a radium needle, small vials of fuel, and metal containers of experimental fuel capsules.



Waste Stream ID: **IN-W337**

## Appendix C

## TRU Waste Inventory Profile Report

Site	Idaho National Laboratory	Final Waste Form	Inorganic Non-Metal	Waste Matrix Code	S5121	Handling	CH
Source Cat.	Source Information Not Compiled	Defense Determination	Unknown	Inventory Date	12/31/2009		
Stream Name	Americium Sources	Activity Concentrations Decayed to CY			1989		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.2	0.0	0.2
<b>Current Form Total</b>	<b>0.2</b>	<b>0.0</b>	<b>0.2</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.2	0.0	0.2
<b>Final Form Total</b>	<b>0.2</b>	<b>0.0</b>	<b>0.2</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.00
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	139.10
Cellulosics	0.00
Rubber	0.00
Plastics	0.00
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Pu-239	1.46E+01
Pu-240	3.03E+00
U-235	3.96E-04

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

## Waste Stream Description

"This waste was generated at the Idaho National Engineering Laboratory. It consists of an americium neutron source. No other wastes were included in the drum."

Waste Stream ID: **IN-W338**

## Appendix C

## TRU Waste Inventory Profile Report

Site	Idaho National Laboratory	Final Waste Form	Heterogeneous	Waste Matrix Code	S5490	Handling	CH
Source Cat.	Source Information Not Compiled	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	ANL-W ACL Cold-Line Absorbed Liquid and Debris			Activity Concentrations Decayed to CY	1989		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	1.2	0.0	1.2
<b>Current Form Total</b>	<b>1.2</b>	<b>0.0</b>	<b>1.2</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	1.2	0.0	1.2
<b>Final Form Total</b>	<b>1.2</b>	<b>0.0</b>	<b>1.2</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.00
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	0.00
Cellulosics	0.00
Rubber	0.00
Plastics	0.00
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Pu-239	4.67E-01
U-235	1.17E-04

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

## Waste Stream Description

This waste stream was generated at ANL-W, includes solidified liquids, miscellaneous hardware, and polyethylene.

Waste Stream ID: **IN-W339**

## Appendix C

## TRU Waste Inventory Profile Report

Site	Idaho National Laboratory	Final Waste Form	Heterogeneous	Waste Matrix Code	S5490	Handling	CH
Source Cat.	Source Information Not Compiled	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	ANL-W FMF EFL: Zr-U-Pu Fuel Casting			Activity Concentrations Decayed to CY	1989		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	8.5	0.0	8.5
<b>Current Form Total</b>	<b>8.5</b>	<b>0.0</b>	<b>8.5</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	8.5	0.0	8.5
<b>Final Form Total</b>	<b>8.5</b>	<b>0.0</b>	<b>8.5</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.00
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	0.00
Cellulosics	0.00
Rubber	0.00
Plastics	0.00
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Pu-239	1.10E+01
Pu-240	4.49E-02
U-235	8.30E-04

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

## Waste Stream Description

This waste stream was generated at ANL-W. It consists of solid zirconium, uranium, and plutonium fuel casting metal alloy wastes. The waste is a solid with small amounts of glass powder from broken glass molds. The waste is created when the metal is heated in a crucible and then pressurized into the glass molds. The glass molds are broken to remove the fuel pins, and the remaining molds, crucibles, and residues constitute the waste.

Comprehensive Inventory Database ver. 1.00

Data ver. D.9.02

NOTE: Actual numerical values have been rounded for presentation purposes.

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Waste Stream ID: **IN-W342R**

## Appendix C

## TRU Waste Inventory Profile Report

Site	Idaho National Laboratory	Final Waste Form	Heterogeneous	Waste Matrix Code	S5490	Handling	RH
Source Cat.	Source Information Not Compiled	Defense Determination	Unknown	Inventory Date	12/31/2009		
Stream Name	Miscellaneous Radionuclide Sources	Activity Concentrations Decayed to CY			1989		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.4	0.0	0.4
<b>Current Form Total</b>	<b>0.4</b>	<b>0.0</b>	<b>0.4</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	0.9	0.0	0.9
<b>Final Form Total</b>	<b>0.9</b>	<b>0.0</b>	<b>0.9</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.00
Aluminum-based Metals/Alloys	0.00
Other Metals	111.26
Other Inorganic Materials	0.00
Cellulosics	0.00
Rubber	0.00
Plastics	0.00
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	652.20
Packaging Material, Plastic	26.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.46E+00
Pu-239	2.13E-02

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

## Waste Stream Description

There is no descriptive or constituent information available for this waste, which was generated at ANL-W. Based on engineering judgment, the waste was assigned to "Inorganic Homogeneous Solids." The waste is assumed to be metallic but of a size that is too small to qualify as debris.

Waste Stream ID: **IN-W350**

## Appendix C

## TRU Waste Inventory Profile Report

Site	Idaho National Laboratory	Final Waste Form	Unknown	Waste Matrix Code	S9000	Handling	CH
Source Cat.	Source Information Not Compiled	Defense Determination	Likely Defense-Related	Inventory Date	12/31/2009		
Stream Name	Special Source Material (UNK)	Activity Concentrations Decayed to CY			1989		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.2	0.0	0.2
<b>Current Form Total</b>	<b>0.2</b>	<b>0.0</b>	<b>0.2</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.2	0.0	0.2
<b>Final Form Total</b>	<b>0.2</b>	<b>0.0</b>	<b>0.2</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.00
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	0.00
Cellulosics	0.00
Rubber	0.00
Plastics	0.00
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Pu-239	5.74E+01
Pu-240	1.76E+02

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

## Waste Stream Description

There is no descriptive or constituent information available for this waste, which was generated at ANL-E.

Waste Stream ID: **IN-W359R**

## Appendix C

## TRU Waste Inventory Profile Report

Site	Idaho National Laboratory	Final Waste Form	Unknown	Waste Matrix Code	S9000	Handling	RH
Source Cat.	Source Information Not Compiled	Defense Determination	Likely Defense-Related	Inventory Date	12/31/2009		
Stream Name	NEUTRON SOURCES			Activity Concentrations Decayed to CY	1989		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.6	0.0	0.6
<b>Current Form Total</b>	<b>0.6</b>	<b>0.0</b>	<b>0.6</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	0.9	0.0	0.9
<b>Final Form Total</b>	<b>0.9</b>	<b>0.0</b>	<b>0.9</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.00
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	0.00
Cellulosics	0.00
Rubber	0.00
Plastics	0.00
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	652.20
Packaging Material, Plastic	26.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Pu-238	1.41E+02

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

## Waste Stream Description

This waste stream generated by Bettis Atomic Laboratory consists of two Pu-238-Be sources and one Pu-238-Li source.

Waste Stream ID: **IN-W360R**

## Appendix C

## TRU Waste Inventory Profile Report

Site	Idaho National Laboratory	Final Waste Form	Unknown	Waste Matrix Code	S9000	Handling	RH
Source Cat.	Source Information Not Compiled	Defense Determination	Likely Defense-Related	Inventory Date	12/31/2009		
Stream Name	Miscellaneous Sources	Activity Concentrations Decayed to CY			1989		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.2	0.0	0.2
<b>Current Form Total</b>	<b>0.2</b>	<b>0.0</b>	<b>0.2</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	0.9	0.0	0.9
<b>Final Form Total</b>	<b>0.9</b>	<b>0.0</b>	<b>0.9</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	111.50
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	0.00
Cellulosics	0.00
Rubber	0.00
Plastics	0.00
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	652.20
Packaging Material, Plastic	26.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Pu-238	2.87E-01
Pu-239	8.14E+00
Pu-240	1.85E+00
Pu-241	4.91E+01
Pu-242	1.33E-04

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

## Waste Stream Description

The waste stream generated by Bettis Atomic Laboratory consists of two Ra-226 sources.

Waste Stream ID: **LA-TA-00-04**

## Appendix C

## TRU Waste Inventory Profile Report

Site	Los Alamos National Laboratory	Final Waste Form	Solidified Organics	Waste Matrix Code	S3110	Handling	CH
Source Cat.	Other/Multiple Sources	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Absorbed Liquid Waste	Activity Concentrations Decayed to CY			2007		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.2	0.0	0.2
<b>Current Form Total</b>	<b>0.2</b>	<b>0.0</b>	<b>0.2</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.2	0.0	0.2
<b>Final Form Total</b>	<b>0.2</b>	<b>0.0</b>	<b>0.2</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	2.40
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	0.88
Cellulosics	0.00
Rubber	0.00
Plastics	3.76
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	19.13
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	3.99E-03
Pu-238	1.25E-03
Pu-239	4.29E-02
Pu-240	1.02E-02
Pu-241	1.47E-01
Pu-242	5.75E-07

## Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D021, D022, D035, D038, D039, D040, F001, F002, F003, F005, U003, U044, U196

## TRUCON Code(s)

112/212

## Waste Stream Description

Inorganic particulate waste generated during plutonium recovery, fabrication, R&D, facility and equipment operations, and maintenance processes.



Waste Stream ID: LA-TA-03-17

## Appendix C

## TRU Waste Inventory Profile Report

Site	Los Alamos National Laboratory	Final Waste Form	Heterogeneous	Waste Matrix Code	S5400	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Hepa Filters	Activity Concentrations Decayed to CY			1977		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
Box - Crate	19.2	0.0	19.2
<b>Current Form Total</b>	<b>19.2</b>	<b>0.0</b>	<b>19.2</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
SWB Dir Ld w/ Liner	20.8	0.0	20.8
<b>Final Form Total</b>	<b>20.8</b>	<b>0.0</b>	<b>20.8</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	10.87
Aluminum-based Metals/Alloys	0.00
Other Metals	3.56
Other Inorganic Materials	17.25
Cellulosics	13.89
Rubber	1.41
Plastics	40.79
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.27
Vitrified	0.00
Packaging Material, Steel	153.50
Packaging Material, Plastic	1.20
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

No Final Form Radionuclides Provided

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

## Waste Stream Description

Hepa Filters

Waste Stream ID: LA-TA-03-20

## Appendix C

## TRU Waste Inventory Profile Report

Site	Los Alamos National Laboratory	Final Waste Form	Heterogeneous	Waste Matrix Code	S5400	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Combustible debris waste from chemistry and metallurgical operations			Activity Concentrations Decayed to CY	1986		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.2	0.0	0.2
85-gal Drum w/ 1 - 55-gal Drum w/ Liner	0.3	0.0	0.3
<b>Current Form Total</b>	<b>0.5</b>	<b>0.0</b>	<b>0.5</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.4	0.0	0.4
<b>Final Form Total</b>	<b>0.4</b>	<b>0.0</b>	<b>0.4</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	16.09
Aluminum-based Metals/Alloys	0.00
Other Metals	5.26
Other Inorganic Materials	25.52
Cellulosics	20.55
Rubber	2.08
Plastics	60.35
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.40
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

No Final Form Radionuclides Provided

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

## Waste Stream Description

Combustible debris waste from chemistry and metallurgical operations in wings 2 and 4 of the CMR facility. Combustible waste generated from facility and equipment operations and maintenance. This waste includes paper, rags, plastic, rubber, wood-based HEPA filters, and plastic-based and cellulose-based waste generated at the facility. Plastic-based waste includes, but may not be limited to, tape, polyethylene and vinyl; gloves; plastic vials; polystyrene; Tygon tubing; polyvinyl chloride plastic; Teflon products; Plexiglas; and dry box gloves (unleaded neoprene base). Cellulose-based waste includes, but may not be limited to, rags, wood, paper, cardboard, laboratory coats and coveralls, booties and cotton gloves, and similar materials. The waste stream may also contain a smaller fraction of non-combustible solids (e.g., scrap metal, crucibles, metal lids, zippers, discarded tools) and a small fraction of homogenous solids, salts, leached solids, ash, hydroxide cakes, crucibles, impure oxides.

Comprehensive Inventory Database ver. 1.00

Data ver. D.9.02

NOTE: Actual numerical values have been rounded for presentation purposes.

C - LA - 3

Waste Stream ID: LA-TA-03-21

## Appendix C

## TRU Waste Inventory Profile Report

Site	Los Alamos National Laboratory	Final Waste Form	Heterogeneous	Waste Matrix Code	S5400	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Metals and Miscellaneous Equipment Debris			Activity Concentrations Decayed to CY	1975		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
Box - Crate	93.4	0.0	93.4
<b>Current Form Total</b>	<b>93.4</b>	<b>0.0</b>	<b>93.4</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
SWB Dir Ld w/ Liner	94.5	0.0	94.5
<b>Final Form Total</b>	<b>94.5</b>	<b>0.0</b>	<b>94.5</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	32.01
Aluminum-based Metals/Alloys	0.00
Other Metals	10.47
Other Inorganic Materials	50.77
Cellulosics	40.90
Rubber	4.15
Plastics	120.08
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.80
Vitrified	0.00
Packaging Material, Steel	153.50
Packaging Material, Plastic	1.20
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

No Final Form Radionuclides Provided

Haz. Waste No(s).

D008

No TRUCON Codes Provided

## Waste Stream Description

Metals and Miscellaneous Equipment Debris

Comprehensive Inventory Database ver. 1.00

Data ver. D.9.02

NOTE: Actual numerical values have been rounded for presentation purposes.

C - LA - 4

Waste Stream ID: LA-TA-03-23

## Appendix C

## TRU Waste Inventory Profile Report

Site	Los Alamos National Laboratory	Final Waste Form	Heterogeneous	Waste Matrix Code	S5400	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Hepa Filters	Activity Concentrations Decayed to CY			1973		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
Box - Crate	66.4	0.0	66.4
<b>Current Form Total</b>	<b>66.4</b>	<b>0.0</b>	<b>66.4</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
SWB Dir Ld w/ Liner	68.0	0.0	68.0
<b>Final Form Total</b>	<b>68.0</b>	<b>0.0</b>	<b>68.0</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	10.65
Aluminum-based Metals/Alloys	0.00
Other Metals	3.48
Other Inorganic Materials	16.89
Cellulosics	13.60
Rubber	1.38
Plastics	39.94
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.27
Vitrified	0.00
Packaging Material, Steel	153.50
Packaging Material, Plastic	1.20
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

No Final Form Radionuclides Provided

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

## Waste Stream Description

Hepa Filters

Waste Stream ID: LA-TA-21-11

## Appendix C

## TRU Waste Inventory Profile Report

Site	Los Alamos National Laboratory	Final Waste Form	Heterogeneous	Waste Matrix Code	S5400	Handling	CH
Source Cat.	Remediation/D&D Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	NonCombustible Building Debris	Activity Concentrations Decayed to CY			1975		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
Box - Crate	15.9	0.0	15.9
Other	2.1	0.0	2.1
<b>Current Form Total</b>	<b>18.0</b>	<b>0.0</b>	<b>18.0</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
SWB Dir Ld w/ Liner	20.8	0.0	20.8
<b>Final Form Total</b>	<b>20.8</b>	<b>0.0</b>	<b>20.8</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	33.56
Aluminum-based Metals/Alloys	12.80
Other Metals	25.73
Other Inorganic Materials	7.31
Cellulosics	21.81
Rubber	16.85
Plastics	12.54
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	153.50
Packaging Material, Plastic	1.20
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

No Final Form Radionuclides Provided

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

## Waste Stream Description

NonCombustible Building Debris

Waste Stream ID: **RL221U-09**

## Appendix C

## TRU Waste Inventory Profile Report

Site	Hanford (Richland) Site	Final Waste Form	Solidified Inorganics	Waste Matrix Code	S3000	Handling	RH
Source Cat.	Remediation/D&D Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	U Plant Tank 10 Projected Waste			Activity Concentrations Decayed to CY	N/A		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
Uncontained	1.9	0.0	1.9
<b>Current Form Total</b>	<b>1.9</b>	<b>0.0</b>	<b>1.9</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	3.6	0.0	3.6
<b>Final Form Total</b>	<b>3.6</b>	<b>0.0</b>	<b>3.6</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.00
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	0.00
Cellulosics	0.00
Rubber	0.00
Plastics	0.00
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	652.20
Packaging Material, Plastic	26.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	3.76E+00
Cs-137	1.56E+02
Np-237	1.79E-02
Pu-238	6.90E-01
Pu-239	1.23E+01
Pu-240	1.23E+01
Pu-241	1.47E+02
Pu-242	1.06E-05
Sr-90	1.20E+02
U-233	2.64E-05
U-234	1.00E-04
U-235	9.76E-05
U-238	1.40E-03

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

## Waste Stream Description

RH-TRU Nitrate Salts in the heel of U Plant Tank 10.

Waste Stream ID: **RL300-11**

## Appendix C

## TRU Waste Inventory Profile Report

Site	Hanford (Richland) Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5000	Handling	RH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	300 Area TRU RH Mixed Debris	Activity Concentrations Decayed to CY			2001		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
Box - Misc	5.7	0.0	5.7
<b>Current Form Total</b>	<b>5.7</b>	<b>0.0</b>	<b>5.7</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	10.7	0.0	10.7
<b>Final Form Total</b>	<b>10.7</b>	<b>0.0</b>	<b>10.7</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	61.00
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	467.03
Cellulosics	15.25
Rubber	0.00
Plastics	3.81
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	652.20
Packaging Material, Plastic	26.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	5.16E-01
Am-243	2.34E-01
Cs-137	3.73E+05
Np-237	1.63E-06
Pu-238	5.75E-01
Pu-239	2.26E-01
Pu-240	8.60E-02
Pu-241	3.80E+00
Pu-242	1.52E-04
Sr-90	2.70E+05
Th-232	8.73E-06
U-234	3.25E-05
U-235	4.96E-07
U-236	1.20E-06
U-238	8.77E-06

No Hazardous Waste Numbers Provided

TRUCON Code(s)

325

## Waste Stream Description

Typically, drums contain both combustible and noncombustible waste items. Combustible waste may include wood, plastics, paper, and rags. Noncombustible waste items may include metals, glass, concrete, and absorbed liquids. If present, boxes typically contain larger waste items (e.g., whole or sectioned glove boxes, ducting, and process vessels). Both drums and boxes may be used for disposal of high-efficiency particulate air filters.

Waste Stream ID: **RLCH2-08**

## Appendix C

## TRU Waste Inventory Profile Report

Site	Hanford (Richland) Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5000	Handling	RH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Tank Farms TRU RH Mixed Debris	Activity Concentrations Decayed to CY			2001		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
Uncontained	292.4	0.0	292.4
<b>Current Form Total</b>	<b>292.4</b>	<b>0.0</b>	<b>292.4</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	417.4	0.0	417.4
<b>Final Form Total</b>	<b>417.4</b>	<b>0.0</b>	<b>417.4</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	2.99
Aluminum-based Metals/Alloys	0.00
Other Metals	362.87
Other Inorganic Materials	7.16
Cellulosics	0.00
Rubber	44.56
Plastics	12.39
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	652.20
Packaging Material, Plastic	26.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.99E+00
Am-243	8.77E-04
Cs-137	3.00E-01
Np-237	1.42E-04
Pu-238	4.92E-02
Pu-239	9.24E-01
Pu-240	2.08E-01
Pu-241	2.69E+00
Pu-242	1.81E-05
Sr-90	5.01E-01
U-233	2.30E-04
U-234	2.56E-03
U-235	1.02E-04
U-236	2.03E-04
U-238	1.93E-03

No Hazardous Waste Numbers Provided

TRUCON Code(s)

325

## Waste Stream Description

Equipment removed from waste tanks (instrument trees, pumps, circulators, agitators, heaters, sluicers, steam coils, air lances, cameras). The waste stream ranges from contaminated clothing to process equipment contaminated with RCRA constituents.



Waste Stream ID: **RLHAN-08**

## Appendix C

## TRU Waste Inventory Profile Report

Site	Hanford (Richland) Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5490	Handling	RH
Source Cat.	Other/Multiple Sources	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Trench Designation waste stream			Activity Concentrations Decayed to CY	N/A		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
85-gal Drum Dir Ld w/ Liner	0.3	0.0	0.3
<b>Current Form Total</b>	<b>0.3</b>	<b>0.0</b>	<b>0.3</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	0.9	0.0	0.9
<b>Final Form Total</b>	<b>0.9</b>	<b>0.0</b>	<b>0.9</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	21.36
Aluminum-based Metals/Alloys	0.07
Other Metals	4.98
Other Inorganic Materials	7.04
Cellulosics	18.58
Rubber	6.29
Plastics	22.45
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	652.20
Packaging Material, Plastic	26.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	5.86E+00
Pu-238	1.34E+00
Pu-239	5.09E+00
Pu-240	2.88E+00
Pu-241	1.11E+02
Pu-242	1.16E-04

## Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D022, D027, D028, D029, D030, D034, D035, D037, D043, F001, F002, F003, F004, F005

## TRUCON Code(s)

325

## Waste Stream Description

Combustible and noncombustible RH-TRU debris waste retrieved from the Hanford low-level burial grounds that cannot be identified or assigned to an original generator. Combustible waste may include wood, plastics, paper, absorbents, rubber, and rags. Noncombustible waste may include failed machinery, tools, glass, concrete, plumbing, and fixtures.

Waste Stream ID: RLPFP-02A

Appendix C

TRU Waste Inventory Profile Report

Site	Hanford (Richland) Site	Final Waste Form	Soils	Waste Matrix Code	S4000	Handling	CH
Source Cat.	Remediation/D&D Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	PFP Contaminated Soil			Activity Concentrations Decayed to CY	N/A		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
Uncontained	23.6	0.0	23.6
<b>Current Form Total</b>	<b>23.6</b>	<b>0.0</b>	<b>23.6</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
SWB Dir Ld w/ Liner	24.6	0.0	24.6
<b>Final Form Total</b>	<b>24.6</b>	<b>0.0</b>	<b>24.6</b>

Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.00
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	0.00
Cellulosics	0.00
Rubber	0.00
Plastics	0.00
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	153.50
Packaging Material, Plastic	1.20
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

No Final Form Radionuclides Provided

No Hazardous Waste Numbers Provided

TRUCON Code(s)  
125/225

Waste Stream Description

Soil characterization and remediation wastes from the 241-Z-361 Crib.

Waste Stream ID: **RLPRC-01**

## Appendix C

## TRU Waste Inventory Profile Report

Site	Hanford (Richland) Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5000	Handling	CH
Source Cat.	R&D/R&D Laboratory Waste	Defense Determination	Unknown	Inventory Date	12/31/2009		
Stream Name	CUPRC TRU Mixed Debris	Activity Concentrations Decayed to CY			1987		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.2	0.0	0.2
SWB Dir Ld w/ Liner	1.9	0.0	1.9
<b>Current Form Total</b>	<b>2.1</b>	<b>0.0</b>	<b>2.1</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.2	0.0	0.2
SWB Dir Ld w/ Liner	1.9	0.0	1.9
<b>Final Form Total</b>	<b>2.1</b>	<b>0.0</b>	<b>2.1</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.00
Aluminum-based Metals/Alloys	0.00
Other Metals	46.45
Other Inorganic Materials	661.59
Cellulosics	0.00
Rubber	0.00
Plastics	0.00
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	151.25
Packaging Material, Plastic	4.75
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	4.40E-02
Pu-238	1.79E-02
Pu-239	1.64E-01
Pu-240	4.19E-02
Pu-241	1.15E+00
Pu-242	2.80E-06
Th-232	4.96E-05
U-234	5.62E-07
U-235	2.54E-08
U-238	5.46E-07

No Hazardous Waste Numbers Provided

TRUCON Code(s)

125/225

## Waste Stream Description

The waste is generated from R&amp;D/R&amp;D Laboratory Waste activities at the CEER University Laboratory.

Waste Stream ID: RP-TFC001

## Appendix C

## TRU Waste Inventory Profile Report

Site	Hanford (River Protection) Site	Final Waste Form	Solidified Inorganics	Waste Matrix Code	S3100	Handling	CH
Source Cat.	Materials Production/Recovery Effluents	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Bismuth Phosphate Process TRU Solids			Activity Concentrations Decayed to CY	2004		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
Tank(s)	1200.0	0.0	1200.0
<b>Current Form Total</b>	<b>1200.0</b>	<b>0.0</b>	<b>1200.0</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	438.7	0.0	438.7
<b>Final Form Total</b>	<b>438.7</b>	<b>0.0</b>	<b>438.7</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.00
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	0.00
Cellulosics	0.00
Rubber	0.00
Plastics	0.00
Cements	0.00
Inorganic Matrix	1.60
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	0.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	7.37E-02
Cs-137	6.11E-01
Np-237	1.22E-05
Pu-238	6.60E-03
Pu-239	5.16E-01
Pu-240	6.23E-02
Pu-241	1.89E-01
Pu-242	3.08E-06
Sr-90	7.98E+00
U-233	1.10E-09
U-234	1.68E-03
U-235	5.42E-05
U-236	1.62E-05
U-238	1.24E-03

## Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D022, D028, D029, D030, D033, D034, D035, D036, D038, D039, D040, D041, D043, F001, F002, F003, F004, F005

**No TRUCON Codes Provided**

## Waste Stream Description

Solidified aqueous waste slurry

Waste Stream ID: RP-TFC002

## Appendix C

## TRU Waste Inventory Profile Report

Site	Hanford (River Protection) Site	Final Waste Form	Solidified Inorganics	Waste Matrix Code	S3100	Handling	RH
Source Cat.	Materials Production/Recovery Effluents	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Bismuth Phosphate Process TRU Solids mixed with Fission Product Waste			Activity Concentrations Decayed to CY	2004		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
Tank(s)	3040.0	0.0	3040.0
<b>Current Form Total</b>	<b>3040.0</b>	<b>0.0</b>	<b>3040.0</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid - Dir Ld	1918.8	0.0	1918.8
<b>Final Form Total</b>	<b>1918.8</b>	<b>0.0</b>	<b>1918.8</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.00
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	0.00
Cellulosics	0.00
Rubber	0.00
Plastics	0.00
Cements	0.00
Inorganic Matrix	1.37
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	560.60
Packaging Material, Plastic	0.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.50E-01
Cs-137	1.05E+02
Np-237	1.31E-04
Pu-238	6.07E-03
Pu-239	3.64E-01
Pu-240	4.17E-02
Pu-241	1.11E-01
Pu-242	9.86E-07
Sr-90	2.46E+02
U-233	6.57E-04
U-234	1.81E-03
U-235	8.00E-05
U-236	2.16E-05
U-238	1.83E-03

## Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D022, D028, D029, D030, D033, D034, D035, D036, D038, D039, D040, D041, D043, F001, F002, F003, F004, F005

**No TRUCON Codes Provided**

## Waste Stream Description

Solidified aqueous waste slurry

Waste Stream ID: **RP-TFC003**

Appendix C

TRU Waste Inventory Profile Report

Site	Hanford (River Protection) Site	Final Waste Form	Solidified Inorganics	Waste Matrix Code	S3100	Handling	RH
Source Cat.	Materials Production/Recovery Effluents	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Bismuth Phosphate Process TRU Solids mixed with Fission Product Waste			Activity Concentrations Decayed to CY	2004		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
Tank(s)	370.0	0.0	370.0
<b>Current Form Total</b>	<b>370.0</b>	<b>0.0</b>	<b>370.0</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid - Dir Ld	258.1	0.0	258.1
<b>Final Form Total</b>	<b>258.1</b>	<b>0.0</b>	<b>258.1</b>

Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.00
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	0.00
Cellulosics	0.00
Rubber	0.00
Plastics	0.00
Cements	0.00
Inorganic Matrix	1.37
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	560.60
Packaging Material, Plastic	0.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.36E-01
Cs-137	2.15E+01
Np-237	1.39E-06
Pu-238	4.87E-03
Pu-239	6.46E-01
Pu-240	6.85E-02
Pu-241	1.94E-01
Pu-242	3.40E-06
Sr-90	1.21E+02
U-233	1.42E-09
U-234	1.80E-03
U-235	7.49E-05
U-236	1.89E-05
U-238	1.69E-03

Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D022, D028, D029, D030, D033, D034, D035, D036, D038, D039, D040, D041, D043, F001, F002, F003, F004, F005

No TRUCON Codes Provided

Waste Stream Description

Solidified aqueous waste slurry

Waste Stream ID: **RP-W013**

## Appendix C

## TRU Waste Inventory Profile Report

Site	Hanford (River Protection) Site	Final Waste Form	Solidified Inorganics	Waste Matrix Code	S3100	Handling	RH
Source Cat.	Materials Production/Recovery Effluents	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	PFP TRU Solids			Activity Concentrations Decayed to CY	2004		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
Tank(s)	270.0	0.0	270.0
<b>Current Form Total</b>	<b>270.0</b>	<b>0.0</b>	<b>270.0</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid - Dir Ld	410.3	0.0	410.3
<b>Final Form Total</b>	<b>410.3</b>	<b>0.0</b>	<b>410.3</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.00
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	0.00
Cellulosics	0.00
Rubber	0.00
Plastics	0.00
Cements	0.00
Inorganic Matrix	1.37
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	560.60
Packaging Material, Plastic	0.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	6.05E+01
Cs-137	1.95E+02
Np-237	2.21E-03
Pu-238	6.58E-01
Pu-239	1.40E+01
Pu-240	3.23E+00
Pu-241	3.25E+01
Pu-242	2.58E-04
Sr-90	4.37E+02
U-233	5.17E-03
U-234	2.62E-03
U-235	1.09E-04
U-236	6.33E-05
U-238	2.44E-03

## Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D022, D028, D029, D030, D033, D034, D035, D036, D038, D039, D040, D041, D043, F001, F002, F003, F004, F005

**No TRUCON Codes Provided**

## Waste Stream Description

Solidified aqueous waste slurry.

Waste Stream ID: **RP-W016**

Appendix C

TRU Waste Inventory Profile Report

Site	Hanford (River Protection) Site	Final Waste Form	Solidified Inorganics	Waste Matrix Code	S3100	Handling	RH
Source Cat.	Materials Production/Recovery Effluents	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	PUREX TRU Cladding Removal Solids			Activity Concentrations Decayed to CY	2004		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
Tank(s)	2030.0	0.0	2030.0
<b>Current Form Total</b>	<b>2030.0</b>	<b>0.0</b>	<b>2030.0</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid - Dir Ld	1277.2	0.0	1277.2
<b>Final Form Total</b>	<b>1277.2</b>	<b>0.0</b>	<b>1277.2</b>

Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.00
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	0.00
Cellulosics	0.00
Rubber	0.00
Plastics	0.00
Cements	0.00
Inorganic Matrix	1.37
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	560.60
Packaging Material, Plastic	0.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	4.69E-01
Cs-137	5.47E+01
Np-237	1.10E-05
Pu-238	9.11E-02
Pu-239	9.17E-01
Pu-240	2.58E-01
Pu-241	6.62E+00
Pu-242	3.27E-05
Sr-90	3.63E+01
U-233	1.60E-07
U-234	1.28E-02
U-235	4.91E-04
U-236	1.24E-03
U-238	8.82E-03

Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D022, D028, D029, D030, D033, D034, D035, D036, D038, D039, D040, D041, D043, F001, F002, F003, F004, F005
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No TRUCON Codes Provided

Waste Stream Description

Solidified aqueous waste slurry



Waste Stream ID: **RP-W754**

Appendix C

TRU Waste Inventory Profile Report

Site	Hanford (River Protection) Site	Final Waste Form	Solidified Inorganics	Waste Matrix Code	S3100	Handling	CH
Source Cat.	Materials Production/Recovery Effluents	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	224 Waste	Activity Concentrations Decayed to CY			2004		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
Tank(s)	1079.0	0.0	1079.0
<b>Current Form Total</b>	<b>1079.0</b>	<b>0.0</b>	<b>1079.0</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	323.2	0.0	323.2
<b>Final Form Total</b>	<b>323.2</b>	<b>0.0</b>	<b>323.2</b>

Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.00
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	0.00
Cellulosics	0.00
Rubber	0.00
Plastics	0.00
Cements	0.00
Inorganic Matrix	1.60
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	0.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.20E-01
Cs-137	1.66E-01
Np-237	1.62E-06
Pu-238	1.11E-02
Pu-239	1.55E+00
Pu-240	1.29E-01
Pu-241	2.16E-01
Pu-242	4.91E-06
Sr-90	3.36E+00
U-233	1.24E-10
U-234	1.79E-04
U-235	7.25E-06
U-236	1.75E-06
U-238	1.64E-04

Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D022, D028, D029, D030, D033, D034, D035, D036, D038, D039, D040, D041, D043, F001, F002, F003, F004, F005

No TRUCON Codes Provided

Waste Stream Description

Solidified aqueous waste slurry.

Waste Stream ID: **RP-W755**

## Appendix C

## TRU Waste Inventory Profile Report

Site	Hanford (River Protection) Site	Final Waste Form	Solidified Inorganics	Waste Matrix Code	S3100	Handling	CH
Source Cat.	Materials Production/Recovery Effluents	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Bismuth Phosphate Process TRU Solids			Activity Concentrations Decayed to CY	2004		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
Tank(s)	3090.0	0.0	3090.0
<b>Current Form Total</b>	<b>3090.0</b>	<b>0.0</b>	<b>3090.0</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	793.5	0.0	793.5
<b>Final Form Total</b>	<b>793.5</b>	<b>0.0</b>	<b>793.5</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.00
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	0.00
Cellulosics	0.00
Rubber	0.00
Plastics	0.00
Cements	0.00
Inorganic Matrix	1.60
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	0.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.41E-01
Cs-137	3.32E-01
Np-237	8.04E-05
Pu-238	2.97E-03
Pu-239	5.40E-01
Pu-240	4.38E-02
Pu-241	6.82E-02
Pu-242	5.51E-07
Sr-90	1.20E+01
U-233	3.11E-09
U-234	3.61E-03
U-235	1.60E-04
U-236	2.90E-05
U-238	3.67E-03

## Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D022, D028, D029, D030, D033, D034, D035, D036, D038, D039, D040, D041, D043, F001, F002, F003, F004, F005

**No TRUCON Codes Provided**

## Waste Stream Description

Solidified aqueous waste slurry

Waste Stream ID: SR-T001-WSB-1

## Appendix C

## TRU Waste Inventory Profile Report

Site	Savannah River Site	Final Waste Form	Solidified Inorganics	Waste Matrix Code	S3000	Handling	CH
Source Cat.	Source Unknown	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	UNKNOWN	Activity Concentrations Decayed to CY			2015		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
SWB Dir Ld w/ Liner	0.0	4910.2	4910.2
<b>Current Form Total</b>	<b>0.0</b>	<b>4910.2</b>	<b>4910.2</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
SWB Dir Ld w/ Liner	0.0	4910.2	4910.2
<b>Final Form Total</b>	<b>0.0</b>	<b>4910.2</b>	<b>4910.2</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.00
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	0.00
Cellulosics	0.00
Rubber	0.00
Plastics	0.00
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	153.50
Packaging Material, Plastic	1.20
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

No Final Form Radionuclides Provided

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

## Waste Stream Description

This waste stream is defense related, contact handled TRU and is a neutralized aqueous stream solidified in an inorganic matrix (cement).

Waste Stream ID: **SR-T001-WSB-3**

## Appendix C

## TRU Waste Inventory Profile Report

Site	Savannah River Site	Final Waste Form	Solidified Inorganics	Waste Matrix Code	S3000	Handling	CH
Source Cat.	Source Unknown	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	UNKNOWN	Activity Concentrations Decayed to CY			2015		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.0	143.9	143.9
<b>Current Form Total</b>	<b>0.0</b>	<b>143.9</b>	<b>143.9</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	0.0	143.9	143.9
<b>Final Form Total</b>	<b>0.0</b>	<b>143.9</b>	<b>143.9</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.00
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	0.00
Cellulosics	0.00
Rubber	0.00
Plastics	0.00
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	0.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

No Final Form Radionuclides Provided

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

## Waste Stream Description

This waste stream is defense related, contact handled TRU and is a neutralized aqueous stream in an inorganic sorbent.

Waste Stream ID: SR-W026-MFFF-1

## Appendix C

## TRU Waste Inventory Profile Report

Site	Savannah River Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5000	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	UNKNOWN				Activity Concentrations Decayed to CY	2015	

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.0	3504.2	3504.2
<b>Current Form Total</b>	<b>0.0</b>	<b>3504.2</b>	<b>3504.2</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.0	3504.2	3504.2
<b>Final Form Total</b>	<b>0.0</b>	<b>3504.2</b>	<b>3504.2</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.00
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	0.00
Cellulosics	0.00
Rubber	0.00
Plastics	0.00
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

No Final Form Radionuclides Provided

Haz. Waste No(s).

D008

TRUCON Code(s)

125/225

## Waste Stream Description

This waste stream is defense related, contact handled TRU and is composed of heterogeneous debris which can include HEPA filters, plastic, protective clothing, metal, gloves, lead lined gloves and sludges.

Waste Stream ID: SR-W026-PDCF-1

## Appendix C

## TRU Waste Inventory Profile Report

Site	Savannah River Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5000	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	UNKNOWN	Activity Concentrations Decayed to CY			2017		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.0	2146.6	2146.6
<b>Current Form Total</b>	<b>0.0</b>	<b>2146.6</b>	<b>2146.6</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.0	2146.6	2146.6
<b>Final Form Total</b>	<b>0.0</b>	<b>2146.6</b>	<b>2146.6</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	3.13
Aluminum-based Metals/Alloys	0.07
Other Metals	0.04
Other Inorganic Materials	1.24
Cellulosics	2.20
Rubber	0.26
Plastics	15.30
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

No Final Form Radionuclides Provided

Haz. Waste No(s).

D008

TRUCON Code(s)

125/225

## Waste Stream Description

This waste stream is defense related, contact handled TRU and is composed of heterogeneous debris which can include HEPA filters, plastic, protective clothing, metal ingots including beryllium, gloves, lead lined gloves and sludges.

Waste Stream ID: SR-W026-WSB-2

## Appendix C

## TRU Waste Inventory Profile Report

Site	Savannah River Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5000	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	UNKNOWN				Activity Concentrations Decayed to CY	2015	

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.0	625.9	625.9
<b>Current Form Total</b>	<b>0.0</b>	<b>625.9</b>	<b>625.9</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.0	625.9	625.9
<b>Final Form Total</b>	<b>0.0</b>	<b>625.9</b>	<b>625.9</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.00
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	0.00
Cellulosics	0.00
Rubber	0.00
Plastics	0.00
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	37.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

No Final Form Radionuclides Provided

Haz. Waste No(s).

D008

TRUCON Code(s)

125/225

## Waste Stream Description

This waste stream is defense related, contact handled TRU and is composed of heterogeneous debris with can include HEPA filters, plastic, protective clothing, metal, gloves, lead lined gloves, and sludges.

Waste Stream ID: **SR-W027-221H-HET-B**

Appendix C

TRU Waste Inventory Profile Report

Site	Savannah River Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5000	Handling	CH
Source Cat.	Discarding Excess/Expired Materials	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Sensitive- Heterogeneous debris from 221H			Activity Concentrations Decayed to CY	2004		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	14.8	0.0	14.8
Box - Plywood	0.3	0.0	2.5
<b>Current Form Total</b>	<b>17.2</b>	<b>0.0</b>	<b>17.2</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	14.8	0.0	14.8
SWB w/ 4 - 55-gal Drums w/o Liners	3.8	0.0	3.8
<b>Final Form Total</b>	<b>18.5</b>	<b>0.0</b>	<b>18.5</b>

Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.00
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	0.00
Cellulosics	0.00
Rubber	0.00
Plastics	0.00
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	147.16
Packaging Material, Plastic	29.46
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

No Final Form Radionuclides Provided

No Hazardous Waste Numbers Provided

TRUCON Code(s)  
125/225

Waste Stream Description

This waste stream has been separated from it's parent waste stream SR-W027-221H-HET because it contains sensitive waste.

Comprehensive Inventory Database ver. 1.00 Data ver. D.9.02  
NOTE: Actual numerical values have been rounded for presentation purposes.



Waste Stream ID: SR-W027-321-322M-HET

## Appendix C

## TRU Waste Inventory Profile Report

Site	Savannah River Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5000	Handling	CH
Source Cat.	Materials Production/Recovery Effluents	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	CH Mixed TRU Debris (S5000)	Activity Concentrations Decayed to CY			1980		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	3.7	0.0	3.7
<b>Current Form Total</b>	<b>3.7</b>	<b>0.0</b>	<b>3.7</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	1.7	0.0	1.7
TDOP w/ 10 - 55-gal Drums w/ Liners	4.5	0.0	4.5
<b>Final Form Total</b>	<b>6.2</b>	<b>0.0</b>	<b>6.2</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.00
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	0.00
Cellulosics	0.00
Rubber	0.00
Plastics	0.00
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	204.53
Packaging Material, Plastic	22.47
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	4.59E-01
Np-237	3.54E-04
Pu-238	1.79E-02
Pu-239	2.99E-02
Pu-240	7.06E-03
Pu-241	1.08E+02
Pu-242	1.23E-06

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

## Waste Stream Description

CH Mixed TRU waste resulting from target assembly fabrication leading to production of defense related nuclear materials.

Waste Stream ID: **SR-W027-773A-HET-CLAS**

## Appendix C

## TRU Waste Inventory Profile Report

Site	Savannah River Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5000	Handling	CH
Source Cat.	Other/Multiple Sources	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	CH TRU - Sensitive waste from 773A			Activity Concentrations Decayed to CY	1990		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.4	0.0	0.4
Box - Steel	1.6	0.0	10.1
SWB Dir Ld w/o Liner	5.7	0.0	5.7
<b>Current Form Total</b>	<b>16.2</b>	<b>0.0</b>	<b>16.2</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.4	0.0	0.4
SWB Dir Ld w/o Liner	17.0	0.0	17.0
<b>Final Form Total</b>	<b>17.4</b>	<b>0.0</b>	<b>17.4</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	175.70
Aluminum-based Metals/Alloys	8.39
Other Metals	21.82
Other Inorganic Materials	86.73
Cellulosics	51.48
Rubber	30.22
Plastics	184.09
Cements	0.00
Inorganic Matrix	0.56
Organic Matrix	0.56
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	152.96
Packaging Material, Plastic	0.88
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

No Final Form Radionuclides Provided

No Hazardous Waste Numbers Provided

TRUCON Code(s)

125/225, 154

## Waste Stream Description

This waste stream is defense related, contact handled TRU waste and is composed of metal equipment and debris

Waste Stream ID: **SR-W027-HBL-Box-B**

## Appendix C

## TRU Waste Inventory Profile Report

Site	Savannah River Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5000	Handling	CH
Source Cat.	Discarding Excess/Expired Materials	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	Sensitive CH mixed TRU from 221H			Activity Concentrations Decayed to CY	1990		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
Box - SRS Black Box	128.1	0.0	128.1
<b>Current Form Total</b>	<b>128.1</b>	<b>0.0</b>	<b>128.1</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
SWB Dir Ld w/o Liner	128.5	0.0	128.5
<b>Final Form Total</b>	<b>128.5</b>	<b>0.0</b>	<b>128.5</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.00
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	0.00
Cellulosics	0.00
Rubber	0.00
Plastics	0.00
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	153.50
Packaging Material, Plastic	0.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

No Final Form Radionuclides Provided

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

## Waste Stream Description

This waste stream has been separated from its parent waste stream SR-W027-HBL-Box because it contains sensitive waste.

Waste Stream ID: **SR-W027-UNK**

## Appendix C

## TRU Waste Inventory Profile Report

Site	Savannah River Site	Final Waste Form	Heterogeneous	Waste Matrix Code	S5000	Handling	CH
Source Cat.	Source Unknown	Defense Determination	Defense-Related	Inventory Date	12/31/2009		
Stream Name	SRS "Generating Source Unknown" TRU Waste			Activity Concentrations Decayed to CY	N/A		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	2.5	0.0	2.5
Box - Concrete	11.9	0.0	11.9
Box - SRS B-25 OP	3.6	0.0	3.6
Box - Steel	3.6	0.0	3.6
<b>Current Form Total</b>	<b>21.6</b>	<b>0.0</b>	<b>21.6</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
SWB Dir Ld w/o Liner	20.8	0.0	20.8
SWB w/ 4 - 55-gal Drums w/ Liners	5.7	0.0	5.7
<b>Final Form Total</b>	<b>26.5</b>	<b>0.0</b>	<b>26.5</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.00
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	0.00
Cellulosics	0.00
Rubber	0.00
Plastics	0.00
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	165.84
Packaging Material, Plastic	3.49
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

No Final Form Radionuclides Provided

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

## Waste Stream Description

This waste stream consists of legacy plutonium contaminated debris from SRS facilities. The unique identification for these waste containers has been lost. Thus, knowledge of the generation source that would allow the waste to be placed in the proper waste stream is not known at this time. Some waste may be remote handled.

Waste Stream ID: **WV-M010a**

## Appendix C

## TRU Waste Inventory Profile Report

Site	West Valley Demonstration Project	Final Waste Form	Solidified Organics	Waste Matrix Code	S3000	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Defense Determination	Pending Determination	Inventory Date	12/31/2009		
Stream Name	TRU Spent Absorbents CH	Activity Concentrations Decayed to CY			2008		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
Box - Misc	17.5	0.0	17.5
<b>Current Form Total</b>	<b>17.5</b>	<b>0.0</b>	<b>17.5</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
SWB Dir Ld w/o Liner	9.5	0.0	9.5
<b>Final Form Total</b>	<b>9.5</b>	<b>0.0</b>	<b>9.5</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.00
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	1.00
Cellulosics	0.00
Rubber	0.00
Plastics	0.00
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	153.50
Packaging Material, Plastic	0.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	5.61E-02
Am-243	3.15E-03
Cs-137	8.09E-03
Np-237	4.88E-07
Pu-238	1.83E-02
Pu-239	2.28E-02
Pu-240	1.74E-02
Pu-241	2.44E-01
Pu-242	4.83E-04
Sr-90	7.11E-03
Th-230	4.10E-06
Th-232	2.87E-04
U-233	1.84E-04
U-234	8.79E-05
U-235	2.26E-05
U-236	6.79E-05
U-238	1.09E-04

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

## Waste Stream Description

This waste stream consists of spent absorbents (not cement) generated from site operations. The media absorbed is an organic liquid for this waste stream. This does not contain hazardous waste.

Waste Stream ID: **WV-T004**

## Appendix C

## TRU Waste Inventory Profile Report

Site	West Valley Demonstration Project	Final Waste Form	Solidified Inorganics	Waste Matrix Code	S3000	Handling	CH
Source Cat.	Remediation/D&D Waste	Defense Determination	Pending Determination	Inventory Date	12/31/2009		
Stream Name	TRU Liquids	Activity Concentrations Decayed to CY			2004		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.8	0.0	0.8
<b>Current Form Total</b>	<b>0.8</b>	<b>0.0</b>	<b>0.8</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	0.8	0.0	0.8
<b>Final Form Total</b>	<b>0.8</b>	<b>0.0</b>	<b>0.8</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.00
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	0.00
Cellulosics	0.00
Rubber	0.00
Plastics	0.00
Cements	2370.00
Inorganic Matrix	1.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	0.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.42E-01
Am-243	1.08E-02
Cm-244	1.50E-02
Cs-137	2.27E-05
Pu-238	2.74E-01
Pu-239	1.08E-01
Pu-240	8.27E-02
Pu-241	3.45E+00
Pu-242	3.02E-04
Sr-90	2.63E-04
Th-230	1.52E-07
Th-232	2.34E-09
U-233	1.00E-04
U-234	4.71E-05
U-235	5.58E-06
U-236	1.67E-05
U-238	4.17E-05

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

## Waste Stream Description

This waste stream consists of liquid waste with associated fissile material generated from previous decontamination and decommissioning activities.

Waste Stream ID: **WV-T006a**

## Appendix C

## TRU Waste Inventory Profile Report

Site	West Valley Demonstration Project	Final Waste Form	Heterogeneous	Waste Matrix Code	S5000	Handling	CH
Source Cat.	Remediation/D&D Waste	Defense Determination	Pending Determination	Inventory Date	12/31/2009		
Stream Name	CH TRU General Waste	Activity Concentrations Decayed to CY			2006		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	85.5	0.0	85.5
Box - Misc	239.5	0.0	239.5
uncontained	187.0	0.0	187.0
<b>Current Form Total</b>	<b>512.0</b>	<b>0.0</b>	<b>512.0</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	130.2	0.0	130.2
SWB Dir Ld w/o Liner	328.9	0.0	328.9
<b>Final Form Total</b>	<b>459.1</b>	<b>0.0</b>	<b>459.1</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.00
Aluminum-based Metals/Alloys	0.00
Other Metals	1.00
Other Inorganic Materials	1.00
Cellulosics	0.00
Rubber	1.00
Plastics	1.00
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	147.06
Packaging Material, Plastic	0.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.17E+00
Am-243	1.64E-01
Cm-244	2.30E-01
Cs-137	3.96E-03
Pu-238	4.18E+00
Pu-239	1.65E+00
Pu-240	1.26E+00
Pu-241	5.29E+01
Pu-242	4.62E-03
Sr-90	4.59E-02
Th-230	2.65E-05
Th-232	4.08E-07
U-233	1.32E-04
U-234	6.20E-05
U-235	7.36E-06
U-236	2.21E-05
U-238	5.48E-05

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

## Waste Stream Description

This waste stream consists of radiologically contaminated solid waste generated from various site activities. The specific contents include but are not limited to Anti-C clothing, hoses, glovebags, tools, pre-filters, HEPA filters, Roughing filters, other filters, sweeping compound, glove boxes, tools, evaporators, dissolver tanks, condensers, piping DAW, plastic bags, bottles, and cell floor debris etc.

Waste Stream ID: **WV-T006b**

## Appendix C

## TRU Waste Inventory Profile Report

Site	West Valley Demonstration Project	Final Waste Form	Heterogeneous	Waste Matrix Code	S5000	Handling	RH
Source Cat.	Remediation/D&D Waste	Defense Determination	Pending Determination	Inventory Date	12/31/2009		
Stream Name	RH TRU General Waste			Activity Concentrations Decayed to CY	2004		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	63.9	0.0	63.9
Box - Misc	381.9	0.0	381.9
Uncontained	113.0	0.0	113.0
<b>Current Form Total</b>	<b>558.8</b>	<b>0.0</b>	<b>558.8</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/o Liner	574.9	0.0	574.9
<b>Final Form Total</b>	<b>574.9</b>	<b>0.0</b>	<b>574.9</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.00
Aluminum-based Metals/Alloys	0.00
Other Metals	1.00
Other Inorganic Materials	1.00
Cellulosics	0.00
Rubber	1.00
Plastics	1.00
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	652.20
Packaging Material, Plastic	0.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	5.24E+00
Cm-244	1.81E-01
Cs-137	6.36E+01
Np-237	1.37E-02
Pu-238	1.71E+00
Pu-239	1.32E+00
Pu-240	1.00E+00
Pu-241	2.97E+01
Sr-90	7.43E+01
Th-232	2.10E-04
U-233	7.98E-03
U-234	3.82E-03
U-235	7.26E-04
U-236	2.19E-03
U-238	2.48E-03

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

## Waste Stream Description

This waste stream consists of radiologically contaminated solid waste generated from various site activities. The specific contents include but are not limited to Anti-C clothing, hoses, glovebags, tools, pre-filters, HEPA filters, Roughing filters, other filters, sweeping compound, glove boxes, tools, evaporators, dissolver tanks, condensers, piping DAW, plastic bags, bottles, and cell floor debris etc.



Waste Stream ID: **WV-T017a**

## Appendix C

## TRU Waste Inventory Profile Report

Site	West Valley Demonstration Project	Final Waste Form	Heterogeneous	Waste Matrix Code	S5000	Handling	CH
Source Cat.	Remediation/D&D Waste	Defense Determination	Pending Determination	Inventory Date	12/31/2009		
Stream Name	CH TRU Spent Filter Media and concrete blocks			Activity Concentrations Decayed to CY	2006		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
Box - Misc	12.2	0.0	12.2
<b>Current Form Total</b>	<b>12.2</b>	<b>0.0</b>	<b>12.2</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
SWB Dir Ld w/o Liner	7.6	0.0	7.6
<b>Final Form Total</b>	<b>7.6</b>	<b>0.0</b>	<b>7.6</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.00
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	1.00
Cellulosics	0.00
Rubber	0.00
Plastics	0.00
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	153.50
Packaging Material, Plastic	0.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.17E+00
Am-243	1.64E-01
Cm-244	2.30E-01
Cs-137	3.96E-03
Pu-238	4.18E+00
Pu-239	1.65E+00
Pu-240	1.26E+00
Pu-241	5.29E+01
Pu-242	4.62E-03
Sr-90	4.59E-02
Th-230	2.65E-05
Th-232	4.08E-07
U-233	1.32E-04
U-234	6.20E-05
U-235	7.36E-06
U-236	2.21E-05
U-238	5.48E-05

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

## Waste Stream Description

This waste stream consists of spent filter media generated from filtration of the Fuel Receiving & Storage pool where the remaining spent fuel rods were stored, and concrete from D&D activities.

Waste Stream ID: **WV-T017b**

## Appendix C

## TRU Waste Inventory Profile Report

Site	West Valley Demonstration Project	Final Waste Form	Heterogeneous	Waste Matrix Code	S5000	Handling	RH
Source Cat.	Remediation/D&D Waste	Defense Determination	Pending Determination	Inventory Date	12/31/2009		
Stream Name	RH TRU Spent Filter Media			Activity Concentrations Decayed to CY	2008		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
Box - Misc	39.3	0.0	39.3
<b>Current Form Total</b>	<b>39.3</b>	<b>0.0</b>	<b>39.3</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/o Liner	33.8	0.0	33.8
<b>Final Form Total</b>	<b>33.8</b>	<b>0.0</b>	<b>33.8</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.00
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	1.00
Cellulosics	0.00
Rubber	0.00
Plastics	0.00
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	652.20
Packaging Material, Plastic	0.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	5.73E-02
Cs-137	2.15E+01
Np-237	7.88E-05
Pu-238	1.80E-02
Pu-239	3.45E-02
Pu-240	2.63E-02
Pu-241	3.22E-01
Sr-90	2.51E-01
Th-230	2.12E-05
Th-232	2.66E-05
U-235	9.77E-05
U-236	2.94E-04
U-238	1.54E-04

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

## Waste Stream Description

This waste stream consists of spent filter media generated from filtration of the Fuel Receiving & Storage pool where the remaining spent fuel rods were stored.

Waste Stream ID: **WV-W024a**

## Appendix C

## TRU Waste Inventory Profile Report

Site	West Valley Demonstration Project	Final Waste Form	Heterogeneous	Waste Matrix Code	S5000	Handling	CH
Source Cat.	Remediation/D&D Waste	Defense Determination	Pending Determination	Inventory Date	12/31/2009		
Stream Name	CH TRU Mixed Waste	Activity Concentrations Decayed to CY			2006		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	5.8	0.0	5.8
Box - Misc	56.4	0.0	56.4
<b>Current Form Total</b>	<b>62.2</b>	<b>0.0</b>	<b>62.2</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	5.6	0.0	5.6
SWB Dir Ld w/o Liner	35.9	0.0	35.9
<b>Final Form Total</b>	<b>41.5</b>	<b>0.0</b>	<b>41.5</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.00
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	11340.00
Cellulosics	0.00
Rubber	0.00
Plastics	0.00
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	150.43
Packaging Material, Plastic	0.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.42E-01
Am-243	1.08E-02
Cm-244	1.50E-02
Cs-137	2.27E-05
Pu-238	2.74E-01
Pu-239	1.08E-01
Pu-240	8.27E-02
Pu-241	3.45E+00
Pu-242	3.02E-04
Sr-90	2.63E-04
Th-230	1.52E-07
Th-232	2.34E-09
U-233	1.00E-04
U-234	4.71E-05
U-235	5.58E-06
U-236	1.67E-05
U-238	4.17E-05

## Haz. Waste No(s).

D006, D007, D008,  
D009, D010No TRUCON  
Codes Provided

## Waste Stream Description

Contains hazardous constituents from D&D activities and Laboratory Waste generated onsite in solid forms such as filters, vacuum cans, glove box debris, piping, hoses, pumps, anti C clothing, bags, wipes, and floor debris. If any liquids are found, then the liquid would be solidified and not expected to be TRU.

Waste Stream ID: **WV-W024b**

## Appendix C

## TRU Waste Inventory Profile Report

Site	West Valley Demonstration Project	Final Waste Form	Heterogeneous	Waste Matrix Code	S5000	Handling	RH
Source Cat.	Remediation/D&D Waste	Defense Determination	Pending Determination	Inventory Date	12/31/2009		
Stream Name	RH TRU Mixed Waste	Activity Concentrations Decayed to CY			2004		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	13.1	0.0	13.1
Box - Misc	130.7	0.0	130.7
<b>Current Form Total</b>	<b>143.8</b>	<b>0.0</b>	<b>143.8</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/o Liner	160.2	0.0	160.2
<b>Final Form Total</b>	<b>160.2</b>	<b>0.0</b>	<b>160.2</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.00
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	11340.00
Cellulosics	0.00
Rubber	0.00
Plastics	0.00
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	652.20
Packaging Material, Plastic	0.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

## Final Form Radionuclides

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	5.11E+01
Am-243	3.11E+00
Cm-244	6.32E-01
Cs-137	2.19E+02
Np-237	4.67E-02
Pu-238	7.30E+00
Pu-239	5.56E+01
Pu-240	4.22E+01
Pu-241	2.82E+02
Pu-242	1.40E-01
Sr-90	2.63E+02
Th-229	2.67E-03
Th-230	9.78E-04
Th-232	7.11E-04
U-233	1.18E-01
U-234	5.56E-02
U-235	9.34E-03
U-236	2.89E-02
U-238	2.89E-02

## Haz. Waste No(s).

D005, D006, D007, D008, D009, D010

No TRUCON Codes Provided

## Waste Stream Description

Contains hazardous constituents from D&D activities and Laboratory Waste generated onsite in solid forms such as filters, vacuum cans, glove box debris, piping, hoses, pumps, anti C clothing, bags, wipes, and floor debris. If any liquids are found, then the liquid would be solidified and not expected to be TRU.

Waste Stream ID: **WV-Z001**

## Appendix C

## TRU Waste Inventory Profile Report

Site	West Valley Demonstration Project	Final Waste Form	Unknown	Waste Matrix Code	U9999	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Defense Determination	Pending Determination	Inventory Date	12/31/2009		
Stream Name	West Valley Buried TRU Waste	Activity Concentrations Decayed to CY			N/A		

Waste Volume Detail (m<sup>3</sup>)

Current Form Volumes			
Container Type	Stored	Proj.	Total
Uncontained	1353.0	0.0	1353.0
<b>Current Form Total</b>	<b>1353.0</b>	<b>0.0</b>	<b>1353.0</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	1353.0	0.0	1353.0
<b>Final Form Total</b>	<b>1353.0</b>	<b>0.0</b>	<b>1353.0</b>

## Waste Material Parameters

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metals/Alloys	0.00
Aluminum-based Metals/Alloys	0.00
Other Metals	0.00
Other Inorganic Materials	10.00
Cellulosics	0.00
Rubber	0.00
Plastics	0.00
Cements	0.00
Inorganic Matrix	0.00
Organic Matrix	0.00
Soils/gravel	0.00
Vitrified	0.00
Packaging Material, Steel	130.80
Packaging Material, Plastic	0.00
Packaging Material, Cellulosics	0.00
Packaging Material, Lead	0.00

No Final Form Radionuclides Provided

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

## Waste Stream Description

Debris waste buried on-site during original plant processing operations

**APPENDIX D: Inventory Comparisons**

## D-1 Introduction

This appendix presents the significant changes and comparisons in the TRU waste inventory for total volumes, waste material and packaging parameters masses, total radionuclide activity, oxyanions, and complexing agents masses reported by sites between the *Annual Transuranic Waste Inventory Report—2009* (ATWIR-2009) Report (DOE 2009a) and this report (referenced as “this reporting period” in this appendix). Decisions, data, and direction that cause changes from year to year in this TRU waste inventory are as follows.

- *Waste program management decisions.* Many sites have reassessed what the final form container types and their respective counts will be for each of the sites’ waste streams. This results in changes to final form volumes and subsequent WMP average densities and radionuclide activity concentrations.
- *Availability of more characterization data with continuing waste emplacement at the WIPP.* WIPP receives shipments from the sites on an ongoing basis, depleting the site inventories and increasing the emplaced inventory. The sites use the emplaced volumes, radionuclide activities and WMP masses from the WIPP WDS to improve inventory estimates.
- *Availability and confidence in supplemental characterization/analytical information and/or acceptable knowledge (AK).* As more AK is gathered and prepared and characterization is completed, the new data are included in waste stream estimates, effectively improving the quality of the estimates.
- *Site estimates of projected TRU waste stream volumes.* Depending on their mission, sites having projected waste streams will produce TRU waste in the future. The basis for estimating future generation can be largely uncertain from year to year, based on the respective site missions.
- *Inter-site shipments.* SQSs will ship their waste to the INL for centralized characterization before the waste is shipped to WIPP.

The changes described above are captured in the TRU waste sites’ updated annual reports. These changes are reported in data templates that are completed by the sites with assistance from the Inventory Team members, as needed. In addition to the information from the sites, certified characterization data are obtained by the TRU waste sites from the WDS and applied to their inventory data. As more TRU waste is emplaced at WIPP, more official characterized data are carried in the CID as represented by emplaced volumes, WMP average densities/masses, and radionuclide activity/concentrations for emplaced waste streams.

## D-2 Volumetric Comparisons

As of December 31, 2009, the total amount of CH- and RH-TRU waste that had been emplaced at WIPP was 64,354 m<sup>3</sup> and 149 m<sup>3</sup>, respectively (DOE 2010a). During the ATWIR-2010 reporting period, 6,545 m<sup>3</sup> of CH-TRU and 96 m<sup>3</sup> of RH-TRU waste was received and emplaced at WIPP according to CID estimates (LANL-CO 2010a) (see Section 3.1.1 for discussion of differences between emplaced volumes reported in the CID and those reported in the WDS).

Tables D-1 and D-2 show the final form total volumes (anticipated [stored + projected] + emplaced) of CH- and RH-TRU waste for LQSSs, with the SQSSs volumes combined into one entry. These tables can be used to compare the inventory data volumes changes that occurred during this reporting period.

It should be noted that the Net Change columns in Table D-1 and the remaining tables in this appendix represent the total net change for the reporting period, which includes both total increases and total decreases reported by the sites.

**Table D-1. Total CH-TRU Waste Volumes (Anticipated Plus Emplaced)**

TRU Waste Site	ATWIR-2009 Total Inventory (m <sup>3</sup> ) <sup>1</sup>	ATWIR-2010 Total Inventory (m <sup>3</sup> ) <sup>2</sup>	Total Net Change (m <sup>3</sup> )
Hanford Richland Operations	2.12E+04	2.57E+04	4.55E+03
Idaho National Laboratory	6.30E+04	6.51E+04	2.10E+03
Los Alamos National Laboratory	1.43E+04	1.47E+04	3.96E+02
Oak Ridge National Laboratory	8.93E+02	1.05E+03	1.59E+02
Rocky Flats Environmental Technology Site <sup>3</sup>	1.50E+04	1.50E+04	0.00E+00
Savannah River Site	1.94E+04	1.72E+04	-2.24E+03
Total of Small Quantity Sites	2.43E+03	2.10E+03	-3.33E+02
<b>Grand Total</b>	<b>1.34E+05</b>	<b>1.41E+05</b>	<b>4.63E+03</b>

<sup>1</sup>CID Data Version D.8.00, LANL-CO 2009b

<sup>2</sup>CID Data Version D.9.02, LANL-CO 2010a

<sup>3</sup>RFETS has emplaced all of its waste and is presented here for completeness

### CH-TRU Waste Volumes

The net overall CH waste inventory volume for the TRU waste complex increased by about 4,630 m<sup>3</sup> for the data contained in this report. The largest CH-TRU waste volume increase of about 4,000 m<sup>3</sup> comes from one Hanford-RL Plutonium Finishing Plant waste stream (RLPFP-01) and accounts for the majority of this total net increase. This waste stream includes D&D waste, which was re-estimated.



### **RH-TRU Waste Volumes**

The net overall RH waste inventory volume for the TRU waste complex has increased by about 700 m<sup>3</sup> for this reporting period. The net increase is attributed to increases from Hanford-RL, INL, and SRS, with decreases reported by ORNL and the SQSs. The largest increase was reported by Hanford-RL for waste stream RL617-08, with a volume of about 1360 m<sup>3</sup> that was moved from the potential designation to the WIPP-bound designation because complete data were received.

**Table D-2. Total RH-TRU Waste Volumes (Anticipated Plus Emplaced)**

<b>TRU Waste Site</b>	<b>ATWIR-2009 Total Inventory (m<sup>3</sup>)<sup>1</sup></b>	<b>ATWIR-2010 Total Inventory (m<sup>3</sup>)<sup>2</sup></b>	<b>Total Net Change (m<sup>3</sup>)</b>
Hanford Richland Operations	2.89E+03	3.76E+03	8.68E+02
Idaho National Laboratory	2.15E+02	5.04E+02	2.88E+02
Los Alamos National Laboratory	9.61E+01	9.61E+01	0.00E+00
Oak Ridge National Laboratory	7.49E+02	5.57E+02	-1.92E+02
Savannah River Site	1.06E+02	1.09E+02	3.56E+00
Total of Small Quantity Sites	6.61E+02	3.89E+02	-2.72E+02
<b>Grand Total</b>	<b>4.72E+03</b>	<b>5.41E+03</b>	<b>6.95E+02</b>

<sup>1</sup>CID Data Version D.8.00, LANL-CO 2009b

<sup>2</sup>CID Data Version D.9.02, LANL-CO 2010a

### **D-3 Waste and Packaging Material Parameter Comparisons**

The waste and packaging material parameters data presented in Tables 3-3 and 3-4 in the body of this report are shown both in average densities (kg/m<sup>3</sup>) as required for performance assessment calculations, and as masses for easier comparison, since the density of the waste is not appropriate for comparison purposes. (See section 3.2.1 of this report for discussion about the constituents of each parameter.) The WMPs and PMs are converted to mass (kg) within the CID by taking the product of the density and the final form volume for each waste stream of the materials. Table D-3, D-4, D-5, D-6, and their associated discussions are presented within this section in mass (kg) to directly show the differences.

### **CH-TRU Waste Material Parameters and Packaging Materials**

The CH-TRU waste and packaging materials are presented in Table D-3. A comparison of these masses showed increases in all parameters except for the aluminum-based metal/alloys and inorganic matrix, which showed net decreases.

Significant net increases in the estimated masses occurred in other inorganic materials, iron-based metal/alloys, soils/gravel, organic matrix, cellulose, cements, and the steel packaging material.

The largest net decrease in estimated mass is for inorganic matrix.

**Table D-3. Total CH-TRU Waste and Packaging Material Parameters**

<b>Waste Material Parameter</b>	<b>ATWIR-2009 Mass (kg)<sup>1</sup></b>	<b>ATWIR-2010 Mass (kg)<sup>2</sup></b>	<b>Mass Net Change (kg)</b>
Aluminum-based Metals/Alloys	2.20E+05	1.87E+05	-3.32E+04
Cellulosics	3.88E+06	4.03E+06	1.47E+05
Cements	7.10E+06	7.24E+06	1.36E+05
Inorganic Matrix	1.06E+07	1.02E+07	-4.15E+05
Iron-based Metals/Alloys	9.76E+06	1.03E+07	5.60E+05
Organic Matrix	5.07E+06	5.28E+06	2.18E+05
Other Inorganic Materials	2.51E+06	3.14E+06	6.31E+05
Other Metals	4.93E+05	5.64E+05	7.04E+04
Plastics	4.73E+06	4.82E+06	8.69E+04
Rubber	6.94E+05	7.47E+05	5.37E+04
Soils/gravel	2.01E+06	2.23E+06	2.18E+05
Vitrified	0.00E+00	0.00E+00	0.00E+00
<b>Waste Total</b>	<b>4.71E+07</b>	<b>4.88E+07</b>	<b>1.67E+06</b>
<b>Package Material</b>			
Packaging Material, Cellulosics	7.14E+05	7.15E+05	9.01E+02
Packaging Material, Lead	0.00E+00	0.00E+00	0.00E+00
Packaging Material, Plastic	2.06E+06	2.08E+06	1.94E+04
Packaging Material, Steel	2.56E+07	2.61E+07	5.50E+05
<b>Packaging Total</b>	<b>2.83E+07</b>	<b>2.89E+07</b>	<b>5.70E+05</b>
<b>Grand Total</b>	<b>7.54E+07</b>	<b>7.77E+07</b>	<b>2.24E+06</b>

<sup>1</sup>Data Source: CID Data Version D.8.00, LANL-CO 2009b

<sup>2</sup>Data Source: CID Data Version D.9.02, LANL-CO 2010a

The reduction of inorganic matrix is due to the reassigning of WMPs based on characterization data from LANL and INL. LANL waste stream LA-LACIN02.001 decreased in inorganic matrix by about 161,000 kg, but distributed about 118,000 kg to cement. INL waste stream IN-ID-SDA-Sludge reduced its inorganic matrix by about 318,000 kg by reassigning 265,000 kg to organic matrix.

Two new waste streams at INL account for the increase in other inorganic materials and soils/gravel. Waste stream IN-BN005 increased the other inorganic materials by about 488,000 kg of the 631,000 kg net increase. Waste stream IN-BN090 increased soils/gravel by about 252,000 kg.

Hanford-RL waste stream RLPFP-01 has increased the volume of its D&D waste by approximately 3800 m<sup>3</sup> or about 2000 SWBs. This increase accounts for the increase in the iron-based metals/alloys, cellulose, and steel packaging masses.

### **RH-TRU Waste Material Parameters and Packaging Materials**

The RH-TRU WMPs and PMs are presented in Table D-4. A comparison of the RH WMPs between the ATWIR-2009 (DOE 2009a) report and this report shows the largest increases for this reporting period are for other inorganic materials, other metals, organic matrix, plastics with the largest net decreases for cements and soils/gravel.

One Hanford-RL waste stream, RL617-08, was moved from potential to WIPP-bound and accounts for the significant net increases in four WMPs: 167,000 kg of the organic matrix, 484,000 kg of the other inorganic materials, 451,000 kg of other metals, and 67,000 for plastics. In addition, LANL waste stream LA-TA-03-27 contributed about 42,000 kg of plastics.

**Table D-4. Total RH-TRU Waste and Packaging Materials Parameters**

<b>Waste Material Parameter</b>	<b>ATWIR-2009 Total Mass (kg)<sup>1</sup></b>	<b>ATWIR-2010 Total Mass (kg)<sup>2</sup></b>	<b>Total Net Change (kg)</b>
Aluminum-based Metals/Alloys	3.89E+04	6.29E+03	-3.26E+04
Cellulosics	4.04E+04	1.03E+05	6.23E+04
Cements	9.86E+05	6.96E+05	-2.90E+05
Inorganic Matrix	1.52E+04	9.46E+04	7.94E+04
Iron-based Metals/Alloys	8.06E+05	7.23E+05	-8.33E+04
Organic Matrix	7.16E+03	1.71E+05	1.64E+05
Other Inorganic Materials	5.62E+05	1.12E+06	5.62E+05
Other Metals	5.99E+04	4.93E+05	4.33E+05
Plastics	9.17E+04	2.27E+05	1.35E+05
Rubber	1.94E+04	8.95E+04	7.02E+04
Soils/gravel	3.99E+05	1.85E+05	-2.14E+05
Vitrified	0.00E+00	1.36E+02	1.36E+02
<b>Waste Total</b>	<b>3.03E+06</b>	<b>3.91E+06</b>	<b>8.87E+05</b>
<b>Package Material</b>			
Packaging Material, Cellulosics	0.00E+00	0.00E+00	0.00E+00
Packaging Material, Lead	7.02E+03	7.85E+03	8.26E+02
Packaging Material, Plastic	8.52E+04	1.24E+05	3.87E+04
Packaging Material, Steel	3.00E+06	3.52E+06	5.20E+05
<b>Packaging Total</b>	<b>3.09E+06</b>	<b>3.65E+06</b>	<b>5.59E+05</b>
<b>Grand Total</b>	<b>6.11E+06</b>	<b>7.56E+06</b>	<b>1.45E+06</b>

<sup>1</sup>CID Data Version D.8.00, LANL-CO 2009b

<sup>2</sup>CID Data Version D.9.02, LANL-CO 2010a

The net decrease in soils/gravel is attributed to the ORNL waste stream OR-W213-RH-Soil, which accounts for about 380,000 kg. This waste stream was characterized as low-level waste. This net decrease is offset by an increase of 167,000 kg from Hanford-RL waste stream RL617-08.

The decrease in cements was reported by Hanford-RL for waste stream RL105-09, with a decrease of about 292,000 kg. This decrease resulted from the re-estimation of the number of canisters that would be generated by the waste stream.

#### **D-4 Radionuclide Activity Comparisons**

Radionuclide activity data improve as additional waste is characterized and emplaced at WIPP. Additional characterization data have been used by the sites for this report that were not available at the time data were collected for the ATWIR-2009 (DOE 2009a). A comparison of the total CH-TRU and RH-TRU activity between the ATWIR-2009 (DOE 2009a) and this report are presented in Tables D-5 and D-6, respectively. The SQSs are combined as a single entry in each of these tables. For comparison purposes, the activities reported in these tables are decayed to WIPP closure in 2033.

As stated earlier, the net change column applies to the total net changes, which include both increases and decreases.

Table D-5 presents total CH-TRU radionuclide activities by site and shows a total net increase of about 67,500 Ci. This net increase is attributed to Hanford-RL and LANL waste streams. Hanford-RL waste stream RLPPF-01 increased by about 81,000 Ci since there was an increase in the estimated volume. LANL increased its reported estimated activity by about 84,000 Ci. This increase is mainly associated with three waste streams that are currently being characterized and therefore providing better data. These waste streams are LA-CIN01.001, LA-LANIN03NC, and LA-MHD01.001.

The SRS shows a net decrease of about 109,000 Ci, which is attributed to two waste streams, SR-W027-221H-HET with a decrease of about 78,000 Ci, and SR-W027-235F-HET which decreased by nearly 23,000 Ci. For this data collection period, SRS used available characterization data for reporting its radionuclide activity. SRS believes the certified characterization data best represent what the remaining activity should be. Reporting certified characterization data has decreased SRS activity from previous estimates.

Table D-6 presents the total RH-TRU waste radionuclide activities by site. The total net activity of RH-TRU waste has increased by about 398,000 Ci.

The majority of the RH-TRU activity increase can be attributed to one LQS and one SQS. Hanford-RL overall activity increased by about 308,000 Ci, with 289,000 Ci accounted for by waste stream RL300-08, which had a volume estimate increase. The Materials and

Fuels Complex (MFC) re-evaluated its waste stream activities with the result that half of the MFC waste stream activities increased by about 47,000 Ci.

**Table D-5. Total CH-TRU Radionuclide Activity by Site Decayed through 2033**

Site	ATWIR-2009 Total Inventory (Ci) <sup>1</sup>	ATWIR-2010 Total Inventory (Ci) <sup>2</sup>	Total Net Change (Ci)
Hanford Richland Operations	4.70E+05	5.65E+05	9.50E+04
Idaho National Laboratory	2.90E+05	2.92E+05	2.04E+03
Los Alamos National Laboratory	2.77E+05	3.61E+05	8.44E+04
Oak Ridge National Laboratory	1.06E+04	4.21E+03	-6.37E+03
Rocky Flats Environmental Technology Site	5.80E+05	5.80E+05	0.00E+00
Savannah River Site	4.60E+05	3.51E+05	-1.09E+05
Total of Small Quantity Sites	1.08E+04	1.21E+04	1.30E+03
<b>Grand Total</b>	<b>2.10E+06</b>	<b>2.17E+06</b>	<b>6.75E+04</b>

<sup>1</sup>CID Data Version D.8.00.0Y, LANL-CO 2009b

<sup>2</sup>CID Data Version D.9.02.0Y, LANL-CO 2010a

**Table D-6. Total RH-TRU Radionuclide Activity by Site Decayed through 2033**

Site	ATWIR-2009 Total Inventory (Ci) <sup>1</sup>	ATWIR-2010 Total Inventory (Ci) <sup>2</sup>	Total Net Change (Ci)
Hanford Richland Operations	3.46E+05	6.54E+05	3.08E+05
Idaho National Laboratory	2.68E+03	3.21E+04	2.94E+04
Los Alamos National Laboratory	3.41E+03	1.41E+03	-2.00E+03
Oak Ridge National Laboratory	3.52E+03	2.58E+03	-9.43E+02
Savannah River Site	4.28E+03	7.01E+03	2.73E+03
Total of Small Quantity Sites	5.99E+04	1.21E+05	6.12E+04
<b>Grand Total</b>	<b>4.20E+05</b>	<b>8.18E+05</b>	<b>3.98E+05</b>

<sup>1</sup>CID Data Version D.8.00.0Y, LANL-CO 2009b

<sup>2</sup>CID Data Version D.9.02.0Y, LANL-CO 2010a

## D-5 Complexing Agent Comparisons

Table D-7 shows the comparison of the total CH- and RH-TRU estimated complexing agents and their masses (kg) between the ATWIR-2009 (DOE 2009a) and this report. These data represent only the complexing agents that are currently being reported by the sites in their anticipated (stored + projected) TRU waste inventory and do not include complexing agents that have been emplaced at WIPP because the WDS does not contain chemical component data. A detailed breakout of waste streams that contain complexing agents can be found in Section 3.2.3.1 of this report.

An overall net cumulative decrease of approximately 1,060 kg in both the CH- and RH-TRU complexing agents has occurred for this reporting period. The majority of this decrease is in the acetic acid constituent of the INL CH-TRU waste stream IN-ID-SDA-Sludge. The reason for the decrease is that the waste stream is actively being shipped to and emplaced at WIPP.

**Table D-7. Total CH/RH Complexing Agents**

Complexing Agent	ATWIR-2009 Total Mass (kg) <sup>1</sup>	ATWIR-2010 Total Mass (kg) <sup>2</sup>	Total Net Change (kg)
Acetic Acid	8.95E+03	7.77E+03	-1.18E+03
Citric Acid	1.56E+03	1.54E+03	-1.42E+01
Oxalic Acid	5.63E+03	5.65E+03	2.51E+01
Sodium Acetate	7.49E+03	7.56E+03	7.21E+01
Sodium Citrate	1.92E+02	2.18E+02	2.60E+01
Sodium EDTA	1.41E+02	1.55E+02	1.43E+01
Sodium Oxalate	1.81E+01	2.11E+01	3.01E+00
<b>Grand Total</b>	<b>2.40E+04</b>	<b>2.29E+04</b>	<b>-1.06E+03</b>

<sup>1</sup>Chemical and Cement Components 2008 Inventory Estimates, McInroy 2009

<sup>2</sup>Chemical and Cement Components 2009 Inventory Estimates, Young 2010b

## D-6 Oxyanions Comparisons

Table D-8 shows the total CH- and RH-TRU estimated oxyanions and their masses (kg) that were reported by site in the ATWIR-2009 (DOE 2009a) and in this report. These data represent only the oxyanions that are currently being reported by the sites as anticipated TRU waste inventory and do not include oxyanions that have been emplaced at WIPP because the WDS does not contain chemical component data. A detailed breakout of waste streams that contain oxyanions can be found in Section 3.2.3.2 of this report.

The overall decrease in oxyanions is attributed to the INL waste stream IN-ID-SDA-Sludge. This waste stream reduced its phosphate and sulfate by approximately 12,900 kg and 36,000 kg, respectively, because of emplacement of the waste at WIPP. The IN-ID-

SDA-Sludge waste stream also decreased the amount of nitrates by about 25,000 kg, reported because of shipments of waste to WIPP. That decrease was offset by an increase of about 33,000 kg of nitrates from a new INL waste stream, IN-BN005. The remaining increase in nitrates comes from small increases in waste streams from INL and Hanford-RL.

**Table D-8. Total CH/RH Oxyanions**

<b>Complexing Agent</b>	<b>ATWIR-2009 Total Mass (kg)<sup>1</sup></b>	<b>ATWIR-2010 Total Mass (kg)<sup>2</sup></b>	<b>Total Net Change (kg)</b>
Nitrates	8.29E+05	8.42E+05	1.33E+04
Phosphates	1.87E+05	1.74E+05	-1.29E+04
Sulfates	2.49E+05	2.13E+05	-3.60E+04
<b>Grand Total</b>	<b>1.26E+06</b>	<b>1.23E+06</b>	<b>-3.56E+04</b>

<sup>1</sup>Chemical and Cement Components 2008 Inventory Estimates, McInroy 2009

<sup>2</sup>Chemical and Cement Components 2009 Inventory Estimates, Young 2010b

**APPENDIX E: Historic Crosswalk of Inventory Waste Streams**



This Appendix contains a crosswalk that maps current ATWIR-2010 inventory waste streams to the ATWIR-2009 (DOE 2009a) inventory waste streams.

Table E-1 displays the site code in the first column, the ATWIR-2010 waste stream in the middle column, and all the ATWIR-2009 (DOE 2009a) waste streams that are mapped to a specific ATWIR-2010 waste stream in the last column. The table provides easy reference to the ATWIR-2009 (DOE 2009a) waste streams using the ATWIR-2010 waste streams as a lookup guide. Table E-2 shows the inverse of Table E-1. Table E-2 displays the site code in the first column, the ATWIR-2009 (DOE 2009a) waste stream in the middle column, and the ATWIR-2010 waste streams that are mapped to a specific ATWIR-2009 (DOE 2009a) waste stream in the last column. This table provides reference to ATWIR-2010 waste streams when the ATWIR-2009 (DOE 2009a) waste streams are known.

#### Site Code and Site Name:

AE	Argonne National Laboratory
AW	Material and Fuels Complex (MFC)
BL	Babcock and Wilcox Nuclear Energy Services
BT	Bettis Atomic Power Laboratory
FR	Framatome
IN	Idaho National Laboratory
KA	Knolls Atomic Power Laboratory
KN	Knolls Atomic Power Laboratory-Nuclear Fuels Services
LA	Los Alamos National Laboratory
LB	Lawrence Berkeley Laboratory
LL	Lawrence Livermore National Laboratory
MC	U.S. Army Materiel Command
ND	Nuclear Radiation Development Site
NT	Nevada Test Site
OR	Oak Ridge National Laboratory
PA	Paducah Gaseous Diffusion Plant
RL	Hanford Site (Richland Operations Office)
RP	Hanford Site (Office of River Protection)
SA	Sandia National Laboratories
SP	Separations Process Research Unit
SR	Savannah River Site
VN	General Electric Vallecitos Nuclear Center
WV	West Valley Demonstration Project

Table E-1. Crosswalk of ATWIR-2010 to ATWIR-2009 Waste Streams

Site Code	ATWIR-2010 Waste Streams	ATWIR-2009 Waste Streams
AE	AE-T001	AE-T001
AE	AE-T003	AE-T003
AE	AE-T009	AE-T009
AW	AW-IN-TRA-BE-01	AW-IN-TRA-BE-01
AW	AW-N026.82	AW-N026.82
AW	AW-N027.531	AW-N027.531
AW	AW-T031.1322	AW-T031.1322
AW	AW-T033.1325	AW-T033.1325
AW	AW-W018	AW-W018
AW	AW-W019	AW-W019
AW	AW-W020.13	AW-W020.13
AW	AW-W026	AW-W026
AW	AW-W028	AW-W028
AW	AW-W029	AW-W029
AW	AW-W046	AW-W046
AW	AW-W047	AW-W047
AW	AW-W048	AW-W048
AW	AW-W049	AW-W049
BL	BL-Parks	BL-Parks
BL	BL-Parks-A	BL-Parks-A
BT	BT-T001	BT-T001
BT	BT-T002	BT-T002
BT	BT-T006	BT-T006
BT	BT-T007	BT-T007
IN	IN-AE-AGHC-01	IN-AE-AGHC-01
IN	IN-AE-AGHC-02	AW-W029
IN	IN-AW-161	IN-AW-161
IN	IN-BN004	IN-BN004
IN	IN-BN005	IN-W315
IN	IN-BN050	IN-BN050
IN	IN-BN090	<i>New waste stream</i>
IN	IN-BN095	IN-BN095
IN	IN-BN204	IN-BN204
IN	IN-BN222	IN-BN222
IN	IN-BN311	IN-BN311
IN	IN-BN375	IN-BN375
IN	IN-BN409	IN-BN409
IN	IN-BN421	IN-BN421
IN	IN-BN425	IN-BN425
IN	IN-BN430	IN-BN430
IN	IN-BN431	IN-BN431
IN	IN-BN432	IN-BN432
IN	IN-BN510	IN-BN510
IN	IN-BN806	IN-BN806
IN	IN-BN811	IN-BN811
IN	IN-BN817	IN-BN817

**Table E-1. Crosswalk of ATWIR-2010 to ATWIR-2009 Waste Streams**  
Continued

Site Code	ATWIR-2010 Waste Streams	ATWIR-2009 Waste Streams
IN	IN-BN823	IN-BN823
IN	IN-BN835	IN-BN835
IN	IN-BN836	IN-BN836
IN	IN-BN842	IN-BN842
IN	IN-BN976	IN-BN976
IN	IN-BN978	IN-BN978
IN	IN-BNINW216	IN-BNINW216
IN	IN-BNINW218	IN-BNINW218
IN	IN-GEM-01	IN-GEM-01
IN	IN-GEM-02	IN-GEM-02
IN	IN-ID-BTO-030	IN-ID-BTO-030
IN	IN-ID-INL-152	IN-ID-INL-152
IN	IN-ID-INL-152M	AW-T031.1322, AW-W020.13, AW-W026, AW-W029
IN	IN-ID-NTLRC-S5400	NTLRC-S5400
IN	IN-ID-RF-S3114	IN-ID-RF-S3114
IN	IN-ID-RF-S3150-A	IN-ID-RF-S3150-A
IN	IN-ID-RF-S5100-A	IN-ID-RF-S5100-A
IN	IN-ID-RF-S5126-A	IN-ID-RF-S5126-A
IN	IN-ID-RF-S5300-A	IN-ID-RF-S5300-A
IN	IN-ID-RTC-S5000	IN-ID-RTC-S5000
IN	IN-ID-SDA-Debris	IN-ID-SDA-Debris
IN	IN-ID-SDA-Sludge	IN-ID-SDA-Sludge
IN	IN-ID-SDA-Soil	IN-ID-SDA-Soil
IN	IN-INTEC-SFS-01	IN-INTEC-SFS-01
IN	IN-NRF-153	IN-NRF-153
IN	IN-NRF-SPC	IN-NRF-SPC
IN	IN-NTLLLBL-S5400	NTLBL-S5400
IN	IN-NT-RF-DECON	<i>New waste stream</i>
IN	IN-NTS-EG&G-HET	NTS-EG&G-HET
IN	IN-NTS-ITRI-S5310	NT-W004
IN	IN-NTS-TTR-HET	NTS-TTR-HET
IN	IN-NTVERB-S5400	<i>New waste stream</i>
IN	IN-SBW-01A	IN-SBW-01A
IN	IN-SBW-01B	IN-SBW-01B
IN	IN-TRA-150	IN-TRA-150
IN	IN-W169R	IN-W169R
IN	IN-W170	IN-W170
IN	IN-W171	IN-W171
IN	IN-W197R	IN-W197R
IN	IN-W208R	IN-W208R
IN	IN-W216R	IN-W216R
IN	IN-W228R	IN-W228R
IN	IN-W243R	IN-W243R
IN	IN-W245R	IN-W245R
IN	IN-W247R	IN-W247R

**Table E-1. Crosswalk of ATWIR-2010 to ATWIR-2009 Waste Streams**  
Continued

Site Code	ATWIR-2010 Waste Streams	ATWIR-2009 Waste Streams
IN	IN-W252R	IN-W252R
IN	IN-W254R	IN-W254R
IN	IN-W259	IN-W259
IN	IN-W269	IN-W269
IN	IN-W283	IN-W283
IN	IN-W283R	IN-W283R
IN	IN-W287	IN-W287
IN	IN-W294R	IN-W294R
IN	IN-W296R	IN-W296R
IN	IN-W298R	IN-W298R
IN	IN-W317R	IN-W317R
IN	IN-W322	IN-W322
IN	IN-W323	IN-W323
IN	IN-W337	IN-W337
IN	IN-W338	IN-W338
IN	IN-W339	IN-W339
IN	IN-W342R	IN-W342R
IN	IN-W345	IN-W345
IN	IN-W347	IN-W347
IN	IN-W350	IN-W350
IN	IN-W351	IN-W351
IN	IN-W358	IN-W358
IN	IN-W359R	IN-W359R
IN	IN-W360R	IN-W360R
IN	IN-W364R	IN-W364R
IN	IN-W365R	IN-W365R
KA	KA-T001	KA-T001
KA	KA-W016	KA-W016
KN	KN-B234TRU	KN-B234TRU
KN	KN-B234TRU_SS	KN-B234TRU_SS
LA	LA-CIN01.001	LA-CIN01.001, LA-TA-55-14
LA	LA-CIN02.001	LA-CIN01.001, LA-CIN02.001
LA	LA-CIN03.001	LA-TA-03-28
LA	LA-LAMHD03DD	LA-LAMHD03DD
LA	LA-LAMIN04S	LA-LAMIN04S
LA	LA-LANHD01	<i>New waste stream</i>
LA	LA-LANIN03NC	LA-LANIN03NC
LA	LA-MHD01.001	LA-LA238HOR, LA-LAMHD02238, LA-LAMIN04S, LA-LA-NCD01, LA-LANHD02238, LA-LANIN03NC, LA-MHD01.001, LA-MIN03-NC.001, LA-TA-00-01, LA-TA-00-04, LA-TA-50-16, LA-TA-55-19, LA-TA-55-30
LA	LA-MHD02-PTX.001	LA-PX-00-01
LA	LA-MHD03.001	LA-MHD03.001, LA-TA-03-09, LA-TA-03-10
LA	LA-MHD04.001	LA-MHD04.001
LA	LA-MHD05-ITRI.001	LA-TA-00-01

**Table E-1. Crosswalk of ATWIR-2010 to ATWIR-2009 Waste Streams**  
Continued

Site Code	ATWIR-2010 Waste Streams	ATWIR-2009 Waste Streams
LA	LA-MHD08.001	LA-MHD08.001
LA	LA-MHD09.001	LA-MHD01.001, LA-MIN03-NC.001, LA-TA-50-01, LA-TA-50-02, LA-TA-50-05, LA-TA-50-06, LA-TA-50-11, LA-TA-50-12, LA-TA-50-13, LA-TA-50-14, LA-TA-50-15, LA-TA-50-16, LA-TA-50-40
LA	LA-MIN02-V.001	LA-MIN02-V.001
LA	LA-MIN03-NC.001	LA-MIN03-NC.001
LA	LA-MIN04-S.001	LA-MHD01.001
LA	LA-OS-00-01.001	LA-OS-00-01.001
LA	LA-OS-00-03	LA-OS-00-03
LA	LA-TA-00-01	LA-TA-00-01
LA	LA-TA-00-03	LA-TA-00-03
LA	LA-TA-00-04	LA-TA-00-04
LA	LA-TA-03-01	LA-TA-03-01
LA	LA-TA-03-09	LA-TA-03-09
LA	LA-TA-03-10	LA-TA-03-10
LA	LA-TA-03-12	LA-TA-03-12
LA	LA-TA-03-14	LA-TA-03-14
LA	LA-TA-03-17	LA-TA-03-17
LA	LA-TA-03-20	LA-TA-03-20
LA	LA-TA-03-21	LA-TA-03-21
LA	LA-TA-03-23	LA-TA-03-23
LA	LA-TA-03-27	LA-TA-03-27
LA	LA-TA-03-28	LA-TA-03-28
LA	LA-TA-03-30	LA-TA-03-30
LA	LA-TA-03-31	LA-TA-03-31
LA	LA-TA-03-33	LA-TA-03-33
LA	LA-TA-03-34	LA-TA-03-34
LA	LA-TA-03-40	LA-TA-03-40
LA	LA-TA-03-42	LA-TA-03-42
LA	LA-TA-21-05	LA-TA-21-05
LA	LA-TA-21-06	LA-TA-21-06
LA	LA-TA-21-07	LA-TA-21-07
LA	LA-TA-21-08	LA-TA-21-08
LA	LA-TA-21-09	LA-TA-21-09
LA	LA-TA-21-10	LA-TA-21-10
LA	LA-TA-21-11	LA-TA-21-11
LA	LA-TA-21-12	LA-TA-21-12
LA	LA-TA-21-13	LA-TA-21-13
LA	LA-TA-21-14	LA-TA-21-14
LA	LA-TA-21-15	LA-TA-21-15
LA	LA-TA-21-16	LA-TA-21-16
LA	LA-TA-21-17	LA-TA-21-17
LA	LA-TA-21-41	LA-TA-21-41
LA	LA-TA-50-12	LA-TA-50-12

**Table E-1. Crosswalk of ATWIR-2010 to ATWIR-2009 Waste Streams**  
Continued

Site Code	ATWIR-2010 Waste Streams	ATWIR-2009 Waste Streams
LA	LA-TA-50-15	LA-TA-50-15
LA	LA-TA-50-16	LA-TA-50-16
LA	LA-TA-50-18	LA-TA-50-18
LA	LA-TA-50-19	LA-TA-50-19
LA	LA-TA-50-20	LA-TA-50-20
LA	LA-TA-55-19	LA-TA-55-19
LA	LA-TA-55-20	LA-TA-55-20
LA	LA-TA-55-21	LA-TA-55-21
LA	LA-TA-55-23	LA-TA-55-23
LA	LA-TA-55-30	LA-TA-55-30
LA	LA-TA-55-32	LA-TA-55-32
LA	LA-TA-55-33	LA-TA-55-33
LA	LA-TA-55-38	LA-TA-55-38
LA	LA-TA-55-43	LA-TA-55-43
LA	LA-TA-55-61	LA-TA-55-61
LB	LB-T001	LB-T001
LB	LB-T002	LB-T002
LB	LB-T003	LB-T003
LB	LB-T004	LB-T004
LL	LL-M001	LL-M001, LL-T005
LL	LL-T004	LL-T004
LL	LL-W018-S5100	LL-W018-S5100
LL	LL-W018-SS	LL-W018-SS
LL	LL-W019	LL-W019
MC	MC-W001	MC-W001
ND	ND-T001	ND-T001
ND	ND-T002	<i>New waste stream</i>
NT	NT-JAS-01	NT-JAS-01
NT	NT-W021	NT-W021
OR	OR-7930-CH-HET	OR-TBD-CH-HET
OR	OR-CHEM-CH-HET	OR-CHEM-CH-HET
OR	OR-GENR-CH-HET	OR-GENR-CH-HET
OR	OR-ISTP-CH-HET	OR-ISTP-CH-HET
OR	OR-NBL-CH-HET	OR-NBL-CH-HET
OR	OR-NFS-CH-HET	OR-NFS-CH-HET
OR	OR-NFS-CH-HOM	OR-NFS-CH-HOM
OR	OR-NFS-CH-SOIL	OR-NFS-CH-SOIL
OR	OR-PGDP-CH-HET	OR-PGDP-CH-HET
OR	OR-RADP-CH-HET	OR-RADP-CH-HET
OR	OR-RADP-CH-SOILS	OR-TBD-CH-HET
OR	OR-REDC-CH-HET	OR-REDC-CH-HET
OR	OR-REDC-RH-HET	OR-REDC-RH-HET
OR	OR-RF-CH-HET	OR-RF-CH-HET
OR	OR-RF-CH-HOM	OR-RF-CH-HOM
OR	OR-TBD-CH-HET	OR-TBD-CH-HET
OR	OR-TBD-RH-HET	OR-TBD-RH-HET

**Table E-1. Crosswalk of ATWIR-2010 to ATWIR-2009 Waste Streams**  
Continued

<b>Site Code</b>	<b>ATWIR-2010 Waste Streams</b>	<b>ATWIR-2009 Waste Streams</b>
OR	OR-W203	OR-W203
OR	OR-W213-RH-SOILS	OR-W213-RH-SOILS
OR	OR-WSTR-CH-HET	OR-WSTR-CH-HET
OR	OR-Y12-CH-HET	OR-Y12-CH-HET
PA	PA-A015	PA-A015
PA	PA-W014	PA-W014
RL	RL105-01	RL105-01
RL	RL105-03	RL105-03
RL	RL105-08	RL105-07
RL	RL105-09	RL105-09
RL	RL200-01	RL200-01
RL	RL200-02	RL200-02
RL	RL201-01	RL201-01
RL	RL202S-01	RL202S-01
RL	RL209E-01	RL209E-01
RL	RL209E-08	RL209E-08
RL	RL216Z-02	RL216Z-02
RL	RL221T-01	RL221T-01
RL	RL221U-01	RL221U-01
RL	RL221U-09	<i>New waste stream</i>
RL	RL222S-01	RL222S-01
RL	RL222S-08	RL222S-08
RL	RL231Z-01	RL231Z-01
RL	RL231Z-03	RL231Z-03
RL	RL233S-01	RL233S-01
RL	RL233S-03	RL233S-03
RL	RL300-01	RL300-01
RL	RL300-03	RL300-03
RL	RL300-08	RL300-08
RL	RL300-11	RL300-11
RL	RL308-01	RL308-01
RL	RL325-01	RL325-01
RL	RL325-02	RL325-01
RL	RL325-03	RL325-03
RL	RL325-08	RL325-08
RL	RL325-09	RL325-09
RL	RL618-01	RL618-01
RL	RL618-07	RL618-07
RL	RLARG-01	RLARG-01
RL	RLBART-01	RLBART-01
RL	RLBART-08	RLBART-08
RL	RLBAT-01	RLBAT-01
RL	RLBAT-08	RLBAT-08
RL	RLBET-08	RLBET-08
RL	RLBW-01	RLBW-01
RL	RLBW-03	RLBW-03

**Table E-1. Crosswalk of ATWIR-2010 to ATWIR-2009 Waste Streams**  
Continued

Site Code	ATWIR-2010 Waste Streams	ATWIR-2009 Waste Streams
RL	RLBW-08	RLBW-08
RL	RLCFF-01	RLCFF-01
RL	RLCFF-03	RLCFF-03
RL	RLCH2-01	RLCH2-01
RL	RLCH2-08	RLCH2-08
RL	RLESG-01	RLESG-01
RL	RLESG-08	RLESG-08
RL	RLEXX-01	RLEXX-01
RL	RLFFTF-01	RLFFTF-01
RL	RLFFTF-08	RLFFTF-01
RL	RLGEV-01	RLGEV-01
RL	RLGEV-03	RLGEV-03
RL	RLGEV-08	RLGEV-08
RL	RLHAN-01	RLHAN-01
RL	RLHAN-08	RLHAN-01
RL	RLIAEA-01	RLIAEA-01
RL	RLMLB-08	RLMLB-08
RL	RLMLL-01	RLMLL-01
RL	RLPFP-01	RLPFP-01
RL	RLPFP-02	RLPFP-02
RL	RLPFP-02A	<i>New waste stream</i>
RL	RLPFP-03	RLPFP-03
RL	RLPFP-04	RLPFP-04
RL	RLPFP-08	RLPFP-08
RL	RLPRC-01	RLPRC-01
RL	RLPURX-01	RLPURX-01
RL	RLPURX-08	RLPURX-07
RL	RLRFET-01	RLRFET-01
RL	RLSAN-01	RLSAN-01
RL	RLSWO-01	RLSWO-01
RL	RLSWO-08	RLSWO-01
RL	RLWAR-01	RLWAR-01
RL	RLWAR-03	RLWAR-03
RL	RLWTP-08	RLWTP-08
RP	RP-TFC001	RP-TFC001
RP	RP-TFC002	RP-TFC002
RP	RP-TFC003	RP-TFC003
RP	RP-W013	RP-W013
RP	RP-W016	RP-W016
RP	RP-W754	RP-W754
RP	RP-W755	RP-W755
SA	SA-T001	SA-T001
SA	SA-W134	SA-W134
SA	SA-W134M	SA-W134M
SA	SA-W135	SA-W135
SA	SA-W136	SA-W136



**Table E-1. Crosswalk of ATWIR-2010 to ATWIR-2009 Waste Streams**  
Continued

Site Code	ATWIR-2010 Waste Streams	ATWIR-2009 Waste Streams
SP	SP-T001	SP-T001
SP	SP-T002	SP-T002
SR	SR-AGNS-HET	SR-W027-999-AGNS-HET
SR	SR-AGNS-HOM	SR-W027-999-AGNS-HOM
SR	SR-AikenTech-HET	SR-W027-SRSG-HET
SR	SR-BCLCH-MT01	SR-BCLCH-MT01
SR	SR-BCLDP.001.001	SR-BCLRH-T007, SR-BCLRH-T009
SR	SR-BCLDP.001.002	SR-BCLRH-T008, SR-BCLRH-T009
SR	SR-BCLDP.002	SR-BCLRH-T006
SR	SR-BCLDP.003	SR-BCLRH-T011
SR	SR-BCLDP.004.002	SR-BCLRH-T002
SR	SR-BCLDP.004.003	SR-BCLRH-T005
SR	SR-BCLDP.005	SR-BCLRH-T010
SR	SR-BCLDP.NYA	<i>New waste stream</i>
SR	SR-KAC-HET	<i>New waste stream</i>
SR	SR-LA-PAD1	SR-W027-999-LASL-HET, SR-W027-999-LASL-HOM
SR	SR-MD-HET	SR-W027-999-MD-HET
SR	SR-MD-HOM-A	SR-W027-999-MD-HOM-A
SR	SR-MD-HOM-B	SR-W027-999-MD-HOM-B
SR	SR-MD-HOM-C	SR-W027-999-MD-HOM-C
SR	SR-MD-PAD1	SR-W027-999-MD-HET
SR	SR-MD-SOIL	SR-W027-999-MD-SOIL
SR	SR-NIST-HET	SR-W027-SRSG-HET
SR	SR-RH-221H.01	SR-W027-221H-HET-RH
SR	SR-RH-221H.02	SR-W027-221H-HEPA
SR	SR-RH-235F.01	SR-W027-235F-HET
SR	SR-RH-772F.01	SR-W026-772F-HET
SR	SR-RH-773A.01	SR-T003-773A-HET
SR	SR-RH-FBL.01	SR-W026-221F-HET
SR	SR-RH-FTF.01	SR-W027-SRSG-HET-RH
SR	SR-RH-SDD.01	SR-W027-SRSG-HET
SR	SR-SDD-211F-HET	SR-W027-SRSG-HET
SR	SR-SDD-800UGT-HET	SR-W027-SRSG-HET
SR	SR-SDD-800UGT-HOM-A	SR-W027-SRSG-HOM
SR	SR-SDD-800UGT-HOM-B	SR-W027-SRSG-HOM
SR	SR-SDD-HET-A	SR-W027-SRSG-HET
SR	SR-SWMF-HET-A	SR-SWMF-HET-A
SR	SR-SWMF-HET-RH	SR-SWMF-HET-RH
SR	SR-SWMF-SOIL	SR-SWMF-SOIL
SR	SR-T001-WSB-1	SR-T001-WSB-1
SR	SR-T001-WSB-3	SR-T001-WSB-3
SR	SR-W026-221F-HEPA	SR-W026-221F-HEPA
SR	SR-W026-221F-HET	SR-W026-221F-HET
SR	SR-W026-221F-HOM	SR-W026-221F-HOM, SR-W027-221F-HOM, SR-W027-221H-HOM

**Table E-1. Crosswalk of ATWIR-2010 to ATWIR-2009 Waste Streams**  
Continued

Site Code	ATWIR-2010 Waste Streams	ATWIR-2009 Waste Streams
SR	SR-W026-772F-HET	SR-W026-772F-HET
SR	SR-W026-CIF-HOM	SR-W027-SRSG-HOM
SR	SR-W026-DWPF-HET	SR-W027-SRSG-HET
SR	SR-W026-MFFF-1	SR-W026-MFFF-1
SR	SR-W026-PDCF-1	SR-W026-PDCF-1
SR	SR-W026-WSB-2	SR-W026-WSB-2
SR	SR-W027-221F-HET-A	SR-W027-221F-HET
SR	SR-W027-221F-HET-C-D	SR-W027-221F-HET
SR	SR-W027-221F-HET-E	SR-W027-221F-HET
SR	SR-W027-221H-HEPA	SR-W027-221H-HEPA
SR	SR-W027-221H-HET	SR-W027-221H-HET
SR	SR-W027-221H-HET-B	SR-W027-221H-HET-B
SR	SR-W027-221H-HET-C	SR-W027-221H-HET
SR	SR-W027-221H-HET-D	SR-W027-221H-HET
SR	SR-W027-221H-HOM	<i>New waste stream</i>
SR	SR-W027-235F-HEPA	SR-W027-235F-HET
SR	SR-W027-235F-HET	SR-W027-235F-HET
SR	SR-W027-235F-HOMO	SR-W027-235F-HOMO
SR	SR-W027-321-322M-HET	SR-W027-SRSG-HET
SR	SR-W027-643G-HET	SR-W027-SRSG-HET
SR	SR-W027-773A-HEPA	SR-W027-773A-HET
SR	SR-W027-773A-HET	SR-W027-773A-HET
SR	SR-W027-773A-HET-CLAS	SR-T001-773A-CLAS
SR	SR-W027-776A-HET	SR-W027-773A-HET
SR	SR-W027-FB-Pre86-C	<i>New waste stream</i>
SR	SR-W027-HBL-Box-A	SR-W027-HBL-Box-A
SR	SR-W027-HBL-Box-B	SR-W027-HBL-Box-B
SR	SR-W027-UNK	<i>New waste stream</i>
VN	VN-GEVNC.02	VN-GEVNC.02
WV	WV-M010a	WV-M010a
WV	WV-T004	WV-T004
WV	WV-T006a	WV-T006a
WV	WV-T006b	WV-T006b
WV	WV-T017a	WV-T017a
WV	WV-T017b	WV-T017b
WV	WV-W024a	WV-W024a
WV	WV-W024b	WV-W024b
WV	WV-Z001	WV-Z001

**Table E-2. Crosswalk of ATWIR-2009 to ATWIR-2010 Waste Streams**

<b>Site Code</b>	<b>ATWIR-2009 Waste Streams</b>	<b>ATWIR-2010 Waste Streams</b>
AE	AE-T001	AE-T001
AE	AE-T003	AE-T003
AE	AE-T009	AE-T009
AW	AW-IN-TRA-BE-01	AW-IN-TRA-BE-01
AW	AW-N026.82	AW-N026.82
AW	AW-N027.531	AW-N027.531
AW	AW-T031.1322	AW-T031.1322, IN-ID-INL-152M
AW	AW-T033.1325	AW-T033.1325
AW	AW-W018	AW-W018
AW	AW-W019	AW-W019
AW	AW-W020.13	AW-W020.13, IN-ID-INL-152M
AW	AW-W026	AW-W026, IN-ID-INL-152M
AW	AW-W028	AW-W028
AW	AW-W029	AW-W029, IN-AE-AGHC-02, IN-ID-INL-152M
AW	AW-W046	AW-W046
AW	AW-W047	AW-W047
AW	AW-W048	AW-W048
AW	AW-W049	AW-W049
BL	BL-Parks	BL-Parks
BL	BL-Parks-A	BL-Parks-A
BT	BT-T001	BT-T001
BT	BT-T002	BT-T002
BT	BT-T006	BT-T006
BT	BT-T007	BT-T007
IN	IN-AE-AGHC-01	IN-AE-AGHC-01
IN	IN-AW-161	IN-AW-161
IN	IN-BN004	IN-BN004
IN	IN-BN050	IN-BN050
IN	IN-BN095	IN-BN095
IN	IN-BN161	Deleted
IN	IN-BN204	IN-BN204
IN	IN-BN211	Deleted
IN	IN-BN222	IN-BN222
IN	IN-BN243	Deleted
IN	IN-BN252	Deleted
IN	IN-BN296	Deleted
IN	IN-BN304	Deleted
IN	IN-BN311	IN-BN311
IN	IN-BN375	IN-BN375
IN	IN-BN409	IN-BN409
IN	IN-BN421	IN-BN421
IN	IN-BN425	IN-BN425
IN	IN-BN430	IN-BN430
IN	IN-BN431	IN-BN431
IN	IN-BN432	IN-BN432

**Table E-2. Crosswalk of ATWIR-2009 to ATWIR-2010 Waste Streams**  
Continued

<b>Site Code</b>	<b>ATWIR-2009 Waste Streams</b>	<b>ATWIR-2010 Waste Streams</b>
IN	IN-BN510	IN-BN510
IN	IN-BN806	IN-BN806
IN	IN-BN811	IN-BN811
IN	IN-BN817	IN-BN817
IN	IN-BN823	IN-BN823
IN	IN-BN835	IN-BN835
IN	IN-BN836	IN-BN836
IN	IN-BN842	IN-BN842
IN	IN-BN976	IN-BN976
IN	IN-BN978	IN-BN978
IN	IN-BNINW216	IN-BNINW216
IN	IN-BNINW218	IN-BNINW218
IN	IN-GEM-01	IN-GEM-01
IN	IN-GEM-02	IN-GEM-02
IN	IN-ID-BTO-030	IN-ID-BTO-030
IN	IN-ID-INL-152	IN-ID-INL-152
IN	IN-ID-NTLLNL-S3900	Deleted
IN	IN-ID-NTLLNL-S5400	Deleted
IN	IN-ID-RF-S3114	IN-ID-RF-S3114
IN	IN-ID-RF-S3150-A	IN-ID-RF-S3150-A
IN	IN-ID-RF-S5100-A	IN-ID-RF-S5100-A
IN	IN-ID-RF-S5126-A	IN-ID-RF-S5126-A
IN	IN-ID-RF-S5300-A	IN-ID-RF-S5300-A
IN	IN-ID-RTC-S5000	IN-ID-RTC-S5000
IN	IN-ID-SDA-Debris	IN-ID-SDA-Debris
IN	IN-ID-SDA-Sludge	IN-ID-SDA-Sludge
IN	IN-ID-SDA-Soil	IN-ID-SDA-Soil
IN	IN-INTEC-SFS-01	IN-INTEC-SFS-01
IN	IN-NRF-153	IN-NRF-153
IN	IN-NRF-SPC	IN-NRF-SPC
IN	IN-SBW-01A	IN-SBW-01A
IN	IN-SBW-01B	IN-SBW-01B
IN	IN-TRA-150	IN-TRA-150
IN	IN-W139	Deleted
IN	IN-W169R	IN-W169R
IN	IN-W170	IN-W170
IN	IN-W171	IN-W171
IN	IN-W172	Deleted
IN	IN-W197R	IN-W197R
IN	IN-W198R	Deleted
IN	IN-W208R	IN-W208R
IN	IN-W216R	IN-W216R
IN	IN-W219	Deleted
IN	IN-W228R	IN-W228R
IN	IN-W243R	IN-W243R
IN	IN-W245R	IN-W245R

**Table E-2. Crosswalk of ATWIR-2009 to ATWIR-2010 Waste Streams**  
Continued

<b>Site Code</b>	<b>ATWIR-2009 Waste Streams</b>	<b>ATWIR-2010 Waste Streams</b>
IN	IN-W247R	IN-W247R
IN	IN-W252R	IN-W252R
IN	IN-W254R	IN-W254R
IN	IN-W259	IN-W259
IN	IN-W260R	Deleted
IN	IN-W269	IN-W269
IN	IN-W283	IN-W283
IN	IN-W283R	IN-W283R
IN	IN-W287	IN-W287
IN	IN-W294R	IN-W294R
IN	IN-W296R	IN-W296R
IN	IN-W298R	IN-W298R
IN	IN-W302	Deleted
IN	IN-W315	IN-BN005
IN	IN-W317R	IN-W317R
IN	IN-W322	IN-W322
IN	IN-W323	IN-W323
IN	IN-W337	IN-W337
IN	IN-W338	IN-W338
IN	IN-W339	IN-W339
IN	IN-W342R	IN-W342R
IN	IN-W345	IN-W345
IN	IN-W347	IN-W347
IN	IN-W350	IN-W350
IN	IN-W351	IN-W351
IN	IN-W358	IN-W358
IN	IN-W359R	IN-W359R
IN	IN-W360R	IN-W360R
IN	IN-W364R	IN-W364R
IN	IN-W365R	IN-W365R
IN	IN-W372	Deleted
IN	IN-W372R	Deleted
KA	KA-T001	KA-T001
KA	KA-W016	KA-W016
KN	KN-B234TRU	KN-B234TRU
KN	KN-B234TRU_SS	KN-B234TRU_SS
LA	LA-CIN01.001	LA-CIN01.001, LA-CIN02.001
LA	LA-CIN02.001	LA-CIN02.001
LA	LA-LA238HOR	LA-MHD01.001
LA	LA-LAMHD02238	LA-MHD01.001
LA	LA-LAMHD03DD	LA-LAMHD03DD
LA	LA-LAMIN04S	LA-LAMIN04S, LA-MHD01.001
LA	LA-LA-NCD01	LA-MHD01.001
LA	LA-LANHD02238	LA-MHD01.001
LA	LA-LANIN03NC	LA-LANIN03NC, LA-MHD01.001

**Table E-2. Crosswalk of ATWIR-2009 to ATWIR-2010 Waste Streams**  
Continued

<b>Site Code</b>	<b>ATWIR-2009 Waste Streams</b>	<b>ATWIR-2010 Waste Streams</b>
LA	LA-MHD01.001	LA-MHD01.001, LA-MHD09.001, LA-MIN04-S.001
LA	LA-MHD03.001	LA-MHD03.001
LA	LA-MHD04.001	LA-MHD04.001
LA	LA-MHD08.001	LA-MHD08.001
LA	LA-MIN02-V.001	LA-MIN02-V.001
LA	LA-MIN03-NC.001	LA-MHD01.001, LA-MHD09.001, LA-MIN03-NC.001
LA	LA-OS-00-01.001	LA-OS-00-01.001
LA	LA-OS-00-03	LA-OS-00-03
LA	LA-PX-00-01	LA-MHD02-PTX.001
LA	LA-TA-00-01	LA-MHD01.001, LA-MHD05-ITRI.001, LA-TA-00-01
LA	LA-TA-00-03	LA-TA-00-03
LA	LA-TA-00-04	LA-MHD01.001, LA-TA-00-04
LA	LA-TA-03-01	LA-TA-03-01
LA	LA-TA-03-09	LA-MHD03.001, LA-TA-03-09
LA	LA-TA-03-10	LA-MHD03.001, LA-TA-03-10
LA	LA-TA-03-12	LA-TA-03-12
LA	LA-TA-03-14	LA-TA-03-14
LA	LA-TA-03-17	LA-TA-03-17
LA	LA-TA-03-20	LA-TA-03-20
LA	LA-TA-03-21	LA-TA-03-21
LA	LA-TA-03-23	LA-TA-03-23
LA	LA-TA-03-27	LA-TA-03-27
LA	LA-TA-03-28	LA-CIN03.001, LA-TA-03-28
LA	LA-TA-03-30	LA-TA-03-30
LA	LA-TA-03-31	LA-TA-03-31
LA	LA-TA-03-33	LA-TA-03-33
LA	LA-TA-03-34	LA-TA-03-34
LA	LA-TA-03-40	LA-TA-03-40
LA	LA-TA-03-42	LA-TA-03-42
LA	LA-TA-21-05	LA-TA-21-05
LA	LA-TA-21-06	LA-TA-21-06
LA	LA-TA-21-07	LA-TA-21-07
LA	LA-TA-21-08	LA-TA-21-08
LA	LA-TA-21-09	LA-TA-21-09
LA	LA-TA-21-10	LA-TA-21-10
LA	LA-TA-21-11	LA-TA-21-11
LA	LA-TA-21-12	LA-TA-21-12
LA	LA-TA-21-13	LA-TA-21-13
LA	LA-TA-21-14	LA-TA-21-14
LA	LA-TA-21-15	LA-TA-21-15
LA	LA-TA-21-16	LA-TA-21-16
LA	LA-TA-21-17	LA-TA-21-17
LA	LA-TA-21-41	LA-TA-21-41

**Table E-2. Crosswalk of ATWIR-2009 to ATWIR-2010 Waste Streams**  
Continued

<b>Site Code</b>	<b>ATWIR-2009 Waste Streams</b>	<b>ATWIR-2010 Waste Streams</b>
LA	LA-TA-50-01	LA-MHD09.001
LA	LA-TA-50-02	LA-MHD09.001
LA	LA-TA-50-05	LA-MHD09.001
LA	LA-TA-50-06	LA-MHD09.001
LA	LA-TA-50-11	LA-MHD09.001
LA	LA-TA-50-12	LA-MHD09.001, LA-TA-50-12
LA	LA-TA-50-13	LA-MHD09.001
LA	LA-TA-50-14	LA-MHD09.001
LA	LA-TA-50-15	LA-MHD09.001, LA-TA-50-15
LA	LA-TA-50-16	LA-MHD01.001, LA-MHD09.001, LA-TA-50-16
LA	LA-TA-50-18	LA-TA-50-18
LA	LA-TA-50-19	LA-TA-50-19
LA	LA-TA-50-20	LA-TA-50-20
LA	LA-TA-50-40	LA-MHD09.001
LA	LA-TA-55-14	LA-CIN01.001
LA	LA-TA-55-19	LA-MHD01.001, LA-TA-55-19
LA	LA-TA-55-20	LA-TA-55-20
LA	LA-TA-55-21	LA-TA-55-21
LA	LA-TA-55-23	LA-TA-55-23
LA	LA-TA-55-30	LA-MHD01.001, LA-TA-55-30
LA	LA-TA-55-32	LA-TA-55-32
LA	LA-TA-55-33	LA-TA-55-33
LA	LA-TA-55-38	LA-TA-55-38
LA	LA-TA-55-43	LA-TA-55-43
LA	LA-TA-55-61	LA-TA-55-61
LB	LB-T001	LB-T001
LB	LB-T002	LB-T002
LB	LB-T003	LB-T003
LB	LB-T004	LB-T004
LL	LL-M001	LL-M001
LL	LL-T004	LL-T004
LL	LL-T005	LL-M001
LL	LL-W018-S5100	LL-W018-S5100
LL	LL-W018-SS	LL-W018-SS
LL	LL-W019	LL-W019
MC	MC-W001	MC-W001
ND	ND-T001	ND-T001
NT	NT-JAS-01	NT-JAS-01
NT	NTLBL-S3900	Deleted
NT	NTLBL-S5400	IN-NTLLLBL-S5400
NT	NTLLNL-S3900	Deleted
NT	NTLLNL-S5400	Deleted
NT	NTLRC-S5400	IN-ID-NTLRC-S5400
NT	NTS-EG&G-HET	IN-NTS-EG&G-HET
NT	NTS-TTR-HET	IN-NTS-TTR-HET

**Table E-2. Crosswalk of ATWIR-2009 to ATWIR-2010 Waste Streams**  
Continued

<b>Site Code</b>	<b>ATWIR-2009 Waste Streams</b>	<b>ATWIR-2010 Waste Streams</b>
NT	NT-W004	IN-NTS-ITRI-S5310
NT	NT-W021	NT-W021
OR	OR-CHEM-CH-HET	OR-CHEM-CH-HET
OR	OR-GENR-CH-HET	OR-GENR-CH-HET
OR	OR-ISTP-CH-HET	OR-ISTP-CH-HET
OR	OR-NBL-CH-HET	OR-NBL-CH-HET
OR	OR-NFS-CH-HET	OR-NFS-CH-HET
OR	OR-NFS-CH-HOM	OR-NFS-CH-HOM
OR	OR-NFS-CH-SOIL	OR-NFS-CH-SOIL
OR	OR-PGDP-CH-HET	OR-PGDP-CH-HET
OR	OR-RADP-CH-HET	OR-RADP-CH-HET
OR	OR-REDC-CH-HET	OR-REDC-CH-HET
OR	OR-REDC-RH-HET	OR-REDC-RH-HET
OR	OR-RF-CH-HET	OR-RF-CH-HET
OR	OR-RF-CH-HOM	OR-RF-CH-HOM
OR	OR-TBD-CH-HET	OR-7930-CH-HET, OR-RADP-CH-SOILS, OR-TBD-CH-HET
OR	OR-TBD-RH-HET	OR-TBD-RH-HET
OR	OR-W203	OR-W203
OR	OR-W213-RH-SOILS	OR-W213-RH-SOILS
OR	OR-WSTR-CH-HET	OR-WSTR-CH-HET
OR	OR-Y12-CH-HET	OR-Y12-CH-HET
PA	PA-A015	PA-A015
PA	PA-W014	PA-W014
RL	RL105-01	RL105-01
RL	RL105-03	RL105-03
RL	RL105-07	RL105-08
RL	RL105-09	RL105-09
RL	RL105-09A	Deleted
RL	RL200-01	RL200-01
RL	RL200-02	RL200-02
RL	RL200-10	Deleted
RL	RL201-01	RL201-01
RL	RL202S-01	RL202S-01
RL	RL209E-01	RL209E-01
RL	RL209E-08	RL209E-08
RL	RL216Z-02	RL216Z-02
RL	RL221T-01	RL221T-01
RL	RL221U-01	RL221U-01
RL	RL222S-01	RL222S-01
RL	RL222S-08	RL222S-08
RL	RL231Z-01	RL231Z-01
RL	RL231Z-03	RL231Z-03
RL	RL233S-01	RL233S-01
RL	RL233S-03	RL233S-03
RL	RL300-01	RL300-01



**Table E-2. Crosswalk of ATWIR-2009 to ATWIR-2010 Waste Streams**  
Continued

<b>Site Code</b>	<b>ATWIR-2009 Waste Streams</b>	<b>ATWIR-2010 Waste Streams</b>
RL	RL300-03	RL300-03
RL	RL300-08	RL300-08
RL	RL300-11	RL300-11
RL	RL308-01	RL308-01
RL	RL325-01	RL325-01, RL325-02
RL	RL325-03	RL325-03
RL	RL325-08	RL325-08
RL	RL325-09	RL325-09
RL	RL618-01	RL618-01
RL	RL618-07	RL618-07
RL	RLARG-01	RLARG-01
RL	RLARG-08	Deleted
RL	RLBART-01	RLBART-01
RL	RLBART-08	RLBART-08
RL	RLBAT-01	RLBAT-01
RL	RLBAT-08	RLBAT-08
RL	RLBET-08	RLBET-08
RL	RLBW-01	RLBW-01
RL	RLBW-03	RLBW-03
RL	RLBW-08	RLBW-08
RL	RLCFF-01	RLCFF-01
RL	RLCFF-03	RLCFF-03
RL	RLCH2-01	RLCH2-01
RL	RLCH2-08	RLCH2-08
RL	RLESG-01	RLESG-01
RL	RLESG-08	RLESG-08
RL	RLEXX-01	RLEXX-01
RL	RLFFTF-01	RLFFTF-01, RLFFTF-08
RL	RLGEV-01	RLGEV-01
RL	RLGEV-03	RLGEV-03
RL	RLGEV-08	RLGEV-08
RL	RLHAN-01	RLHAN-01, RLHAN-08
RL	RLIAEA-01	RLIAEA-01
RL	RLMLB-08	RLMLB-08
RL	RLMLL-01	RLMLL-01
RL	RLPFP-01	RLPFP-01
RL	RLPFP-02	RLPFP-02
RL	RLPFP-03	RLPFP-03
RL	RLPFP-04	RLPFP-04
RL	RLPFP-08	RLPFP-08
RL	RLPRC-01	RLPRC-01
RL	RLPURX-01	RLPURX-01
RL	RLPURX-07	RLPURX-08
RL	RLRFET-01	RLRFET-01
RL	RLSAN-01	RLSAN-01
RL	RLSWO-01	RLSWO-01, RLSWO-08

**Table E-2. Crosswalk of ATWIR-2009 to ATWIR-2010 Waste Streams**  
Continued

<b>Site Code</b>	<b>ATWIR-2009 Waste Streams</b>	<b>ATWIR-2010 Waste Streams</b>
RL	RLWAR-01	RLWAR-01
RL	RLWAR-03	RLWAR-03
RL	RLWTP-08	RLWTP-08
RP	RP-TFC001	RP-TFC001
RP	RP-TFC002	RP-TFC002
RP	RP-TFC003	RP-TFC003
RP	RP-W013	RP-W013
RP	RP-W016	RP-W016
RP	RP-W754	RP-W754
RP	RP-W755	RP-W755
SA	SA-T001	SA-T001
SA	SA-W134	SA-W134
SA	SA-W134M	SA-W134M
SA	SA-W135	SA-W135
SA	SA-W136	SA-W136
SP	SP-T001	SP-T001
SP	SP-T002	SP-T002
SR	SR-BCLCH-MT01	SR-BCLCH-MT01
SR	SR-BCLRH-MT01	Deleted
SR	SR-BCLRH-T001	Deleted
SR	SR-BCLRH-T002	SR-BCLDP.004.002
SR	SR-BCLRH-T003	Deleted
SR	SR-BCLRH-T004	Deleted
SR	SR-BCLRH-T005	SR-BCLDP.004.003
SR	SR-BCLRH-T006	SR-BCLDP.002
SR	SR-BCLRH-T007	SR-BCLDP.001.001
SR	SR-BCLRH-T008	SR-BCLDP.001.002
SR	SR-BCLRH-T009	SR-BCLDP.001.001, SR-BCLDP.001.002
SR	SR-BCLRH-T010	SR-BCLDP.005
SR	SR-BCLRH-T011	SR-BCLDP.003
SR	SR-SWMF-HET-A	SR-SWMF-HET-A
SR	SR-SWMF-HET-RH	SR-SWMF-HET-RH
SR	SR-SWMF-SOIL	SR-SWMF-SOIL
SR	SR-T001-773A-CLAS	SR-W027-773A-HET-CLAS
SR	SR-T001-WSB-1	SR-T001-WSB-1
SR	SR-T001-WSB-3	SR-T001-WSB-3
SR	SR-T003-773A-HET	SR-RH-773A.01
SR	SR-W026-221F-HEPA	SR-W026-221F-HEPA
SR	SR-W026-221F-HET	SR-RH-FBL.01, SR-W026-221F-HET
SR	SR-W026-221F-HOM	SR-W026-221F-HOM
SR	SR-W026-772F-HET	SR-RH-772F.01, SR-W026-772F-HET
SR	SR-W026-MFFF-1	SR-W026-MFFF-1
SR	SR-W026-PDCF-1	SR-W026-PDCF-1
SR	SR-W026-WSB-2	SR-W026-WSB-2
SR	SR-W027-221F-HET	SR-W027-221F-HET-A, SR-W027-221F-HET-C-D, SR-W027-221F-HET-E

**Table E-2. Crosswalk of ATWIR-2009 to ATWIR-2010 Waste Streams**  
Continued

Site Code	ATWIR-2009 Waste Streams	ATWIR-2010 Waste Streams
SR	SR-W027-221F-HOM	SR-W026-221F-HOM
SR	SR-W027-221H-HEPA	SR-RH-221H.02, SR-W027-221H-HEPA
SR	SR-W027-221H-HET	SR-W027-221H-HET, SR-W027-221H-HET-C, SR-W027-221H-HET-D
SR	SR-W027-221H-HET-B	SR-W027-221H-HET-B
SR	SR-W027-221H-HET-RH	SR-RH-221H.01
SR	SR-W027-221H-HOM	SR-W026-221F-HOM
SR	SR-W027-235F-HET	SR-RH-235F.01, SR-W027-235F-HEPA, SR-W027-235F-HET
SR	SR-W027-235F-HOMO	SR-W027-235F-HOMO
SR	SR-W027-773A-HET	SR-W027-773A-HEPA, SR-W027-773A-HET, SR-W027-776A-HET
SR	SR-W027-999-AGNS-HET	SR-AGNS-HET
SR	SR-W027-999-AGNS-HOM	SR-AGNS-HOM
SR	SR-W027-999-LASL-HET	SR-LA-PAD1
SR	SR-W027-999-LASL-HOM	SR-LA-PAD1
SR	SR-W027-999-MD-HET	SR-MD-HET, SR-MD-PAD1
SR	SR-W027-999-MD-HOM-A	SR-MD-HOM-A
SR	SR-W027-999-MD-HOM-B	SR-MD-HOM-B
SR	SR-W027-999-MD-HOM-C	SR-MD-HOM-C
SR	SR-W027-999-MD-SOIL	SR-MD-SOIL
SR	SR-W027-HBL-Box-A	SR-W027-HBL-Box-A
SR	SR-W027-HBL-Box-B	SR-W027-HBL-Box-B
SR	SR-W027-SRSG-HET	SR-AikenTech-HET, SR-NIST-HET, SR-RH-SDD.01, SR-SDD-211F-HET, SR-SDD-800UGT-HET, SR-SDD-HET-A, SR-W026-DWPF-HET, SR-W027-321-322M-HET, SR-W027-643G-HET
SR	SR-W027-SRSG-HET-RH	SR-RH-FTF.01
SR	SR-W027-SRSG-HOM	SR-SDD-800UGT-HOM-A, SR-SDD-800UGT-HOM-B, SR-W026-CIF-HOM
VN	VN-GEVNC.01	Deleted
VN	VN-GEVNC.02	VN-GEVNC.02
WV	WV-M010a	WV-M010a
WV	WV-T004	WV-T004
WV	WV-T006a	WV-T006a
WV	WV-T006b	WV-T006b
WV	WV-T017a	WV-T017a
WV	WV-T017b	WV-T017b
WV	WV-W024a	WV-W024a
WV	WV-W024b	WV-W024b
WV	WV-Z001	WV-Z001

**APPENDIX F: DOE Potential Waste Screening Memorandum**



**Department of Energy**  
Carlsbad Field Office  
P. O. Box 3090  
Carlsbad, New Mexico 88221  
March 29, 2010

Mr. Ned Elkins, Manager  
Los Alamos National Laboratory - Carlsbad Operations  
115 N. Main  
Carlsbad, NM 88220

Subject: TRU Waste Inventory Screening Criteria Guidance

Dear Mr. Elkins:

The Department of Energy Carlsbad Field Office (CBFO), in the enclosed memorandum, is providing guidance on the criteria to be used to screen transuranic (TRU) waste streams for exclusion from the Waste Isolation Pilot Plant (WIPP)-bound inventory in upcoming Annual TRU Waste Inventory Reports. This guidance will stay in effect until Los Alamos National Laboratory – Carlsbad Operations is formally notified otherwise by CBFO.

If you have any questions regarding this guidance please notify me at (575) 234-7457.

Sincerely,

Russ Patterson  
Compliance Certification Manager

Enclosure

cc: w/enclosure  
C. Fesmire, CBFO \*ED  
S. McCauslin, CBFO ED  
G. Basabilvazo, CBFO ED  
R. Nelson, CBFO ED  
D. Kessel, SNL ED  
S. Kouba, WRES ED  
B. Crawford, LANL-CO ED  
B. McInroy, LANL-CO ED  
\*ED denotes electronic distribution

*INV - 1004-01-01-01*

CBFO:ORC:RLP:MDA:10-0945:UFC 5822.00

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**Screening Memorandum  
March 17, 2010**

This screening memo describes criteria that will be used to screen transuranic (TRU) waste streams for exclusion from the Waste Isolation Pilot Plant (WIPP)-bound inventory. This WIPP-bound waste is used in future performance assessments (PAs) for the Compliance Recertification Application (CRA). This memo does not address high level, low level or commercial waste since they are prohibited for disposal in WIPP. The table below contains screening criteria that will be used to designate Potential waste streams. The table in no way indicates that waste identified as Potential will be excluded from emplacement in WIPP in the future.

All waste streams collected for each Annual TRU Waste Inventory Report (ATWIR) are categorized within the TRU waste inventory database as WIPP-Bound unless one or more of the screening criteria listed in the table below are encountered. All shipments to WIPP will be subject to the conditions delineated in the WIPP Hazardous Waste Facility Permit Waste Analysis Plan (WAP), WIPP Waste Acceptance Criteria (WAC) and the Transuranic Authorized Methods for Payload Control (TRAMPAC). The table below is intended to be treated as a guide for delineating Potential waste streams that will be reported in the ATWIR in Appendix C and excluded from being reported in Performance Assessment Inventory Report (PAIR) that will be used for future PAs.

**Criteria for Categorizing Waste Streams as Potential**

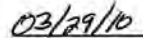
Screening Criteria	Comment
<b>TRU Determination</b> Undetermined	Will remain potential until the waste stream has been officially determined to be transuranic. If the waste stream is determined to be non-transuranic then it will be removed from the inventory.
<b>Defense Determination</b> Unknown	Will remain potential until the waste stream has been officially determined to be defense waste. If the waste stream is determined to be non-defense then it will be removed from the inventory.
<b>Regulatory Restrictions</b> <ul style="list-style-type: none"> <li>• Surface Dose &gt; 1000 R/hr</li> <li>• Activity &gt;23 Ci/L (or 23,000 Ci/m<sup>3</sup>) averaged over the volume of the canister</li> <li>• Prohibited hazardous constituents</li> <li>• Summary category groups other than S3000, S4000, S5000</li> <li>• And other regulatory restrictions</li> </ul>	Will remain potential until the waste stream meets all acceptance criteria for WIPP. This may involve: <ul style="list-style-type: none"> <li>• Repackaging waste stream</li> <li>• Treating waste stream</li> <li>• Removal of restricted items from waste stream</li> <li>• Any other process that would remediate the regulatory restriction</li> </ul>
<b>Incomplete Data</b> <ul style="list-style-type: none"> <li>• Incomplete or missing radionuclide concentrations</li> <li>• Incomplete or missing WMP</li> </ul>	Will remain potential until the waste stream reports all required data.

Screening Criteria	Comment
densities <ul style="list-style-type: none"> <li>• Incomplete or missing final form container information</li> <li>• Unknown waste stream information</li> <li>• Any other incomplete or missing waste stream information that is required for PA</li> </ul>	
<b>Directed by DOE to move to Potential</b>	Will remain potential until DOE directs to remove waste stream from potential.

DOE/CBFO Compliance Certification Manager



Russ Patterson



Date