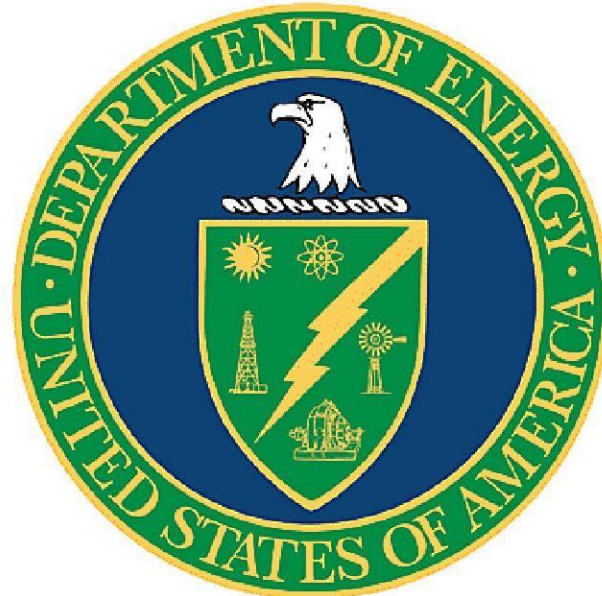


ANNUAL TRANSURANIC WASTE INVENTORY REPORT – 2014
(Data Cutoff Date 12/31/2013)

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ACRONYMS AND ABBREVIATIONS

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

AK	acceptable knowledge
AMWTP	Advanced Mixed Waste Treatment Project
ANL	Argonne National Laboratory
ATWIR	Annual Transuranic Waste Inventory Report
BAPL	Bettis Atomic Power Laboratory
BL	Babcock and Wilcox Nuclear Energy Services
CBFO	Carlsbad Field Office
CCO	Criticality Control Overpacks
CFR	Code of Federal Regulations
CH	contact-handled
Ci	curie
CID	Comprehensive Inventory Database
CIT	CID Import Template
CPR	cellulose, 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
INL	Idaho National Laboratory
KAPL-NFS	Knolls Atomic Power Laboratory– Nuclear Fuel Services
KAPL-S	Knolls Atomic Power Laboratory– Schenectady
kg	kilogram
LANL	Los Alamos National Laboratory
LANL-CO	Los Alamos National Laboratory – Carlsbad Operations
LBNL	Lawrence Berkeley National Laboratory
l	liter
LLNL	Lawrence Livermore National Laboratory
LLW	low-level waste
LQS	large quantity site
LWA	Land Withdrawal Act
m ³	cubic meters

MFC	Material and Fuels Complex
MgO	magnesium oxide
mrem	millirem
NEPA	National Environmental Policy Act
NNSS	Nevada National Security Site
NRD	Nuclear Radiation Development Site
NS	Neutron Shielded
NTP	National TRU Program
ORIGEN-S	Oak Ridge Isotope Generation and Depletion Code (a module of SCALE version 6)
ORNL	Oak Ridge National Laboratory
PA	performance assessment
PAIR	Performance Assessment Inventory Report
PM	packaging material
QA	quality assurance
QAPD	Quality Assurance Program Document
RCRA	Resource Conservation and Recovery Act
RH	remote-handled
RL	Hanford Site –Richland Operations
RP	Hanford Site – Office of River Protection
SCALE	Standardized Computer Analysis for Licensing Evaluation
SNL	Sandia National Laboratories
SQS	small quantity site
SRS	Savannah River Site
TRU	transuranic
TWBIR	Transuranic Waste Baseline Inventory Report
WAC	Waste Acceptance Criteria
WAP	Waste Analysis Plan
WDS	Waste Data System
WIPP	Waste Isolation Pilot Plant
WMP	waste material parameter
WPR	waste profile report
WV	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 and only deep geologic repository for the permanent disposal of defense-generated TRU waste. As of December 31, 2013 (the cutoff date for inventory data for this report), there have been 11,807 shipments (11,090 contact-handled [CH] and 717 remote-handled [RH]) of TRU waste to WIPP for emplacement since WIPP's opening (DOE 2014a).

This *Annual Transuranic Waste Inventory Report – 2014* (ATWIR-2014) (hereafter referred to as “this report” or “ATWIR-2014”) 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 – 2013* (ATWIR-2013) (DOE 2014b). This report focuses on the TRU waste remaining at the TRU waste generator sites and only presents emplaced waste in section 3.0 in Table 3-3, Table 3-5, and Table 3-13. Changes in waste volume, waste material parameters (WMPs), packaging materials (PMs), complexing agents, oxyanions, and radionuclides are also discussed in section 3.0 (see section 6.0 for definitions of these components).

The ATWIR-2014 was developed from an annual inventory data update campaign involving the TRU waste generator sites. TRU waste generation has occurred at both large quantity sites and small quantity sites (LQs and SQs) across the country. Many of these sites have emplaced their waste at WIPP, found other compliant disposition pathways for the waste, or transferred the waste to other sites for further disposition.

The updated data received from the TRU waste generator sites were entered into the Comprehensive Inventory Database (CID). The CID is a DOE Carlsbad Field Office (CBFO) database qualified in accordance with the Los Alamos National Laboratory – Carlsbad Operations (LANL-CO) Quality Assurance (QA) Program, which is in compliance with the CBFO *Quality Assurance Program Document* (QAPD) (DOE 2010). The CID includes estimates for: TRU waste volumes, WMPs, PMs, complexing agents, oxyanions, and radionuclides (decayed to common years 2013 and 2033 [WIPP proposed closure date]).

The purpose of this report is to document the total inventory of TRU waste as defined by the TRU waste generator sites, to provide current TRU waste inventory information for the DOE complex, WIPP stakeholders, and regulators, and to provide the CBFO with updated strategic inventory information. The TRU waste inventory also supports CBFO input into National Environmental Policy Act (NEPA) analyses, the development of new containers or shipping packages, and planned change requests for containers and other design changes that may take place in the repository.

TRU waste must meet the WIPP requirements (e.g., WIPP Waste Acceptance Criteria [WAC] and 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 summarize the TRU waste at the TRU waste generator sites for anticipated (stored plus projected) inventory volume, WMP and PM mass, complexing agent and oxyanion mass; radionuclide activity, and inventory change estimates as of December 31, 2013. All site data are validated by the DOE TRU waste site representative to ensure the data best represent the generator site's inventory at the time of the data cutoff.

Table ES-1. Anticipated CH/RH Waste Inventory Volume by Site

TRU Waste Site	CH Volumes (m ³)	RH Volumes (m ³)	Total Volumes (m ³)
Hanford (Richland) Site	1.98E+04	2.86E+03	2.27E+04
Idaho National Laboratory	2.41E+04	2.08E+02	2.43E+04
Los Alamos National Laboratory	6.52E+03	7.92E+01	6.60E+03
Oak Ridge National Laboratory	1.15E+03	4.32E+02	1.58E+03
Savannah River Site	8.32E+03	4.43E+01	8.36E+03
Small Quantity Sites	2.17E+03	2.06E+02	2.38E+03
Grand Total	6.21E+04	3.83E+03	6.59E+04

Data Source: CID Data Version D.13.01 (LANL-CO 2014a). Note: This table contains data for WIPP-bound waste streams only; it does not include data for Emplaced or Potential waste streams.

Table ES-2. Anticipated CH/RH Waste and Packaging Material Inventory

Waste Material	CH Mass (kg)	RH Mass (kg)	Total Mass (kg)
Iron-based Metal/Alloys	2.50E+06	4.53E+05	2.96E+06
Aluminum-based Metal/Alloys	3.15E+05	1.46E+04	3.30E+05
Other Metal/Alloys	2.91E+05	3.53E+05	6.45E+05
Other Inorganic Materials	1.96E+06	8.87E+05	2.85E+06
Cellulose	9.43E+05	8.69E+04	1.03E+06
Rubber	5.17E+05	6.55E+04	5.82E+05
Plastic	1.91E+06	1.75E+05	2.09E+06
Cement	2.03E+06	1.34E+03	2.04E+06
Solidified Inorganic Material	3.01E+06	2.33E+04	3.04E+06
Solidified Organic Material	2.50E+06	2.23E+03	2.50E+06
Soil	2.28E+06	1.39E+05	2.42E+06
Vitrified	--	--	--
Packaging Material, Cellulose	2.37E+04	--	2.37E+04
Packaging Material, Plastic	8.77E+05	2.36E+05	1.11E+06
Packaging Material, Rubber	2.57E+04	2.08E+03	2.77E+04
Packaging Material, Steel	1.02E+07	3.63E+06	1.38E+07

Table ES-2. Anticipated CH/RH Waste and Packaging Material Inventory
Continued

Waste Material	CH Mass (kg)	RH Mass (kg)	Total Mass (kg)
Packaging Material, Lead	--	4.13E+02	4.13E+02
Grand Total	2.94E+07	6.07E+06	3.54E+07

Data Source: CID Data Version D.13.01 (LANL-CO 2014a). Note: This table contains data for WIPP-bound waste streams only; it does not include data for Emplaced or Potential waste streams.

Table ES-3. Anticipated CH/RH Complexing Agent and Oxyanion Inventory

Site	Complexing Agent Mass (kg)	Oxyanion Mass (kg)
Hanford (Richland) Site	1.38E+04	2.59E+05
Idaho National Laboratory	2.85E+03	3.65E+05
Los Alamos National Laboratory	2.25E+02	2.40E+05
Small Quantity Sites	1.03E+02	2.44E+01
Grand Total	1.69E+04	8.64E+05

Data Source: CID Data Version D.13.01 (LANL-CO 2014a). Note: This table contains data for WIPP-bound waste streams only; it does not include data for Emplaced or Potential waste streams.

Table ES-4. Anticipated CH/RH Radionuclide Activity by Site Decayed through 2013

TRU Waste Site	CH Activity (Ci)	RH Activity (Ci)	Total Activity (Ci)
Hanford (Richland) Site	6.09E+05	7.62E+05	1.37E+06
Idaho National Laboratory	8.84E+04	1.32E+05	2.20E+05
Los Alamos National Laboratory	9.98E+05	3.78E+03	1.00E+06
Oak Ridge National Laboratory	2.50E+04	7.81E+03	3.28E+04
Savannah River Site	1.47E+06	1.08E+04	1.48E+06
Small Quantity Sites	2.60E+04	2.14E+05	2.39E+05
Grand Total	3.21E+06	1.13E+06	4.34E+06

Data Source: CID Data Version D.13.01 (LANL-CO 2014a). Note: This table contains data for WIPP-bound waste streams only; it does not include data for Emplaced or Potential waste streams.

Table ES-5. Anticipated CH/RH Inventory Changes

Inventory Parameter	ATWIR-2013	ATWIR-2014	Total Net Change
Volume (m ³)	6.62E+04	6.59E+04	-2.66E+02
Waste and Packaging Material (kg)	3.45E+07	3.54E+07	9.05E+05
Complexing Agents (kg)	1.89E+04	1.69E+04	-1.99E+03

Table ES-5. Anticipated CH/RH Inventory Changes
Continued

Inventory Parameter	ATWIR- 2013	ATWIR- 2014	Total Net Change
Oxyanions (kg)	9.31E+05	8.64E+05	-6.64E+04
Radionuclide Activity (Ci as of 2033)	1.53E+06	2.98E+06	1.44E+06

Data Source: CID Data Versions D.12.02 (LANL-CO 2013a) and D.13.01 (LANL-CO 2014a).

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

1.0 INTRODUCTION

This *Annual Transuranic Waste Inventory Report – 2014* (ATWIR-2014) (hereafter referred to as “this report” or “ATWIR-2014”) provides the National TRU Program (NTP) with a strategic inventory to be used for initiatives such as the development of transuranic (TRU) waste site-specific project plans or National Environmental Policy Act (NEPA) analyses. Also, if requested by the U.S. Department of Energy (DOE) Carlsbad Field Office (CBFO), this report will provide the basis for the Performance Assessment Inventory Report (PAIR) for performance assessment (PA) modeling purposes. 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 changes since the *Annual Transuranic Waste Inventory Report – 2013* (ATWIR-2013) (DOE 2014b).

TRU waste must meet the requirements of the Waste Isolation Pilot Plant (WIPP) Waste Acceptance Criteria (WAC) and the WIPP Hazardous Waste Facility Permit Waste Analysis Plan (WAP) before it can be disposed of at WIPP.

Section 1.1 explains how the TRU waste inventory was collected and used for the initial certification of WIPP. Currently, the inventory is collected on an annual basis to monitor how it 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 generator site information, and the WIPP Waste Data System (WDS), formerly known as the WIPP Waste Information System. Section 1.3 describes the uses of TRU waste inventory.

Section 2.0 describes the methodologies undertaken in order to prepare this report. These include:

- Collection, screening, and analyses of raw inventory data from the TRU waste generator sites
- Analysis of emplaced inventory data reported from the WDS
- Verification and validation of data entered into the CID
- Decay and buildup correction of radionuclide data using the Oak Ridge Isotope Generation and Depletion (ORIGEN-S) module of SCALE [Standardized Computer Analysis for Licensing Evaluation]: *A Modular Code System for Performing Standardized Computer Analyses for Licensing Evaluation*, Version 6 (SCALE 6) (ORNL 2009)
- Calculations performed within the CID

Section 3.0 presents the TRU waste inventory estimates, with summaries of the inventory information collected from the TRU waste generator sites, and discusses changes in the inventory information for each of the following sections. Section 3.1 presents rolled-up TRU waste volume estimates, by site, of contact-handled (CH) and remote-handled (RH) TRU waste reported as stored, projected, and anticipated (stored plus projected). Section 3.2 presents the inventory of non-radiological material estimates including: waste material parameters (WMPs),

packaging materials (PMs), and chemical 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) 2013. All site data are validated by the DOE TRU waste generator site representative to ensure the data best represent the site's inventory at the time of the data cutoff.

Section 4.0 discusses the Potential TRU waste streams that have been excluded in accordance with CBFO guidance criteria. These criteria are documented in a "screening memorandum" (Patterson 2010) (see Appendix D) that determines whether a waste stream is WIPP-bound or Potential. Also found in section 4.0 is a table showing waste streams that have been moved from Potential to WIPP-bound status during this collection period.

Section 5.0 presents a summary of this report, section 6.0 provides the glossary, and section 7.0 provides the references that were used for this report.

This report also contains four appendices. Appendix A presents the WIPP-bound waste profile reports (WPRs), Appendix B presents the Potential WPRs, and Appendix C presents the historic crosswalk of waste streams. In previous years, TRU waste sites have reported a waste stream "deleted" if all the known waste in that waste stream had been dispositioned. However, the inventory team has discovered that the TRU waste sites may move containers from a waste stream back into a waste stream that had been reported as "deleted" because these containers matched its waste stream description. This movement of containers into a "deleted" waste stream caused considerable confusion. Starting with this ATWIR-2014, waste streams listed in Appendix C will no longer be reported as "deleted," but will be reported as "depleted." This will allow containers to be moved back into a waste stream that is reported as "depleted" and the waste stream will again be active. Appendix D contains the screening memorandum.

This report includes comprehensive data from each TRU waste generator site and WDS summation data for emplaced waste. More specific information on the emplaced waste can be obtained from the CBFO WDS administrator at the WIPP Information Center at 1-800-336-WIPP (9477) or at infocntr@wipp.ws. The WDS administrator manages the official database including container-level data on the emplaced TRU waste.

1.1 Background and History

The WIPP Land Withdrawal Act (LWA) (U.S. Congress 1992 and 1996) required the U.S. Environmental Protection Agency (EPA) to issue final disposal regulations to certify WIPP. On May 18, 1998, the EPA certified that 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 WIPP on March 26, 1999, with the initial receipt of TRU waste, thus becoming the nation's first deep geologic repository for the permanent disposal of defense-generated TRU waste. The WIPP Land Withdrawal Act (U.S. Congress 1992 and 1996) also requires that WIPP be recertified every five years from the time of the first receipt of waste; WIPP has been recertified twice. DOE submitted the first compliance recertification application (CRA), 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 2009), to

the EPA in March 2009, and WIPP was recertified in November 2010. The third recertification application was submitted to the EPA in March 2014 (DOE 2014c).

Table 1-1 lists the historical TRU waste inventory documents and their intended purpose.

Table 1-1. Historical Inventory Documents

Date	Title	Purpose
June 1994	WIPP Transuranic Waste Baseline Inventory Report	First attempt made by DOE complex to report all of its TRU waste at the waste-stream level.
December 1995	Transuranic Waste Baseline Inventory Report (TWBIR), Revision 2	Revisions 2 and 3 provided the inventory information to the Sandia National Laboratories-Carlsbad for the initial certification of WIPP.
June 1996	TWBIR, Revision 3	
March 2004	Appendix DATA, Attachment F of <i>Title 40 CFR 191, Subparts B and C, Compliance Recertification 2004</i>	Provided updated inventory information for the first recertification of WIPP in 2004.
March 2006	Transuranic Waste Baseline Inventory Report – 2004	This was a revision of Appendix DATA, Attachment F. Provided updated inventory to support the Performance Assessment Baseline Calculation.
August 2008	Annual Transuranic Waste Inventory Report (ATWIR) –2007	The first annual inventory report that contained both scaled (calculations to represent a full repository) and unscaled data.
December 2008	ATWIR–2008	Annual inventory report that reported only unscaled data.
April 2009	Performance Assessment Inventory Report (PAIR) –2008	Provided data from ATWIR-2008 in the required format for performance assessment calculations.
December 2009	ATWIR–2009	Provided updated annual inventory information.
December 2010	ATWIR–2010	Provided updated annual inventory information.
December 2011	ATWIR–2011	Provided updated annual inventory information.
October 2012	ATWIR–2012	Provided updated annual inventory information.
November 2012	PAIR–2012	Provided data from ATWIR-2012 in the required format for performance assessment calculations.
February 2014	ATWIR–2013	Provided updated annual inventory information.

Depending upon programmatic needs, site waste management decisions, and characterization data, TRU waste inventory information is re-evaluated frequently and the TRU waste inventory is updated annually. This report is an update based on the TRU waste complex’s known inventory as of December 31, 2013.

Since the ATWIR-2013 was published, a number of changes and improvements have occurred that affected the volume, waste material, and radiological characteristics of TRU waste streams. Five waste streams have been moved from Potential to WIPP-bound status to be in alignment with the CBFO screening memorandum (Patterson 2010) provided in Appendix D. The list of these waste streams (presented in Table 4-2) also includes the reasons for the moves. The other primary inventory changes observed and addressed in this report are attributed to the following:

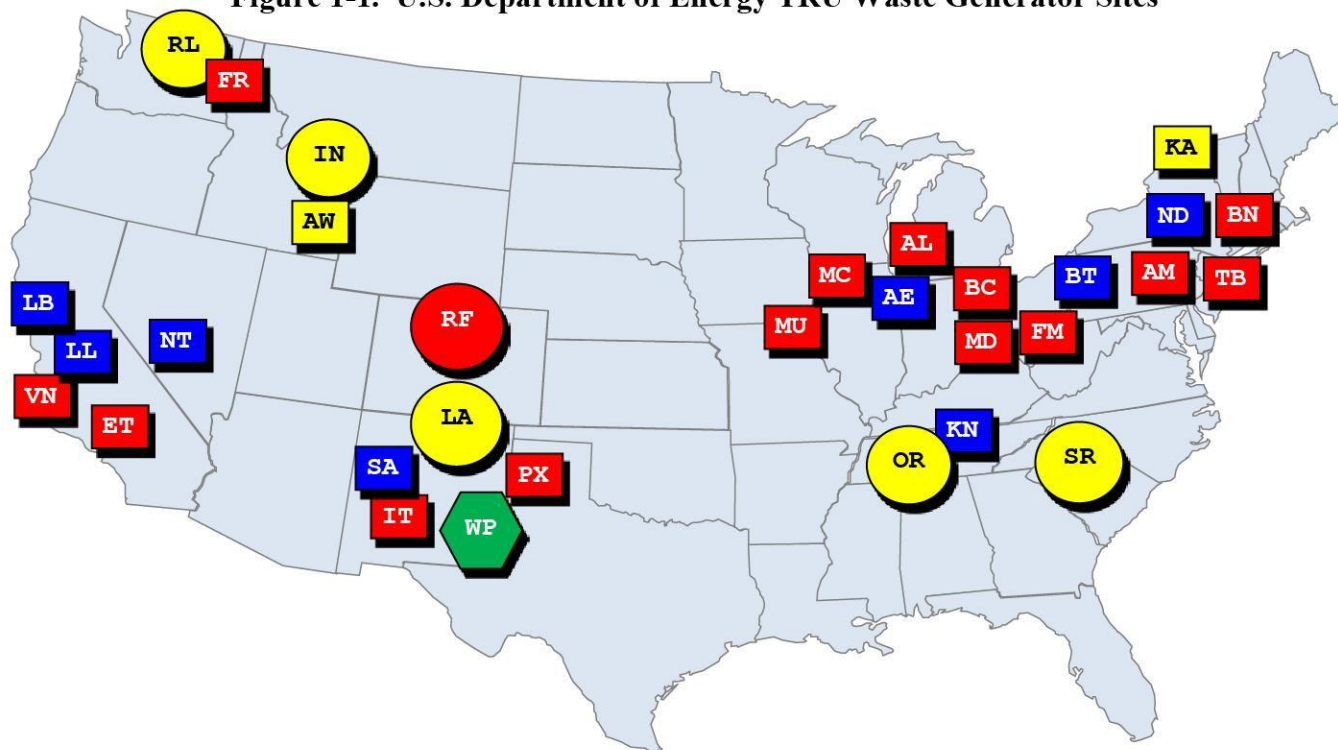
- Waste emplacement since the ATWIR-2013.
- Seven new waste streams have been added to the inventory, seven waste streams have been depleted and shipped to WIPP, and one waste stream has been determined to be low level waste (LLW).
- SRS CH volume increased by approximately 3,950 m³ with the movement of SR-T001-WSB-1 from Potential to WIPP-bound.
- SQS CH/RH volume has increased overall by approximately 312 m³.

TRU waste is currently stored at both small quantity sites (SQSs) and large quantity sites (LQSs) across the country, as seen in Figure 1-1. This figure presents the DOE TRU waste generator sites, divided into three categories, as of December 31, 2013. Yellow represents the active TRU waste sites, red represents the sites that have been de-inventoried of all TRU waste, and blue represents the sites that have been de-inventoried of their legacy TRU waste but continue to manage additional defense TRU waste.

There are three generator sites not shown on Figure 1-1 that report only Potential TRU waste: West Valley Demonstration Project, Office of River Protection, and Babcock and Wilcox Nuclear Energy Services. Potential TRU waste is discussed in section 4.0 of this report.

This report was prepared by the Los Alamos National Laboratory – Carlsbad Operations (LANL-CO) TRU Waste Inventory Team for the DOE/CBFO. The work for this report was performed under the CBFO *Quality Assurance Program Document (QAPD)* (DOE 2010). 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 standards under the LANL-CO Quality Assurance (QA) Program. This includes the software QA procedures used to qualify the CID and other software, including ORIGEN-S, used to analyze TRU waste inventory information. LANL-CO software QA is documented in LCO-QPD-02, *LANL-CO Software Quality Assurance Plan* (LANL-CO 2013b), and LCO-QP19-1, *Software Quality Assurance* (LANL-CO 2013c).

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



Yellow – Active TRU Waste Sites **Red – De-inventoried of all TRU Waste** **Blue – De-inventoried of Legacy TRU waste**

AE	Argonne National Laboratory
AL	Ames Laboratory
AM	ARCO Medical Products — de-inventoried - shipped to the Offsite Source Recovery Program (OSRP)
AW	Materials and Fuels Complex
BC	Battelle Columbus Laboratories— de-inventoried - shipped to RL and SR
BN	Brookhaven National Laboratory— de-inventoried - shipped to OSRP
BT	Bettis Atomic Power Laboratory
ET	Energy Technology Engineering Center— de-inventoried - shipped to RL
FM	Fernald Environmental Management Project— de-inventoried - shipped to OSRP
FR	Framatome (AREVA) — de-inventoried - shipped to RL
IN	Idaho National Laboratory
IT	Inhalation Toxicology Research Institute (Lovelace Respiratory Research Institute) — de-inventoried - shipped to SA
KA	Knolls Atomic Power Laboratory-Schenectady
KN	Knolls Atomic Power Laboratory-Nuclear Fuel Services
LA	Los Alamos National Laboratory
LB	Lawrence Berkeley National Laboratory
LL	Lawrence Livermore National Laboratory (includes Site 300)
MC	U.S. Army Materiel Command (Army)
MD	Mound Plant – de-inventoried - shipped to SR
MU	University of Missouri Research Reactor
ND	Nuclear Radiation Development Site, Inc.
NT	Nevada Nuclear Security Site
OR	Oak Ridge National Laboratory
PX	Pantex Plant
RF	Rocky Flats Environmental Technology Site
RL	Hanford Site (Richland Operations Office)
SA	Sandia National Laboratories
SR	Savannah River Site
TB	Teledyne Brown Engineering
VN	General Electric Vallecitos Nuclear Center
WP	Waste Isolation Pilot Plant

1.2 Sources of Transuranic Waste Inventory Information

This report includes information taken from: 1) the ATWIR-2013, 2) updated information provided by the TRU waste generator sites, 3) AK reports, and 4) the WIPP WDS (Van Soest 2014). Each year, the sites are requested to update their data from the previous year. As an example, the sites used the ATWIR-2013 (data cutoff 12/31/2012) information to update the data used for this report. TRU waste generator sites may use information obtained from site-specific AK reports, which provide information on waste streams being characterized and shipped to WIPP, such as chemical lists and radionuclides, and their site-specific databases. All TRU waste inventory information for emplaced waste is obtained from the CBFO WDS administrator.

1.3 Uses of Transuranic Waste Inventory Information

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 scenarios. CBFO management has used this strategic inventory information to support decisions related to waste retrieval, treatment, repackaging, characterization, shipment, and disposal for both stored and projected waste initiatives 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. As mentioned earlier, when inventory data are needed for PA modeling, CBFO will request a PAIR that provides the latest inventory data that are scaled, using a defined methodology, in order to model a full repository.

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), which might affect gas generation and emplacement of magnesium oxide (MgO) in the repository (EPA 1996).

2.0 METHODOLOGY

This report was generated using documented processes and methods that are qualified under the LANL-CO QA Program (see section 1.1). The following steps were completed in order to generate this report (see Figure 2-1):

1. Collected TRU waste stream information from the TRU waste generator sites.
2. Performed a thorough review of all data to check for accuracy, consistency and completeness.
3. Entered the updated information in the CID and verified it.
4. Updated information in the CID validated by the DOE TRU waste generator site representatives.
5. Generated the required data tables, using the CID.

6. Performed analyses, where appropriate, to supplement CID data for publication in 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 radionuclides. Section 2.3 describes the transformation activities performed on the WDS emplaced waste data prior to input in the CID.

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

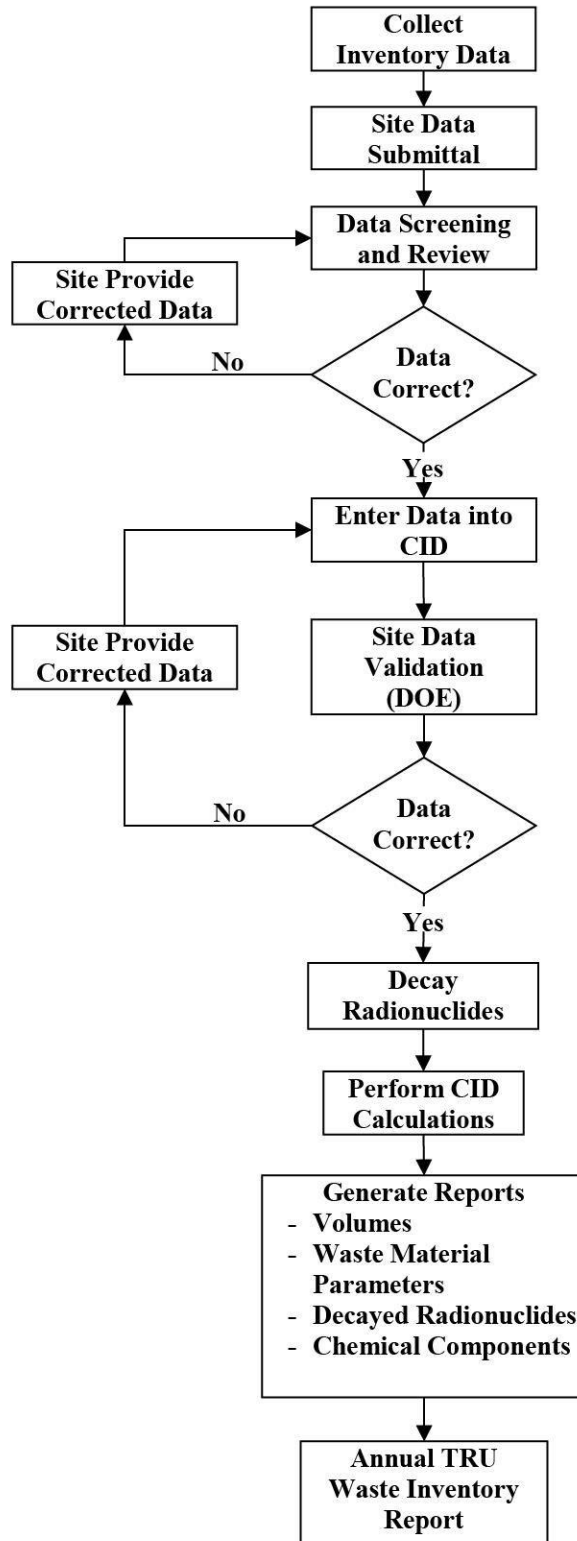
The process used to collect information from the TRU waste generator sites is captured in LANL-CO Procedure INV-SP-01, *Data Collection and Entry for the Comprehensive Inventory* (LANL-CO 2014b). On January 22, 2014, in accordance with this procedure, a letter was sent from CBFO (Patterson 2014) to TRU waste generator sites requesting the annual TRU waste inventory update. The Inventory Team then sent each site a notification of the update with an attached file with the Microsoft[®] Excel data template (DT) workbook containing last year's validated data along with guidance explaining the steps required to update the DT with the site's updated information. The Inventory Team worked with personnel from every generator site to assist in the updating process and to resolve issues.

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

- Verification of radionuclide isotopic inputs (e.g., confirm TRU concentration is greater than 100 nanocuries per gram);
- Verification of isotopic distribution for material type codes (e.g., plutonium [Pu]-52 and mixed fission products);
- Verification of radionuclide threshold limits to determine if the waste stream appeared to be categorized correctly as CH or RH;
- Verification that activity concentration for RH-TRU waste did not exceed the LWA limits (i.e., waste streams reported with greater than 23 curies per liter [Ci/l] averaged over the volume of the RH-TRU canister were screened out of the WIPP-bound inventory);
- Verification that if cement was used for solidification, it was also reported as a WMP in kilograms (kg);
- Verification that any hazardous waste that is prohibited at WIPP had treatment identified;
- Comparison of the ATWIR-2014 waste stream data to the ATWIR-2013 waste stream data to identify and understand any significant differences.

The process followed for entering TRU waste inventory information into the CID is also captured in INV-SP-01 (LANL-CO 2014b). In accordance with this procedure, the TRU waste inventory information was uploaded from the Microsoft[®] Excel DT or entered manually into the CID. Once the data were entered, waste stream data reports were prepared and sent to the DOE TRU waste generator site representative (manager or his/her designee). A validation letter signed by the DOE TRU waste generator site representative and site contractor (contractor signature optional) documented the correctness of the information as reported in the CID. Hard copies of the waste stream data reports 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.13.01 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 DOE CBFO database developed by LANL-CO and qualified in accordance with the LANL-CO QA Program, which is in compliance with the CBFO QAPD. The LANL-CO software QA Program is documented in LCO-QPD-02, *LANL-CO Software Quality Assurance Plan* (LANL-CO 2013b) and LCO-QP19-1, *Software Quality Assurance* (LANL-CO 2013c). 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.

Stored, projected, and anticipated values for volumes, WMPs, radionuclides, and chemical components, presented throughout this report are summations of the individual waste stream values for the specified categories (site, handling designation, etc.).

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 generator site contacts were asked to update the current form container information for their stored (already generated and stored at the site) and projected (future generation) TRU waste. For each waste stream, the contacts also provided an estimate of the WIPP-compliant final form container type(s) that would ultimately be used to ship the waste to the WIPP and determined the respective stored and projected counts for each container type based on the current form volume of the waste.

Final form stored and projected site waste stream volumes found within this report were derived by applying standardized container type volumes, which are maintained within the CID. CH-TRU waste volume calculations use the outer container volume and the RH-TRU waste volume calculations use the inner container volume.

The emplaced waste streams' container counts and volumes were obtained from the CBFO WDS administrator (see section 2.3). After this information was transformed for use in the CID (Van Soest 2014), the emplaced waste stream volumes were then imported into the CID and used in reporting the emplaced portion of the inventory.

2.2.2 Waste Material Parameter and Packaging Materials Reporting

As part of the data call for this report, the TRU waste generator site contacts were asked to update each waste stream's mass, in kg, for WMPs, or physical materials contained in the waste. See section 3.2.1 for a description of these WMPs.

The contacts were directed to only report the mass of the stored waste at their sites, even if the waste stream had a projected component. The CID then derived a projected mass using the projected-to-stored volume ratio for each waste stream. The anticipated mass was calculated by summing the stored and projected mass. However, if a waste stream consisted only of projected waste, then the contacts were requested to report their estimates of the projected mass for each WMP for that particular waste stream.

The PMs, as described in section 3.2.2, are specific to each of the individual final form container types, with each PM being a proportional contributor to a waste stream's overall PM makeup based upon the respective container counts reported. These PMs are standardized and defined for each container type and reported in INV-SAR-19, *Analysis of Container Material Masses* (French 2009) and in a memo to the Quality Assurance File QAM-12-17 (Van Soest 2012).

Appendices A and B present a list of average WMP and PM densities (kg/m^3) for each waste stream. These densities were calculated by dividing the total mass of each material in the waste stream by the total final form volume of the waste stream.

2.2.3 Radionuclide Reporting

The TRU waste generator site contacts were asked to update information about the radiological components in their TRU waste. For each waste stream, they were asked to assess and update, if necessary, radionuclides and their associated activity in curies. In addition, the TRU waste generator site contacts were asked to provide the most recent assay year or projected generation year for each waste stream. This date was then used to determine the time basis for decay and buildup calculations.

The site contacts were directed to report only the total radionuclide activity of the waste stored at their sites, even if the waste stream had a projected component. The CID then derived a projected activity using the projected-to-stored volume ratio for each waste stream. The anticipated activity was calculated by summing the stored and projected activities. However, if a waste stream consisted only of projected waste, then the contacts were requested to report their estimates of the projected activity for each radionuclide for that particular waste stream.

The sites provided undecayed radionuclide data, which may or may not have included the complete set of associated daughters. Since these site data consisted of radionuclide activities at the date of assay (generation or as calculated), they were decay-corrected to common dates for reporting purposes, if needed. All radionuclide data provided in this report in Table 3-10, Table 3-11, Table 3-12, and Appendix A were decay-corrected to the end of the common base CY 2013. In order to identify changes in the radionuclide inventory (discussed in section 3.3.2), from previous TRU waste inventory reports, radionuclide activities were decay-corrected to the end of the WIPP proposed closure year, CY 2033, and are shown in Table 3-13.

The CID automates the radionuclide decay process by utilizing the ORIGEN-S module of SCALE 6 (ORNL 2009), which is a depletion and decay library that has been qualified for use under the LANL-CO QA Program, in accordance with LCO-QPD-02 and LCO-QP19-1. The CID first takes the radionuclide activities reported by the TRU waste generator site contacts and exports them in the form of ORIGEN-S input files for each waste stream. It then executes ORIGEN-S in a sequential fashion for each input file, where the radionuclide decay and buildup calculations are performed and written to an output file. Finally, each output file is read and imported back into the CID, resulting in decay-corrected radionuclide tables to be generated for this report.

Appendices A and B present a list of average radionuclide concentrations (Ci/m^3) for each waste stream. These concentrations were calculated by dividing the total activity of each radionuclide in the waste stream by the total final form volume of the waste stream. Note that the radionuclides in Appendix B are not decay-corrected.

2.2.4 Chemical Constituent Reporting

As part of the data call for this report, the TRU waste generator site contacts were asked to update information about the chemical constituents of their site's waste. The contacts were requested to report stored and projected mass separately for their complexing agents (acetic acid, citric acid, oxalic acid, acetate, citrate, oxalate, and ethylenediaminetetraacetic acid [EDTA]), oxyanions (nitrates, phosphates, and sulfates), and other chemical constituents in units of mass (kg).

2.3 Analyses Supporting the Annual Transuranic Waste Inventory Report

In addition to collecting and processing information from the DOE TRU waste generator sites and securing the site information in a qualified database for future use, an analysis was performed and documented in accordance with LANL-CO QA Procedure LCO-QP9-1, *Analyses* (LANL-CO 2013d), in order to support the preparation of this report. A documented request was made of the CBFO WDS database administrator to supply data for the waste emplaced in the WIPP repository, en route to WIPP, or in above ground storage at WIPP as of December 31, 2013. To update the TRU waste emplaced inventory data within the CID, the WDS data were first migrated into a standardized CID Import Template (CIT) file. This migration required that the original WDS data undergo various transformations including, but not limited to, calculations, aggregations, and data mapping. These activities and calculations are documented in INV-SAR-32, *WDS Data Transformation for Insertion in the 2013 Inventory CID Import Template* (Van Soest 2014). The CIT file was subsequently used to update the CID.

The emplaced inventory is presented as a repository-level summation under "WIPP (Emplaced)" in section 3.0, under specific component sections (e.g., volumes, WMPs and PMs, and radionuclides). Chemical constituents are not reported in the emplaced inventory because the WDS does not track these constituents. Readers seeking more specific information on emplaced waste should make a request to the CBFO WDS administrator so that the data can be obtained directly from the WDS, which is the official database of record for emplaced waste.

3.0 TRANSURANIC WASTE INVENTORY ESTIMATES AND CHANGES

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 generator sites, and labeled as data version D.13.01 (LANL-CO 2014a), as discussed in section 2.1. It should be noted that all table values in this report are presented to three significant figures.

Section 3.1 presents the final form TRU waste volume for CH- and RH-TRU waste and a discussion of changes since ATWIR-2013 was issued. Section 3.2 presents the non-radiological components of the TRU waste inventory as reported by the site contacts, and a discussion of

changes that have occurred during this reporting period. This includes roll-ups of the WMPs, PMs, and chemical components, and includes a discussion of changes since ATWIR-2013. Section 3.3 presents the TRU waste radionuclide activities reported by the sites, which have been decayed through common base CY 2013. This section also presents a discussion of changes that have occurred in the total CH- and RH-TRU waste activity since ATWIR-2013.

3.1 TRU Waste Volume Estimates

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

3.1.1 TRU Waste Inventory Total Volumes by Site

As stated earlier, TRU waste volume information requested from the TRU waste generator 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 container information 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. The information presented in the tables of this section contains only final form data. The sites' current form container types and volumes can be found in Appendices A and B.

Table 3-1 shows the total CH-TRU waste volume stored, projected, and anticipated. An estimated anticipated final form total of approximately 62,100 m³ of CH-TRU waste is currently being reported at the sites and could be shipped to WIPP in the future, provided all WIPP requirements are met. Approximately 97% of the anticipated CH-TRU waste is stored or will be generated at LQs: RL, INL, LANL, Oak Ridge National Laboratory (ORNL), and the SRS. During this inventory collection period of January through December 2013, Argonne National Laboratory (ANL), INL, LANL, and SRS shipped CH-TRU waste to WIPP (DOE 2014a). (See Table 3-3 for changes to CH-TRU waste volumes reported between ATWIR-2013 and ATWIR-2014.)

Table 3-2 shows the total RH-TRU waste volume stored, projected, and anticipated. An estimated anticipated final form total of about 3,830 m³ of RH-TRU waste is currently being reported by the sites and could be shipped to WIPP in the future, provided all WIPP requirements are met. Approximately 95% of the anticipated RH-TRU waste is stored or will be generated at LQs: RL, INL, LANL, ORNL, and SRS. During this inventory collection period, ANL and INL shipped RH-TRU waste to WIPP (DOE 2014a). (See Table 3-3 for changes to RH-TRU waste volumes reported between ATWIR-2013 and ATWIR-2014.)

Table 3-1. CH Waste Inventory Total Volumes

TRU Waste Site	Stored Volumes (m ³)	Projected Volumes (m ³)	Anticipated Volumes (m ³)
Argonne National Laboratory	4.06E+01	1.34E+02	1.75E+02
Hanford (Richland) Site	1.60E+04	3.82E+03	1.98E+04
Idaho National Laboratory	2.40E+04	8.22E+01	2.41E+04
Knolls Atomic Power Laboratory - Nuclear Fuel Services	6.99E+01	7.02E+02	7.71E+02
Lawrence Berkeley National Laboratory	4.16E-01	4.16E-01	8.32E-01
Lawrence Livermore National Laboratory	2.32E+02	7.64E+02	9.96E+02
Los Alamos National Laboratory	3.69E+03	2.83E+03	6.52E+03
Material and Fuels Complex	2.29E+00	2.91E+01	3.14E+01
Nevada National Security Site	5.27E+01	9.07E+01	1.43E+02
Nuclear Radiation Development Site	2.08E+00	6.24E-01	2.70E+00
Oak Ridge National Laboratory	1.05E+03	9.98E+01	1.15E+03
Sandia National Laboratories	4.20E+00	4.73E+01	5.14E+01
Savannah River Site	8.15E+02	7.51E+03	8.32E+03
Grand Total	4.60E+04	1.61E+04	6.21E+04

Data Source: CID Data Version D.13.01 (LANL-CO 2014a). Note: This table contains data for WIPP-bound waste streams only; it does not include data for Emplaced or Potential waste streams.

Table 3-2. RH Waste Inventory Total Volumes

TRU Waste Site	Stored Volumes (m ³)	Projected Volumes (m ³)	Anticipated Volumes (m ³)
Argonne National Laboratory	2.61E+01	5.80E+01	8.41E+01
Bettis Atomic Power Laboratory	--	4.99E+00	4.99E+00
Hanford (Richland) Site	2.57E+03	2.88E+02	2.86E+03
Idaho National Laboratory	2.08E+02	--	2.08E+02
Knolls Atomic Power Laboratory – Schenectady	1.87E+00	1.31E+01	1.50E+01
Los Alamos National Laboratory	7.92E+01	--	7.92E+01
Material and Fuels Complex	1.19E+01	8.11E+01	9.30E+01
Oak Ridge National Laboratory	2.98E+02	1.34E+02	4.32E+02

Table 3-2. RH Waste Inventory Total Volumes
Continued

TRU Waste Site	Stored Volumes (m ³)	Projected Volumes (m ³)	Anticipated Volumes (m ³)
Sandia National Laboratories	8.74E+00	--	8.74E+00
Savannah River Site	3.31E+01	1.12E+01	4.43E+01
Grand Total	3.24E+03	5.91E+02	3.83E+03

Data Source: CID Data Version D.13.01 (LANL-CO 2014a). Note: This table contains data for WIPP-bound waste streams only; it does not include data for Emplaced or Potential waste streams.

3.1.2 Changes to TRU Waste Volumes

Table 3-3 shows the total net changes for final form total volumes (anticipated) of CH- and RH-TRU waste between ATWIR-2013 and this report. The net change column applies to the total net changes, which include both increases and decreases in waste streams as reported by the sites and the volume of emplaced waste taken from the WDS. As shown, the total net change in anticipated volume is a decrease of 266 m³, but approximately 5,170 m³ of waste was emplaced, leaving a net increase of about 4,910 m³. This change comes mainly from three waste streams. SR-T001-WSB-1 changed from Potential to WIPP-bound and introduced approximately 3,950 m³. Despite having shipped 878 m³, Advanced Mixed Waste Treatment Project's (AMWTP's) waste stream IN-ID-RF-S3114 increased its volume estimate by 694 m³. This increase is due to the treatment and repackaging of prohibited liquids which doubles the number of final form drums. The volume estimate for RL105-09 increased its volume estimate by approximately 376 m³ because of grouting and Fissile Gram Equivalent limits.

Table 3-3. CH/RH Waste Volume Changes

TRU Waste Site	ATWIR-2013 Total Inventory (m ³)	ATWIR-2014 Total Inventory (m ³)	Total Net Change (m ³)
Hanford (Richland) Site	2.24E+04	2.27E+04	2.62E+02
Idaho National Laboratory	2.59E+04	2.43E+04	-1.56E+03
Los Alamos National Laboratory	8.82E+03	6.60E+03	-2.23E+03
Oak Ridge National Laboratory	1.45E+03	1.58E+03	1.32E+02
Savannah River Site	5.56E+03	8.36E+03	2.81E+03
Small Quantity Sites	2.07E+03	2.38E+03	3.12E+02
Anticipated Total	6.62E+04	6.59E+04	-2.66E+02
WIPP (Emplaced)	8.52E+04	9.04E+04	5.17E+03
Grand Total	1.51E+05	1.56E+05	4.91E+03

Data Source: CID Data Versions D.12.02 (LANL-CO 2013a) and D.13.01 (LANL-CO 2014a).

3.2 Non-Radiological Material Estimates

This section presents the non-radiological properties of the TRU waste inventory collected for this report. 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, such as CPR materials that might affect gas generation in the repository. Section 3.2.1 presents the inventory of WMPs, section 3.2.2 presents PMs, and section 3.2.3 presents the chemical components.

3.2.1 Waste Material Parameters

WMPs are reported as final form mass (kg). See section 2.2.2 for details on how WMPs are reported.

The following WMP descriptions are used for this report:

- Aluminum-Based Metal/Alloys – Aluminum or aluminum-based alloys in the waste materials.
- Cellulose – Material generally derived from high-polymer plant carbohydrates such as paper, cardboard, Kimwipes[®], wood, cellophane, and cloth.
- Cement – An agent used to solidify liquid, particulate, and sludge. Cement may be reacted or unreacted.
- 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.
- Other Inorganic Materials – Inorganic non-metal waste materials such as concrete, glass, firebrick, ceramics, graphite, sand, and inorganic sorbents.
- Other Metal/Alloys – All other metal/alloys (e.g., copper, zirconium, tantalum) found in the waste materials, including the lead portion of leaded rubber gloves/aprons.
- Plastic – Generally man-made, often derived from petroleum feedstock. Examples are polyethylene, polyvinyl chloride, Lucite[®], and Teflon[®].
- Rubber – Natural or manmade elastic latex materials, such as Hypalon[®], neoprene, surgical gloves, and leaded-rubber gloves (rubber part only).
- Solidified Inorganic Material – Any homogeneous material consisting of sludge or aqueous-based liquid that has been solidified. Examples are wastewater treatment sludge and inorganic particulates.
- Solidified Organic Material – Organic resin, solidified organic liquid, and sludge.

- Soil – Generally consists of naturally occurring soil that has been contaminated with radioactive waste materials at a high enough level to be considered TRU waste.
- 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.)

3.2.2 Packaging Materials

PMs are the non-radiological materials (such as steel, plastic, cellulose, rubber and lead) used as components of the WIPP-approved containers which hold TRU waste. The PM mass for the WIPP-approved payload containers are fixed values in the CID. The site contacts report the expected final form container type, and the CID generates the PM mass using consistent values associated with the container type. An analysis was performed (French 2009) to calculate the PM mass to be assigned to the various WIPP-approved container types in the CID. The purpose of that analysis was to document the calculations for steel, plastic, cellulose, lead, and rubber used in the containers for packaging CH- and RH-TRU waste for shipment to WIPP. A memo to the Quality Assurance File QAM-12-17 addresses the packaging materials for the three new WIPP-approved containers in the CID, the Criticality Control Overpack (CCO) and the Neutron Shielded (NS) canisters NS15 and NS30 (Van Soest 2012). These containers are used for packaging CH- and RH-TRU waste for shipment to WIPP.

The estimated WMP and PM anticipated mass for CH- and RH-TRU waste are presented in Table 3-4.

Table 3-4. CH/RH Waste and Packaging Material Inventory

Waste Material	CH Mass (kg)	RH Mass (kg)	Total Mass (kg)
Iron-based Metal/Alloys	2.50E+06	4.53E+05	2.96E+06
Aluminum-based Metal/Alloys	3.15E+05	1.46E+04	3.30E+05
Other Metal/Alloys	2.91E+05	3.53E+05	6.45E+05
Other Inorganic Materials	1.96E+06	8.87E+05	2.85E+06
Cellulose	9.43E+05	8.69E+04	1.03E+06
Rubber	5.17E+05	6.55E+04	5.82E+05
Plastic	1.91E+06	1.75E+05	2.09E+06
Cement	2.03E+06	1.34E+03	2.04E+06
Solidified Inorganic Material	3.01E+06	2.33E+04	3.04E+06
Solidified Organic Material	2.50E+06	2.23E+03	2.50E+06
Soil	2.28E+06	1.39E+05	2.42E+06
Vitrified	--	--	--
Packaging Material, Cellulose	2.37E+04	--	2.37E+04

Table 3-4. CH/RH Waste and Packaging Material Inventory
Continued

Waste Material	CH Mass (kg)	RH Mass (kg)	Total Mass (kg)
Packaging Material, Plastic	8.77E+05	2.36E+05	1.11E+06
Packaging Material, Rubber	2.57E+04	2.08E+03	2.77E+04
Packaging Material, Steel	1.02E+07	3.63E+06	1.38E+07
Packaging Material, Lead	--	4.13E+02	4.13E+02
Grand Total	2.94E+07	6.07E+06	3.54E+07

Data Source: CID Data Version D.13.01 (LANL-CO 2014a). 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 Waste and Packaging Material Parameter Changes

The changes in WMP and PM data between ATWIR-2013 and this report are presented in Table 3-5 for the total CH- and RH-TRU waste and packaging materials. Data for the WMPs and PMs improve as additional waste is characterized and the sites use that characterization data to estimate the WMPs remaining in that waste stream at the site. As stated earlier, the net change column applies to the total net changes, which include both increases and decreases in waste streams as reported by the site contacts and the amount of emplaced waste taken from the WDS.

As shown in Table 3-5, the total change in anticipated WMP mass was an increase of about 822,000 kg and an increase of approximately 83,100 kg in anticipated PM mass. The emplaced WMPs increased approximately 1.68 million kg and the emplaced PMs increased approximately 1.07 million kg. The increase in WMPs can be attributed primarily to two waste streams: SR-T001-WSB-1, which changed from Potential to WIPP-bound, and IN-ID-RF-S3114, which has a portion of containers with organic liquids that require treatment. After treatment the number of current form drums doubles due to the solidification process. Both of these waste streams' WMP mass combined contributes to an increase of approximately 2.10 million kg overall. The increase in PMs at WIPP is expected since the generator sites are shipping waste to WIPP.

Table 3-5. CH/RH Waste and Packaging Material Inventory Changes

Waste Material Parameter	ATWIR-2013 Mass (kg)	ATWIR-2014 Mass (kg)	Mass Net Change (kg)
Iron-based Metal/Alloys	3.14E+06	2.96E+06	-1.80E+05
Aluminum-based Metal/Alloys	2.20E+05	3.30E+05	1.10E+05
Other Metal/Alloys	5.98E+05	6.45E+05	4.68E+04
Other Inorganic Materials	2.80E+06	2.85E+06	5.22E+04
Cellulose	9.46E+05	1.03E+06	8.34E+04
Rubber	4.75E+05	5.82E+05	1.07E+05
Plastic	1.55E+06	2.09E+06	5.36E+05

Table 3-5. CH/RH Waste and Packaging Material Inventory Changes
Continued

Waste Material Parameter	ATWIR-2013 Mass (kg)	ATWIR-2014 Mass (kg)	Mass Net Change (kg)
Cement	2.58E+06	2.04E+06	-5.48E+05
Solidified Inorganic Material	3.30E+06	3.04E+06	-2.64E+05
Solidified Organic Material	1.67E+06	2.50E+06	8.23E+05
Soil	2.36E+06	2.42E+06	5.50E+04
Vitrified	--	--	--
Anticipated Waste Total	1.96E+07	2.05E+07	8.22E+05
WIPP (Emplaced) Waste Total	2.65E+07	2.82E+07	1.68E+06
Package Material			
Packaging Material, Cellulose	3.32E+04	2.37E+04	-9.52E+03
Packaging Material, Plastic	1.04E+06	1.11E+06	6.83E+04
Packaging Material, Rubber	2.67E+04	2.77E+04	1.01E+03
Packaging Material, Steel	1.38E+07	1.38E+07	3.15E+04
Packaging Material, Lead	8.60E+03	4.13E+02	-8.19E+03
Anticipated Packaging Total	1.49E+07	1.50E+07	8.31E+04
WIPP (Emplaced) Packaging Total	1.92E+07	2.03E+07	1.07E+06
Grand Total	8.03E+07	8.39E+07	3.66E+06

Data Source: CID Data Versions D.12.02 (LANL-CO 2013a) and D.13.01 (LANL-CO 2014a).

3.2.4 Chemical Components

DOE tracks the mass (kg) of complexing agents and oxyanions as part of the non-radiological components. This report is the mechanism that DOE uses to track these components for currently stored and projected TRU waste at the sites. These mass totals for this report are presented in Table 3-6 and Table 3-8. For details on the reporting methods on chemical components, see section 2.2.4.

3.2.4.1 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 site contacts were asked to update their estimates of complexing agents in the waste streams (Patterson 2014). Table 3-6 presents a summary of the estimated CH- and RH-TRU waste complexing agents' mass by site and the grand totals.

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

TRU Waste Site	Acetate (kg)	Acetic Acid (kg)	Citrate (kg)	Citric Acid (kg)	EDTA (kg)	Oxalate (kg)	Oxalic Acid (kg)
Argonne National Laboratory	--	--	--	--	--	--	7.41E+01
Hanford (Richland) Site	6.25E+03	3.00E+03	3.65E+01	1.01E+03	5.21E+00	1.96E+01	3.44E+03
Idaho National Laboratory	4.24E+02	2.02E+03	1.48E+02	4.11E+01	1.42E+02	6.00E-02	7.47E+01
Lawrence Livermore National Laboratory	--	7.28E+00	--	7.28E+00	7.28E+00	--	7.28E+00
Los Alamos National Laboratory	--	1.08E+00	--	1.19E+02	--	--	1.06E+02
Sandia National Laboratories	--	1.00E-09	--	1.00E-09	1.00E-09	--	--
Grand Total	6.68E+03	5.03E+03	1.85E+02	1.18E+03	1.54E+02	1.97E+01	3.70E+03

Data Source: CID Data Version D.13.01 (LANL-CO 2014a). Note: This table contains data for WIPP-bound waste streams only; it does not include data for Emplaced or Potential waste streams.

3.2.4.2 Changes to Complexing Agents

Table 3-7 shows the changes in the total estimated CH- and RH-TRU waste complexing agent mass (kg) between the ATWIR-2013 and this report. These data represent only the complexing agents that are currently being reported by the sites in their anticipated TRU waste inventory and do not include complexing agents that have been emplaced at WIPP because these components are not tracked in the WDS.

There was an overall net decrease of approximately 1,990 kg in the total estimated CH- and RH-TRU waste complexing agents' mass for this reporting period. The decrease in complexing agents comes primarily from waste stream IN-ID-RF-S5000-RH from INL. The overall decrease for this waste stream was approximately 1,350 kg. The AK, written during CY 2013, was used to update the waste stream complexing agent data. INL has revised the mass of complexing agents based on updated AK information.

Table 3-7. CH/RH Complexing Agent Changes

Complexing Agent	ATWIR-2013 Total Mass (kg)	ATWIR-2014 Total Mass (kg)	Total Net Change (kg)
Acetate	6.76E+03	6.68E+03	-8.26E+01
Acetic Acid	6.89E+03	5.03E+03	-1.85E+03

Table 3-7. CH/RH Complexing Agent Changes
Continued

Complexing Agent	ATWIR-2013 Total Mass (kg)	ATWIR-2014 Total Mass (kg)	Total Net Change (kg)
Citrate	2.14E+02	1.85E+02	-2.90E+01
Citric Acid	1.18E+03	1.18E+03	-6.55E+00
EDTA	1.56E+02	1.54E+02	-1.97E+00
Oxalate	1.96E+01	1.97E+01	6.00E-02
Oxalic Acid	3.72E+03	3.70E+03	-1.92E+01
Grand Total	1.89E+04	1.69E+04	-1.99E+03

Data Source: CID Data Versions D.12.02 (LANL-CO 2013a) and D.13.01 (LANL-CO 2014a). Note: This table contains data for WIPP-bound waste streams only; it does not include data for Emplaced or Potential waste streams.

3.2.4.3 Oxyanions

Estimates of the mass of oxyanions (nitrates, phosphates, and sulfates) expected in the TRU waste were also requested from the TRU waste site contacts. The contacts reported estimates of oxyanions in their waste as mass (kg) for both stored and projected waste. Table 3-8 presents the estimated CH- and RH-TRU waste oxyanion mass by site.

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

TRU Waste Site	Nitrate (kg)	Phosphate (kg)	Sulfate (kg)
Argonne National Laboratory	1.44E+00	4.00E-01	6.17E-01
Hanford (Richland) Site	1.24E+05	1.17E+05	1.82E+04
Idaho National Laboratory	2.80E+05	2.14E+04	6.34E+04
Lawrence Berkeley National Laboratory	1.04E-01	--	--
Lawrence Livermore National Laboratory	7.28E+00	7.28E+00	7.28E+00
Los Alamos National Laboratory	2.05E+05	--	3.55E+04
Sandia National Laboratories	1.00E-06	--	--
Grand Total	6.08E+05	1.39E+05	1.17E+05

Data Source: CID Data Version D.13.01 (LANL-CO 2014a). Note: This table contains data for WIPP-bound waste streams only; it does not include data for Emplaced or Potential waste streams.

3.2.4.4 Changes to Oxyanions

Table 3-9 shows the changes in the total estimated CH- and RH-TRU waste oxyanion mass (kg) since they were reported in the ATWIR-2013. 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.

There was an overall net decrease of approximately 66,400 kg of oxyanion mass in the estimated CH- and RH-TRU waste for this reporting period. The decrease in oxyanions comes primarily from four waste streams. Waste streams IN-BNINW216 and IN-BNINW218 from INL showed a combined decrease in nitrates of about 24,200 kg. It is assumed this decrease is due to both waste streams actively being shipped to WIPP. Waste stream IN-ID-SDA-Sludge from INL showed a total oxyanion decrease of about 24,000 kg due to improved AK and the reevaluation of their oxyanions. Waste stream LA-TA-21-16 from LANL showed a total oxyanion decrease of approximately 11,400 kg. This increase was also due to the site's reevaluation of their oxyanions.

Table 3-9. CH/RH Oxyanion Changes

Oxyanion	ATWIR-2013 Total Mass (kg)	ATWIR-2014 Total Mass (kg)	Total Net Change (kg)
Nitrate	6.49E+05	6.08E+05	-4.09E+04
Phosphate	1.44E+05	1.39E+05	-4.99E+03
Sulfate	1.38E+05	1.17E+05	-2.05E+04
Grand Total	9.31E+05	8.64E+05	-6.64E+04

Data Source: CID Data Versions D.12.02 (LANL-CO 2013a) and D.13.01 (LANL-CO 2014a). 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 Estimates

This section presents the updated TRU waste radionuclide activity inventory collected from the TRU waste generator sites as of the end of CY 2013. The TRU waste generator sites' TRU waste stream radionuclide activities, in curies, shown in Table 3-10, Table 3-11, and Table 3-12, are decay-corrected through the end of CY 2013 (as described in section 2.2.3). Table 3-13 shows a comparison between ATWIR-2013 and ATWIR-2014 activity. The values in Table 3-13 are decay-corrected through the end of CY 2033 so that a realistic comparison can be presented. The data are then aggregated using the CID and placed into tables by site for CH- and RH-TRU wastes.

3.3.1 Radionuclide Inventory by Site

Table 3-10 and Table 3-11 provide the comprehensive WIPP-bound anticipated activity (Ci) inventory estimates for CH- and RH-TRU waste, respectively. Table 3-12 sums the CH and RH site totals to produce a total anticipated activity by site.

Table 3-10. Total CH Radionuclide Activity (Ci) on a Site Basis Decayed through 2013

Radionuclide	ANL	Hanford	INL	KAPL-NFS	LANL	LBNL	LLNL	MFC	NNSS	NRD	ORNL	SNL	SRS	Grand Total
Ac-225	9.46E-05	3.64E-04	5.16E-06	6.12E-03	1.24E-01	1.32E-14	9.31E-13	3.19E-10	2.69E-12	1.16E-14	1.89E-03	5.71E-17	1.82E-06	1.32E-01
Ac-227	4.88E-09	9.46E-08	5.75E-05	2.11E-05	3.81E+01	6.32E-19	6.23E-03	4.10E-10	1.42E-10	--	2.99E+00	1.96E-14	5.24E-03	4.11E+01
Ac-228	2.97E-06	2.75E-03	2.30E-08	3.26E-01	8.81E-02	2.40E-07	3.44E-17	3.90E-19	9.51E-16	--	5.41E-02	1.12E-18	4.47E-03	4.76E-01
Ag-108	5.53E-05	--	--	--	--	--	--	--	--	--	--	--	--	5.53E-05
Ag-108m	6.36E-04	--	--	--	2.10E-05	--	--	--	--	--	--	--	--	6.57E-04
Ag-109m	9.67E-10	--	--	--	--	--	1.50E-03	--	--	--	1.23E-12	--	--	1.50E-03
Ag-110m	--	--	--	--	--	--	--	--	--	--	7.58E-02	--	--	7.58E-02
Am-241	7.04E+00	4.32E+04	4.43E+04	1.09E+03	6.93E+04	9.59E-03	1.29E+03	1.19E+02	1.93E+01	3.48E+01	2.42E+03	1.33E-01	1.22E+06	1.38E+06
Am-242	3.84E-04	1.54E-02	--	--	1.17E+01	--	4.55E-02	--	--	--	--	--	5.41E-04	1.17E+01
Am-242m	3.86E-04	1.55E-02	--	--	--	--	6.95E+00	--	--	--	9.67E-01	--	1.08E-02	7.94E+00
Am-243	1.15E+01	7.91E-01	4.90E-03	--	4.78E+00	4.40E-08	2.20E-01	--	--	--	4.39E+00	--	6.39E-01	2.23E+01
Am-245	7.49E-09	--	--	--	--	--	--	--	--	--	3.47E-20	--	--	7.49E-09
At-217	9.46E-05	3.64E-04	5.16E-06	6.12E-03	1.24E-01	1.32E-14	9.31E-13	3.19E-10	2.69E-12	1.16E-14	1.89E-03	5.71E-17	1.82E-06	1.32E-01
Ba-133	3.24E-05	5.45E-04	--	--	2.47E-04	--	--	--	--	--	5.83E-04	--	8.13E-06	1.42E-03
Ba-137m	2.13E+00	1.02E+04	4.30E-02	--	1.83E-01	1.63E-07	2.63E-02	--	--	--	1.06E-02	6.69E-03	8.89E-01	1.02E+04
Bi-210	6.03E-05	3.59E-04	8.39E-07	3.44E-04	3.18E-06	1.70E-25	5.17E-13	3.93E-16	4.64E-12	--	3.15E-01	2.44E-16	1.33E-09	3.15E-01
Bi-211	4.88E-09	9.46E-08	1.38E-07	2.11E-05	2.52E-06	6.32E-19	1.03E-11	4.10E-10	1.42E-10	--	3.98E-06	1.96E-14	1.87E-09	2.78E-05
Bi-212	3.60E-04	2.67E+03	8.42E-07	1.37E+00	1.62E-03	7.17E-08	1.60E-02	1.05E-19	4.96E-16	--	5.70E-04	2.52E-19	4.87E-14	2.67E+03
Bi-213	9.45E-05	3.64E-04	5.16E-06	6.12E-03	1.24E-01	1.32E-14	9.31E-13	3.19E-10	2.69E-12	1.16E-14	1.89E-03	5.71E-17	1.82E-06	1.32E-01
Bi-214	1.16E-04	5.11E-03	2.78E-05	4.68E-03	2.36E+00	1.11E-23	1.15E-11	1.32E-14	1.37E-10	--	5.39E-01	1.07E-14	1.54E-03	2.91E+00
Bk-249	5.16E-04	--	--	--	2.82E-03	--	--	--	--	--	5.73E+00	--	--	5.73E+00
Bk-250	1.28E-09	--	--	--	--	--	--	--	--	--	--	--	--	1.28E-09
C-14	4.13E-03	6.00E-04	--	--	--	--	--	--	--	--	3.98E-06	--	1.82E-03	6.55E-03
Ca-45	3.06E-07	--	--	--	--	--	--	--	--	--	--	--	--	3.06E-07
Cd-109	9.67E-10	--	--	--	--	--	1.50E-03	--	--	--	2.33E-06	--	--	1.51E-03
Cd-113	2.77E-23	--	--	--	--	--	--	--	--	--	--	--	--	2.77E-23
Cd-113m	1.27E-04	--	--	--	--	--	--	--	--	--	--	--	--	1.27E-04
Ce-139	--	--	--	--	--	--	--	--	--	--	7.57E-05	--	--	7.57E-05
Ce-141	--	--	--	--	--	--	--	--	--	--	1.99E+00	--	--	1.99E+00
Ce-144	5.29E-03	--	--	--	2.79E-04	--	--	--	--	--	6.87E-01	--	--	6.93E-01
Cf-249	1.12E-01	1.81E-02	2.30E-03	--	1.03E+00	4.31E-03	7.37E+00	--	--	--	6.35E-01	--	1.98E-03	9.17E+00
Cf-250	1.45E-09	--	--	--	--	1.15E-07	--	--	--	--	3.02E-01	--	8.74E-11	3.02E-01
Cf-251	5.65E-05	--	--	--	--	--	2.29E-04	--	--	--	9.73E-03	--	1.01E-03	1.10E-02
Cf-252	1.31E-03	--	--	--	--	--	4.91E-03	--	--	--	1.49E+01	--	2.29E+00	1.72E+01
Cf-253	--	--	--	--	--	--	--	--	--	--	4.48E-03	--	--	4.48E-03
Cf-254	--	--	--	--	--	--	--	--	--	--	1.30E-03	--	--	1.30E-03
Cl-36	2.27E-07	--	--	--	--	--	--	--	--	--	--	--	--	2.27E-07
Cm-242	3.37E-04	1.27E-02	--	--	1.03E-03	--	--	--	--	--	2.86E+00	--	1.08E-05	2.87E+00
Cm-243	2.49E-02	5.20E-01	3.52E-03	--	6.21E+00	--	7.77E-02	--	--	--	1.21E+02	--	3.78E-02	1.27E+02
Cm-244	1.01E+03	6.58E+01	4.40E+01	--	1.42E+04	--	7.61E+02	--	--	--	3.67E+03	--	6.37E+01	1.98E+04
Cm-245	1.13E-04	1.16E+04	5.57E-06	--	8.46E+00	7.04E-07	3.75E-02	--	--	--	3.11E-01	--	1.11E-02	1.16E+04
Cm-246	7.48E-03	--	--	--	1.84E+00	3.54E-11	--	--	--	--	1.82E+01	--	6.79E-03	2.01E+01
Cm-247	9.21E-10	--	--	--	--	--	3.05E-06	--	--	--	3.33E-04	--	1.09E-02	1.12E-02
Cm-248	1.74E-04	--	--	--	--	1.69E-07	1.53E-02	--	--	--	2.12E-02	--	1.56E-07	3.67E-02
Cm-250	9.16E-09	--	--	--	--	--	--	--	--	--	2.23E-03	--	--	2.23E-03

Table 3-10. Total CH Radionuclide Activity (Ci) on a Site Basis Decayed through 2013
Continued

Radionuclide	ANL	Hanford	INL	KAPL- NFS	LANL	LBNL	LLNL	MFC	NNSS	NRD	ORNL	SNL	SRS	Grand Total
Co-58	--	--	--	--	--	--	--	--	--	--	7.68E-03	--	--	7.68E-03
Co-60	8.43E-03	2.00E-01	2.84E-06	--	2.45E-03	--	1.63E-03	--	--	--	1.00E-01	--	3.25E-03	3.16E-01
Cr-51	--	--	--	--	--	--	--	--	--	--	2.75E-01	--	--	2.75E-01
Cs-134	5.36E-02	4.23E-01	--	--	--	--	--	--	--	--	3.56E-01	--	2.17E-05	8.33E-01
Cs-135	1.54E-06	--	--	--	--	--	--	--	--	--	--	--	--	1.54E-06
Cs-137	2.26E+00	1.08E+04	7.63E-02	--	1.26E+01	1.73E-07	7.01E-01	--	--	--	9.70E+00	7.08E-03	1.59E+00	1.09E+04
Es-253	--	--	--	--	--	--	--	--	--	--	1.00E-06	--	--	1.00E-06
Eu-152	1.41E-04	7.51E-01	--	--	1.33E-02	--	3.81E-04	--	--	--	3.35E-01	--	1.61E-04	1.10E+00
Eu-154	3.49E-02	4.20E+00	--	--	4.22E-03	--	3.94E-03	--	--	--	8.07E-01	3.33E-05	5.95E-03	5.06E+00
Eu-155	5.67E-03	2.61E-06	--	--	7.83E-05	--	--	--	--	--	4.66E-01	--	3.28E-02	5.04E-01
Fe-55	1.06E-02	--	--	--	--	--	--	--	--	--	1.75E-06	--	--	1.06E-02
Fe-59	1.47E-10	--	--	--	--	--	--	--	--	--	4.14E-04	--	--	4.14E-04
Fr-221	9.46E-05	3.64E-04	5.16E-06	6.12E-03	1.24E-01	1.32E-14	9.31E-13	3.19E-10	2.69E-12	1.16E-14	1.89E-03	5.71E-17	1.82E-06	1.32E-01
Fr-223	6.73E-11	1.31E-09	1.90E-09	2.91E-07	3.48E-08	8.72E-21	1.42E-13	5.66E-12	1.96E-12	--	5.48E-08	2.71E-16	2.57E-11	3.84E-07
Gd-152	5.31E-19	2.84E-15	--	--	9.71E-22	--	--	--	--	--	3.66E-16	--	--	3.20E-15
Gd-153	--	--	--	--	1.83E-05	--	--	--	--	--	--	--	--	1.83E-05
H-3	1.52E-02	1.03E-04	--	--	4.43E+05	--	--	--	--	--	1.27E-05	--	4.45E-04	4.43E+05
Ho-166m	1.48E-09	--	--	--	--	--	--	--	--	--	7.77E-04	--	4.85E-07	7.77E-04
I-125	--	--	--	--	5.65E-06	--	--	--	--	--	--	--	--	5.65E-06
I-129	4.59E-07	1.58E-06	--	--	1.20E-06	--	--	--	--	--	3.23E-05	--	3.93E-03	3.96E-03
I-131	--	--	--	--	--	--	--	--	--	--	2.23E-05	--	--	2.23E-05
K-40	1.77E-04	7.99E-01	--	--	--	--	5.89E-08	--	--	--	7.60E-04	4.98E-10	1.36E-06	8.00E-01
Kr-85	1.53E-02	1.25E+00	--	--	1.04E-01	--	--	--	--	--	--	--	2.28E-06	1.37E+00
Mn-54	2.35E-04	9.68E-09	--	--	2.13E-05	--	--	--	--	--	5.64E-03	--	--	5.90E-03
Mn-56	--	--	--	--	3.55E-04	--	--	--	--	--	--	--	--	3.55E-04
Na-22	4.23E-05	6.30E+04	--	--	1.67E-03	--	1.92E-04	--	--	--	1.94E-06	--	2.50E-03	6.30E+04
Na-24	--	--	--	--	3.50E-06	--	--	--	--	--	--	--	--	3.50E-06
Nb-93m	1.47E-03	--	--	--	--	--	--	--	--	--	--	--	--	1.47E-03
Nb-94	4.05E-06	1.12E-03	--	--	--	--	2.24E-08	--	--	--	2.27E-06	--	1.75E-07	1.12E-03
Nb-95	3.65E-09	--	--	--	--	--	--	--	--	--	7.40E-02	--	--	7.40E-02
Nb-95m	1.95E-11	--	--	--	--	--	--	--	--	--	--	--	--	1.95E-11
Nd-144	9.69E-18	--	--	--	1.86E-19	--	--	--	--	--	1.40E-45	--	--	9.88E-18
Ni-59	--	--	--	--	--	--	--	--	--	--	--	--	6.34E-10	6.34E-10
Ni-63	1.34E-05	--	--	--	--	--	--	--	--	--	3.41E+00	--	--	3.41E+00
Np-237	4.68E-02	4.57E-01	8.28E-01	1.74E-03	1.45E+00	1.72E-05	1.40E-02	1.08E-01	1.42E-04	2.59E-05	3.83E-01	1.10E-07	6.85E-01	3.97E+00
Np-238	1.74E-06	6.96E-05	--	--	--	--	--	--	--	--	--	--	--	7.14E-05
Np-239	1.15E+01	7.91E-01	4.13E-04	--	6.24E-03	4.40E-08	2.08E-05	--	--	--	1.80E+00	--	2.76E-05	1.41E+01
Np-240	1.60E-09	2.72E-14	--	--	2.39E-11	3.21E-18	5.56E-25	--	--	--	6.60E-19	--	--	1.62E-09
Np-240m	1.33E-06	2.27E-11	--	--	1.99E-08	2.68E-15	4.63E-22	--	--	--	5.50E-16	--	--	1.35E-06
P-32	3.42E-19	--	--	--	--	--	--	--	--	--	--	--	--	3.42E-19
Pa-231	8.21E-08	2.53E-06	1.47E-06	2.79E-04	9.13E-01	3.03E-17	4.90E-02	6.98E-09	3.06E-09	--	3.90E-01	6.30E-13	2.37E-03	1.35E+00
Pa-233	4.68E-02	4.57E-01	3.55E-01	1.74E-03	2.15E-02	1.72E-05	3.82E-04	1.08E-01	1.42E-04	2.59E-05	2.09E-01	1.10E-07	7.65E-04	1.20E+00
Pa-234	3.72E-06	9.71E-04	5.41E-03	4.43E-04	2.15E-03	1.01E-12	1.69E-15	3.37E-07	3.22E-06	--	2.23E-05	1.10E-16	1.41E-07	9.00E-03
Pa-234m	2.86E-03	7.47E-01	4.16E+00	3.41E-01	2.12E-02	7.80E-10	1.30E-12	2.59E-04	2.48E-03	--	1.78E-02	8.48E-14	1.08E-04	5.29E+00
Pb-209	9.45E-05	3.64E-04	5.16E-06	6.12E-03	1.24E-01	1.32E-14	9.31E-13	3.19E-10	2.69E-12	1.16E-14	1.89E-03	5.71E-17	1.82E-06	1.32E-01
Pb-210	6.02E-05	3.59E-04	8.39E-07	3.44E-04	2.59E-03	1.70E-25	5.17E-13	3.93E-16	4.64E-12	--	3.15E-01	2.44E-16	1.33E-09	3.18E-01
Pb-211	4.88E-09	9.46E-08	1.38E-07	2.11E-05	2.52E-06	6.32E-19	1.03E-11	4.10E-10	1.42E-10	--	3.98E-06	1.96E-14	2.25E-06	3.01E-05

Table 3-10. Total CH Radionuclide Activity (Ci) on a Site Basis Decayed through 2013
Continued

Radionuclide	ANL	Hanford	INL	KAPL-NFS	LANL	LBNL	LLNL	MFC	NNSS	NRD	ORNL	SNL	SRS	Grand Total
Pb-212	3.60E-04	2.67E+03	8.42E-07	1.37E+00	6.01E-01	7.17E-08	1.31E-17	1.05E-19	4.96E-16	--	4.49E-04	2.52E-19	1.79E-09	2.67E+03
Pb-214	1.16E-04	5.11E-03	2.78E-05	4.68E-03	1.28E-05	1.11E-23	1.15E-11	1.32E-14	1.37E-10	--	5.39E-01	1.07E-14	5.58E-03	5.54E-01
Pd-107	1.52E-06	--	--	--	--	--	--	--	--	--	--	--	--	1.52E-06
Pm-147	4.40E-01	8.89E+00	--	--	--	--	--	--	--	--	1.85E+00	--	--	1.12E+01
Po-210	5.97E-05	2.77E-04	4.47E-07	3.44E-04	3.18E-06	7.46E-26	5.17E-13	3.88E-16	3.17E-12	--	3.15E-01	1.34E-16	1.33E-09	3.15E-01
Po-211	1.34E-11	2.60E-10	3.79E-10	5.81E-08	6.93E-09	1.74E-21	2.82E-14	1.13E-12	3.90E-13	--	1.09E-08	5.39E-17	5.13E-12	7.66E-08
Po-212	2.31E-04	1.71E+03	5.40E-07	8.79E-01	8.39E-07	4.59E-08	8.41E-18	6.71E-20	3.17E-16	--	2.20E-04	1.61E-19	3.12E-14	1.71E+03
Po-213	9.26E-05	3.56E-04	5.05E-06	6.00E-03	1.21E-01	1.29E-14	9.11E-13	3.13E-10	2.63E-12	1.14E-14	1.85E-03	5.59E-17	1.78E-06	1.30E-01
Po-214	1.16E-04	5.11E-03	2.78E-05	4.68E-03	1.28E-05	1.11E-23	1.15E-11	1.32E-14	1.37E-10	--	5.39E-01	1.07E-14	8.50E-09	5.49E-01
Po-215	4.88E-09	9.46E-08	1.38E-07	2.11E-05	2.52E-06	6.32E-19	1.03E-11	4.10E-10	1.42E-10	--	3.98E-06	1.96E-14	1.87E-09	2.78E-05
Po-216	3.60E-04	2.67E+03	8.42E-07	1.37E+00	1.31E-06	7.17E-08	1.31E-17	1.05E-19	4.96E-16	--	3.44E-04	2.52E-19	4.87E-14	2.67E+03
Po-218	1.16E-04	5.11E-03	2.78E-05	4.68E-03	1.28E-05	1.11E-23	1.15E-11	1.32E-14	1.37E-10	--	5.39E-01	1.07E-14	8.51E-09	5.49E-01
Pr-144	5.29E-03	--	--	--	3.73E-05	--	--	--	--	--	--	--	--	5.33E-03
Pr-144m	7.40E-05	--	--	--	5.23E-07	--	--	--	--	--	--	--	--	7.46E-05
Pu-236	1.41E-09	--	--	--	--	--	--	--	--	--	--	--	--	1.41E-09
Pu-238	7.27E+00	1.51E+04	2.04E+03	1.25E+02	1.99E+05	--	1.87E+03	1.37E-01	7.16E+00	--	3.06E+03	2.08E-01	4.76E+04	2.69E+05
Pu-239	1.23E+01	4.39E+04	1.37E+04	3.89E+03	3.74E+04	7.26E-04	1.45E+03	5.55E+00	5.73E+01	--	5.69E+02	6.72E+00	1.15E+04	1.13E+05
Pu-240	1.75E+01	1.93E+04	3.18E+03	3.89E+03	1.01E+04	2.00E-05	3.98E+02	4.24E-01	5.40E+01	--	8.11E+02	1.54E+00	2.90E+03	4.07E+04
Pu-241	4.75E+01	3.64E+05	2.51E+04	4.53E+03	1.65E+05	3.76E-04	4.82E+03	8.02E+00	2.97E+02	--	1.42E+04	8.14E+00	1.85E+05	7.63E+05
Pu-242	3.55E-02	1.89E+02	4.89E-01	--	5.74E+01	6.68E-17	1.28E-01	8.95E-05	3.37E-03	--	3.56E+00	1.82E-04	1.66E+00	2.53E+02
Pu-243	9.21E-10	--	--	--	--	--	--	--	--	--	--	--	--	9.21E-10
Pu-244	1.33E-06	2.27E-11	--	--	1.99E-04	2.68E-15	4.64E-22	--	--	--	6.56E-04	--	--	8.56E-04
Ra-223	4.88E-09	9.46E-08	1.38E-07	2.11E-05	2.52E-06	6.32E-19	1.03E-11	4.10E-10	1.42E-10	--	8.73E-06	1.96E-14	1.87E-09	3.26E-05
Ra-224	3.60E-04	2.67E+03	8.42E-07	1.37E+00	2.66E-05	7.17E-08	1.31E-17	1.05E-19	4.96E-16	--	4.97E-04	2.52E-19	4.87E-14	2.67E+03
Ra-225	9.46E-05	3.64E-04	5.16E-06	6.12E-03	1.24E-01	1.32E-14	9.31E-13	3.19E-10	2.69E-12	1.16E-14	1.89E-03	5.71E-17	1.83E-06	1.32E-01
Ra-226	1.16E-04	5.11E-03	1.85E-04	4.68E-03	3.07E-01	1.11E-23	1.15E-11	1.32E-14	1.37E-10	--	7.49E-01	1.07E-14	9.03E-05	1.07E+00
Ra-228	2.97E-06	2.75E-03	2.30E-08	3.26E-01	5.03E-09	2.40E-07	3.44E-17	3.90E-19	9.51E-16	--	1.33E-04	1.12E-18	4.87E-14	3.29E-01
Rb-87	8.35E-10	--	--	--	--	--	--	--	--	--	--	--	--	8.35E-10
Rh-106	1.11E-02	--	--	--	3.02E-04	--	--	--	--	--	--	--	--	1.14E-02
Rn-219	4.88E-09	9.46E-08	1.38E-07	2.11E-05	2.52E-06	6.32E-19	1.03E-11	4.10E-10	1.42E-10	--	3.98E-06	1.96E-14	1.87E-09	2.78E-05
Rn-220	3.60E-04	2.67E+03	8.42E-07	1.37E+00	1.31E-06	7.17E-08	1.31E-17	1.05E-19	4.96E-16	--	3.44E-04	2.52E-19	4.87E-14	2.67E+03
Rn-222	1.16E-04	5.11E-03	2.78E-05	4.68E-03	1.28E-05	1.11E-23	1.15E-11	1.32E-14	1.37E-10	--	5.39E-01	1.07E-14	8.51E-09	5.49E-01
Ru-103	--	--	--	--	--	--	--	--	--	--	9.22E-01	--	--	9.22E-01
Ru-106	1.11E-02	--	--	--	1.36E-03	--	--	--	--	--	3.99E+00	--	2.21E-06	4.00E+00
S-35	2.75E-05	--	--	--	--	--	--	--	--	--	--	--	--	2.75E-05
Sb-125	2.99E-03	5.88E-01	--	--	5.91E-05	--	4.76E-06	--	--	--	2.31E-01	--	2.88E-03	8.25E-01
Sb-126	1.20E-06	1.14E-01	--	--	1.03E-06	--	--	--	--	--	1.81E-04	--	--	1.14E-01
Sb-126m	8.58E-06	8.13E-01	--	--	7.39E-06	--	--	--	--	--	--	--	--	8.13E-01
Sc-46	--	--	--	--	2.53E-13	--	--	--	--	--	--	--	--	2.53E-13
Se-79	3.50E-06	--	--	--	--	--	--	--	--	--	--	--	--	3.50E-06
Sm-147	7.58E-12	4.13E-10	--	--	--	--	--	--	--	--	--	--	--	4.21E-10
Sm-148	4.73E-35	2.53E-31	--	--	4.29E-38	--	--	--	--	--	5.53E-31	--	--	8.06E-31
Sm-151	1.69E-02	2.21E+00	--	--	2.41E-02	--	--	--	--	--	5.26E-01	--	--	2.78E+00
Sn-121	--	--	--	--	9.65E-05	--	--	--	--	--	--	--	--	9.65E-05
Sn-121m	--	--	--	--	1.83E-04	--	--	--	--	--	--	--	--	1.83E-04
Sn-126	8.58E-06	8.13E-01	--	--	1.07E-05	--	--	--	--	--	--	--	--	8.13E-01
Sr-85	2.60E-08	--	--	--	--	--	--	--	--	--	--	--	--	2.60E-08

Table 3-10. Total CH Radionuclide Activity (Ci) on a Site Basis Decayed through 2013
Continued

Radionuclide	ANL	Hanford	INL	KAPL- NFS	LANL	LBNL	LLNL	MFC	NNSS	NRD	ORNL	SNL	SRS	Grand Total
Sr-89	--	--	--	--	--	--	--	--	--	--	3.73E-02	--	--	3.73E-02
Sr-90	1.92E+00	9.96E+02	8.39E-02	--	8.48E+00	--	7.59E-01	--	--	--	9.79E+01	--	9.74E-01	1.11E+03
Tc-99	6.50E-03	1.63E+00	--	2.40E+01	--	--	--	--	--	--	1.65E+01	--	1.76E-05	4.21E+01
Te-125m	7.31E-04	1.44E-01	--	--	7.34E-06	--	--	--	--	--	--	--	--	1.44E-01
Th-227	4.81E-09	9.33E-08	1.36E-07	2.08E-05	2.48E-06	6.23E-19	1.01E-11	4.05E-10	1.40E-10	--	4.43E-01	1.93E-14	1.84E-09	4.43E-01
Th-228	3.59E-04	2.67E+03	8.42E-07	1.37E+00	3.63E-03	7.17E-08	1.05E-03	1.05E-19	4.96E-16	--	5.82E-03	2.52E-19	2.12E-02	2.67E+03
Th-229	9.46E-05	3.64E-04	5.16E-06	6.12E-03	1.29E-01	1.32E-14	1.31E-03	3.19E-10	2.69E-12	1.16E-14	9.19E-03	5.71E-17	2.90E-02	1.75E-01
Th-230	3.25E-04	3.23E-02	1.10E-05	2.16E+00	2.15E-03	3.85E-20	2.44E-04	2.37E-11	2.01E-07	--	2.12E-03	2.47E-11	5.85E-03	2.20E+00
Th-231	1.45E-04	5.37E-02	4.91E-02	2.64E+00	3.41E-02	1.43E-12	9.90E-07	8.89E-05	4.82E-05	--	6.76E-04	1.99E-08	1.14E-05	2.78E+00
Th-232	9.55E-06	1.28E-02	2.03E-07	7.20E-01	5.62E-04	1.12E-06	1.70E-16	3.03E-18	3.17E-15	--	1.35E-02	1.01E-17	2.46E-03	7.50E-01
Th-234	2.86E-03	7.47E-01	4.16E+00	3.41E-01	2.29E-02	7.80E-10	1.30E-12	2.59E-04	2.48E-03	--	1.75E-02	8.48E-14	1.08E-04	5.29E+00
Tl-207	4.87E-09	9.43E-08	1.37E-07	2.11E-05	2.51E-06	6.30E-19	1.02E-11	4.09E-10	1.41E-10	--	3.97E-06	1.96E-14	1.86E-09	2.78E-05
Tl-208	1.29E-04	9.59E+02	3.03E-07	4.93E-01	2.47E-02	2.58E-08	8.39E-03	3.76E-20	1.78E-16	--	1.24E-04	9.04E-20	2.69E-03	9.60E+02
Tl-209	1.99E-06	7.64E-06	1.08E-07	1.29E-04	2.60E-03	2.77E-16	1.96E-14	6.71E-12	5.65E-14	2.43E-16	3.98E-05	1.20E-18	3.86E-08	2.78E-03
Tm-171	1.22E-09	--	--	--	4.82E-02	--	--	--	--	--	--	--	--	4.82E-02
U-232	1.37E-04	5.13E+03	9.82E-04	--	7.18E-01	--	4.29E-03	--	--	--	2.30E-01	--	9.20E-02	5.13E+03
U-233	4.42E-04	2.05E+00	2.65E-01	1.39E+01	4.47E+01	1.50E-10	2.70E+00	1.82E-06	7.22E-09	1.41E-10	8.28E+00	6.73E-13	7.89E+00	7.98E+01
U-234	6.03E-03	1.75E+03	1.36E+00	1.39E+01	2.52E+01	4.19E-15	3.66E-02	1.38E-06	7.18E-03	--	3.46E-01	1.78E-06	2.50E+01	1.82E+03
U-235	1.45E-04	5.37E-02	8.79E-02	2.64E+00	5.05E-02	1.43E-12	2.52E-03	8.89E-05	4.82E-05	--	2.58E-03	1.99E-08	1.03E+00	3.87E+00
U-236	1.66E-05	1.99E-03	7.36E-05	2.64E+00	7.50E-03	1.18E-12	1.15E-06	3.72E-08	1.36E-05	--	1.26E+00	1.37E-07	6.55E-03	3.92E+00
U-237	1.14E-03	8.71E+00	1.29E-01	1.08E-01	1.13E-01	8.99E-09	3.43E-03	1.92E-04	7.10E-03	--	7.71E-04	1.95E-04	3.83E-04	9.07E+00
U-238	2.86E-03	7.47E-01	6.40E+00	3.41E-01	3.77E-01	7.80E-10	1.19E-02	2.59E-04	2.48E-03	--	3.03E-02	8.48E-14	8.97E-02	8.00E+00
U-240	1.33E-06	2.27E-11	--	--	1.99E-08	2.68E-15	4.63E-22	--	--	--	5.50E-16	--	--	1.35E-06
Y-90	1.92E+00	9.96E+02	5.00E-02	--	5.97E+04	--	7.59E-01	--	--	--	1.70E-02	--	8.95E-03	6.07E+04
Zr-93	6.62E-07	--	--	--	--	--	--	--	--	--	--	--	--	6.62E-07
Zr-95	1.66E-09	--	--	--	--	--	--	--	--	--	5.05E-01	--	--	5.05E-01
Grand Total	1.14E+03	6.09E+05	8.84E+04	1.36E+04	9.98E+05	1.51E-02	1.06E+04	1.34E+02	4.34E+02	3.48E+01	2.50E+04	1.68E+01	1.47E+06	3.21E+06

Data Source: CID Data Version D.13.01 (LANL-CO 2014a). Note: This table contains data for WIPP-bound waste streams only; it does not include data for Emplaced or Potential waste streams.

Table 3-11. Total RH Radionuclide Activity (Ci) on a Site Basis Decayed through 2013

Radionuclide	ANL	BAPL	Hanford	INL	KAPL-S	LANL	MFC	ORNL	SNL	SRS	Grand Total
Ac-225	8.93E-03	5.91E-05	3.24E-04	1.44E-03	4.79E-07	3.70E-13	1.69E-08	8.52E-01	1.85E-05	9.23E-06	8.63E-01
Ac-227	4.24E-01	8.19E-12	9.20E-03	7.70E-06	3.60E-09	7.51E-07	1.38E-06	2.46E+00	1.39E-07	2.92E-05	2.89E+00
Ac-228	4.41E-02	8.19E-16	2.02E-05	3.34E-05	7.27E-05	3.69E-15	1.44E-13	1.07E-02	1.15E-12	1.37E-15	5.49E-02
Ag-108	1.88E-03	--	--	--	--	--	7.16E-07	--	--	--	1.88E-03
Ag-108m	2.16E-02	--	--	--	--	--	8.23E-06	--	--	--	2.16E-02
Ag-109m	7.96E-01	--	--	--	--	--	--	2.10E-08	--	--	7.96E-01
Ag-110	2.03E-03	--	3.48E-08	--	4.99E-07	--	3.26E-11	1.47E-15	--	--	2.03E-03
Ag-110m	1.49E-01	--	2.56E-06	--	3.67E-05	--	2.40E-09	1.08E-13	--	--	1.49E-01
Am-241	2.74E+02	4.34E-02	4.88E+03	7.06E+02	5.42E-02	4.23E+00	1.14E+02	1.79E+02	4.13E+01	1.02E+02	6.30E+03
Am-242	7.18E+00	--	1.22E+00	2.52E-04	--	--	3.71E-05	5.93E-03	8.28E-01	3.39E-02	9.27E+00
Am-242m	7.21E+00	--	1.22E+00	2.53E-04	--	--	3.72E-05	5.96E-03	8.32E-01	3.41E-02	9.31E+00
Am-243	3.38E+00	1.78E-04	4.02E+00	6.89E-04	2.49E-06	--	1.96E-04	1.66E+00	1.05E-01	1.48E+00	1.07E+01
Am-245	5.10E-12	--	--	--	--	--	--	1.73E-14	--	7.03E-09	7.03E-09
Ar-37	2.05E-09	--	--	--	--	--	--	--	--	--	2.05E-09
Ar-39	1.50E-02	--	--	--	--	--	6.19E-04	--	--	--	1.56E-02
Ar-42	3.99E-02	--	--	--	--	--	--	--	--	--	3.99E-02
At-217	8.93E-03	5.91E-05	3.24E-04	1.44E-03	4.79E-07	3.70E-13	1.69E-08	8.52E-01	1.85E-05	9.23E-06	8.63E-01
Ba-133	3.31E+00	--	--	--	--	--	--	--	--	--	3.31E+00
Ba-137m	2.31E+03	8.83E+01	2.11E+05	2.43E+04	5.05E+01	9.81E+02	3.72E+04	2.00E+03	2.96E+02	2.59E+01	2.78E+05
Bi-210	1.48E+00	7.67E-14	1.39E-02	1.45E-03	2.78E-08	2.01E-10	1.48E-10	7.12E+00	3.45E-07	1.16E-09	8.62E+00
Bi-211	4.24E-01	8.19E-12	9.22E-03	7.70E-06	3.60E-09	7.51E-07	1.39E-06	2.46E+00	1.39E-07	2.92E-05	2.90E+00
Bi-212	5.71E+00	1.46E-02	1.91E-03	7.26E-03	4.82E-05	2.87E-15	2.87E-05	1.76E+00	2.39E-13	7.70E-16	7.50E+00
Bi-213	8.93E-03	5.91E-05	3.24E-04	1.44E-03	4.79E-07	3.70E-13	1.69E-08	8.52E-01	1.85E-05	9.23E-06	8.63E-01
Bi-214	7.05E-02	3.80E-12	7.12E-02	4.81E-02	6.17E-07	1.23E-09	3.95E-09	1.22E+01	3.45E-07	1.50E-08	1.24E+01
Bk-249	3.52E-07	--	--	--	--	--	--	1.19E-09	--	4.86E-04	4.86E-04
Bk-250	--	--	--	--	--	--	--	5.55E-09	--	--	5.55E-09
C-14	--	2.48E-03	4.47E-04	5.06E+01	1.48E-01	--	3.43E+01	1.09E-03	--	8.03E-04	8.51E+01
Ca-45	8.95E-03	--	--	--	--	--	--	--	--	--	8.95E-03
Cd-109	7.96E-01	--	--	--	--	--	--	2.10E-08	--	--	7.96E-01
Cd-113	3.33E-19	--	5.24E-19	--	--	--	9.55E-21	--	--	--	8.67E-19
Cd-113m	1.52E+00	--	1.55E+00	--	--	--	4.36E-02	--	--	--	3.12E+00
Cd-115m	1.91E-06	--	--	--	--	--	--	--	--	--	1.91E-06
Ce-139	5.33E-02	--	--	--	--	--	--	--	--	--	5.33E-02
Ce-141	1.15E-07	--	--	5.91E-07	--	--	8.73E-07	--	--	--	1.58E-06
Ce-144	1.61E+01	--	1.68E-03	1.23E+03	--	4.63E-07	4.04E+03	3.47E-11	--	6.86E-05	5.28E+03
Cf-249	1.12E+00	--	--	--	1.88E-13	--	--	6.24E-01	--	1.31E-03	1.75E+00
Cf-250	5.51E-02	--	--	--	--	--	--	2.14E+00	--	2.51E-05	2.20E+00
Cf-251	1.36E-08	--	--	--	2.38E-15	--	--	1.38E-01	--	8.48E-07	1.38E-01
Cf-252	9.54E-04	--	--	--	6.78E-17	--	--	6.89E-03	--	2.58E-02	3.36E-02
Cm-242	5.95E+00	--	1.03E+00	2.09E-04	2.28E-06	--	3.08E-05	4.90E-03	6.88E-01	2.81E-02	7.70E+00
Cm-243	2.69E+00	--	2.80E+01	6.39E-03	2.65E-03	--	--	1.04E-01	--	2.78E-03	3.08E+01
Cm-244	6.39E+01	--	7.28E+02	2.80E+02	8.91E-03	--	4.87E-06	5.13E+02	--	1.25E+02	1.71E+03
Cm-245	3.05E-03	--	8.82E-02	--	2.30E-08	--	--	1.02E-01	--	1.82E-02	2.11E-01
Cm-246	1.70E-05	--	3.94E-02	1.34E-16	3.00E-09	--	--	4.09E+00	--	2.43E-02	4.15E+00
Cm-247	1.06E-09	--	1.24E-10	--	7.07E-15	--	--	3.20E-06	--	4.60E-08	3.25E-06
Cm-248	4.96E-09	--	1.88E-06	--	1.40E-14	--	--	1.99E-02	--	8.67E-06	1.99E-02
Cm-250	--	--	--	--	--	--	--	3.96E-08	--	--	3.96E-08
Co-58	7.76E-04	--	--	8.44E+02	--	--	2.05E-01	--	--	--	8.45E+02

Table 3-11. Total RH Radionuclide Activity (Ci) on a Site Basis Decayed through 2013
Continued

Radionuclide	ANL	BAPL	Hanford	INL	KAPL-S	LANL	MFC	ORNL	SNL	SRS	Grand Total
Co-60	6.49E+01	1.06E+00	1.13E+02	3.63E+03	2.30E+00	3.91E-01	3.23E+02	1.51E+00	2.61E-04	6.78E-11	4.14E+03
Cr-51	1.59E-09	--	--	1.99E-01	--	--	7.85E-11	--	--	--	1.99E-01
Cs-134	2.32E+01	9.09E-02	6.02E+02	4.25E+02	--	--	2.46E+02	5.45E-03	--	1.15E-01	1.30E+03
Cs-135	1.42E-07	--	6.32E-04	1.92E-03	1.90E-05	--	1.63E-03	--	--	--	4.20E-03
Cs-137	2.45E+03	9.35E+01	2.23E+05	2.57E+04	5.35E+01	1.04E+03	3.94E+04	2.12E+03	3.13E+02	2.74E+01	2.94E+05
Dy-159	7.10E-03	--	--	--	--	--	--	--	--	--	7.10E-03
Es-254	--	--	--	--	--	--	--	6.85E-15	--	--	6.85E-15
Eu-149	7.14E-04	--	--	--	--	--	--	--	--	--	7.14E-04
Eu-152	1.45E+00	9.01E+00	2.24E+00	1.70E-01	--	--	9.57E-03	1.50E+01	--	--	2.79E+01
Eu-154	9.30E+02	3.90E+00	7.61E+02	5.45E+00	5.32E-02	1.85E-02	7.63E+00	7.14E+00	1.43E-03	6.14E-01	1.72E+03
Eu-155	6.26E+00	1.00E-01	4.53E+02	6.61E+00	--	3.80E-02	4.74E+01	1.12E-01	--	1.18E-02	5.13E+02
Fe-55	7.14E+01	6.98E-02	3.09E-02	2.59E+00	1.07E+01	--	9.39E+01	--	--	--	1.79E+02
Fe-59	6.12E-07	--	--	7.25E-01	--	--	3.67E-07	--	--	--	7.25E-01
Fr-221	8.93E-03	5.91E-05	3.24E-04	1.44E-03	4.79E-07	3.70E-13	1.69E-08	8.52E-01	1.85E-05	9.23E-06	8.63E-01
Fr-223	5.84E-03	1.13E-13	1.27E-04	1.06E-07	4.96E-11	1.04E-08	1.91E-08	3.39E-02	1.91E-09	4.03E-07	3.99E-02
Gd-152	5.49E-15	3.40E-14	1.73E-14	--	--	--	3.62E-17	1.70E-12	--	--	1.76E-12
Gd-153	6.22E-02	--	2.41E-08	--	--	--	--	--	--	--	6.22E-02
H-3	2.60E+01	2.41E-01	9.16E+02	1.19E+02	8.09E-02	--	2.09E-01	--	3.75E-01	7.01E-02	1.06E+03
Hf-175	6.51E-05	--	--	--	--	--	--	--	--	--	6.51E-05
Hf-181	2.42E-08	--	--	--	--	--	--	--	--	--	2.42E-08
I-125	9.95E-05	--	--	--	--	--	--	--	--	--	9.95E-05
I-129	8.32E-07	3.12E-05	2.42E-03	2.46E-05	1.51E-05	--	9.43E-02	1.63E-06	--	--	9.68E-02
In-113m	4.04E-03	--	--	--	--	--	--	--	--	--	4.04E-03
In-114	1.27E-06	--	--	--	--	--	--	--	--	--	1.27E-06
In-114m	1.33E-06	--	--	--	--	--	--	--	--	--	1.33E-06
In-115	4.52E-17	--	--	--	--	--	--	--	--	--	4.52E-17
In-115m	2.11E-10	--	--	--	--	--	--	--	--	--	2.11E-10
Ir-194	1.74E-02	--	--	--	--	--	--	--	--	--	1.74E-02
K-42	3.99E-02	--	--	--	--	--	--	--	--	--	3.99E-02
Kr-85	1.04E+02	4.22E+00	4.21E+02	1.05E+01	9.92E-01	1.95E+02	2.58E+00	--	--	9.34E-01	7.39E+02
Lu-177m	1.52E-04	--	--	--	--	--	--	--	--	--	1.52E-04
Mn-54	3.37E+00	--	9.53E+00	8.00E+03	--	--	5.69E+01	--	--	--	8.07E+03
Mo-93	--	--	1.25E-04	3.66E-01	--	--	5.68E-02	--	--	--	4.22E-01
Na-22	3.61E-02	--	1.18E-04	--	--	--	--	5.46E-09	--	--	3.63E-02
Nb-91	2.45E-02	--	--	--	--	--	--	--	--	--	2.45E-02
Nb-93m	7.75E-01	3.56E-03	3.59E-04	1.56E-01	1.01E-05	--	1.44E-02	--	--	--	9.49E-01
Nb-94	--	--	8.47E-02	8.01E-02	4.62E-02	--	3.48E-01	--	--	--	5.59E-01
Nb-95	1.14E-02	--	2.36E-06	4.40E-06	--	--	3.45E-06	--	--	--	1.14E-02
Nb-95m	6.08E-05	--	1.26E-08	--	--	--	1.59E-08	--	--	--	6.08E-05
Nd-144	2.95E-14	--	1.74E-14	5.16E-12	--	1.52E-15	7.46E-12	8.25E-16	--	3.66E-16	1.27E-11
Ni-59	1.98E-02	1.62E-01	8.45E-04	5.03E+02	8.91E-02	--	3.42E+02	--	--	2.88E-10	8.46E+02
Ni-63	4.71E+01	1.31E+01	3.01E-02	1.01E+02	1.24E+01	--	5.95E+01	--	--	--	2.33E+02
Np-235	6.70E-01	--	--	--	--	--	--	--	--	--	6.70E-01
Np-237	4.14E-03	2.55E-04	2.80E-01	1.33E-02	8.71E-05	2.05E-05	1.12E-01	3.35E-02	1.05E-01	2.35E+00	2.90E+00
Np-238	3.25E-02	--	5.50E-03	1.14E-06	--	--	1.68E-07	2.68E-05	3.74E-03	1.53E-04	4.19E-02
Np-239	3.38E+00	1.78E-04	4.02E+00	6.89E-04	2.49E-06	--	1.96E-04	1.66E+00	1.05E-01	1.48E+00	1.07E+01
Np-240	1.44E-12	--	2.79E-09	--	9.71E-17	--	--	4.52E-09	--	6.93E-16	7.31E-09
Np-240m	1.20E-09	--	2.32E-06	--	8.09E-14	--	--	3.77E-06	--	5.77E-13	6.09E-06

Table 3-11. Total RH Radionuclide Activity (Ci) on a Site Basis Decayed through 2013
Continued

Radionuclide	ANL	BAPL	Hanford	INL	KAPL-S	LANL	MFC	ORNL	SNL	SRS	Grand Total
Os-185	1.66E-05	--	--	--	--	--	--	--	--	--	1.66E-05
Os-194	1.74E-02	--	--	--	--	--	--	--	--	--	1.74E-02
Pa-231	4.63E-07	2.62E-10	2.04E-05	3.40E-05	3.13E-08	3.14E-06	3.25E-06	7.22E-03	4.44E-06	2.49E-04	7.53E-03
Pa-233	4.14E-03	2.55E-04	2.80E-01	1.02E-02	8.71E-05	2.05E-05	1.12E-01	3.35E-02	1.05E-01	3.29E-04	5.46E-01
Pa-234	1.22E-04	3.85E-11	1.47E-03	1.73E-03	6.04E-11	5.30E-08	1.51E-05	2.31E-05	1.37E-04	9.60E-05	3.59E-03
Pa-234m	9.35E-02	2.96E-08	1.13E+00	1.33E+00	4.65E-08	4.08E-05	1.16E-02	1.78E-02	1.05E-01	7.39E-02	2.77E+00
Pb-209	8.93E-03	5.91E-05	3.24E-04	1.44E-03	4.79E-07	3.70E-13	1.69E-08	8.52E-01	1.85E-05	9.23E-06	8.63E-01
Pb-210	1.48E+00	7.67E-14	1.39E-02	1.45E-03	2.78E-08	2.01E-10	1.48E-10	7.12E+00	3.45E-07	1.16E-09	8.61E+00
Pb-211	4.24E-01	8.19E-12	9.22E-03	7.70E-06	3.60E-09	7.51E-07	1.39E-06	2.46E+00	1.39E-07	2.92E-05	2.90E+00
Pb-212	5.71E+00	1.46E-02	1.91E-03	7.26E-03	4.82E-05	2.87E-15	2.87E-05	1.76E+00	2.39E-13	7.70E-16	7.50E+00
Pb-214	7.05E-02	3.80E-12	7.12E-02	4.81E-02	6.17E-07	1.23E-09	3.95E-09	1.22E+01	3.45E-07	1.50E-08	1.24E+01
Pd-107	4.32E-06	--	8.64E-05	--	7.97E-07	--	4.36E-05	--	--	--	1.35E-04
Pm-145	9.39E-01	--	--	--	--	--	--	--	--	--	9.39E-01
Pm-146	1.03E+00	--	--	--	--	--	1.37E-03	--	--	--	1.03E+00
Pm-147	9.41E+01	7.13E-01	2.95E+01	7.00E+01	9.20E-02	--	2.72E+00	1.16E-02	2.48E-01	2.02E-01	1.98E+02
Pm-148	3.00E-09	--	--	--	--	--	--	--	--	--	3.00E-09
Pm-148m	5.67E-08	--	--	--	--	--	--	--	--	--	5.67E-08
Po-210	1.53E+00	3.87E-14	1.28E-02	7.72E-04	1.95E-08	2.01E-10	1.44E-10	7.12E+00	3.42E-07	1.16E-09	8.66E+00
Po-211	1.17E-03	2.25E-14	2.54E-05	2.12E-08	9.90E-12	2.06E-09	3.81E-09	6.77E-03	3.81E-10	8.03E-08	7.97E-03
Po-212	3.66E+00	9.32E-03	1.22E-03	4.65E-03	3.09E-05	1.84E-15	1.84E-05	1.13E+00	1.53E-13	4.93E-16	4.80E+00
Po-213	8.74E-03	5.79E-05	3.17E-04	1.41E-03	4.69E-07	3.63E-13	1.65E-08	8.34E-01	1.81E-05	9.03E-06	8.45E-01
Po-214	7.05E-02	3.80E-12	7.12E-02	4.81E-02	6.17E-07	1.23E-09	3.95E-09	1.22E+01	3.45E-07	1.50E-08	1.24E+01
Po-215	4.24E-01	8.19E-12	9.22E-03	7.70E-06	3.60E-09	7.51E-07	1.39E-06	2.46E+00	1.39E-07	2.92E-05	2.90E+00
Po-216	5.71E+00	1.46E-02	1.91E-03	7.26E-03	4.82E-05	2.87E-15	2.87E-05	1.76E+00	2.39E-13	7.70E-16	7.50E+00
Po-218	7.05E-02	3.80E-12	7.12E-02	4.81E-02	6.17E-07	1.23E-09	3.95E-09	1.22E+01	3.46E-07	1.50E-08	1.24E+01
Pr-144	1.61E+01	--	1.68E-03	1.22E+03	--	4.63E-07	4.04E+03	3.47E-11	--	6.86E-05	5.28E+03
Pr-144m	2.25E-01	--	2.36E-05	1.71E+01	--	6.48E-09	5.65E+01	4.85E-13	--	9.60E-07	7.39E+01
Pu-236	6.16E-01	--	5.75E-06	2.51E-03	--	--	6.63E-07	--	--	--	6.18E-01
Pu-238	2.75E+02	2.04E+00	1.91E+03	1.29E+03	1.25E+00	1.38E+00	2.50E+01	1.33E+02	1.62E+01	4.34E+03	8.00E+03
Pu-239	1.25E+02	1.62E-03	2.35E+03	5.13E+02	1.31E-02	9.26E+01	8.45E+02	2.63E+01	1.52E+01	1.12E+01	3.97E+03
Pu-240	6.16E+01	--	5.74E+03	2.37E+02	1.30E-02	2.53E+00	3.90E+02	2.41E+01	1.28E+01	6.15E+00	6.47E+03
Pu-241	1.06E+03	3.28E-01	2.09E+04	1.42E+02	2.90E-01	3.87E+01	8.06E+01	8.52E+01	1.13E+02	6.08E+03	2.85E+04
Pu-242	5.71E-02	2.93E-05	6.44E+03	3.99E-03	3.94E-06	1.53E-03	1.14E-02	1.09E-01	1.05E-01	5.21E-01	6.44E+03
Pu-243	1.06E-09	--	1.24E-10	--	7.07E-15	--	--	3.20E-06	--	4.60E-08	3.25E-06
Pu-244	1.20E-09	--	2.33E-06	--	8.10E-14	--	--	3.77E-06	--	5.78E-13	6.10E-06
Ra-223	4.24E-01	8.19E-12	9.22E-03	7.70E-06	3.60E-09	7.51E-07	1.39E-06	2.46E+00	1.39E-07	2.92E-05	2.90E+00
Ra-224	5.71E+00	1.46E-02	1.91E-03	7.26E-03	4.82E-05	2.87E-15	2.87E-05	1.76E+00	2.39E-13	7.70E-16	7.50E+00
Ra-225	8.93E-03	5.91E-05	3.24E-04	1.44E-03	4.79E-07	3.70E-13	1.69E-08	8.52E-01	1.85E-05	9.23E-06	8.63E-01
Ra-226	7.05E-02	3.80E-12	7.12E-02	4.81E-02	6.17E-07	1.23E-09	3.95E-09	1.22E+01	3.46E-07	1.50E-08	1.24E+01
Ra-228	4.41E-02	8.19E-16	2.02E-05	3.34E-05	7.27E-05	3.69E-15	1.44E-13	1.07E-02	1.15E-12	1.37E-15	5.49E-02
Re-188	3.46E-06	--	--	--	--	--	--	--	--	--	3.46E-06
Rh-102	1.19E-01	--	--	--	--	--	--	--	--	--	1.19E-01
Rh-103m	5.30E-06	--	--	--	--	--	--	--	--	--	5.30E-06
Rh-106	2.68E+01	--	3.80E-02	5.80E+01	1.09E-02	8.36E-05	8.87E+00	7.24E-08	--	3.29E-04	9.37E+01
Rn-219	4.24E-01	8.19E-12	9.22E-03	7.70E-06	3.60E-09	7.51E-07	1.39E-06	2.46E+00	1.39E-07	2.92E-05	2.90E+00
Rn-220	5.71E+00	1.46E-02	1.91E-03	7.26E-03	4.82E-05	2.87E-15	2.87E-05	1.76E+00	2.39E-13	7.70E-16	7.50E+00
Rn-222	7.05E-02	3.80E-12	7.12E-02	4.81E-02	6.17E-07	1.23E-09	3.95E-09	1.22E+01	3.46E-07	1.50E-08	1.24E+01
Ru-103	5.31E-06	--	--	--	--	--	--	--	--	--	5.31E-06

Table 3-11. Total RH Radionuclide Activity (Ci) on a Site Basis Decayed through 2013
Continued

Radionuclide	ANL	BAPL	Hanford	INL	KAPL-S	LANL	MFC	ORNL	SNL	SRS	Grand Total
Ru-106	2.68E+01	--	3.80E-02	5.80E+01	1.09E-02	8.36E-05	8.87E+00	7.24E-08	--	3.29E-04	9.37E+01
S-35	8.40E-05	--	--	--	--	--	--	--	--	--	8.40E-05
Sb-124	1.03E-04	--	--	--	--	--	9.49E-02	--	--	--	9.50E-02
Sb-125	6.22E+01	1.39E-02	1.56E+02	6.50E+00	3.88E-04	5.08E-03	2.44E+01	6.50E-04	--	--	2.49E+02
Sb-126	1.04E-05	--	1.16E-01	--	2.22E-06	7.89E-03	3.24E-04	--	--	--	1.24E-01
Sb-126m	7.41E-05	--	8.28E-01	--	1.59E-05	5.64E-02	2.32E-03	--	--	--	8.87E-01
Sc-46	4.83E-04	--	--	--	--	--	--	--	--	--	4.83E-04
Se-75	2.53E-03	--	--	3.91E+00	--	--	--	--	--	--	3.91E+00
Se-79	9.99E-06	--	1.38E-01	--	4.88E-06	--	4.84E-04	--	--	1.07E-02	1.49E-01
Sm-145	1.24E-01	--	--	--	--	--	--	--	--	--	1.24E-01
Sm-146	5.32E-09	--	--	--	--	--	7.11E-12	--	--	--	5.33E-09
Sm-147	1.62E-09	1.23E-11	1.86E-09	4.58E-09	2.73E-12	--	4.68E-11	4.67E-10	4.27E-12	4.90E-11	8.65E-09
Sm-148	1.71E-19	3.03E-30	3.11E-30	--	--	--	3.22E-33	2.57E-27	--	--	1.71E-19
Sm-151	3.18E+00	2.56E-01	3.40E+01	5.98E+00	5.42E-02	2.01E-02	3.23E+00	--	8.96E+00	3.00E-01	5.60E+01
Sn-113	4.04E-03	--	--	--	--	--	--	--	--	--	4.04E-03
Sn-119m	3.32E-01	--	1.51E-07	--	--	--	--	--	--	--	3.32E-01
Sn-121	6.59E-01	--	2.99E-04	--	1.09E-04	6.10E-01	2.49E-04	--	--	--	1.27E+00
Sn-121m	8.49E-01	--	3.86E-04	--	1.40E-04	7.86E-01	3.21E-04	--	--	--	1.64E+00
Sn-123	3.86E-02	--	--	--	--	--	--	--	--	--	3.86E-02
Sn-126	7.41E-05	--	8.28E-01	--	1.59E-05	5.64E-02	2.32E-03	--	--	--	8.87E-01
Sr-85	5.07E-05	--	--	--	--	--	--	--	--	--	5.07E-05
Sr-89	1.90E-04	--	--	--	--	--	--	--	--	--	1.90E-04
Sr-90	1.70E+03	9.31E+01	1.41E+05	3.10E+04	4.80E+01	7.12E+02	5.62E+04	1.27E+03	2.34E+02	2.04E+01	2.32E+05
Ta-182	7.50E+00	--	--	8.75E-18	--	--	--	--	--	--	7.50E+00
Tb-157	6.68E-02	--	--	--	--	--	--	--	--	--	6.68E-02
Tb-160	5.18E-05	--	--	--	--	--	--	--	--	--	5.18E-05
Tc-97m	8.57E-04	--	--	--	--	--	--	--	--	--	8.57E-04
Tc-99	1.05E-02	2.10E-02	7.20E+00	3.63E-02	1.43E-02	--	4.57E+00	2.07E-02	--	1.12E-03	1.19E+01
Te-121	1.34E-02	--	--	--	--	--	--	--	--	--	1.34E-02
Te-121m	1.35E-02	--	--	--	--	--	--	--	--	--	1.35E-02
Te-123	1.14E-14	--	--	--	--	--	--	--	--	--	1.14E-14
Te-123m	6.37E-03	--	--	--	--	--	--	--	--	--	6.37E-03
Te-125m	1.52E+01	3.39E-03	3.82E+01	1.59E+00	9.48E-05	1.24E-03	5.95E+00	1.59E-04	--	6.18E-19	6.09E+01
Te-127	4.19E-02	--	--	--	--	--	--	--	--	--	4.19E-02
Te-127m	4.27E-02	--	--	--	--	--	--	--	--	--	4.27E-02
Te-129	2.10E-08	--	--	--	--	--	--	--	--	--	2.10E-08
Te-129m	3.27E-08	--	--	--	--	--	--	--	--	--	3.27E-08
Th-227	4.19E-01	8.07E-12	9.09E-03	7.60E-06	3.55E-09	7.40E-07	1.37E-06	2.43E+00	1.37E-07	2.88E-05	2.86E+00
Th-228	5.69E+00	1.45E-02	1.90E-03	7.26E-03	4.81E-05	2.87E-15	2.85E-05	1.76E+00	2.39E-13	7.70E-16	7.47E+00
Th-229	8.93E-03	5.91E-05	3.24E-04	1.44E-03	4.79E-07	3.70E-13	1.69E-08	8.52E-01	1.85E-05	9.23E-06	8.63E-01
Th-230	3.16E-05	8.81E-09	9.10E-05	2.41E-04	4.75E-04	3.20E-07	5.12E-06	1.39E-03	1.93E-06	8.93E-06	2.24E-03
Th-231	1.09E-02	6.18E-06	5.24E-02	1.01E-01	4.25E-04	8.26E-03	7.17E-02	2.12E-03	1.05E-01	1.47E+00	1.82E+00
Th-232	3.51E-10	7.35E-15	6.93E-05	1.80E-04	2.39E-04	6.37E-15	7.70E-13	1.42E-02	1.04E-11	3.86E-15	1.47E-02
Th-234	9.35E-02	2.96E-08	1.13E+00	1.33E+00	4.65E-08	4.08E-05	1.16E-02	1.78E-02	1.05E-01	7.39E-02	2.77E+00
Tl-207	4.23E-01	8.16E-12	9.19E-03	7.68E-06	3.59E-09	7.49E-07	1.38E-06	2.46E+00	1.38E-07	2.91E-05	2.89E+00
Tl-208	2.05E+00	5.23E-03	6.87E-04	2.61E-03	1.73E-05	1.03E-15	1.03E-05	6.33E-01	8.59E-14	2.77E-16	2.69E+00
Tl-209	1.87E-04	1.24E-06	6.80E-06	3.03E-05	1.01E-08	7.78E-15	3.55E-10	1.79E-02	3.88E-07	1.94E-07	1.81E-02
Tm-170	1.27E-03	--	--	--	--	--	--	--	--	--	1.27E-03

Table 3-11. Total RH Radionuclide Activity (Ci) on a Site Basis Decayed through 2013
Continued

Radionuclide	ANL	BAPL	Hanford	INL	KAPL-S	LANL	MFC	ORNL	SNL	SRS	Grand Total
Tm-171	3.92E-01	--	--	--	--	--	--	--	--	--	3.92E-01
U-232	2.58E+00	1.43E-02	1.22E-03	7.22E-03	1.60E-06	--	3.16E-07	1.72E+00	--	--	4.33E+00
U-233	2.37E-04	1.61E-02	6.40E-01	2.78E+00	1.82E-03	7.37E-10	4.89E-05	1.82E+01	1.05E-01	1.31E-02	2.17E+01
U-234	6.12E-02	4.85E-04	1.60E+00	2.23E+00	2.40E-03	1.97E-03	1.70E-01	1.19E-01	1.05E-01	1.56E-01	4.44E+00
U-235	1.09E-02	6.18E-06	5.24E-02	1.03E-01	4.25E-04	8.26E-03	7.17E-02	2.12E-03	1.05E-01	1.47E+00	1.83E+00
U-236	8.06E-06	7.45E-05	1.74E-01	1.65E-04	5.30E-04	7.84E-06	4.69E-03	1.21E-03	1.05E-01	2.61E-05	2.86E-01
U-237	2.53E-02	7.84E-06	4.99E-01	2.53E-03	6.94E-06	9.27E-04	1.93E-03	2.04E-03	2.70E-03	2.72E-03	5.37E-01
U-238	9.35E-02	2.96E-08	1.13E+00	1.33E+00	4.65E-08	4.08E-05	1.16E-02	1.78E-02	1.05E-01	7.39E-02	2.77E+00
U-240	1.20E-09	--	2.32E-06	--	8.09E-14	--	--	3.77E-06	--	5.77E-13	6.09E-06
V-49	1.53E+00	--	--	--	--	--	--	--	--	--	1.53E+00
W-181	3.04E-04	--	--	--	--	--	--	--	--	--	3.04E-04
W-185	2.86E-05	--	--	--	--	--	--	--	--	--	2.86E-05
W-188	3.42E-06	--	--	--	--	--	--	--	--	--	3.42E-06
Xe-127	3.16E-08	--	--	--	--	--	--	--	--	--	3.16E-08
Y-90	1.70E+03	9.31E+01	1.41E+05	3.10E+04	4.80E+01	7.13E+02	5.62E+04	1.27E+03	2.34E+02	2.04E+01	2.32E+05
Y-91	1.54E-03	--	--	--	--	--	--	--	--	--	1.54E-03
Zn-65	1.76E-02	--	1.07E-03	--	--	--	--	7.37E-16	--	--	1.87E-02
Zr-93	8.17E-05	4.90E-03	6.75E-04	--	1.22E-04	--	2.03E-03	--	--	--	7.81E-03
Zr-95	5.17E-03	--	1.07E-06	6.84E+01	--	--	1.35E-06	--	--	--	6.84E+01
Grand Total	1.17E+04	4.04E+02	7.62E+05	1.32E+05	2.29E+02	3.78E+03	2.00E+05	7.81E+03	1.29E+03	1.08E+04	1.13E+06

Data Source: CID Data Version D.13.01 (LANL-CO 2014a). Note: This table contains data for WIPP-bound waste streams only; it does not include data for Emplaced or Potential waste streams.

Table 3-12. Total Activity by Site Decayed through 2013

TRU Waste Site	CH Activity (Ci)	RH Activity (Ci)	Total Activity (Ci)
Argonne National Laboratory	1.14E+03	1.17E+04	1.28E+04
Bettis Atomic Power Laboratory	--	4.04E+02	4.04E+02
Hanford (Richland) Site	6.09E+05	7.62E+05	1.37E+06
Idaho National Laboratory	8.84E+04	1.32E+05	2.20E+05
Knolls Atomic Power Laboratory - Nuclear Fuel Services	1.36E+04	--	1.36E+04
Knolls Atomic Power Laboratory - Schenectady	--	2.29E+02	2.29E+02
Lawrence Berkeley National Laboratory	1.51E-02	--	1.51E-02
Lawrence Livermore National Laboratory	1.06E+04	--	1.06E+04
Los Alamos National Laboratory	9.98E+05	3.78E+03	1.00E+06
Material and Fuels Complex	1.34E+02	2.00E+05	2.00E+05
Nevada National Security Site	4.34E+02	--	4.34E+02
Nuclear Radiation Development Site	3.48E+01	--	3.48E+01
Oak Ridge National Laboratory	2.50E+04	7.81E+03	3.28E+04
Sandia National Laboratories	1.68E+01	1.29E+03	1.31E+03
Savannah River Site	1.47E+06	1.08E+04	1.48E+06
Grand Total	3.21E+06	1.13E+06	4.34E+06

Data Source: CID Data Version D.13.01 (LANL-CO 2014a). Note: This table contains data for WIPP-bound waste streams only; it does not include data for Emplaced or Potential waste streams.

3.3.2 Radionuclide Changes

Radionuclide activity data improve as additional waste is characterized and emplaced at WIPP. Characterization data used by the sites for this report may not have been available at the time that inventory information was collected for the ATWIR-2013. Table 3-13 presents the changes in the total activity between the ATWIR-2013 and this report. For the purpose of this discussion of changes, the activities reported in this table were 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 as reported by the sites and taken from the WDS.

Table 3-13. CH/RH Activity Changes Decayed through 2033

Site	ATWIR-2013 Total Inventory (Ci)	ATWIR-2014 Total Inventory (Ci)	Total Net Change (Ci)
Hanford (Richland) Site	8.53E+05	8.10E+05	-4.39E+04
Idaho National Laboratory	1.35E+05	1.45E+05	1.01E+04

Table 3-13. CH/RH Activity Changes Decayed through 2033
Continued

Site	ATWIR-2013 Total Inventory (Ci)	ATWIR-2014 Total Inventory (Ci)	Total Net Change (Ci)
Los Alamos National Laboratory	2.27E+05	5.04E+05	2.76E+05
Oak Ridge National Laboratory	4.19E+04	1.89E+04	-2.29E+04
Savannah River Site	1.88E+05	1.35E+06	1.17E+06
Small Quantity Sites	8.77E+04	1.45E+05	5.77E+04
Anticipated Total	1.53E+06	2.98E+06	1.44E+06
WIPP (Emplaced)	1.55E+06	1.70E+06	1.54E+05
Grand Total	3.08E+06	4.68E+06	1.60E+06

Data Source: CID Data Versions D.12.02 (LANL-CO 2013a) and D.13.01 (LANL-CO 2014a).

As shown in Table 3-13, the total CH- and RH-TRU waste activity reported by the sites has increased approximately 1.44 million Ci. This increase, when combined with the emplacement of about 154,000 Ci at WIPP during CY13, leaves a total increase of around 1.60 million Ci. This sizeable increase can be largely attributed to the conversion of the SR-T001-WSB-1 waste stream at SRS into the WIPP-bound inventory (it was previously categorized as Potential, and not included in the rollup). This waste stream alone accounts for roughly 1.17 million Ci. Another large contributor, with an approximate increase of 260,000 Ci, is LANL's waste stream LA-MHD01.001 for which, in prior years, activity had not been properly estimated for the containers that did not have activity data.

4.0 POTENTIAL TRU WASTE

A waste stream can be designated either WIPP-bound or Potential. All TRU waste must meet all WIPP requirements (e.g., WIPP WAC, WIPP Hazardous Waste Facility Permit WAP) before it can be disposed of at WIPP.

Approximately 10% of the final form TRU waste volume reported by the TRU waste generator 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, such as the lack of characterization data. Section 4.1 identifies the reasons waste streams are designated as Potential waste streams.

4.1 Categories of Potential TRU Waste

DOE has listed the criteria (Patterson 2010) for categorizing waste streams as Potential. Below are the categories for which TRU waste generator sites would consider a waste stream to be 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 stated in the WIPP LWA (U.S. Congress 1992 and 1996). 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 activities, WMP mass, 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 requirements, as noted above, are met and the waste meets all WIPP requirements (e.g., WIPP WAC, WIPP Hazardous Waste Facility Permit WAP). Table 4-1 identifies the current Potential CH- and RH-TRU waste streams. Table 4-2 identifies waste streams that were moved from Potential to WIPP-bound during this reporting period.

Table 4-1. Potential WIPP CH/RH-TRU Waste Streams

Waste Stream ID ¹	Handling	Final Form Anticipated Volume (m ³)	Categories of Potential WIPP CH/RH-TRU Waste
AW-IN-TRA-BE-01	RH	2.58E+01	Regulatory Restrictions
BL-Parks	CH	9.62E+00	Incomplete Data
BL-Parks-A	RH	6.24E-01	Incomplete Data
IN-JH826CH	CH	8.32E-01	Incomplete Data
IN-SBW-01A	RH	5.99E+02	TRU Waste Determination

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

Waste Stream ID¹	Handling	Final Form Anticipated Volume (m³)	Categories of Potential WIPP CH/RH-TRU Waste
IN-SBW-01B	RH	8.90E+01	TRU Waste Determination
IN-W139	CH	8.32E-01	Incomplete Data
IN-W269	CH	1.23E+01	Incomplete Data
LA-TA-00-04	CH	2.08E-01	Regulatory Restrictions
RL300-11	RH	7.49E+00	Regulatory Restrictions
RLCH2-08	RH	2.50E+00	TRU Waste Determination
RLPFP-02	CH	3.78E+01	Incomplete Data
RLPRC-01	CH	1.89E+00	Defense Determination
RLPURX-02	CH	3.72E+02	Incomplete Data
RP-TFC001	CH	4.39E+02	Directed by DOE to Move to Potential
RP-W754	CH	3.23E+02	Directed by DOE to Move to Potential
RP-W755	CH	7.94E+02	Directed by DOE to Move to Potential
SR-W027-773A-HET-CLAS	CH	3.78E+00	Incomplete Data
WV-M010a	CH	9.45E+00	Directed by DOE to Move to Potential
WV-T004	CH	4.16E-01	Directed by DOE to Move to Potential
WV-T006a	CH	2.01E+02	Directed by DOE to Move to Potential
WV-T006b	RH	2.90E+02	Directed by DOE to Move to Potential
WV-T017b	RH	7.49E+00	Directed by DOE to Move to Potential
WV-W024a	CH	8.37E+00	Directed by DOE to Move to Potential
WV-W024b	RH	4.49E+01	Directed by DOE to Move to Potential
WV-W050a	CH	6.03E+00	Directed by DOE to Move to Potential
WV-Z001	CH	4.30E+03	Directed by DOE to Move to Potential
Grand Total		7.59E+03	

¹See Figure 1-1 for site designators for sites with TRU waste. Sites with Potential TRU Waste Only are: West Valley Demonstration Project (WV), Hanford Office of River Protection (RP), and Babcock and Wilcox Nuclear Energy Services (BL). Data Source: CID Data Version D.13.01 (LANL-CO 2014a).

Table 4-2. Potential to WIPP-Bound Waste Streams

Waste Stream ID¹	Reason
IN-W338	Moved to waste stream IN-BN510.3 for characterization
IN-W339	Moved to waste stream IN-BN510.3 for characterization
IN-W350	Moved to waste stream IN-BN510.3 for characterization
SA-W135-A	Moved to waste stream SA-W135 per AK Summary Report, CCP-AK-SNL-500, Rev. 5
SR-T001-WSB-1	New Waste Material Parameter data were provided

¹See Figure 1-1 for site designators; Data Source: CID Data Version D.13.01 (LANL-CO 2014a).

5.0 SUMMARY

WIPP has been receiving TRU waste since March 26, 1999. As of December 31, 2013, WIPP had received 11,807 shipments of TRU waste (11,090 CH shipments and 717 RH shipments) (DOE 2014a). During this reporting period (January through December 2013), about 5,130 m³ of CH-TRU waste, 46 m³ of RH-TRU waste (Van Soest 2014), 3.66 million kg of waste and packaging materials, and 154,000 Ci of activity have been emplaced at WIPP.

This report is an update to the ATWIR-2013. Like the ATWIR-2013, this report focuses on changes resulting from characterization, improved estimations, and continued waste generation. It also identifies the waste streams that have been moved from Potential waste streams to WIPP-bound waste streams. The cutoff date for this report was December 31, 2013. This report provides current TRU waste inventory information for CBFO, the DOE complex, WIPP stakeholders, and regulators.

As shown from the tables presented in section 3.0 of this report, the generator sites' estimates are becoming more representative of their waste since they are using known characterization data to help estimate their stored and projected waste.

The increases this year in waste material parameters and radionuclide activity are mainly a result of a waste stream that was moved from Potential to WIPP-bound.

This report's appendices include WIPP-bound and Potential TRU waste profile reports, a historic crosswalk of TRU waste streams, and the CBFO screening memorandum (Patterson 2010). These can be found in Appendices A, B, C, and D, respectively.

6.0 GLOSSARY

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 (U.S. EPA 1996).

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

Assay Year – The most recent year in which the containers in a waste stream were assayed. For waste streams reporting only projected waste, the initial projected generation year is used. This “base” year for the waste stream is used for the purpose of decay calculations to normalize the radionuclide inventory across the complex to a common year for reporting.

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.

Depleted Waste Stream – An existing waste stream from which all containers have been dispositioned. Waste containers from other waste streams that fit the waste stream description may be added back into a depleted waste stream and, therefore, the waste stream becomes an active waste stream.

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.

Emplaced Inventory – Waste that is en route, in above ground storage, or disposed in the underground at WIPP as of the inventory date (December 31, 2013) 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.

Packaging Material – A non-radiological material (such as steel, plastic, cellulose, rubber and lead) used as components of the WIPP-approved containers which hold TRU waste.

Pending Defense Determination – A Defense Determination that has been initiated but not yet issued.

Performance Assessment – PA 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 PA 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 generator 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 that has not yet been packaged.

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.

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

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 Generator Sites – The five major active DOE facilities and several smaller sites throughout the U.S. that generate and store TRU waste. These may be called sites or TRU waste sites.

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 – The project authorized under Section 213 of the DOE National Security and Military Applications of Nuclear Energy Authorization Act of 1980 (U.S. Congress 1979) to demonstrate the safe and environmentally-sound disposal of radioactive waste materials generated by atomic energy defense activities.

Waste Material Parameter – A non-radiological material that is found in TRU waste. As an example, CPR materials 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 or Potential. The waste profile is presented in tabular format and is intended to provide a summary of the important information about a particular waste stream.

Waste Volume – Final form stored and projected site waste stream volumes were derived by applying standardized final form container type volumes, which are maintained within the CID.

WIPP-bound Inventory – 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.

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APPENDIX A WIPP-BOUND TRU WASTE PROFILE REPORTS

The following waste profile reports contain information on waste streams that are placed in the WIPP-bound category as of the inventory date, December 31, 2013.

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

AE	Argonne National Laboratory
AW	Material and Fuels Complex
BT	Bettis Atomic Power Laboratory
IN	Idaho National Laboratory
KA	Knolls Atomic Power Laboratory - Schenectady
KN	Knolls Atomic Power Laboratory - Nuclear Fuel Services
LA	Los Alamos National Laboratory
LB	Lawrence Berkeley National Laboratory
LL	Lawrence Livermore National Laboratory
ND	Nuclear Radiation Development Site
NT	Nevada National Security Site
OR	Oak Ridge National Laboratory
RL	Hanford (Richland) Site
SA	Sandia National Laboratories
SR	Savannah River Site

Waste Stream ID: **AE-T001**

Appendix A
Waste Profile Report

Site	Argonne National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	R&D/R&D Laboratory Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2013	
Stream Name	ANL-E Contact-Handled Mixed Heterogeneous Debris			Activity Concentrations Decayed to CY		2013	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
30-gal Drum	2.1	0.0	2.1
55-gal Drum Dir Ld w/ Liner	0.0	127.9	127.9
55-gal Drum Dir Ld w/o Liner	13.7	0.0	13.7
85-gal Drum	3.5	0.0	3.5
Box - Misc	2.9	0.0	2.9
Current Form Total	22.3	127.9	150.3

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	33.7	127.9	161.6
Final Form Total	33.7	127.9	161.6

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	32.19
Aluminum-based Metal/Alloys	3.63
Other Metal/Alloys	9.74
Other Inorganic Materials	2.00
Cellulose	2.50
Rubber	3.06
Plastic	26.51
Cement	0.00
Solidified Inorganic Material	0.69
Solidified Organic Material	0.18
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	3.54E-02
Am-243	7.06E-02
Cm-244	6.27E+00
Cs-137	1.04E-02
Np-237	2.70E-04
Pu-238	7.65E-03
Pu-239	6.38E-02
Pu-240	9.25E-02
Pu-241	1.46E-01
Pu-242	2.43E-05
Pu-244	6.56E-09
Sr-90	9.35E-03
Th-229	5.85E-07
Th-230	1.98E-06
Th-232	4.66E-08
U-233	2.09E-06
U-234	3.60E-05
U-235	8.43E-07
U-236	7.07E-08
U-238	1.61E-05

Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D019, D027, D028, D029, D030, D037, F002, F004, F005

TRUCON Code(s)

116/216, 125/225

Waste Stream Description

The debris waste consists primarily of organic and inorganic laboratory debris. Organic debris materials includes paper, cardboard, cloth, plastic, and rubber. Inorganic debris materials include aluminum items, glass, tools, lead (e.g., scrap, shielding), metal cans, scrap metal, and laboratory equipment.

Waste Stream ID: **AE-T003**

Appendix A
Waste Profile Report

Site	Argonne National Laboratory	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	R&D/R&D Laboratory Waste	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2013	
Stream Name	ANL-E Contact-Handled Solidified Organic and Inorganic Homogenous Solids				Activity Concentrations Decayed to CY	2013	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
30-gal Drum	0.5	0.0	0.5
55-gal Drum Dir Ld w/ Liner	0.0	6.4	6.4
55-gal Drum Dir Ld w/o Liner	2.1	0.0	2.1
85-gal Drum	0.3	0.0	0.3
Box - Misc	0.5	0.0	0.5
Current Form Total	3.3	6.4	9.8

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	6.9	6.4	13.3
Final Form Total	6.9	6.4	13.3

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	0.00
Aluminum-based Metal/Alloys	25.62
Other Metal/Alloys	0.00
Other Inorganic Materials	65.30
Cellulose	0.00
Rubber	0.00
Plastic	0.00
Cement	0.00
Solidified Inorganic Material	190.91
Solidified Organic Material	7.69
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	9.94E-02
Am-243	4.97E-03
Cm-244	8.74E-04
Cs-137	4.34E-02
Np-237	2.35E-04
Pu-238	4.53E-01
Pu-239	1.46E-01
Pu-240	1.91E-01
Pu-241	1.80E+00
Pu-242	2.37E-03
Pu-244	2.04E-08
Sr-90	3.08E-02
Th-229	1.53E-09
Th-230	3.99E-07
Th-232	1.52E-07
U-233	7.74E-06
U-234	1.66E-05
U-235	6.44E-07
U-236	3.89E-07
U-238	1.88E-05

Haz. Waste No(s).

D004, D005, D006,
D007, D008, D009,
D010, D011, D019,
D027, D028, D029,
D030, D037, F002,
F004, F005

TRUCON Code(s)

111/211, 113/213,
129/229

Waste Stream Description

Waste stream consists of mixed homogeneous solids generated during the neutralization and solidification of aqueous and inorganic liquids originating from Argonne laboratory and maintenance operations.

Waste Stream ID: **AE-T009**

Appendix A
Waste Profile Report

Site	Argonne National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	RH
Source Cat.	R&D/R&D Laboratory Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2013	
Stream Name	RH TRU				Activity Concentrations Decayed to CY	2013	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
110-gal Drum	0.8	0.0	0.8
30-gal Drum	4.3	19.2	23.5
55-gal Drum Dir Ld w/o Liner	7.5	38.5	46.0
85-gal Drum	1.0	0.0	1.0
Miscellaneous	0.6	0.0	0.6
Current Form Total	14.1	57.7	71.8

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 30-gal w/o Liner	2.4	19.3	21.7
RH Can w/ Remov Lid w/ 3 - 55-gal w/o Liner	23.7	38.7	62.4
Final Form Total	26.1	58.0	84.1

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	53.72
Aluminum-based Metal/Alloys	16.22
Other Metal/Alloys	69.41
Other Inorganic Materials	9.42
Cellulose	0.78
Rubber	7.85
Plastic	18.40
Cement	0.00
Solidified Inorganic Material	9.07
Solidified Organic Material	11.51
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	10.59
Packaging Material, Rubber	0.69
Packaging Material, Steel	1107.92
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	3.26E+00
Am-243	4.02E-02
Cm-244	7.60E-01
Cs-137	2.91E+01
Np-237	4.93E-05
Pu-238	3.27E+00
Pu-239	1.48E+00
Pu-240	7.32E-01
Pu-241	1.26E+01
Pu-242	6.79E-04
Pu-244	1.43E-11
Sr-90	2.03E+01
Th-229	1.06E-04
Th-230	3.76E-07
Th-232	4.18E-12
U-233	2.82E-06
U-234	7.28E-04
U-235	1.30E-04
U-236	9.59E-08
U-238	1.11E-03

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

Waste stream consists of RH TRU debris generated by destructive and nondestructive examination of radiological materials such as fuel pins, reactor structural materials, and targets in waste cans. This waste stream consists predominantly of organic and inorganic debris generated during the destructive and nondestructive examinations. Wastes are visually inspected at packaging to ensure that the waste is compliant per the ANL Acceptable Knowledge document.

Waste Stream ID: **AW-5410N**

Appendix A
Waste Profile Report

Site	Material and Fuels Complex	Summary Category	S5000	Defense Determination	Pending Determination	Handling	RH
Source Cat.	R&D/R&D Laboratory Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2013	
Stream Name	RH TRU ATR Complex Legacy from Hot-Cell Cleanup				Activity Concentrations Decayed to CY	2013	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
Box - Steel w/ lead-lined 55-gal drum	2.7	0.0	2.7
Current Form Total	2.7	0.0	2.7

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/o Liner	0.6	0.0	0.6
Final Form Total	0.6	0.0	0.6

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	9.16
Aluminum-based Metal/Alloys	3.05
Other Metal/Alloys	0.00
Other Inorganic Materials	1.53
Cellulose	1.53
Rubber	0.00
Plastic	1.53
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	8.70
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	7.13E-02
Am-243	3.14E-04
Cm-244	2.75E-06
Cs-137	4.22E-01
Np-237	7.93E-06
Pu-238	3.48E-02
Pu-239	9.63E-03
Pu-240	1.45E-02
Pu-241	4.90E-01
Pu-242	3.93E-05
Sr-90	8.90E-01
Th-229	2.35E-14
Th-230	1.06E-10
Th-232	1.69E-19
U-233	1.34E-10
U-234	3.08E-06
U-235	4.97E-07
U-236	1.72E-09
U-238	9.86E-06

No Hazardous Waste Numbers Provided

TRUCON Code(s)
325

Waste Stream Description

Lab debris: fuel examination waste rod pieces (Severe Fuel Damage tests), met mounts, small plastic and metal containers, Tygon tubing, etc.

Waste Stream ID: **AW-5649N**

Appendix A
Waste Profile Report

Site	Material and Fuels Complex	Summary Category	S3000	Defense Determination	Pending Determination	Handling	CH
Source Cat.	R&D/R&D Laboratory Waste	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2013	
Stream Name	CH TRU ATR Complex				Activity Concentrations Decayed to CY	2013	

Waste Volume Detail (m³)

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

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

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	0.00
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	13.53
Other Inorganic Materials	30.41
Cellulose	0.00
Rubber	0.00
Plastic	0.00
Cement	0.00
Solidified Inorganic Material	23.67
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	1.95E-03
Np-237	2.74E-09
Pu-238	3.37E-05
Pu-239	1.48E-02
Pu-240	2.88E-03
Pu-241	6.15E-02
Th-229	3.93E-18
Th-230	1.12E-14
Th-232	5.26E-20
U-233	2.76E-14
U-234	4.85E-10
U-235	7.27E-11
U-236	4.27E-10

No Hazardous Waste Numbers Provided

TRUCON Code(s)
113/213

Waste Stream Description

This waste stream consists of solidified actinide solutions using Aquaset-II.

Waste Stream ID: **AW-5882N**

Appendix A
Waste Profile Report

Site	Material and Fuels Complex	Summary Category	S5000	Defense Determination	Pending Determination	Handling	RH
Source Cat.	R&D/R&D Laboratory Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2013	
Stream Name	RH TRU INL ATR Complex ARMF Capsules			Activity Concentrations Decayed to CY		2013	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum	0.2	0.0	0.2
Current Form Total	0.2	0.0	0.2

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/o Liner	0.6	0.0	0.6
Final Form Total	0.6	0.0	0.6

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	0.00
Aluminum-based Metal/Alloys	1.38
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	0.00
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	8.70
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	2.00E-01
Cs-137	3.38E-01
Np-237	5.87E-07
Sr-90	3.33E-01
Th-229	3.01E-15
Th-230	1.85E-13
U-233	1.14E-11
U-234	4.47E-09
U-235	2.29E-04
U-238	1.78E-04

No Hazardous Waste Numbers Provided

TRUCON Code(s)
325

Waste Stream Description

ARMF/CRMF encapsulated irradiated fuel examination waste and ATR hot-cell debris.

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

Appendix A
Waste Profile Report

Site	Material and Fuels Complex	Summary Category	S5000	Defense Determination	Pending Determination	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2013		
Stream Name	MFC CH-MTRU Due to RCRA Metals			Activity Concentrations Decayed to CY	2013		

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	0.6	4.2	4.8
Current Form Total	0.6	4.2	4.8

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	0.6	4.2	4.8
Final Form Total	0.6	4.2	4.8

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	0.00
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	59.90
Other Inorganic Materials	0.00
Cellulose	14.97
Rubber	0.00
Plastic	0.00
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	17.45
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	6.06E+00
Np-237	2.97E-04
Pu-238	7.07E-03
Pu-239	4.23E-01
Pu-240	4.60E-02
Pu-241	1.12E+00
Pu-242	3.30E-06
Th-229	2.26E-13
Th-230	3.71E-13
Th-232	1.34E-19
U-233	2.57E-09
U-234	4.02E-08
U-235	2.65E-06
U-236	2.72E-09
U-238	1.02E-15

Haz. Waste No(s).

D006, D007, D008

TRUCON Code(s)

125/225

Waste Stream Description

This waste stream is debris generated in the Casting Lab, Analytical Laboratory and Fuel Manufacturing Facility glove boxes. It consists of various combinations of miscellaneous discarded equipment and process material items (e.g., lead-lined gloves, metals, cellulose, plastics, water (dried) and/or air filters, crucibles, tools, etc.) contaminated with transuranic actinides, activation and fission products, and RCRA-metals. All or some of the various potential waste material parameters may be present in the containers generated.

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

Appendix A
Waste Profile Report

Site	Material and Fuels Complex	Summary Category	S5000	Defense Determination	Pending Determination	Handling	RH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2013	
Stream Name	RH TRU Hot Cell Waste			Activity Concentrations Decayed to CY		2013	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
30-gal Drum	0.9	0.0	0.9
55-gal Drum Dir Ld w/o Liner	2.1	16.6	18.7
Canister - (MFC) o/p 45-gal Drums	2.0	41.6	43.6
Canister - (SL-type)	0.9	0.0	0.9
Liner - RSWF	0.5	0.0	0.5
Current Form Total	6.4	58.2	64.6

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/o Liner	8.7	56.2	64.9
Final Form Total	8.7	56.2	64.9

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	26.23
Aluminum-based Metal/Alloys	30.44
Other Metal/Alloys	41.47
Other Inorganic Materials	9.10
Cellulose	9.30
Rubber	0.01
Plastic	22.68
Cement	0.15
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	8.70
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	1.58E+00
Am-243	1.67E-10
Cm-244	4.86E-08
Cs-137	5.05E+02
Np-237	1.58E-03
Pu-238	3.44E-02
Pu-239	1.25E+01
Pu-240	5.94E+00
Pu-241	3.45E-01
Pu-242	1.53E-04
Sr-90	7.92E+02
Th-229	1.79E-12
Th-230	1.72E-08
Th-232	2.36E-15
U-233	1.71E-08
U-234	9.37E-04
U-235	1.03E-03
U-236	2.40E-05
U-238	1.13E-04

No Hazardous Waste Numbers Provided

TRUCON Code(s)
325

Waste Stream Description

This waste stream is remote-handled (RH) radioactive transuranic miscellaneous debris waste generated in the hot-cells of the Fuel Conditioning Facility (FCF), Hot Fuel Examination Facility (HFEF), and Analytical Lab (AL). These process materials are: AL sampling process waste, metals, cellulose, plastics, rubber, glass labware, solidified samples, filters, discarded equipment and tools, etc. It may also contain small pieces and fines of post-irradiation fuel examination waste (FEW) and subassembly hardware.

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

Appendix A
Waste Profile Report

Site	Material and Fuels Complex	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Analytical Laboratory Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2013		
Stream Name	MFC CH-TRU Waste				Activity Concentrations Decayed to CY	2013	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	1.5	25.0	26.4
Current Form Total	1.5	25.0	26.4

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	1.5	25.0	26.4
Final Form Total	1.5	25.0	26.4

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	0.00
Aluminum-based Metal/Alloys	7.45
Other Metal/Alloys	41.84
Other Inorganic Materials	2.40
Cellulose	0.00
Rubber	0.00
Plastic	29.70
Cement	0.00
Solidified Inorganic Material	3.84
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	3.43E+00
Np-237	4.04E-03
Pu-238	3.91E-03
Pu-239	1.33E-01
Pu-240	7.69E-03
Pu-241	1.01E-01
Pu-242	2.79E-06
Th-229	1.21E-11
Th-230	8.31E-13
Th-232	8.98E-20
U-233	6.85E-08
U-234	4.50E-08
U-235	2.89E-06
U-236	9.11E-10
U-238	9.82E-06

No Hazardous Waste Numbers Provided

TRUCON Code(s)
125/225

Waste Stream Description

Miscellaneous process material debris waste. The specific Waste Material Parameters for currently stored containers will be reflected on the WMP tab.

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

Appendix A
Waste Profile Report

Site	Material and Fuels Complex	Summary Category	S5000	Defense Determination	Pending Determination	Handling	RH
Source Cat.	R&D/R&D Laboratory Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2013	
Stream Name	RH MTRU Hot Cell Waste			Activity Concentrations Decayed to CY		2013	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
30-gal Drum	0.1	0.0	0.1
55-gal Drum Dir Ld w/o Liner	0.2	0.0	0.2
Canister - (MFC) o/p 45-gal Drums	0.7	26.4	27.1
Liner - RSWF	0.1	0.0	0.1
Current Form Total	1.1	26.4	27.5

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/o Liner	1.9	25.0	26.8
Final Form Total	1.9	25.0	26.8

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	3.13
Aluminum-based Metal/Alloys	4.10
Other Metal/Alloys	48.52
Other Inorganic Materials	23.65
Cellulose	13.71
Rubber	0.00
Plastic	8.93
Cement	0.00
Solidified Inorganic Material	3.68
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	8.70
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	4.23E-01
Cs-137	2.47E+02
Np-237	3.49E-04
Pu-238	8.49E-01
Pu-239	1.31E+00
Pu-240	1.56E-01
Pu-241	2.16E+00
Pu-242	5.20E-05
Sr-90	1.80E+02
Th-229	6.25E-10
Th-230	1.49E-07
Th-232	2.30E-14
U-233	1.78E-06
U-234	4.06E-03
U-235	1.70E-04
U-236	1.16E-04
U-238	1.54E-04

Haz. Waste No(s).

D006, D007, D008, D009

TRUCON Code(s)

325

Waste Stream Description

This waste stream consists of miscellaneous FCF, HFEF and AL generated debris.

Waste Stream ID: **BT-T001**

Appendix A
Waste Profile Report

Site	Bettis Atomic Power Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	RH
Source Cat.	R&D/R&D Laboratory Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2013	
Stream Name	Irradiated TRU material waste				Activity Concentrations Decayed to CY	2013	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
Hot Cell	0.0	4.8	4.8
Current Form Total	0.0	4.8	4.8

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/o Liner	0.0	5.0	5.0
Final Form Total	0.0	5.0	5.0

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	0.00
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	268.83
Other Inorganic Materials	0.00
Cellulose	44.87
Rubber	0.00
Plastic	134.42
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	8.70
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	8.69E-03
Am-243	3.57E-05
Cs-137	1.87E+01
Np-237	5.11E-05
Pu-238	4.08E-01
Pu-239	3.25E-04
Pu-241	6.57E-02
Pu-242	5.87E-06
Sr-90	1.86E+01
Th-229	1.18E-05
Th-230	1.76E-09
Th-232	1.47E-15
U-233	3.23E-03
U-234	9.71E-05
U-235	1.24E-06
U-236	1.49E-05
U-238	5.93E-09

No Hazardous Waste Numbers Provided

TRUCON Code(s)
322

Waste Stream Description

Equipment & materials in the shielded cells are from past operations and the cells are in the process of being emptied. Some cells need infrastructure improvements to the manipulators and visibility before the waste can be evaluated, segregated, packaged, and then generated.

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

Appendix A
Waste Profile Report

Site	Idaho National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	RH
Source Cat.	R&D/R&D Laboratory Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2013		
Stream Name	MFC Retrievable ANL-E RH TRU Containers - Stage 2			Activity Concentrations Decayed to CY	2013		

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum	17.7	0.0	17.7
Canister - (ANL-E)	0.7	0.0	0.7
Current Form Total	18.3	0.0	18.3

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/o Liner	86.1	0.0	86.1
Final Form Total	86.1	0.0	86.1

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	47.14
Aluminum-based Metal/Alloys	3.21
Other Metal/Alloys	4.85
Other Inorganic Materials	3.21
Cellulose	5.82
Rubber	1.07
Plastic	8.87
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.14
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	8.70
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Cs-137	1.30E+02
Pu-239	3.91E+00
Pu-240	2.07E+00
Sr-90	1.99E+02
Th-230	2.52E-12
Th-232	6.14E-08
U-234	3.23E-08
U-235	3.83E-04
U-236	1.04E-06
U-238	6.77E-04

Haz. Waste No(s).

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

TRUCON Code(s)

321, 322, 325

Waste Stream Description

The Stage 2 R&D laboratory waste contains combustible and non-combustible scrap, recoverable and non-recoverable fissile material, bonded clad material, irradiated structural material, grinding papers, fuel fines, fuel pin pieces, and fuel impregnated with epoxy, from the destructive examination of irradiated fuel pins in the Alpha-Gamma Hot Cell at ANL-E.

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

Appendix A
Waste Profile Report

Site	Idaho National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	RH
Source Cat.	R&D/R&D Laboratory Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2013	
Stream Name	Noncompliant Waste segregated From Waste stream IN-AE-AGHC-02 during repackaging.				Activity Concentrations Decayed to CY	2013	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum	1.0	0.0	1.0
Current Form Total	1.0	0.0	1.0

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/o Liner	1.2	0.0	1.2
Final Form Total	1.2	0.0	1.2

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	60.24
Aluminum-based Metal/Alloys	4.10
Other Metal/Alloys	6.20
Other Inorganic Materials	4.10
Cellulose	7.44
Rubber	1.37
Plastic	11.33
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.18
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	8.70
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Cs-137	1.56E+02
Pu-239	4.44E+00
Pu-240	2.21E+00
Sr-90	2.39E+02
Th-230	2.42E-12
Th-232	9.20E-08
U-234	3.10E-08
U-235	4.66E-04
U-236	1.11E-06
U-238	6.50E-04

Haz. Waste No(s).

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

TRUCON Code(s)

321, 322, 325

Waste Stream Description

This waste stream consists of five 55 gallon drums . The waste contained in these five drums had experienced either vigorous reaction or spontaneous combustion during waste sorting and repackaging operations. The waste in these drums was generated at ANL-E during destructive examination of the irradiated fuel pins and mostly contains fuel pieces and fines. In response to the spontaneous combustion Met-L-X was added to extinguish the fire and Sodium Carbonate was added to prevent further reactions. The waste will be treated in future for meeting WIPP disposition requirements.

Waste Stream ID: **IN-BN004**

Appendix A
Waste Profile Report

Site	Idaho National Laboratory	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Materials Production/Recovery Effluents	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2013	
Stream Name	Special Setups Waste				Activity Concentrations Decayed to CY	2013	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	216.7	0.0	216.7
Box - Misc	3.2	0.0	3.2
Current Form Total	219.9	0.0	219.9

Final Form Volumes			
Container Type	Stored	Proj.	Total
SWB w/ 4 - 55-gal Drums w/ Liners	521.6	0.0	521.6
Final Form Total	521.6	0.0	521.6

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	0.02
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.03
Other Inorganic Materials	2.35
Cellulose	0.03
Rubber	0.01
Plastic	0.22
Cement	273.11
Solidified Inorganic Material	175.45
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	16.30
Packaging Material, Rubber	0.44
Packaging Material, Steel	211.11
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	5.47E-01
Cm-244	2.28E-03
Cs-137	4.68E-09
Np-237	1.71E-05
Pu-238	3.67E-02
Pu-239	9.73E-01
Pu-240	2.18E-01
Pu-241	1.29E+00
Pu-242	2.08E-05
Sr-90	5.15E-09
U-234	1.17E-05
U-235	1.96E-06
U-238	8.93E-05

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 waste was generated in support of plutonium operations at Rocky Flats from a waste treatment process that solidified process waste.

Waste Stream ID: **IN-BN050**

Appendix A
Waste Profile Report

Site	Idaho National Laboratory	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Source Information Not Compiled	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2013	
Stream Name	Solidified Solutions			Activity Concentrations Decayed to CY		2013	

Waste Volume Detail (m³)

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

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

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	185.10
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	2.75
Cellulose	123.56
Rubber	0.00
Plastic	1.64
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Np-237	3.33E-04
Pu-239	1.20E-01
Th-229	3.65E-11
U-233	3.46E-08
U-235	2.84E-09

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-BN090**

Appendix A
Waste Profile Report

Site	Idaho National Laboratory	Summary Category	54000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Spill Clean-ups/Emergency Response Actions	Waste Matrix Code Group	Contaminated Soil/Debris Waste		Inventory Date	12/31/2013	
Stream Name	Dirt				Activity Concentrations Decayed to CY	2013	

Waste Volume Detail (m³)

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

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

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	0.84
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	6.60
Cellulose	3.43
Rubber	0.00
Plastic	0.36
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.24
Soil	460.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	16.30
Packaging Material, Rubber	0.44
Packaging Material, Steel	211.11
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	1.29E-03
Cs-137	1.39E-08
Np-237	3.08E-08
Pu-238	1.77E-04
Pu-239	1.79E-03
Pu-240	3.80E-04
Pu-241	2.39E-03
Pu-242	4.28E-08
Sr-90	1.52E-08
U-234	1.24E-06
U-235	2.99E-07
U-238	4.38E-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.

Waste Stream ID: **IN-BN203**

Appendix A
Waste Profile Report

Site	Idaho National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Remediation/D&D Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2013		
Stream Name	Paper, Cloth, Metal, Glass				Activity Concentrations Decayed to CY	2013	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	5.4	0.0	5.4
Bin - Misc	21.0	0.0	21.0
Current Form Total	26.4	0.0	26.4

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

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	0.00
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	0.00
Cement	0.00
Solidified Inorganic Material	0.03
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	17.13
Packaging Material, Rubber	0.44
Packaging Material, Steel	231.11
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	2.17E-01
Cs-137	3.48E-08
Np-237	6.21E-06
Pu-238	2.85E-02
Pu-239	4.81E-01
Pu-240	1.16E-01
Pu-241	8.63E-01
Pu-242	1.34E-05
Sr-90	3.81E-08
Th-229	1.05E-14
Th-230	1.09E-09
Th-232	7.65E-19
U-233	7.97E-11
U-234	3.96E-05
U-235	1.23E-05
U-236	1.03E-08
U-238	2.08E-05

Haz. Waste No(s).

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

**No TRUCON
Codes Provided**

Waste Stream Description

This waste stream was generated by D&D activities at the Battelle Columbus Laboratory. It consists of a mixture of combustible and non-combustible items.

Waste Stream ID: **IN-BN204**

Appendix A
Waste Profile Report

Site	Idaho National Laboratory	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Remediation/D&D Waste	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2013	
Stream Name	Solidified Solutions				Activity Concentrations Decayed to CY	2013	

Waste Volume Detail (m³)

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

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

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	0.00
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	196.75
Cellulose	0.00
Rubber	0.00
Plastic	0.00
Cement	0.00
Solidified Inorganic Material	199.14
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	16.30
Packaging Material, Rubber	0.44
Packaging Material, Steel	211.11
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	7.40E-02
Cs-137	7.90E-08
Np-237	6.74E-06
Pu-238	1.35E+00
Pu-239	9.50E-02
Pu-240	2.67E-02
Pu-241	1.79E-01
Pu-242	1.83E-05
Sr-90	8.62E-08
Th-229	3.12E-14
Th-230	6.11E-10
Th-232	4.88E-19
U-233	1.42E-10
U-234	2.29E-05
U-235	1.06E-06
U-236	3.95E-09
U-238	1.42E-14

Haz. Waste No(s).

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

**No TRUCON
Codes Provided**

Waste Stream Description

This waste, generated by Battelle Columbus, consists of solidified liquid wastes from glove box decontamination operations conducted in Building JN-4.

Waste Stream ID: **IN-BN222**

Appendix A
Waste Profile Report

Site	Idaho National Laboratory	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Pollution Control or Waste Treatment Process	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2013	
Stream Name	Solidified Plutonium Recovery Incinerator Waste				Activity Concentrations Decayed to CY	2013	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	59.7	0.0	59.7
Current Form Total	59.7	0.0	59.7

Final Form Volumes			
Container Type	Stored	Proj.	Total
SWB w/ 4 - 55-gal Drums w/o Liners	143.6	0.0	143.6
Final Form Total	143.6	0.0	143.6

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	4.33
Aluminum-based Metal/Alloys	0.02
Other Metal/Alloys	0.13
Other Inorganic Materials	1.74
Cellulose	0.02
Rubber	0.04
Plastic	12.81
Cement	79.70
Solidified Inorganic Material	93.57
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.44
Packaging Material, Steel	211.11
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	7.39E-01
Np-237	4.30E-05
Pu-238	1.53E-01
Pu-239	3.90E+00
Pu-240	8.88E-01
Pu-241	7.21E+00
Pu-242	6.87E-05
U-234	5.52E-07
U-235	1.26E-07
U-238	2.15E-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.

Waste Stream ID: **IN-BN290**

Appendix A
Waste Profile Report

Site	Idaho National Laboratory	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Materials Production/Recovery Effluents	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2013	
Stream Name	Filter Sludge				Activity Concentrations Decayed to CY	2013	

Waste Volume Detail (m³)

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

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

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	12.20
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	22.44
Cellulose	0.00
Rubber	0.00
Plastic	4.47
Cement	0.00
Solidified Inorganic Material	111.56
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	17.13
Packaging Material, Rubber	0.44
Packaging Material, Steel	231.11
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	3.68E-01
Np-237	4.05E-06
Pu-238	7.86E-02
Pu-239	1.92E+00
Pu-240	4.25E-01
Pu-241	1.70E+00
Pu-242	3.16E-05
Th-229	6.57E-15
Th-230	9.32E-12
Th-232	2.80E-18
U-233	5.05E-11
U-234	6.73E-07
U-235	5.67E-09
U-236	3.78E-08
U-238	1.47E-14

Haz. Waste No(s).

D006, D008, F001, F002

No TRUCON Codes Provided

Waste Stream Description

This waste stream was generated by the Rocky Flats Plant and consists of sludge generated from the incinerator off-gas system associated with the plutonium recovery operations in Building 771.

Waste Stream ID: **IN-BN311**

Appendix A
Waste Profile Report

Site	Idaho National Laboratory	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Other/Multiple Sources	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2013	
Stream Name	Process Heels				Activity Concentrations Decayed to CY	2013	

Waste Volume Detail (m³)

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
Current Form Total	16.3	0.0	16.3

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

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	1.02
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.33
Other Inorganic Materials	91.67
Cellulose	0.00
Rubber	0.00
Plastic	19.67
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	17.13
Packaging Material, Rubber	0.44
Packaging Material, Steel	231.11
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	2.01E+00
Np-237	2.38E-05
Pu-238	6.09E-01
Pu-239	1.05E+01
Pu-240	2.46E+00
Pu-241	1.10E+01
Pu-242	1.93E-04
Th-229	4.41E-13
Th-230	1.01E-09
Th-232	2.18E-16
U-233	9.67E-10
U-234	1.98E-05
U-235	1.14E-07
U-236	8.02E-07
U-238	3.29E-13

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

Waste Stream Description

This waste stream, generated at the Rocky Flats Plant, consists of miscellaneous residues.

Waste Stream ID: **IN-BN375**

Appendix A
Waste Profile Report

Site	Idaho National Laboratory	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Materials Production/Recovery Effluents	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2013	
Stream Name	Oil-Dri-Residue From Incinerator			Activity Concentrations Decayed to CY	2013		

Waste Volume Detail (m³)

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

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

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	7.08
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.89
Other Inorganic Materials	137.57
Cellulose	1.83
Rubber	0.04
Plastic	7.84
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	16.30
Packaging Material, Rubber	0.44
Packaging Material, Steel	211.11
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	3.07E-01
Np-237	3.16E-06
Pu-238	2.06E-02
Pu-239	5.43E-01
Pu-240	1.27E-01
Pu-241	8.55E-01
Pu-242	1.17E-05
U-234	5.29E-06
U-235	4.49E-07
U-238	6.32E-05

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 materials such as oil-dri, floor dry, vermiculite, and sorbent booms.

Waste Stream ID: **IN-BN409**

Appendix A
Waste Profile Report

Site	Idaho National Laboratory	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Materials Production/Recovery Effluents	Waste Matrix Code Group	Salt Waste	Inventory Date	12/31/2013		
Stream Name	Chloride Salts	Activity Concentrations Decayed to CY			2013		

Waste Volume Detail (m³)

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

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

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	11.46
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.61
Other Inorganic Materials	105.68
Cellulose	0.77
Rubber	0.00
Plastic	5.90
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	17.13
Packaging Material, Rubber	0.44
Packaging Material, Steel	231.11
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	1.18E+01
Np-237	9.98E-05
Pu-238	3.53E-01
Pu-239	8.24E+00
Pu-240	1.89E+00
Pu-241	1.37E+01
Pu-242	2.93E-04
U-234	4.75E-08
U-235	1.11E-08

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

Waste Stream Description

This waste stream, generated at the Rocky Flats Plant includes spent salts generated by production and experimental pyrochemical operations used to recover and purify plutonium metal.

Waste Stream ID: **IN-BN421**

Appendix A
Waste Profile Report

Site	Idaho National Laboratory	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Materials Production/Recovery Effluents	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2013	
Stream Name	Uncemented Ash/Soot			Activity Concentrations Decayed to CY		2013	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	47.8	0.0	47.8
Current Form Total	47.8	0.0	47.8

Final Form Volumes			
Container Type	Stored	Proj.	Total
TDOP w/ 10 - 55-gal Drums w/ Liners	112.5	0.0	112.5
Final Form Total	112.5	0.0	112.5

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	1.74
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.14
Other Inorganic Materials	18.03
Cellulose	0.00
Rubber	0.00
Plastic	21.62
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	17.13
Packaging Material, Rubber	0.44
Packaging Material, Steel	231.11
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	2.31E+00
Np-237	3.10E-05
Pu-238	5.08E-01
Pu-239	9.37E+00
Pu-240	2.17E+00
Pu-241	1.35E+01
Pu-242	1.91E-04
U-234	6.14E-07
U-235	1.50E-07
U-238	1.99E-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 generated at the Rocky Flats Plant includes ash heels and soot from the plutonium recovery incinerator. The ash heels consist of insoluble materials from dissolution of plutonium-containing materials. Soot is the airborne fly ash that accumulated in the off-gas system of the plutonium recovery.

Waste Stream ID: **IN-BN425**

Appendix A
Waste Profile Report

Site	Idaho National Laboratory	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	R&D/R&D Laboratory Waste	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2013	
Stream Name	Fluid Bed Ash					Activity Concentrations Decayed to CY	2013

Waste Volume Detail (m³)

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

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

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	0.00
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.49
Cellulose	0.00
Rubber	0.00
Plastic	1.37
Cement	0.00
Solidified Inorganic Material	262.22
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	17.13
Packaging Material, Rubber	0.44
Packaging Material, Steel	231.11
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	1.59E-04
Np-237	2.50E-10
Pu-238	1.57E-04
Pu-239	5.70E-03
Pu-240	1.27E-03
Pu-241	8.86E-03
Pu-242	1.66E-07
Th-229	6.78E-19
Th-230	1.68E-10
Th-232	7.49E-20
U-233	3.35E-15
U-234	2.03E-06
U-235	2.79E-07
U-236	3.37E-10
U-238	1.91E-05

Haz. Waste No(s).

D007, F005

TRUCON Code(s)

114/214

Waste Stream Description

This waste consists of fluidized bed ash which is a fine powder generated by the Fluid Bed Incinerator (FBI).

Waste Stream ID: **IN-BN432**

Appendix A
Waste Profile Report

Site	Idaho National Laboratory	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Other/Multiple Sources	Waste Matrix Code Group	Solidified Organics		Inventory Date	12/31/2013	
Stream Name	Solidified Ion Exchange Resin from Actinide Recovery				Activity Concentrations Decayed to CY	2013	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	80.1	0.0	80.1
Current Form Total	80.1	0.0	80.1

Final Form Volumes			
Container Type	Stored	Proj.	Total
TDOP w/ 10 - 55-gal Drums w/ Liners	184.5	0.0	184.5
Final Form Total	184.5	0.0	184.5

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	7.43
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	9.45
Other Inorganic Materials	6.33
Cellulose	0.35
Rubber	0.00
Plastic	10.87
Cement	73.06
Solidified Inorganic Material	0.00
Solidified Organic Material	85.77
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	17.13
Packaging Material, Rubber	0.44
Packaging Material, Steel	231.11
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	4.58E+00
Cs-137	3.64E-06
Np-237	3.70E-05
Pu-238	1.40E-01
Pu-239	2.94E+00
Pu-240	6.73E-01
Pu-241	5.05E+00
Pu-242	5.62E-05
Sr-90	4.00E-06
U-234	3.54E-07
U-235	1.10E-07

Haz. Waste No(s).D007, D008, D022,
D029, F001, F002,
F005**TRUCON Code(s)**

126/226

Waste Stream Description

This waste stream consists of spent anionic and cationic exchange resins used in the plutonium and americium purification and recovery processes at Rocky Flats.

Waste Stream ID: **IN-BN510**

Appendix A
Waste Profile Report

Site	Idaho National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Other/Multiple Sources	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2013	
Stream Name	Supercompacted Debris Waste				Activity Concentrations Decayed to CY	2013	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
100-gal Drum Dir Ld w/o Liner	40.9	0.0	40.9
Current Form Total	40.9	0.0	40.9

Final Form Volumes			
Container Type	Stored	Proj.	Total
100-gal Drum Dir Ld w/o Liner	40.9	0.0	40.9
Final Form Total	40.9	0.0	40.9

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	316.57
Aluminum-based Metal/Alloys	2.26
Other Metal/Alloys	7.22
Other Inorganic Materials	24.23
Cellulose	205.95
Rubber	7.25
Plastic	114.11
Cement	0.00
Solidified Inorganic Material	0.09
Solidified Organic Material	0.01
Soil	0.10
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.31
Packaging Material, Steel	113.72
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	1.99E-01
Cs-137	3.45E-08
Np-237	6.07E-05
Pu-238	7.84E+00
Pu-239	8.63E-01
Pu-240	1.96E-01
Pu-241	1.40E+00
Pu-242	2.17E-05
Sr-90	3.79E-08
U-233	4.67E-03
U-234	1.52E-05
U-235	4.87E-06
U-238	3.54E-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)

121/221

Waste Stream Description

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

Waste Stream ID: **IN-BN510.1**

Appendix A
Waste Profile Report

Site	Idaho National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Other/Multiple Sources	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2013	
Stream Name	Supercompacted Debris Waste				Activity Concentrations Decayed to CY	2013	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
100-gal Drum Dir Ld w/o Liner	20.1	0.0	20.1
Current Form Total	20.1	0.0	20.1

Final Form Volumes			
Container Type	Stored	Proj.	Total
100-gal Drum Dir Ld w/o Liner	20.1	0.0	20.1
Final Form Total	20.1	0.0	20.1

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	610.85
Aluminum-based Metal/Alloys	8.52
Other Metal/Alloys	4.26
Other Inorganic Materials	21.09
Cellulose	118.85
Rubber	9.13
Plastic	81.89
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.52
Soil	3.09
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.31
Packaging Material, Steel	113.72
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	1.46E+00
Am-243	1.81E-04
Cs-137	9.80E-05
Np-237	4.25E-05
Pu-238	1.88E+01
Pu-239	1.12E+00
Pu-240	2.86E-01
Pu-241	1.76E+00
Pu-242	5.40E-05
Sr-90	1.08E-04
U-234	1.73E-05
U-235	3.04E-06
U-238	1.25E-04

Haz. Waste No(s).

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

TRUCON Code(s)

121/221

Waste Stream Description

BN510.1 is a newly-generated debris waste stream from supercompaction of 55-gallon containers.

Waste Stream ID: **IN-BN510.3**

Appendix A
Waste Profile Report

Site	Idaho National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Other/Multiple Sources	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2013	
Stream Name	Supercompacted Debris Waste				Activity Concentrations Decayed to CY	2013	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	4985.3	0.0	4985.3
Bin - Misc	1610.0	0.0	1610.0
Box - Misc	773.5	0.0	773.5
Current Form Total	7368.8	0.0	7368.8

Final Form Volumes			
Container Type	Stored	Proj.	Total
100-gal Drum Dir Ld w/o Liner	2653.0	0.0	2653.0
Final Form Total	2653.0	0.0	2653.0

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	11.83
Aluminum-based Metal/Alloys	0.04
Other Metal/Alloys	0.35
Other Inorganic Materials	0.99
Cellulose	3.14
Rubber	0.14
Plastic	3.01
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.02
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.31
Packaging Material, Steel	113.72
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	5.74E-02
Am-243	2.96E-07
Cs-137	1.05E-05
Np-237	4.26E-06
Pu-238	1.82E-01
Pu-239	5.89E-02
Pu-240	1.98E-02
Pu-241	1.73E-01
Pu-242	3.65E-06
Sr-90	1.15E-05
U-233	5.33E-06
U-234	1.44E-06
U-235	6.90E-07
U-238	1.97E-06

Haz. Waste No(s).

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

TRUCON Code(s)

121/221

Waste Stream Description

IN -BN510.3 is a newly generated debris waste stream generated from supercompacted 55-gallon containers.

Waste Stream ID: **IN-BN600**

Appendix A
Waste Profile Report

Site	Idaho National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Other/Multiple Sources	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2013	
Stream Name	AMWTP WMF-676 PCB Contaminated Debris				Activity Concentrations Decayed to CY	2013	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	65.1	82.2	147.3
Current Form Total	65.1	82.2	147.3

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	65.1	82.2	147.3
Final Form Total	65.1	82.2	147.3

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	180.71
Aluminum-based Metal/Alloys	0.22
Other Metal/Alloys	3.72
Other Inorganic Materials	5.09
Cellulose	16.32
Rubber	0.47
Plastic	30.15
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.03
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	1.02E-01
Cs-137	3.07E-07
Np-237	1.59E-06
Pu-238	1.82E-02
Pu-239	3.50E-01
Pu-240	7.96E-02
Pu-241	3.72E-01
Pu-242	6.64E-06
Sr-90	3.38E-07
U-234	7.39E-07
U-235	8.15E-08
U-238	7.80E-06

Haz. Waste No(s).

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

TRUCON Code(s)

125/225

Waste Stream Description

Newly generated PCB contaminated debris waste from the remediation of prohibited PCB waste within the Advanced Mixed Waste Treatment Facility (WMF-676).

Waste Stream ID: **IN-BN806**

Appendix A
Waste Profile Report

Site	Idaho National Laboratory	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Materials Production/Recovery Effluents	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2013	
Stream Name	Solidified Process Solids				Activity Concentrations Decayed to CY	2013	

Waste Volume Detail (m³)

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

Final Form Volumes			
Container Type	Stored	Proj.	Total
SWB w/ 4 - 55-gal Drums w/ Liners	20.8	0.0	20.8
Final Form Total	20.8	0.0	20.8

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	0.31
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.12
Cellulose	0.02
Rubber	0.04
Plastic	3.21
Cement	97.16
Solidified Inorganic Material	114.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	16.30
Packaging Material, Rubber	0.44
Packaging Material, Steel	211.11
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	2.30E-01
Cs-137	1.23E-08
Np-237	3.77E-06
Pu-238	6.46E-02
Pu-239	1.52E+00
Pu-240	3.47E-01
Pu-241	2.22E+00
Pu-242	2.50E-05
Sr-90	1.34E-08
Th-229	4.10E-14
Th-230	5.60E-11
Th-232	1.62E-17
U-233	1.20E-10
U-234	1.51E-06
U-235	1.20E-08
U-236	8.22E-08
U-238	3.10E-14

Haz. Waste No(s).

D008, F001, F002, F003, F005

**No TRUCON
Codes Provided**

Waste Stream Description

This waste stream, generated at Rocky Flats consists of various sludge, particulates, and heels immobilized into a solid monolith with Portland cement.

Waste Stream ID: **IN-BN811**

Appendix A
Waste Profile Report

Site	Idaho National Laboratory	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Pollution Control or Waste Treatment Process	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2013	
Stream Name	Evaporator and Dissolver Sludge			Activity Concentrations Decayed to CY		2013	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.8	0.0	0.8
Current Form Total	0.8	0.0	0.8

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

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	1.29
Aluminum-based Metal/Alloys	1.51
Other Metal/Alloys	0.00
Other Inorganic Materials	0.75
Cellulose	4.60
Rubber	2.75
Plastic	4.68
Cement	0.00
Solidified Inorganic Material	48.14
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	16.30
Packaging Material, Rubber	0.44
Packaging Material, Steel	211.11
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	8.95E-02
Np-237	3.72E-06
Pu-238	2.00E+01
Pu-239	4.40E-02
Pu-240	2.62E-02
Pu-241	7.44E-02
Pu-242	2.83E-05
Th-229	3.57E-13
Th-230	1.71E-07
Th-232	1.10E-17
U-233	3.51E-10
U-234	1.50E-03
U-235	1.04E-09
U-236	1.86E-08
U-238	5.98E-05

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 Stream ID: **IN-BN817**

Appendix A
Waste Profile Report

Site	Idaho National Laboratory	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Materials Production/Recovery Effluents	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2013	
Stream Name	Cemented Sand, Slag, Crucible Heels				Activity Concentrations Decayed to CY	2013	

Waste Volume Detail (m³)

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

Final Form Volumes			
Container Type	Stored	Proj.	Total
SWB w/ 4 - 55-gal Drums w/ Liners	15.1	0.0	15.1
Final Form Total	15.1	0.0	15.1

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	0.06
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.01
Cellulose	0.00
Rubber	0.00
Plastic	3.26
Cement	123.02
Solidified Inorganic Material	144.84
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	16.30
Packaging Material, Rubber	0.44
Packaging Material, Steel	211.11
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	1.51E-01
Np-237	2.67E-06
Pu-238	5.14E-02
Pu-239	1.15E+00
Pu-240	2.62E-01
Pu-241	1.78E+00
Pu-242	1.85E-05
Th-229	2.27E-14
Th-230	3.39E-11
Th-232	9.39E-18
U-233	7.52E-11
U-234	1.04E-06
U-235	7.91E-09
U-236	5.44E-08
U-238	2.01E-14

Haz. Waste No(s).

D007

No TRUCON Codes Provided

Waste Stream Description

This waste stream, generated at Rocky Flats consists of sand, slag, and crucible heels immobilized into a solid monolith.

Waste Stream ID: **IN-BN823**

Appendix A
Waste Profile Report

Site	Idaho National Laboratory	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Materials Production/Recovery Effluents	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2013	
Stream Name	Cemented Miscellaneous Sludge				Activity Concentrations Decayed to CY	2013	

Waste Volume Detail (m³)

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

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

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	0.00
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.24
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	3.16
Cement	104.87
Solidified Inorganic Material	122.75
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	16.30
Packaging Material, Rubber	0.44
Packaging Material, Steel	211.11
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	3.27E-03
Np-237	2.87E-02
Pu-238	1.38E-03
Pu-239	2.53E-02
Pu-240	5.79E-03
Pu-241	3.79E-02
Pu-242	6.35E-07
Th-229	4.39E-10
Th-230	1.52E-12
Th-232	3.42E-19
U-233	1.11E-06
U-234	3.62E-08
U-235	2.24E-10
U-236	1.54E-09
U-238	8.86E-16

Haz. Waste No(s).

D008, F001, F002, F003

No TRUCON Codes Provided

Waste Stream Description

This waste stream, generated at Rocky Flats, consists of various sludge wastes immobilized into a solid monolith with Portland cement. The cemented sludge was generated from non-specific sources and designated as inorganic particulate below the economic discard limit (EDL).

Waste Stream ID: **IN-BN835**

Appendix A
Waste Profile Report

Site	Idaho National Laboratory	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Materials Production/Recovery Effluents	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2013	
Stream Name	Solidified Acid/Caustic Waste			Activity Concentrations Decayed to CY		2013	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	23.9	0.0	23.9
Current Form Total	23.9	0.0	23.9

Final Form Volumes			
Container Type	Stored	Proj.	Total
SWB w/ 4 - 55-gal Drums w/ Liners	58.6	0.0	58.6
Final Form Total	58.6	0.0	58.6

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	0.02
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.05
Cellulose	4.83
Rubber	0.01
Plastic	0.23
Cement	0.00
Solidified Inorganic Material	210.48
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	16.30
Packaging Material, Rubber	0.44
Packaging Material, Steel	211.11
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	3.64E-02
Cs-137	3.01E-08
Np-237	1.03E-05
Pu-238	2.36E+00
Pu-239	3.48E-03
Pu-240	2.22E-03
Pu-241	8.42E-03
Pu-242	2.48E-06
Sr-90	3.28E-08
Th-229	6.96E-14
Th-230	1.14E-09
Th-232	5.83E-20
U-233	2.64E-10
U-234	4.10E-05
U-235	2.79E-09
U-236	3.94E-10
U-238	1.18E-06

Haz. Waste No(s).D007, D008, D009,
F001, F002**TRUCON Code(s)**

111/211

Waste Stream Description

This waste stream, generated at Mound consists of drums containing solidified acid and caustic wastes combined with nonhazardous absorbent.

Waste Stream ID: **IN-BN836**

Appendix A
Waste Profile Report

Site	Idaho National Laboratory	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Pollution Control or Waste Treatment Process	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2013	
Stream Name	Cemented Sludge				Activity Concentrations Decayed to CY	2013	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	55.1	0.0	55.1
Current Form Total	55.1	0.0	55.1

Final Form Volumes			
Container Type	Stored	Proj.	Total
SWB w/ 4 - 55-gal Drums w/ Liners	132.3	0.0	132.3
Final Form Total	132.3	0.0	132.3

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	0.00
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.01
Other Inorganic Materials	0.21
Cellulose	0.11
Rubber	0.00
Plastic	0.05
Cement	218.25
Solidified Inorganic Material	287.44
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	16.30
Packaging Material, Rubber	0.44
Packaging Material, Steel	211.11
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	4.16E-05
Cs-137	5.92E-06
Np-237	9.17E-07
Pu-238	8.41E-02
Pu-239	2.59E-03
Pu-240	7.32E-04
Pu-241	4.50E-03
Pu-242	1.94E-07
Sr-90	6.46E-06
Th-229	4.29E-15
Th-230	2.80E-11
Th-232	1.34E-20
U-233	1.95E-11
U-234	1.21E-06
U-235	1.28E-11
U-236	1.08E-10
U-238	1.51E-16

Haz. Waste No(s).

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

TRUCON Code(s)

111/211

Waste Stream Description

This waste stream consists of drums containing Mound cemented sludge. The sludge was originally generated from the treatment of alpha-contaminated wastewaters at the Waste Disposal Building. The sludge was solidified with Portland Cement. Florco, a non-hazardous absorbent, may have been also added to the waste stream.

Waste Stream ID: **IN-BN842**

Appendix A
Waste Profile Report

Site	Idaho National Laboratory	Summary Category	S4000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Remediation/D&D Waste	Waste Matrix Code Group	Contaminated Soil/Debris Waste		Inventory Date	12/31/2013	
Stream Name	Contaminated Soil			Activity Concentrations Decayed to CY		2013	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.2	0.0	0.2
Box - Misc	123.6	0.0	123.6
Current Form Total	123.8	0.0	123.8

Final Form Volumes			
Container Type	Stored	Proj.	Total
SWB w/ 4 - 55-gal Drums w/ Liners	192.8	0.0	192.8
Final Form Total	192.8	0.0	192.8

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	0.00
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	13.90
Cellulose	0.00
Rubber	0.00
Plastic	0.00
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	580.77
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	16.30
Packaging Material, Rubber	0.44
Packaging Material, Steel	211.11
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	1.62E-05
Np-237	2.01E-11
Pu-238	2.09E-02
Pu-239	6.24E-04
Pu-240	1.54E-04
Pu-241	8.84E-04
Pu-242	4.31E-08
Th-229	2.64E-20
Th-230	6.95E-12
Th-232	2.81E-21
U-233	1.91E-16
U-234	3.00E-07
U-235	3.08E-12
U-236	2.28E-11
U-238	3.34E-17

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 spill cleanup. All soil waste was dry when packaged.

Waste Stream ID: **IN-BN976**

Appendix A
Waste Profile Report

Site	Idaho National Laboratory	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2013	
Stream Name	Bldg. 776 Process Sludge				Activity Concentrations Decayed to CY	2013	

Waste Volume Detail (m³)

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
Current Form Total	64.9	0.0	64.9

Final Form Volumes			
Container Type	Stored	Proj.	Total
SWB w/ 4 - 55-gal Drums w/ Liners	43.5	0.0	43.5
Final Form Total	43.5	0.0	43.5

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	0.00
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	1.24
Cellulose	0.00
Rubber	0.00
Plastic	0.26
Cement	84.96
Solidified Inorganic Material	127.65
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	16.30
Packaging Material, Rubber	0.44
Packaging Material, Steel	211.11
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	2.18E+00
Cs-137	2.47E-07
Np-237	3.11E-05
Pu-238	3.26E-01
Pu-239	8.70E+00
Pu-240	2.01E+00
Pu-241	8.28E+00
Pu-242	1.65E-04
Sr-90	2.68E-07
Th-229	2.58E-13
Th-230	1.07E-09
Th-232	7.19E-17
U-233	8.61E-10
U-234	1.99E-05
U-235	2.42E-06
U-236	4.16E-07
U-238	6.83E-05

Haz. Waste No(s).

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

**No TRUCON
Codes Provided**

Waste Stream Description

This waste, generated at Rocky Flats, consists of sludge mixed with Portland cement. The sludge consists of dirt, sand, gravel, floor sweepings and other similar materials from floor drains.

Waste Stream ID: **IN-BN978**

Appendix A
Waste Profile Report

Site	Idaho National Laboratory	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2013	
Stream Name	Laundry Sludge				Activity Concentrations Decayed to CY	2013	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
Box - Misc	34.9	0.0	34.9
Current Form Total	34.9	0.0	34.9

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

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	0.00
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	2.96
Other Inorganic Materials	30.25
Cellulose	30.25
Rubber	40.10
Plastic	8.18
Cement	268.45
Solidified Inorganic Material	402.68
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	17.13
Packaging Material, Rubber	0.44
Packaging Material, Steel	231.11
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	4.67E-03
Pu-238	6.08E-04
Pu-239	2.15E-02
Pu-240	4.78E-03
Pu-241	3.91E-02
Pu-242	6.21E-07
U-234	7.21E-06
U-235	1.53E-06
U-238	4.01E-05

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

Waste Stream Description

This waste, generated at Rocky Flats, consists of sludge generated by laundry operations mixed with Portland cement. The sludge consists of lint, spent detergent, dirt, and other similar waste.

Waste Stream ID: **IN-BNINW216**

Appendix A
Waste Profile Report

Site	Idaho National Laboratory	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Pollution Control or Waste Treatment Process	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2013	
Stream Name	First/Second Stage Sludge				Activity Concentrations Decayed to CY	2013	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	2191.3	0.0	2191.3
Box - Misc	22.2	0.0	22.2
Current Form Total	2213.5	0.0	2213.5

Final Form Volumes			
Container Type	Stored	Proj.	Total
SWB w/ 4 - 55-gal Drums w/ Liners	5254.2	0.0	5254.2
Final Form Total	5254.2	0.0	5254.2

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	0.05
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.07
Other Inorganic Materials	3.73
Cellulose	0.03
Rubber	0.02
Plastic	0.33
Cement	45.74
Solidified Inorganic Material	338.61
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	16.30
Packaging Material, Rubber	0.44
Packaging Material, Steel	211.11
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	5.87E+00
Am-243	1.33E-08
Cs-137	1.45E-08
Np-237	7.06E-05
Pu-238	3.50E-02
Pu-239	4.50E-01
Pu-240	1.13E-01
Pu-241	1.31E+00
Pu-242	3.47E-05
Sr-90	1.59E-08
U-234	2.03E-05
U-235	4.17E-06
U-238	1.15E-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

This waste stream, generated at Rocky Flats, consists of aqueous sludges generated from wastewater treatment processes in Building 774.

Waste Stream ID: **IN-BNINW218**

Appendix A
Waste Profile Report

Site	Idaho National Laboratory	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Materials Production/Recovery Effluents	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2013	
Stream Name	Building 374 Sludge			Activity Concentrations Decayed to CY		2013	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	176.8	0.0	176.8
Box - Misc	6.3	0.0	6.3
Current Form Total	183.1	0.0	183.1

Final Form Volumes			
Container Type	Stored	Proj.	Total
SWB w/ 4 - 55-gal Drums w/ Liners	427.1	0.0	427.1
Final Form Total	427.1	0.0	427.1

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	0.02
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	22.85
Cellulose	0.00
Rubber	0.01
Plastic	2.09
Cement	23.32
Solidified Inorganic Material	349.74
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	16.30
Packaging Material, Rubber	0.44
Packaging Material, Steel	211.11
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	6.07E-02
Cs-137	1.53E-09
Np-237	2.02E-05
Pu-238	2.48E-03
Pu-239	6.25E-02
Pu-240	1.38E-02
Pu-241	7.26E-02
Pu-242	1.43E-06
Sr-90	1.69E-09
U-234	2.85E-04
U-235	2.61E-05
U-238	3.41E-03

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

Building 374 sludge, generated at Rocky Flats, consists of drums containing Building 374 dry sludge, Solidified Direct Cementation Process (DCP) sludge, or Building 374 solidified bypass sludge.

Waste Stream ID: **IN-ID-ANLE-BIN**

Appendix A
Waste Profile Report

Site	Idaho National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	RH
Source Cat.	R&D/R&D Laboratory Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2013		
Stream Name	RH TRU Debris Waste from ANL-E stored at INL			Activity Concentrations Decayed to CY	2013		

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
Bin - MII	20.5	0.0	20.5
Current Form Total	20.5	0.0	20.5

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/o Liner	20.0	0.0	20.0
Final Form Total	20.0	0.0	20.0

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	346.00
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	30.30
Other Inorganic Materials	14.32
Cellulose	3.86
Rubber	0.00
Plastic	8.01
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	8.70
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Pu-239	8.42E-01

Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D019, D027, D028, D029, D030, D037, F002, F004, F005

TRUCON Code(s)

321, 325

Waste Stream Description

This waste stream consists of six bins of general plant waste generated at ANL-E during D&D operations.

Waste Stream ID: **IN-ID-ANLW-W269-RH**

Appendix A
Waste Profile Report

Site	Idaho National Laboratory	Summary Category	S3000	Defense Determination	Defense-Related	Handling	RH
Source Cat.	R&D/R&D Laboratory Waste	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2013	
Stream Name	RH Laboratory Waste from INL			Activity Concentrations Decayed to CY		2013	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum	0.2	0.0	0.2
Current Form Total	0.2	0.0	0.2

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/o Liner	0.6	0.0	0.6
Final Form Total	0.6	0.0	0.6

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	28.85
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	3.21
Other Inorganic Materials	0.00
Cellulose	0.16
Rubber	0.16
Plastic	4.01
Cement	0.00
Solidified Inorganic Material	12.82
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	8.70
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	8.64E+00
Cs-137	4.70E-01
Np-237	2.80E-06
Pu-239	1.39E+01
Th-229	1.79E-16
U-233	6.10E-12
U-235	1.37E-08

Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D019, D022, F002, F004, F005

TRUCON Code(s)

311

Waste Stream Description

This waste stream consists of one drum that contains three one gallon glass bottles full of dissolved fuel solutions absorbed on vermiculite or Oil -Dri.

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

Appendix A
Waste Profile Report

Site	Idaho National Laboratory	Summary Category	S3000	Defense Determination	Defense-Related	Handling	RH
Source Cat.	R&D/R&D Laboratory Waste	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2013	
Stream Name	Solidified Waste Sludge from Bettis Atomic Power Lab.				Activity Concentrations Decayed to CY	2013	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum	0.8	0.0	0.8
Current Form Total	0.8	0.0	0.8

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/o Liner	1.2	0.0	1.2
Final Form Total	1.2	0.0	1.2

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	111.38
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.80
Cellulose	0.00
Rubber	1.50
Plastic	0.13
Cement	53.53
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	8.70
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	4.26E-03
Am-243	5.52E-04
Cs-137	3.20E+01
Np-237	5.82E-04
Pu-238	4.42E+00
Pu-239	4.95E-03
Pu-240	4.99E-03
Pu-242	4.82E-05
Sr-90	3.04E+01
Th-229	2.50E-04
Th-230	4.10E-08
Th-232	1.18E-05
U-233	1.14E-01
U-234	3.45E-04
U-235	6.39E-05
U-236	3.70E-09
U-238	1.87E-13

Haz. Waste No(s).D004, D005, D006,
D007, D008, D010,
D011, F002**TRUCON Code(s)**

327

Waste Stream Description

This waste stream consists of predominantly inorganic waste materials generated during sectioning of fuel elements, grinding, mounting and polishing of metallographic specimens solidified in concrete matrix and placed in IN-41 containers (5 in dia. x16 in long). Thirteen of these IN-41 containers were shipped from BAPL to ANL-W where IN-41 containers were placed in HFEF-5 liners (6 ft. tall x 12 in dia.). The HFEF-5 liners were sent to RWMC for interim storage in 1988. The HFEF liners have been retrieved and repackaged into 4-55 gallon drums for characterization and shipment to WIPP.

Waste Stream ID: **IN-ID-EBR-S5000**

Appendix A
Waste Profile Report

Site	Idaho National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	RH
Source Cat.	Remediation/D&D Waste	Waste Matrix Code Group	Uncategorized Metal Waste	Inventory Date	12/31/2013		
Stream Name	RH-TRU Debris Waste From Experimental Breeder Reactor			Activity Concentrations Decayed to CY	2013		

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum	4.4	0.0	4.4
Current Form Total	4.4	0.0	4.4

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/o Liner	4.4	0.0	4.4
Final Form Total	4.4	0.0	4.4

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	20.83
Aluminum-based Metal/Alloys	13.97
Other Metal/Alloys	858.52
Other Inorganic Materials	0.00
Cellulose	0.46
Rubber	0.46
Plastic	0.82
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.02
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	8.70
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Cs-137	6.25E+00
Pu-239	1.83E+00
Sr-90	6.72E+00
Th-230	4.50E-05
U-234	2.88E-01
U-235	1.34E-02
U-238	2.87E-01

No Hazardous Waste Numbers Provided

TRUCON Code(s)
321, 322, 325

Waste Stream Description

Waste stream consists of waste generated from decommissioning the EBR-1 reactor after 12 years of operation. The debris consists of the reactor outer blanket components composed of natural uranium clad with stainless steel

Waste Stream ID: **IN-ID-HFEF-S5000-RP**

Appendix A
Waste Profile Report

Site	Idaho National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	RH
Source Cat.	R&D/R&D Laboratory Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2013	
Stream Name	Sodium contaminated RH TRU Waste from Materials and Fuels Complex at INL.				Activity Concentrations Decayed to CY	2013	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
HFEF-5 RH Insert	3.7	0.0	3.7
RSWF Liner	1.2	0.0	1.2
SLSF Canister	1.4	0.0	1.4
Current Form Total	6.3	0.0	6.3

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/o Liner	16.8	0.0	16.8
Final Form Total	16.8	0.0	16.8

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	213.68
Aluminum-based Metal/Alloys	2.74
Other Metal/Alloys	54.90
Other Inorganic Materials	5.49
Cellulose	2.74
Rubber	0.27
Plastic	2.74
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	8.70
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	5.43E-04
Cs-137	9.05E+01
Np-237	3.77E-06
Pu-238	1.70E-02
Pu-239	3.79E+00
Pu-240	1.91E+00
Sr-90	8.50E+01
Th-229	1.22E-15
Th-230	2.31E-13
Th-232	1.52E-18
U-233	2.22E-11
U-234	5.03E-08
U-235	3.42E-04
U-236	5.91E-08
U-238	8.07E-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 consists 26 HFEF inserts, two SLSF canisters, and 1 RSWF liner.

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

Appendix A
Waste Profile Report

Site	Idaho National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	RH
Source Cat.	R&D/R&D Laboratory Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2013	
Stream Name	RH-TRU Debris Waste From Materials and Fuels Complex Hot Fuel Examination Facility at the INL.				Activity Concentrations Decayed to CY	2013	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum	14.6	0.0	14.6
HFEF-5 RH Insert	0.1	0.0	0.1
Current Form Total	14.7	0.0	14.7

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/o Liner	21.8	0.0	21.8
Final Form Total	21.8	0.0	21.8

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	23.27
Aluminum-based Metal/Alloys	0.43
Other Metal/Alloys	1.29
Other Inorganic Materials	5.16
Cellulose	5.60
Rubber	0.43
Plastic	6.44
Cement	0.00
Solidified Inorganic Material	0.43
Solidified Organic Material	0.04
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	8.70
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	4.07E-01
Am-243	4.11E-11
Cm-244	4.99E-03
Cs-137	5.09E+01
Np-237	9.70E-05
Pu-238	1.68E-01
Pu-239	4.55E-01
Pu-240	8.70E-02
Pu-241	2.34E-02
Pu-242	6.02E-07
Sr-90	5.36E+01
Th-229	2.26E-08
Th-230	1.68E-08
Th-232	7.72E-07
U-233	1.51E-05
U-234	1.12E-04
U-235	4.88E-05
U-236	3.32E-06
U-238	1.22E-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 1 HFEF insert (12 in. Dia. x 6 ft. tall) and 70 55-gallon drums. Three 55-gallon will be placed in a RH TRU Removable Lid Canister for transport to WIPP. Some of the containers in this waste stream have hazardous waste codes applied by the generator. One of the drum was received from AMWTP in 2009 as Suspect RH TRU waste

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

Appendix A
Waste Profile Report

Site	Idaho National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2013		
Stream Name	MFC generated debris waste (Leaded Gloves)			Activity Concentrations Decayed to CY	2013		

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.6	0.0	0.6
Current Form Total	0.6	0.0	0.6

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.6	0.0	0.6
Final Form Total	0.6	0.0	0.6

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	0.00
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	209.94
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	48.88
Plastic	21.31
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	6.30E-02
Cs-137	1.09E-05
Np-237	1.65E-06
Pu-238	2.50E-03
Pu-239	8.03E-02
Pu-240	1.80E-02
Pu-241	1.31E-01
Pu-242	2.80E-06
Sr-90	1.20E-05
Th-229	1.24E-15
Th-230	2.59E-10
Th-232	5.25E-20
U-233	1.42E-11
U-234	1.41E-05
U-235	3.78E-07
U-236	1.06E-09
U-238	8.69E-16

Haz. Waste No(s).

D008
TRUCON Code(s)
125/225, 127/227, 154

Waste Stream Description

This waste was originally generated at the Experimental Fuels Lab at the Materials Fuel Complex (MFC). The leaded gloves were used in the glovebox which was used to cast and prepare samples of uranium, plutonium and zirconium fuels. The SWB was repackaged at INTEC in Building CPP-659 and the leaded-gloves were removed by CWI and placed in 3 new 55-gal drums with a 90-mil rigid liner.

Waste Stream ID: **IN-ID-MFC-SOLID**

Appendix A
Waste Profile Report

Site	Idaho National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	RH
Source Cat.	Analytical Laboratory Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2013		
Stream Name	RH-TRU Waste From Materials and Fuels Complex at the INL.			Activity Concentrations Decayed to CY	2013		

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum	0.8	0.0	0.8
Current Form Total	0.8	0.0	0.8

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/o Liner	1.2	0.0	1.2
Final Form Total	1.2	0.0	1.2

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	85.24
Aluminum-based Metal/Alloys	5.40
Other Metal/Alloys	0.36
Other Inorganic Materials	8.01
Cellulose	2.16
Rubber	0.36
Plastic	7.55
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	8.70
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Cs-137	3.30E+01
Pu-239	2.35E-01
Pu-240	1.41E-01
Sr-90	3.44E+01
Th-230	3.37E-13
Th-232	2.98E-17
U-234	4.32E-09
U-235	4.36E-04
U-236	7.10E-08
U-238	9.05E-05

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 consists of 4 55-gallon drums of repackaged waste from 24-inch diameter by 148-inch long carbon steel liners each containing one 1-litre bottle of solidified sample solution and debris from Analytical Laboratory hot cells.

Waste Stream ID: **IN-ID-Miscellaneous**

Appendix A
Waste Profile Report

Site	Idaho National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	RH
Source Cat.	R&D/R&D Laboratory Waste	Waste Matrix Code Group	Uncategorized Metal Waste	Inventory Date	12/31/2013		
Stream Name	AMWTP Suspect RH TRU Sources	Activity Concentrations Decayed to CY			2013		

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum	3.5	0.0	3.5
Box - Misc	3.4	0.0	3.4
Current Form Total	6.9	0.0	6.9

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/o Liner	3.7	0.0	3.7
Final Form Total	3.7	0.0	3.7

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	90.28
Aluminum-based Metal/Alloys	90.28
Other Metal/Alloys	225.96
Other Inorganic Materials	22.56
Cellulose	11.31
Rubber	0.00
Plastic	22.56
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	8.70
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	1.56E+00
Cm-244	1.29E-07
Cs-137	9.27E-05
Np-237	4.81E-04
Pu-238	1.38E+02
Pu-239	2.16E+00
Pu-240	3.95E-01
Pu-241	4.54E+00
Pu-242	8.17E-05
Sr-90	1.01E-04
Th-229	9.21E-14
Th-230	1.94E-09
Th-232	2.89E-19
U-233	2.09E-09
U-234	4.06E-04
U-235	5.83E-05
U-236	1.17E-08
U-238	3.94E-06

Haz. Waste No(s).

D008, D009

**No TRUCON
Codes Provided**

Waste Stream Description

This waste stream consists of 17 55 gallon drums and one non-standard box of miscellaneous sources and scrap material received from on-site and off-site generators

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

Appendix A
Waste Profile Report

Site	Idaho National Laboratory	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Solidified Organics		Inventory Date	12/31/2013	
Stream Name	Organic Setups				Activity Concentrations Decayed to CY	2013	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	1836.6	0.0	1836.6
Box - Misc	38.0	0.0	38.0
Current Form Total	1874.7	0.0	1874.7

Final Form Volumes			
Container Type	Stored	Proj.	Total
SWB w/ 4 - 55-gal Drums w/ Liners	247.6	0.0	247.6
TDOP w/ 10 - 55-gal Drums w/ Liners	4018.5	0.0	4018.5
Final Form Total	4266.1	0.0	4266.1

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	1.99
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	7.36
Cellulose	0.08
Rubber	0.02
Plastic	3.15
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	362.67
Soil	0.02
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	17.08
Packaging Material, Rubber	0.44
Packaging Material, Steel	229.95
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	1.21E-02
Np-237	3.72E-07
Pu-238	3.26E-03
Pu-239	7.16E-02
Pu-240	1.54E-02
Pu-241	1.11E-01
Pu-242	1.45E-06
U-234	2.81E-06
U-235	4.51E-07
U-238	2.27E-05

Haz. Waste No(s).

D008, D022, D026,
D027, D028, D029,
D030, D032, D034,
D036, D037, F001,
F002, F005

TRUCON Code(s)

112/212

Waste Stream Description

This waste, generated at Rocky Flats, consists of various organic liquids transferred to Building 774 for immobilization using Micro-cell E. The organic liquids were primarily a mixture of oils and chlorinated solvents. Small amounts of Oil-Dri were sometimes added to the mixture as well. This process was shutdown in 1985 and replaced by the Organic and Sludge Immobilization System (OASIS) process.

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

Appendix A
Waste Profile Report

Site	Idaho National Laboratory	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Solidified Organics		Inventory Date	12/31/2013	
Stream Name	Organic and Sludge Immobilization System Waste				Activity Concentrations Decayed to CY	2013	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	20.6	0.0	20.6
Current Form Total	20.6	0.0	20.6

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	12.1	0.0	12.1
SWB w/ 4 - 55-gal Drums w/ Liners	17.0	0.0	17.0
TDOP w/ 10 - 55-gal Drums w/ Liners	4.5	0.0	4.5
Final Form Total	33.6	0.0	33.6

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	0.03
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	1.99
Cellulose	0.03
Rubber	0.00
Plastic	1.99
Cement	5.09
Solidified Inorganic Material	0.00
Solidified Organic Material	617.31
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	23.87
Packaging Material, Rubber	0.49
Packaging Material, Steel	184.92
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	3.95E-02
Np-237	2.24E-06
Pu-238	1.65E-02
Pu-239	3.76E-01
Pu-240	8.20E-02
Pu-241	7.97E-01
Pu-242	6.72E-06
U-234	3.76E-07
U-235	8.86E-08
U-238	1.22E-06

Haz. Waste No(s).

D008, D022, D028,
D029, D030, D032,
D034, D036, D043,
F001, F002, F005

TRUCON Code(s)

112/212, 154

Waste Stream Description

This waste, generated at Rocky Flats, consists of various organic liquids immobilized into a solid monolith by the Organic and Sludge Immobilization System (OASIS) in Building 774. Oil and chlorinated solvent mixtures were the primary liquids treated by OASIS.

Waste Stream ID: **IN-ID-RF-S5000-RH**

Appendix A
Waste Profile Report

Site	Idaho National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	RH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2013		
Stream Name	Rocky Flats Generated Suspect RH TRU waste received from AMWTP			Activity Concentrations Decayed to CY	2013		

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum	5.8	0.0	5.8
Current Form Total	5.8	0.0	5.8

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/o Liner	6.2	0.0	6.2
Final Form Total	6.2	0.0	6.2

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	0.00
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	1.85
Other Inorganic Materials	23.89
Cellulose	23.89
Rubber	78.53
Plastic	64.50
Cement	23.56
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	8.70
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	1.01E+02
Np-237	8.69E-04
Pu-238	4.72E-02
Pu-239	3.09E+00
Pu-240	4.44E-01
Pu-241	2.82E+00
Pu-242	4.90E-05
Th-229	2.33E-12
Th-230	1.00E-11
Th-232	5.18E-18
U-233	1.36E-08
U-234	5.41E-07
U-235	1.22E-08
U-236	5.25E-08
U-238	3.04E-14

Haz. Waste No(s).

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

TRUCON Code(s)

321, 322

Waste Stream Description

This waste stream generated at Rocky Flats plant, consists of various types filter media and insulation processed with Portland cement to absorb liquids and neutralize acids, plastics such as Teflon, polyethylene, polyvinyl chloride, latex and nonleaded rubber.

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

Appendix A
Waste Profile Report

Site	Idaho National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Materials Production/Recovery Effluents	Waste Matrix Code Group	Graphite Waste	Inventory Date	12/31/2013		
Stream Name	Rocky Flats Transuranic Graphite Debris				Activity Concentrations Decayed to CY	2013	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	7.5	0.0	7.5
Current Form Total	7.5	0.0	7.5

Final Form Volumes			
Container Type	Stored	Proj.	Total
SWB w/ 4 - 55-gal Drums w/ Liners	18.9	0.0	18.9
Final Form Total	18.9	0.0	18.9

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	4.71
Aluminum-based Metal/Alloys	0.01
Other Metal/Alloys	0.05
Other Inorganic Materials	142.70
Cellulose	3.46
Rubber	0.01
Plastic	2.10
Cement	0.00
Solidified Inorganic Material	0.01
Solidified Organic Material	0.01
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	16.30
Packaging Material, Rubber	0.44
Packaging Material, Steel	211.11
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	7.07E-01
Np-237	6.53E-05
Pu-238	1.63E-01
Pu-239	4.99E+00
Pu-240	1.13E+00
Pu-241	7.28E+00
Pu-242	9.83E-05

Haz. Waste No(s).

D008, D029, F001, F002, F005

TRUCON Code(s)

115/215, 154

Waste Stream Description

This waste stream generated at Rocky Flats is comprised of graphite. Graphite wastes include broken molds, chunks and pieces.

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

Appendix A
Waste Profile Report

Site	Idaho National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Materials Production/Recovery Effluents	Waste Matrix Code Group	Combustible Waste	Inventory Date	12/31/2013		
Stream Name	Rocky Flats Combustibles and Plastic Stored at INL			Activity Concentrations Decayed to CY	2013		

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	2267.8	0.0	2267.8
Current Form Total	2267.8	0.0	2267.8

Final Form Volumes			
Container Type	Stored	Proj.	Total
SWB w/ 4 - 55-gal Drums w/ Liners	117.2	0.0	117.2
TDOP w/ 10 - 55-gal Drums w/ Liners	4810.5	0.0	4810.5
Final Form Total	4927.7	0.0	4927.7

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	2.65
Aluminum-based Metal/Alloys	0.11
Other Metal/Alloys	0.38
Other Inorganic Materials	5.87
Cellulose	44.98
Rubber	2.53
Plastic	63.75
Cement	0.00
Solidified Inorganic Material	0.01
Solidified Organic Material	0.01
Soil	0.01
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	17.11
Packaging Material, Rubber	0.44
Packaging Material, Steel	230.64
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	1.18E+00
Cm-244	8.68E-03
Cs-137	5.63E-08
Np-237	9.41E-06
Pu-238	2.31E-02
Pu-239	7.80E-01
Pu-240	1.73E-01
Pu-241	1.39E+00
Pu-242	2.24E-05
Sr-90	6.20E-08
U-233	2.70E-07
U-234	3.64E-08
U-235	3.64E-08
U-238	2.40E-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)

116/216, 154

Waste Stream Description

This waste stream, generated by Rocky Flats, is comprised of combustible and plastic debris.

Waste Stream ID: **IN-ID-Sample Fuel**

Appendix A
Waste Profile Report

Site	Idaho National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	RH
Source Cat.	R&D/R&D Laboratory Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2013	
Stream Name	RH TRU Waste from INL.			Activity Concentrations Decayed to CY		2013	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
110-gal Drum	0.4	0.0	0.4
55-gal Drum	1.7	0.0	1.7
85-gal Drum	1.0	0.0	1.0
Current Form Total	3.0	0.0	3.0

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/o Liner	5.0	0.0	5.0
Final Form Total	5.0	0.0	5.0

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	100.16
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	360.58
Other Inorganic Materials	20.03
Cellulose	5.01
Rubber	0.00
Plastic	10.02
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	8.70
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	1.81E+00
Cs-137	4.68E-02
Np-237	5.88E-04
Pu-238	1.45E-01
Pu-239	6.41E+00
Pu-240	2.74E+00
Pu-241	6.99E+00
Pu-242	1.04E-04
Sr-90	2.62E-06
Th-232	2.85E-05
U-233	1.35E-02
U-234	4.54E-05
U-235	3.46E-04
U-238	6.64E-04

Haz. Waste No(s).

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

TRUCON Code(s)

321, 322, 325

Waste Stream Description

This waste consists of 12 containers of debris waste generated at MFC and TRA. The waste consists of either solutions of dissolved fuel or remains of the fuel after the destructive examination performed for Research and Development

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

Appendix A
Waste Profile Report

Site	Idaho National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Remediation/D&D Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2013	
Stream Name	ICP Retrieved Debris Waste (Filters/Graphite)			Activity Concentrations Decayed to CY		2013	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.8	0.0	0.8
55-gal Drum Equivalent	600.7	0.0	600.7
Current Form Total	601.5	0.0	601.5

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	733.4	0.0	733.4
Final Form Total	733.4	0.0	733.4

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	1.18
Aluminum-based Metal/Alloys	0.20
Other Metal/Alloys	0.22
Other Inorganic Materials	192.23
Cellulose	83.17
Rubber	0.56
Plastic	7.90
Cement	0.75
Solidified Inorganic Material	3.88
Solidified Organic Material	0.96
Soil	16.90
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	6.94E-01
Cs-137	1.43E-06
Np-237	1.07E-05
Pu-238	5.88E-02
Pu-239	1.64E+00
Pu-240	3.66E-01
Pu-241	1.87E+00
Pu-242	3.77E-05
Sr-90	1.57E-06
Th-229	8.42E-10
Th-230	2.07E-09
Th-232	5.34E-13
U-233	9.57E-06
U-234	2.25E-04
U-235	5.71E-06
U-236	1.08E-08
U-238	4.44E-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, 119/219, 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
Waste Profile Report

Site	Idaho National Laboratory	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Remediation/D&D Waste	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2013	
Stream Name	ICP Retrieved Sludge Waste (Inorganic/Organic Sludge/Roaster Oxide)				Activity Concentrations Decayed to CY	2013	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	98.6	0.0	98.6
55-gal Drum Equivalent	2072.3	0.0	2072.3
Current Form Total	2170.9	0.0	2170.9

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	2755.4	0.0	2755.4
Final Form Total	2755.4	0.0	2755.4

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	0.15
Aluminum-based Metal/Alloys	0.01
Other Metal/Alloys	0.01
Other Inorganic Materials	35.13
Cellulose	0.35
Rubber	0.10
Plastic	0.65
Cement	0.13
Solidified Inorganic Material	148.41
Solidified Organic Material	308.68
Soil	16.64
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	1.51E+00
Cm-244	2.56E-05
Cs-137	1.26E-05
Np-237	2.31E-05
Pu-238	2.02E-02
Pu-239	4.72E-01
Pu-240	1.06E-01
Pu-241	8.58E-01
Pu-242	1.86E-05
Sr-90	1.38E-05
Th-229	1.60E-09
Th-230	2.59E-09
Th-232	7.73E-20
U-233	1.81E-05
U-234	2.82E-04
U-235	7.43E-06
U-236	3.13E-09
U-238	1.22E-03

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
Waste Profile Report

Site	Idaho National Laboratory	Summary Category	S4000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Remediation/D&D Waste	Waste Matrix Code Group	Contaminated Soil/Debris Waste		Inventory Date	12/31/2013	
Stream Name	ICP Retrieved Soils				Activity Concentrations Decayed to CY	2013	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	11.2	0.0	11.2
55-gal Drum Equivalent	454.9	0.0	454.9
Current Form Total	466.1	0.0	466.1

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	566.0	0.0	566.0
Final Form Total	566.0	0.0	566.0

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	0.48
Aluminum-based Metal/Alloys	0.02
Other Metal/Alloys	0.10
Other Inorganic Materials	19.10
Cellulose	12.09
Rubber	0.29
Plastic	5.21
Cement	0.30
Solidified Inorganic Material	9.81
Solidified Organic Material	5.10
Soil	482.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	8.08E-01
Cs-137	1.45E-05
Np-237	1.22E-05
Pu-238	2.30E-02
Pu-239	5.96E-01
Pu-240	1.33E-01
Pu-241	8.56E-01
Pu-242	1.91E-05
Sr-90	1.59E-05
Th-229	2.41E-10
Th-230	2.44E-09
Th-232	3.57E-10
U-233	2.74E-06
U-234	2.65E-04
U-235	4.03E-05
U-236	3.93E-09
U-238	8.12E-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-Silver Drum**

Appendix A
Waste Profile Report

Site	Idaho National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	RH
Source Cat.	R&D/R&D Laboratory Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2013	
Stream Name	Suspect RH TRU Waste from AMWTP Box line				Activity Concentrations Decayed to CY	2013	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
85-gal Drum	0.3	0.0	0.3
Current Form Total	0.3	0.0	0.3

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/o Liner	0.6	0.0	0.6
Final Form Total	0.6	0.0	0.6

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	40.06
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	48.08
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	12.82
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	8.70
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	2.68E+01
Np-237	2.63E-04
Pu-238	7.79E-04
Pu-239	2.79E-02
Pu-240	6.22E-03
Pu-241	4.70E-02
Pu-242	8.12E-07

Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D027, D029, D030, D034, D037, D043, F001, F002, F004, F005

**No TRUCON
Codes Provided**

Waste Stream Description

This waste consists of one inner silver drum that contains waste from multiple Rocky Flats drums in box line. Silver drum is overpacked in 85 gallon drum

Waste Stream ID: **IN-ID-Source Material**

Appendix A
Waste Profile Report

Site	Idaho National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	RH
Source Cat.	R&D/R&D Laboratory Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2013		
Stream Name	Miscellaneous Source Material				Activity Concentrations Decayed to CY	2013	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
85-gal Drum	0.6	0.0	0.6
Current Form Total	0.6	0.0	0.6

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/o Liner	1.2	0.0	1.2
Final Form Total	1.2	0.0	1.2

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	44.07
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	120.19
Other Inorganic Materials	8.01
Cellulose	0.00
Rubber	0.00
Plastic	4.01
Cement	320.51
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	8.70
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	1.50E+01
Cs-137	5.75E-01
Pu-238	1.24E-02
Pu-239	1.44E+00
Pu-240	9.78E-02
Pu-241	7.52E-01
Pu-242	1.29E-05
Sr-90	6.42E-01

No Hazardous
Waste Numbers
Provided

No TRUCON
Codes Provided

Waste Stream Description

This waste stream consists of two 55 gallon drums that were retrieved by AMWTP and overpacked in 85 gallon drums

Waste Stream ID: **IN-ID-SRP-S3000**

Appendix A
Waste Profile Report

Site	Idaho National Laboratory	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Remediation/D&D Waste	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2013	
Stream Name	INL Sludge Repackage Project Combined Sludge Waste				Activity Concentrations Decayed to CY	2013	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	70.1	0.0	70.1
Current Form Total	70.1	0.0	70.1

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	70.1	0.0	70.1
Final Form Total	70.1	0.0	70.1

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	1.32
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.06
Other Inorganic Materials	9.23
Cellulose	0.19
Rubber	0.50
Plastic	4.96
Cement	0.00
Solidified Inorganic Material	382.01
Solidified Organic Material	229.20
Soil	0.13
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	1.43E-01
Cs-137	8.60E-09
Np-237	2.59E-06
Pu-238	2.66E-03
Pu-239	2.66E-03
Pu-240	7.71E-03
Pu-241	8.02E-02
Pu-242	1.50E-06
Sr-90	9.48E-09
U-234	1.03E-04
U-235	3.26E-06
U-238	1.22E-04

Haz. Waste No(s).

D004, D005, D006,
D007, D008, D009,
D010, D011, D022,
D026, D027, D028,
D029, D030, D032,
D034, D036, D037,
F001, F002, F005,
F006, F007, F009

TRUCON Code(s)

111/211, 112/212,
132/232

Waste Stream Description

This waste stream consists of sludge generated from repackaging of Rocky Flats inorganic and organic sludge wastes by the Sludge Repackage Project (SRP) at the RWMC.

Waste Stream ID: **IN-ID-TRA-W345-RH**

Appendix A
Waste Profile Report

Site	Idaho National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	RH
Source Cat.	R&D/R&D Laboratory Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2013		
Stream Name	RH-TRU Debris from TRA at the INL			Activity Concentrations Decayed to CY	2013		

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum	0.2	0.0	0.2
Current Form Total	0.2	0.0	0.2

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/o Liner	0.6	0.0	0.6
Final Form Total	0.6	0.0	0.6

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	32.05
Aluminum-based Metal/Alloys	4.81
Other Metal/Alloys	24.04
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	3.21
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	8.70
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Cm-244	4.49E+02
Pu-240	3.65E+00

Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D019, D022, F002, F004, F005
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TRUCON Code(s)

325

Waste Stream Description

This waste stream consists of one container of debris waste. This drum contains small volume of curium oxide cross section samples packaged in 1973 and sent to RWMC for interim storage. This drum was retrieved by AMWTP in 2009 and was sent to INTEC for characterization as suspect RH TRU Waste

Waste Stream ID: **IN-NRF-SPC-103**

Appendix A
Waste Profile Report

Site	Idaho National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	RH
Source Cat.	R&D/R&D Laboratory Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2013		
Stream Name	RH-TRU Debris Waste from the Naval Nuclear Propulsion Program (NNPP)			Activity Concentrations Decayed to CY	2013		

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
Can	0.8	0.0	0.8
Current Form Total	0.8	0.0	0.8

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/o Liner	36.8	0.0	36.8
Final Form Total	36.8	0.0	36.8

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	252.88
Aluminum-based Metal/Alloys	36.94
Other Metal/Alloys	0.24
Other Inorganic Materials	8.64
Cellulose	5.02
Rubber	0.20
Plastic	6.38
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	8.70
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	3.01E-01
Cs-137	3.15E+02
Np-237	4.77E-07
Pu-238	2.09E+01
Pu-239	5.78E-02
Pu-240	2.52E-02
Pu-241	1.92E+00
Pu-242	7.53E-05
Sr-90	2.94E+02
Th-229	3.07E-05
Th-230	1.20E-06
Th-232	4.60E-19
U-233	6.97E-02
U-234	2.61E-02
U-235	4.07E-05
U-236	3.73E-09
U-238	3.94E-06

Haz. Waste No(s).D004, D005, D006,
D007, D008, D010,
D011No TRUCON
Codes Provided**Waste Stream Description**

This waste stream was generated at NNPP facilities and consists of 109 containers in storage at the INL. Waste was generated during the same or similar process that generated the SPC waste. AK information is being collected to assure the waste stream meets WIPP requirements. Waste stream includes debris waste generated during analysis of post-irradiated nuclear fuel from Naval Reactors programs using destructive examination methods.

Waste Stream ID: **IN-W323**

Appendix A
Waste Profile Report

Site	Idaho National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Other/Multiple Sources	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2013	
Stream Name	Combustible Lab Waste					Activity Concentrations Decayed to CY	2013

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	6.7	0.0	6.7
Current Form Total	6.7	0.0	6.7

Final Form Volumes			
Container Type	Stored	Proj.	Total
SWB w/ 4 - 55-gal Drums w/ Liners	15.1	0.0	15.1
Final Form Total	15.1	0.0	15.1

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	12.15
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.86
Cellulose	70.39
Rubber	0.79
Plastic	7.03
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	16.30
Packaging Material, Rubber	0.44
Packaging Material, Steel	211.11
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	3.43E-02
Np-237	1.60E-07
Pu-238	5.94E-01
Pu-239	1.32E-01
Pu-241	4.83E-01
Th-229	3.38E-15
Th-230	5.04E-09
U-233	6.07E-12
U-234	4.43E-05
U-235	5.07E-05

Haz. Waste No(s).

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

**No TRUCON
Codes Provided**

Waste Stream Description

This waste stream generated at NRF contains process equipment and combustible materials.

Waste Stream ID: **IN-W345**

Appendix A
Waste Profile Report

Site	Idaho National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Remediation/D&D Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2013	
Stream Name	TRU Scrap					Activity Concentrations Decayed to CY	2013

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	3.1	0.0	3.1
Box - Misc	3.2	0.0	3.2
Current Form Total	6.3	0.0	6.3

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	4.0	0.0	4.0
Final Form Total	4.0	0.0	4.0

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	172.15
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.18
Other Inorganic Materials	4.29
Cellulose	144.77
Rubber	13.06
Plastic	116.14
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	6.33E-02
Am-243	1.05E-04
Cs-137	1.50E-04
Np-237	1.10E-04
Pu-238	3.04E-02
Pu-239	1.10E+00
Pu-240	2.45E-01
Pu-241	1.75E+00
Pu-242	3.18E-05
Sr-90	1.64E-04
Th-229	3.27E-13
Th-230	2.16E-11
Th-232	2.86E-18
U-233	1.86E-09
U-234	7.62E-07
U-235	4.34E-09
U-236	2.90E-08
U-238	6.68E-06

Haz. Waste No(s).

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

**No TRUCON
Codes Provided**

Waste Stream Description

This waste stream includes debris waste generated at multiple locations on the INL (INTEC, NRF, TRA, and RWMC). The waste generated at TRA (IR-155) consists of a plastic glove box, hydraulic pump containing oil, vacuum pumps, centrifuges, tools and experimental fuel capsules. Debris waste generated at the other facilities is assumed to be similar based on assignment of the same content code.

Waste Stream ID: **IN-W347**

Appendix A
Waste Profile Report

Site	Idaho National Laboratory	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Other/Multiple Sources	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2013	
Stream Name	Absorbed Liquids				Activity Concentrations Decayed to CY	2013	

Waste Volume Detail (m³)

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
Current Form Total	67.3	0.0	67.3

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	38.1	0.0	38.1
Final Form Total	38.1	0.0	38.1

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	0.00
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	54.88
Cellulose	0.00
Rubber	0.00
Plastic	0.00
Cement	0.00
Solidified Inorganic Material	117.54
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	1.63E+00
Cs-137	4.36E-06
Np-237	3.47E-05
Pu-238	2.03E-01
Pu-239	3.05E+00
Pu-240	9.76E-01
Pu-241	6.76E+00
Pu-242	1.08E-04
Sr-90	4.76E-06
Th-229	9.93E-14
Th-230	1.47E-09
Th-232	1.14E-17
U-233	5.71E-10
U-234	4.11E-05
U-235	9.34E-06
U-236	1.16E-07
U-238	1.59E-04

Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D019, D027, D028, D029, D030, D037, F002, F003, F004, F005

**No TRUCON
Codes Provided**

Waste Stream Description

This waste generated at Argonne National Laboratory-East, consists of various absorbed liquids and homogeneous solids from multiple ANL-E buildings.

Waste Stream ID: **IN-W351**

Appendix A
Waste Profile Report

Site	Idaho National Laboratory	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	R&D/R&D Laboratory Waste	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2013	
Stream Name	Empty Bottles and Absorbent			Activity Concentrations Decayed to CY		2013	

Waste Volume Detail (m³)

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

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	1.5	0.0	1.5
Final Form Total	1.5	0.0	1.5

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	3.40
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	3.40
Cellulose	202.10
Rubber	2.30
Plastic	25.30
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	1.44E+00
Np-237	1.50E-05
Pu-238	1.72E-01
Pu-239	1.66E+00
Pu-240	8.69E-01
Pu-241	7.47E+00
Pu-242	2.90E-04
Th-229	4.10E-14
Th-230	3.64E-11
Th-232	1.02E-17
U-233	2.38E-10
U-234	1.97E-06
U-235	6.54E-09
U-236	1.03E-07
U-238	1.80E-13

Haz. Waste No(s).

D005, D006, D007,
D008, D009, D010,
D011, D019, D027,
D028, D029, D030,
D037, F002, F004,
F005

**No TRUCON
Codes Provided**

Waste Stream Description

This waste stream, generated at Argonne National Laboratory-East, consists of empty polyethylene and glass bottles used to transport small volumes of liquid. After the liquids were emptied from the transport bottles, the empty transport bottles were filled with vermiculite or Oil-Dri®.

Waste Stream ID: **KA-T001**

Appendix A
Waste Profile Report

Site	Knolls Atomic Power Laboratory - Schenectady	Summary Category	S5000	Defense Determination	Defense-Related	Handling	RH
Source Cat.	R&D/R&D Laboratory Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2013		
Stream Name	Transuranic Debris			Activity Concentrations Decayed to CY	2013		

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
Can	0.0	0.1	0.1
Current Form Total	0.0	0.1	0.1

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	0.0	12.5	12.5
Final Form Total	0.0	12.5	12.5

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	1.87
Aluminum-based Metal/Alloys	0.01
Other Metal/Alloys	0.00
Other Inorganic Materials	0.05
Cellulose	1.54
Rubber	0.14
Plastic	1.24
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	45.67
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	9.43E-04
Am-243	1.34E-07
Cm-244	5.08E-04
Cs-137	2.26E+00
Np-237	6.86E-06
Pu-238	3.88E-02
Pu-239	6.11E-05
Pu-240	4.93E-05
Pu-241	1.43E-02
Pu-242	3.10E-07
Pu-244	4.34E-15
Sr-90	2.25E+00
Th-229	2.51E-12
Th-230	4.24E-09
Th-232	1.05E-13
U-233	1.04E-09
U-234	4.56E-05
U-235	9.54E-07
U-236	9.21E-06
U-238	3.66E-09

No Hazardous Waste Numbers Provided

TRUCON Code(s)
325

Waste Stream Description

This waste stream has not yet been generated. It consists of organic and inorganic particulate and debris.

Waste Stream ID: **KA-T002**

Appendix A
Waste Profile Report

Site	Knolls Atomic Power Laboratory - Schenectady	Summary Category	S3000	Defense Determination	Defense-Related	Handling	RH
Source Cat.	R&D/R&D Laboratory Waste	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2013	
Stream Name	Transuranic Sludge			Activity Concentrations Decayed to CY		2013	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
Tank(s)	1.0	0.0	1.0
Current Form Total	1.0	0.0	1.0

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	1.9	0.0	1.9
Final Form Total	1.9	0.0	1.9

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	10.68
Aluminum-based Metal/Alloys	5.34
Other Metal/Alloys	560.90
Other Inorganic Materials	0.00
Cellulose	5.34
Rubber	5.34
Plastic	5.34
Cement	0.00
Solidified Inorganic Material	10.68
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	45.67
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	2.26E-02
Am-243	9.66E-10
Cm-244	1.32E-03
Cs-137	1.33E+01
Np-237	2.18E-08
Pu-238	4.06E-01
Pu-239	6.61E-03
Pu-240	6.61E-03
Pu-241	5.77E-02
Sr-90	1.04E+01
Th-229	2.56E-07
Th-230	2.53E-04
Th-232	1.28E-04
U-233	9.70E-04
U-234	9.74E-04
U-235	2.21E-04
U-236	2.21E-04

No Hazardous Waste Numbers Provided

TRUCON Code(s)
325

Waste Stream Description

Organic and inorganic particulate and sludge.

Waste Stream ID: **KA-W016**

Appendix A
Waste Profile Report

Site	Knolls Atomic Power Laboratory - Schenectady	Summary Category	S5000	Defense Determination	Defense-Related	Handling	RH
Source Cat.	R&D/R&D Laboratory Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2013		
Stream Name	Transuranic Debris				Activity Concentrations Decayed to CY	2013	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
Can	0.0	0.0	0.0
Current Form Total	0.0	0.0	0.0

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	0.0	0.6	0.6
Final Form Total	0.0	0.6	0.6

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	18.73
Aluminum-based Metal/Alloys	0.11
Other Metal/Alloys	0.02
Other Inorganic Materials	0.46
Cellulose	15.43
Rubber	1.39
Plastic	12.38
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	45.67
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	3.18E-04
Am-243	1.32E-06
Cm-244	1.72E-04
Cs-137	7.65E-01
Np-237	2.32E-06
Pu-238	1.32E-02
Pu-239	2.07E-05
Pu-240	1.67E-05
Pu-241	4.85E-03
Pu-242	1.05E-07
Pu-244	4.30E-14
Sr-90	7.63E-01
Th-229	2.49E-11
Th-230	3.40E-08
Th-232	1.04E-12
U-233	9.69E-09
U-234	1.54E-05
U-235	3.22E-07
U-236	3.11E-06
U-238	1.24E-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. Details of waste characteristics will be developed upon generation.

Waste Stream ID: **KN-B234TRU**

Appendix A
Waste Profile Report

Site	Knolls Atomic Power Laboratory - Nuclear Fuel Services	Summary Category	S4000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Remediation/D&D Waste	Waste Matrix Code Group	Contaminated Soil/Debris Waste		Inventory Date	12/31/2013	
Stream Name	Building 234 TRU Waste					Activity Concentrations Decayed to CY	2013

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	31.0	0.0	31.0
55-gal Drum Dir Ld w/o Liner	1.5	0.0	1.5
Box - Crate	30.8	0.0	30.8
Uncontained	0.0	701.6	701.6
Current Form Total	63.2	701.6	764.8

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	69.9	701.6	771.5
Final Form Total	69.9	701.6	771.5

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	15.88
Aluminum-based Metal/Alloys	1.15
Other Metal/Alloys	0.00
Other Inorganic Materials	14.88
Cellulose	2.26
Rubber	0.13
Plastic	13.97
Cement	0.00
Solidified Inorganic Material	266.14
Solidified Organic Material	0.00
Soil	709.71
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	1.41E+00
Np-237	2.25E-06
Pu-238	1.62E-01
Pu-239	5.04E+00
Pu-240	5.04E+00
Pu-241	5.87E+00
Th-229	7.94E-06
Th-230	2.80E-03
Th-232	9.34E-04
U-233	1.81E-02
U-234	1.81E-02
U-235	3.42E-03
U-236	3.43E-03
U-238	4.42E-04

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.

Waste Stream ID: LA-CIN01.001

Appendix A
Waste Profile Report

Site	Los Alamos National Laboratory	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2013	
Stream Name	Cemented TRU Waste				Activity Concentrations Decayed to CY	2013	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
110-gal Drum w/ 1 - 55-gal Drum w/ Liner	8.5	0.0	8.5
55-gal Drum Dir Ld w/ Liner	113.4	83.2	196.6
55-gal POC - 12" w/ Liner	2.1	0.0	2.1
85-gal Drum w/ 1 - 55-gal Drum w/ Liner	246.7	0.0	246.7
Cask - Misc w/ 1 - 30-gal Drum	4.4	0.0	4.4
Cask - Misc w/ 2 - 30-gal Drums	0.8	0.0	0.8
SWB Dir Ld w/ Liner	7.6	0.0	7.6
SWB w/ 4 - 55-gal Drums w/ Liners	3.8	0.0	3.8
Current Form Total	387.2	83.2	470.4

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	289.7	83.2	372.9
55-gal POC - 12" w/ Liner	2.1	0.0	2.1
SWB Dir Ld w/ Liner	7.6	0.0	7.6
SWB w/ 4 - 55-gal Drums w/ Liners	3.8	0.0	3.8
Final Form Total	303.2	83.2	386.4

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	34.78
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	6.19
Cement	972.99
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.73
Packaging Material, Plastic	36.16
Packaging Material, Rubber	0.56
Packaging Material, Steel	134.14
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	1.15E+02
Am-243	2.74E-03
Cs-137	1.47E-05
Np-237	3.84E-04
Pu-238	7.82E+00
Pu-239	1.77E+01
Pu-240	4.71E+00
Pu-241	9.13E+01
Pu-242	8.15E-03
Pu-244	5.18E-09
Sr-90	1.48E-05
Th-232	1.45E-06
U-233	3.18E-04
U-234	1.15E-03
U-235	1.69E-05
U-236	7.12E-06
U-238	5.83E-04

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)

114/214, 125/225,
126/226

Waste Stream Description

Inorganic homogenous solid waste (cemented TRU waste) generated in TA-55.

Waste Stream ID: LA-CIN02.001

Appendix A
Waste Profile Report

Site	Los Alamos National Laboratory	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2013	
Stream Name	Cemented TRU Waste				Activity Concentrations Decayed to CY	2013	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
110-gal Drum w/ 1 - 55-gal Drum w/ Liner	4.6	0.0	4.6
55-gal Drum Dir Ld w/ Liner	12.1	62.4	74.5
85-gal Drum w/ 1 - 55-gal Drum w/ Liner	7.1	0.0	7.1
SWB Dir Ld w/ Liner	2.1	0.0	2.1
SWB w/ 4 - 55-gal Drums w/ Liners	102.6	0.0	102.6
Current Form Total	128.4	62.4	190.8

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	19.3	62.4	81.7
SWB Dir Ld w/ Liner	3.8	0.0	3.8
SWB w/ 4 - 55-gal Drums w/ Liners	102.1	0.0	102.1
Final Form Total	125.2	62.4	187.6

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	0.00
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	0.58
Cement	581.40
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	25.04
Packaging Material, Rubber	0.49
Packaging Material, Steel	174.94
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	2.70E+00
Am-243	7.35E-06
Cs-137	6.56E-07
Np-237	7.36E-06
Pu-238	2.90E-01
Pu-239	3.73E+00
Pu-240	1.57E-01
Pu-241	1.34E+00
Pu-242	2.26E-05
Sr-90	6.11E-07
U-233	1.60E-04
U-234	4.76E-05
U-235	1.35E-05
U-238	9.77E-07

Haz. Waste No(s).

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

TRUCON Code(s)

111/211, 114/214,
125/225

Waste Stream Description

Homogeneous cemented inorganics generated in the TA-50-01 RLWTF pretreatment process.

Waste Stream ID: **LA-CIN03.001**

Appendix A
Waste Profile Report

Site	Los Alamos National Laboratory	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2013	
Stream Name	Cemented TRU Waste				Activity Concentrations Decayed to CY	2013	

Waste Volume Detail (m³)

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	1.6	0.0	1.6
Current Form Total	3.9	0.0	3.9

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	3.3	0.0	3.3
Final Form Total	3.3	0.0	3.3

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	0.00
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	1.98
Cement	657.41
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	3.54E-02
Am-243	9.74E-06
Cs-137	3.67E-05
Np-237	8.23E-06
Pu-238	3.68E-02
Pu-239	3.52E-01
Pu-240	8.01E-03
Pu-241	6.27E-02
Pu-242	2.97E-07
Sr-90	3.66E-05
Th-229	1.79E-07
Th-230	1.17E-09
Th-232	5.85E-21
U-233	3.58E-11
U-234	1.27E-04
U-235	3.03E-06
U-236	2.37E-10
U-238	1.80E-04

Haz. Waste No(s).

D004, D005, D006,
D007, D008, D009,
D010, D011, D022,
D027, D028, D029,
D030, D037, D043,
F001, F002, F003,
F004, F005

TRUCON Code(s)

114/214, 125/225,
126/226

Waste Stream Description

Cemented TRU waste generated in the CMR during facility and equipment operations and maintenance processes.

Waste Stream ID: LA-LANHD01

Appendix A
Waste Profile Report

Site	Los Alamos National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	R&D/R&D Laboratory Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2013		
Stream Name	TRU METAL WASTE	Activity Concentrations Decayed to CY			2013		

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	1.2	0.0	1.2
SWB Dir Ld w/ Liner	3.8	0.0	3.8
Current Form Total	5.0	0.0	5.0

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	1.2	0.0	1.2
SWB Dir Ld w/ Liner	3.8	0.0	3.8
Final Form Total	5.0	0.0	5.0

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	266.95
Aluminum-based Metal/Alloys	1.08
Other Metal/Alloys	32.00
Other Inorganic Materials	173.12
Cellulose	22.09
Rubber	33.14
Plastic	102.21
Cement	0.00
Solidified Inorganic Material	4.25
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	10.10
Packaging Material, Rubber	0.29
Packaging Material, Steel	147.81
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	3.04E-02
Np-237	2.67E-14
Pu-238	8.75E-02
Pu-239	4.51E-01
Pu-240	1.21E-01
Pu-241	6.93E-01
Pu-242	8.70E-06
Pu-244	1.64E-14
U-234	8.20E-06
U-235	2.97E-10

No Hazardous Waste Numbers Provided

TRUCON Code(s)
117/217

Waste Stream Description

ALL OTHER NON-COMBUSTIBLE WASTE

Waste Stream ID: **LA-MHD01.001**

Appendix A
Waste Profile Report

Site	Los Alamos National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	R&D/R&D Laboratory Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2013		
Stream Name	Heterogeneous Debris			Activity Concentrations Decayed to CY	2013		

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
110-gal Drum w/ 1 - 55-gal Drum w/ Liner	0.7	0.0	0.7
55-gal Drum Dir Ld w/ Liner	75.3	2448.2	2523.5
55-gal POC - 12" w/ Liner	9.6	0.0	9.6
55-gal POC - 6" w/ Liner	0.2	0.0	0.2
85-gal Drum w/ 1 - 55-gal Drum w/ Liner	34.8	0.0	34.8
Box - Crate	20.0	0.0	20.0
Box - FRP	38.2	0.0	38.2
Cask - Misc w/ 1 - 30-gal Drum	65.6	0.0	65.6
Cask - Misc w/ 2 - 30-gal Drums	4.0	0.0	4.0
Other	55.7	0.0	55.7
Other - Sphere	16.7	0.0	16.7
Other - Tritium Torpedo	3.7	0.0	3.7
SWB Dir Ld w/ Liner	19.0	108.3	127.3
SWB w/ 4 - 55-gal Drums w/ Liners	53.2	0.0	53.2
Current Form Total	396.7	2556.5	2953.1

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	251.3	2448.2	2699.4
55-gal POC - 12" w/ Liner	9.6	0.0	9.6
55-gal POC - 6" w/ Liner	0.2	0.0	0.2
SWB Dir Ld w/ Liner	153.1	107.7	260.8
SWB w/ 4 - 55-gal Drums w/ Liners	52.9	0.0	52.9
Final Form Total	467.1	2555.9	3022.9

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	111.11
Aluminum-based Metal/Alloys	0.45
Other Metal/Alloys	13.32
Other Inorganic Materials	72.05
Cellulose	9.20
Rubber	13.79
Plastic	42.54
Cement	0.00
Solidified Inorganic Material	1.77
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.44
Packaging Material, Plastic	33.61
Packaging Material, Rubber	0.53
Packaging Material, Steel	135.40
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	3.86E+00
Am-243	1.18E-03
Cm-244	4.21E-01
Cs-137	1.99E-03
Np-237	4.04E-04
Pu-238	4.10E+01
Pu-239	8.75E+00
Pu-240	2.41E+00
Pu-241	3.95E+01
Pu-242	1.74E-02
Pu-244	7.39E-09
Sr-90	1.99E-03
Th-229	1.73E-06
U-233	1.00E-03
U-234	4.59E-03
U-235	1.45E-06
U-236	9.50E-07
U-238	3.27E-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)

112/212, 115/215, 116/216, 117/217, 118/218, 119/219, 122/222, 123/223, 124/224, 125/225, 133/233, 154

Waste Stream Description

Mixed heterogeneous debris waste generated in TA-55.

Waste Stream ID: LA-MHD03.001

Appendix A
Waste Profile Report

Site	Los Alamos National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Remediation/D&D Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2013		
Stream Name	Heterogeneous Debris	Activity Concentrations Decayed to CY				2013	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
110-gal Drum w/ 1 - 55-gal Drum w/ Liner	0.3	0.0	0.3
30-gal Drum	4.6	0.0	4.6
55-gal Drum Dir Ld w/ Liner	72.4	124.8	197.2
55-gal POC - 12" w/ Liner	0.4	0.0	0.4
85-gal Drum w/ 1 - 55-gal Drum w/ Liner	5.5	0.0	5.5
Cask - Misc w/ 1 - 30-gal Drum	0.8	0.0	0.8
SWB Dir Ld w/ Liner	9.5	0.0	9.5
SWB w/ 4 - 55-gal Drums w/ Liners	3.8	0.0	3.8
Current Form Total	97.3	124.8	222.1

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	82.4	124.8	207.2
55-gal POC - 12" 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	3.8	0.0	3.8
Final Form Total	96.0	124.8	220.8

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	22.86
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	7.48
Other Inorganic Materials	36.26
Cellulose	29.21
Rubber	2.96
Plastic	85.76
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.57
Vitrified	0.00
Packaging Material, Cellulose	0.25
Packaging Material, Plastic	35.18
Packaging Material, Rubber	0.55
Packaging Material, Steel	133.86
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	2.21E-01
Am-243	3.06E-04
Cm-244	1.12E+01
Cs-137	6.86E-03
Np-237	6.69E-05
Pu-238	1.54E+00
Pu-239	4.40E-01
Pu-240	1.22E-01
Pu-241	1.81E+00
Pu-242	3.53E-05
Pu-244	5.07E-11
Sr-90	1.04E-02
Th-229	3.45E-09
U-234	4.54E-04
U-235	7.74E-06
U-236	1.34E-06
U-238	2.05E-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
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TRUCON Code(s)

112/212, 115/215, 116/216, 117/217, 118/218, 119/219, 120/220, 123/223, 125/225, 154
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Waste Stream Description

Mixed heterogeneous combustible and non-combustible debris.

Waste Stream ID: **LA-MHD04.001**

Appendix A
Waste Profile Report

Site	Los Alamos National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2013		
Stream Name	Heterogeneous Debris			Activity Concentrations Decayed to CY	2013		

Waste Volume Detail (m³)

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
55-gal POC - 12" w/ Liner	0.3	0.0	0.3
85-gal Drum w/ 1 - 55-gal Drum w/ Liner	0.6	0.0	0.6
Box - Crate	125.1	0.0	125.1
Box - FRP	85.5	0.0	85.5
Other	37.9	0.0	37.9
SWB Dir Ld w/ Liner	64.6	0.0	64.6
SWB w/ 4 - 55-gal Drums w/ Liners	1.9	0.0	1.9
Current Form Total	316.6	0.0	316.6

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	1.2	0.0	1.2
55-gal POC - 12" w/ Liner	0.2	0.0	0.2
SWB Dir Ld w/ Liner	311.9	0.0	311.9
SWB w/ 4 - 55-gal Drums w/ Liners	1.9	0.0	1.9
Final Form Total	315.2	0.0	315.2

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	42.99
Aluminum-based Metal/Alloys	16.39
Other Metal/Alloys	32.95
Other Inorganic Materials	9.37
Cellulose	27.93
Rubber	21.58
Plastic	16.06
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.09
Packaging Material, Plastic	1.46
Packaging Material, Rubber	0.20
Packaging Material, Steel	153.94
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	2.47E-01
Am-243	9.74E-08
Cs-137	1.99E-05
Np-237	4.06E-06
Pu-238	4.86E+00
Pu-239	7.14E-01
Pu-240	1.97E-01
Pu-241	1.40E+00
Pu-242	2.13E-05
Sr-90	1.86E-05
Th-229	4.45E-08
U-234	5.44E-04
U-235	2.74E-07
U-236	3.26E-08
U-238	1.14E-06

Haz. Waste No(s).

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

TRUCON Code(s)

115/215, 116/216,
117/217, 118/218,
119/219, 123/223,
125/225, 154

Waste Stream Description

Mixed heterogeneous combustible and non-combustible debris generated at TA-21 DP West Facility during plutonium processing and associated operations.

Waste Stream ID: LA-MHD05-ITRI.001

Appendix A
Waste Profile Report

Site	Los Alamos National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2013		
Stream Name	Heterogeneous Debris Waste			Activity Concentrations Decayed to CY	2013		

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	3.3	0.0	3.3
85-gal Drum w/ 1 - 55-gal Drum w/ Liner	0.3	0.0	0.3
Current Form Total	3.7	0.0	3.7

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	3.5	0.0	3.5
Final Form Total	3.5	0.0	3.5

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	138.61
Aluminum-based Metal/Alloys	4.28
Other Metal/Alloys	8.32
Other Inorganic Materials	20.67
Cellulose	4.28
Rubber	6.80
Plastic	6.80
Cement	0.00
Solidified Inorganic Material	55.44
Solidified Organic Material	6.80
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	5.47E+00
Am-243	2.70E-04
Cm-244	5.95E+00
Cs-137	3.62E-06
Np-237	1.65E-05
Pu-238	5.28E+00
Pu-239	1.58E-01
Pu-240	3.64E-02
Pu-241	2.55E-01
Pu-242	2.85E-06
Sr-90	3.62E-06
U-233	2.73E-05
U-234	6.53E-05
U-235	1.80E-09

Haz. Waste No(s).

D005, D006, D007, D008, D009, D011, D019, F005

TRUCON Code(s)

125/225, 154

Waste Stream Description

Mixed CH-TRU waste and consists of dry heterogeneous organic and inorganic debris stored at LANL resulting from the preparation of aerosols of TRU isotopes for inhalation studies performed at the LRR1.

Waste Stream ID: **LA-MHD08.001**

Appendix A
Waste Profile Report

Site	Los Alamos National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	R&D/R&D Laboratory Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2013		
Stream Name	Heterogeneous Debris Waste			Activity Concentrations Decayed to CY	2013		

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	1.0	0.0	1.0
Current Form Total	1.0	0.0	1.0

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	1.0	0.0	1.0
Final Form Total	1.0	0.0	1.0

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	21.65
Aluminum-based Metal/Alloys	0.24
Other Metal/Alloys	7.72
Other Inorganic Materials	13.75
Cellulose	15.65
Rubber	5.29
Plastic	38.11
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	9.85E-02
Am-243	4.64E-03
Cm-244	6.66E+01
Cs-137	8.68E-04
Np-237	1.37E-02
Pu-238	3.96E-01
Pu-239	4.26E-01
Pu-240	1.34E-02
Pu-241	1.10E+00
Pu-242	5.43E-01
Sr-90	8.68E-04
Th-229	7.47E-05
Th-232	2.55E-06
U-234	3.89E-05
U-235	2.36E-13

Haz. Waste No(s).

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

TRUCON Code(s)

111/211, 115/215,
116/216, 117/217,
118/218, 119/219,
120/220, 123/223,
125/225, 154

Waste Stream Description

Mixed heterogeneous combustible and non-combustible debris generated during plutonium and uranium R&D processes in the TA48 Alpha Facility.

Waste Stream ID: LA-MHD09.001

Appendix A
Waste Profile Report

Site	Los Alamos National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2013		
Stream Name	Heterogeneous Debris	Activity Concentrations Decayed to CY				2013	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.8	0.0	0.8
85-gal Drum w/ 1 - 55-gal Drum w/ Liner	1.3	0.0	1.3
Other	16.8	0.0	16.8
SWB w/ 4 - 55-gal Drums w/ Liners	1.9	0.0	1.9
Current Form Total	20.8	0.0	20.8

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	1.7	0.0	1.7
SWB Dir Ld w/ Liner	17.0	0.0	17.0
SWB w/ 4 - 55-gal Drums w/ Liners	1.9	0.0	1.9
Final Form Total	20.6	0.0	20.6

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	146.83
Aluminum-based Metal/Alloys	53.45
Other Metal/Alloys	54.25
Other Inorganic Materials	5.96
Cellulose	10.98
Rubber	10.12
Plastic	11.10
Cement	0.00
Solidified Inorganic Material	2.45
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	5.49
Packaging Material, Rubber	0.25
Packaging Material, Steel	156.91
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	3.27E-01
Am-243	2.13E-08
Cs-137	6.99E-06
Np-237	3.99E-06
Pu-238	1.54E-01
Pu-239	7.25E-01
Pu-240	2.20E-01
Pu-241	6.67E+00
Pu-242	4.95E-05
Sr-90	6.99E-06
Th-229	6.86E-07
U-233	1.74E-04
U-234	3.21E-05
U-235	5.25E-07
U-236	6.25E-08
U-238	4.27E-09

Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D022, D027, D028, D029, D030, D037, D043, F001, F002, F004, F005, F006, F007, F009

TRUCON Code(s)

115/215, 116/216, 117/217, 118/218, 119/219, 120/220, 123/223, 125/225, 154

Waste Stream Description

Mixed heterogeneous combustible and non-combustible debris from TA-50.

Waste Stream ID: LA-MIN02-V.001

Appendix A
Waste Profile Report

Site	Los Alamos National Laboratory	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2013	
Stream Name	Absorbed Waste				Activity Concentrations Decayed to CY	2013	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	26.9	0.0	26.9
55-gal POC - 12" w/ Liner	10.2	0.0	10.2
85-gal Drum w/ 1 - 55-gal Drum w/ Liner	19.3	0.0	19.3
SWB Dir Ld w/ Liner	1.9	0.0	1.9
Current Form Total	58.4	0.0	58.4

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	39.3	0.0	39.3
55-gal POC - 12" w/ Liner	10.2	0.0	10.2
SWB Dir Ld w/ Liner	1.9	0.0	1.9
Final Form Total	51.4	0.0	51.4

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	26.50
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	26.05
Cement	0.00
Solidified Inorganic Material	457.21
Solidified Organic Material	60.19
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	26.79
Packaging Material, Plastic	35.75
Packaging Material, Rubber	0.55
Packaging Material, Steel	210.55
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	1.38E+01
Am-243	9.58E-04
Cm-244	1.18E-02
Cs-137	1.19E-05
Np-237	1.61E-04
Pu-238	2.50E+00
Pu-239	1.78E+01
Pu-240	4.51E+00
Pu-241	6.85E+01
Pu-242	3.43E-03
Pu-244	1.68E-09
Sr-90	1.21E-05
U-234	5.26E-04
U-235	1.17E-05
U-236	4.25E-06
U-238	5.47E-04

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, 113/213, 122/222, 125/225, 126/226, 129/229

Waste Stream Description

Inorganic particulate waste generated in TA-55.

Waste Stream ID: LA-MIN03-NC.001

Appendix A
Waste Profile Report

Site	Los Alamos National Laboratory	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2013	
Stream Name	Homogeneous Inorganic Solids				Activity Concentrations Decayed to CY	2013	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
110-gal Drum w/ 1 - 55-gal Drum w/ Liner	2.0	0.0	2.0
55-gal Drum Dir Ld w/ Liner	28.7	0.0	28.7
85-gal Drum w/ 1 - 55-gal Drum w/ Liner	62.1	0.0	62.1
Current Form Total	92.8	0.0	92.8

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	68.8	0.0	68.8
Final Form Total	68.8	0.0	68.8

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	0.08
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	4.45
Cement	0.00
Solidified Inorganic Material	834.89
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	5.11E-01
Am-243	2.54E-06
Cs-137	9.69E-06
Np-237	7.99E-07
Pu-238	1.39E-01
Pu-239	3.90E-01
Pu-240	4.41E-03
Pu-241	1.65E-01
Pu-242	5.41E-07
Sr-90	9.71E-06
Th-229	5.21E-08
U-234	2.48E-05
U-235	1.01E-06
U-236	1.71E-08
U-238	2.51E-06

Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D022, D028, D037, F001, F002, F004, F005, F006, F007, F009

TRUCON Code(s)

111/211, 125/225

Waste Stream Description

Homogeneous dewatered sludge generated in the TA-50-01 RLWTF main treatment process.

Waste Stream ID: LA-MIN04-S.001

Appendix A
Waste Profile Report

Site	Los Alamos National Laboratory	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Salt Waste	Inventory Date	12/31/2013		
Stream Name	Salt Waste				Activity Concentrations Decayed to CY	2013	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	1.9	0.0	1.9
55-gal POC - 12" w/ Liner	1.9	0.0	1.9
85-gal Drum w/ 1 - 55-gal Drum w/ Liner	0.3	0.0	0.3
Current Form Total	4.1	0.0	4.1

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	2.1	0.0	2.1
55-gal POC - 12" w/ Liner	1.9	0.0	1.9
Final Form Total	4.0	0.0	4.0

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	34.73
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	2.15
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	18.19
Cement	0.00
Solidified Inorganic Material	110.30
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	63.99
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	319.33
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	1.74E+01
Am-243	5.97E-03
Cs-137	1.18E-04
Np-237	1.22E-04
Pu-238	2.16E+00
Pu-239	3.90E+01
Pu-240	9.73E+00
Pu-241	1.21E+02
Pu-242	2.37E-02
Sr-90	1.19E-04
U-234	1.92E-04
U-235	3.12E-06
U-238	1.64E-04

Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D021, D022, D035, D038, D039, D040, F001, F002, F003, F005
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TRUCON Code(s)

124/224, 125/225

Waste Stream Description

Consists primarily of inorganic homogeneous solid waste (salt waste) generated in TA-55.

Waste Stream ID: LA-MIN05-V.001

Appendix A
Waste Profile Report

Site	Los Alamos National Laboratory	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Remediation/D&D Waste	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2013	
Stream Name	Absorbed TRU Waste					Activity Concentrations Decayed to CY	2013

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	1.5	0.0	1.5
SWB Dir Ld w/ Liner	1.9	0.0	1.9
Current Form Total	3.4	0.0	3.4

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	1.5	0.0	1.5
SWB Dir Ld w/ Liner	1.9	0.0	1.9
Final Form Total	3.3	0.0	3.3

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	23.71
Aluminum-based Metal/Alloys	4.48
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	9.29
Rubber	0.96
Plastic	13.45
Cement	0.00
Solidified Inorganic Material	134.22
Solidified Organic Material	134.22
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	16.81
Packaging Material, Rubber	0.36
Packaging Material, Steel	143.57
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	5.34E-01
Am-243	3.92E-03
Cs-137	1.62E-05
Np-237	5.50E-03
Pu-238	6.86E-01
Pu-239	1.43E+00
Pu-240	3.38E-01
Pu-241	4.62E+00
Pu-242	2.90E-05
Sr-90	1.62E-05
U-234	1.18E-03
U-235	1.10E-05
U-236	1.52E-07
U-238	1.99E-05

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

TRUCON Code(s)

125/225

Waste Stream Description

Mixed homogeneous solids

Waste Stream ID: **LA-MSG04.001**

Appendix A
Waste Profile Report

Site	Los Alamos National Laboratory	Summary Category	S4000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Spill Clean-ups/Emergency Response Actions	Waste Matrix Code Group	Contaminated Soil/Debris Waste		Inventory Date	12/31/2013	
Stream Name	Contaminated Soil			Activity Concentrations Decayed to CY		2013	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	8.1	0.0	8.1
Box - Crate	19.0	0.0	19.0
SWB Dir Ld w/ Liner	36.1	0.0	36.1
Current Form Total	63.2	0.0	63.2

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	8.1	0.0	8.1
SWB Dir Ld w/ Liner	54.8	0.0	54.8
Final Form Total	62.9	0.0	62.9

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	30.24
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	5.23
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	551.73
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	5.82
Packaging Material, Rubber	0.24
Packaging Material, Steel	150.52
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	2.75E-03
Cs-137	8.77E-04
Np-237	2.07E-07
Pu-238	5.60E-04
Pu-239	1.15E-01
Pu-240	2.22E-04
Pu-242	4.75E-07
Pu-244	2.78E-06
Sr-90	2.03E-04
U-233	8.23E-08
U-234	5.59E-05
U-235	6.24E-06
U-238	2.63E-05

Haz. Waste No(s).

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

TRUCON Code(s)

111/211

Waste Stream Description

Mixed contaminated soil generated at the TA-21 DP West Facility.

Waste Stream ID: LA-OS-00-01.001

Appendix A
Waste Profile Report

Site	Los Alamos National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Discarding Excess/Expired Materials	Waste Matrix Code Group	Uncategorized Metal Waste	Inventory Date	12/31/2013		
Stream Name	Defense Sealed Sources				Activity Concentrations Decayed to CY	2013	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal POC - 12" w/ Liner	3.3	0.0	3.3
55-gal POC - 6" w/ Liner	5.6	0.0	5.6
Current Form Total	8.9	0.0	8.9

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal POC - 12" w/ Liner	3.3	0.0	3.3
55-gal POC - 6" w/ Liner	5.6	0.0	5.6
Final Form Total	8.9	0.0	8.9

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	41.23
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	7.28
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	0.00
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	185.21
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	398.13
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	4.48E+01
Cm-244	1.16E+03
Cs-137	5.33E-01
Pu-238	1.42E+01
Pu-239	2.29E+01
Pu-240	5.99E+00
Pu-241	7.56E+00
Pu-242	5.33E-02
Sr-90	1.86E-05
U-233	1.93E-08
U-234	4.25E-03
U-235	4.91E-10
U-238	1.90E-10

No Hazardous Waste Numbers Provided

TRUCON Code(s)
120/220

Waste Stream Description

Manufactured sealed sources in metal or Lexan containers placed inside POCs. Sealed sources are encapsulated in various metals. Sealed sources contain varying amounts and combinations of Pu, Am, or other TRU nuclides, and may contain Be, Li, or other light elements.

Waste Stream ID: LA-TA-00-01

Appendix A
Waste Profile Report

Site	Los Alamos National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	R&D/R&D Laboratory Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2013		
Stream Name	TA-39 Heterogeneous Debris				Activity Concentrations Decayed to CY	2013	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	8.3	0.0	8.3
85-gal Drum w/ 1 - 55-gal Drum w/ Liner	0.6	0.0	0.6
Box - Crate	68.7	0.0	68.7
Other - Tritium Torpedo	3.0	0.0	3.0
Current Form Total	80.6	0.0	80.6

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	8.7	0.0	8.7
SWB Dir Ld w/ Liner	71.8	0.0	71.8
Final Form Total	80.6	0.0	80.6

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	107.03
Aluminum-based Metal/Alloys	19.13
Other Metal/Alloys	19.13
Other Inorganic Materials	59.08
Cellulose	2.10
Rubber	1.89
Plastic	1.89
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	5.09
Packaging Material, Rubber	0.23
Packaging Material, Steel	150.98
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	9.60E-03
Cs-137	3.15E-08
Np-237	2.62E-05
Pu-238	1.96E-02
Pu-239	1.74E-02
Pu-240	9.57E-04
Pu-241	1.29E-02
Pu-242	5.53E-08
Sr-90	3.15E-08
Th-229	5.02E-15
Th-230	2.91E-13
Th-232	6.99E-22
U-233	1.14E-10
U-234	5.94E-08
U-235	8.47E-11
U-236	2.83E-11
U-238	8.58E-18

Haz. Waste No(s).

D008, F001

TRUCON Code(s)115/215, 116/216,
117/217, 118/218,
119/219, 120/220,
123/223, 125/225,
154**Waste Stream Description**

Mixed heterogeneous debris generated during plutonium and uranium R&D operations in the TA-39, Building 69, Two-Stage Gas Gun Facility.

Waste Stream ID: LA-TA-00-03

Appendix A
Waste Profile Report

Site	Los Alamos National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	RH
Source Cat.	Other/Multiple Sources	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2013		
Stream Name	NON-PN EQUIPMENT	Activity Concentrations Decayed to CY			2013		

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
Canister - (LANL-RH)	2.1	0.0	2.1
Current Form Total	2.1	0.0	2.1

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid - Dir Ld	1.8	0.0	1.8
Final Form Total	1.8	0.0	1.8

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	0.37
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	19.45
Cement	0.00
Solidified Inorganic Material	3650.35
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.00
Packaging Material, Steel	560.67
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Pu-239	6.97E+00
U-235	2.27E-07

Haz. Waste No(s).

D008

No TRUCON
Codes Provided**Waste Stream Description**

LAMPRE REACTOR VESSEL SEALED IN CASK VESSEL

Waste Stream ID: LA-TA-03-14

Appendix A
Waste Profile Report

Site	Los Alamos National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2013		
Stream Name	Metals and Miscellaneous Equipment Debris			Activity Concentrations Decayed to CY	2013		

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
Box - Crate	8.8	0.0	8.8
Current Form Total	8.8	0.0	8.8

Final Form Volumes			
Container Type	Stored	Proj.	Total
SWB Dir Ld w/ Liner	9.5	0.0	9.5
Final Form Total	9.5	0.0	9.5

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	56.34
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	18.43
Other Inorganic Materials	89.36
Cellulose	71.98
Rubber	7.30
Plastic	211.34
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	1.41
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	1.20
Packaging Material, Rubber	0.19
Packaging Material, Steel	153.44
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Pu-238	2.91E-01
Pu-239	6.56E-04
Th-230	6.29E-09
U-234	3.53E-05
U-235	2.39E-11

Haz. Waste No(s).

D008

TRUCON Code(s)115/215, 116/216,
117/217, 118/218,
119/219, 120/220,
123/223, 125/225,
154**Waste Stream Description**

Metals and Miscellaneous Equipment Debris

Waste Stream ID: LA-TA-03-27

Appendix A
Waste Profile Report

Site	Los Alamos National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	RH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2013		
Stream Name	Combined combustible and noncombustible debris waste (RH-TRU) of the CMR facility			Activity Concentrations Decayed to CY	2013		

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
Canister - (LANL-RH)	76.2	0.0	76.2
RH Can w/ Fxd Lid - Dir Ld	1.0	0.0	1.0
Current Form Total	77.2	0.0	77.2

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	76.5	0.0	76.5
Final Form Total	77.4	0.0	77.4

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	233.37
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	76.34
Other Inorganic Materials	370.19
Cellulose	298.19
Rubber	30.23
Plastic	875.48
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	5.86
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.00
Packaging Material, Steel	559.21
Packaging Material, Lead	5.33

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	5.46E-02
Cs-137	1.34E+01
Np-237	2.65E-07
Pu-238	1.78E-02
Pu-239	1.04E+00
Pu-240	3.27E-02
Pu-241	5.00E-01
Pu-242	1.98E-05
Sr-90	9.20E+00
Th-229	4.78E-15
Th-230	4.13E-09
Th-232	8.22E-17
U-233	9.51E-12
U-234	2.54E-05
U-235	1.07E-04
U-236	1.01E-07
U-238	5.27E-07

No Hazardous Waste Numbers Provided

TRUCON Code(s)
117/217

Waste Stream Description

Combined combustible and noncombustible debris waste (RH-TRU) from wing 9 of the CMR facility. Combustible/noncombustible waste is generated from facility and equipment operations and maintenance

Waste Stream ID: LA-TA-03-28

Appendix A
Waste Profile Report

Site	Los Alamos National Laboratory	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2013	
Stream Name	Cement paste from CMR building (mixed)				Activity Concentrations Decayed to CY	2013	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	1.0	0.0	1.0
Current Form Total	1.0	0.0	1.0

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	1.0	0.0	1.0
Final Form Total	1.0	0.0	1.0

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	0.00
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	3.05
Cement	1015.09
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Pu-238	2.51E+00
Th-230	6.10E-08
U-234	3.24E-04

Haz. Waste No(s).

D007, F001, F002

TRUCON Code(s)

114/214, 126/226

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
Waste Profile Report

Site	Los Alamos National Laboratory	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Solidified Organics		Inventory Date	12/31/2013	
Stream Name	SILICON-BASED OIL - LIQUID				Activity Concentrations Decayed to CY	2013	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
30-gal Drum	0.1	0.0	0.1
Current Form Total	0.1	0.0	0.1

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

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	39.93
Aluminum-based Metal/Alloys	7.55
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	15.65
Rubber	1.62
Plastic	22.66
Cement	0.00
Solidified Inorganic Material	226.07
Solidified Organic Material	226.07
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Pu-238	2.42E-01
Th-230	5.88E-09
U-234	3.12E-05

No Hazardous
Waste Numbers
Provided

No TRUCON
Codes Provided

Waste Stream Description

Absorbed Organics on Vermiculite

Waste Stream ID: LA-TA-21-05

Appendix A
Waste Profile Report

Site	Los Alamos National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2013		
Stream Name	Graphite				Activity Concentrations Decayed to CY	2013	

Waste Volume Detail (m³)

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
Current Form Total	0.3	0.0	0.3

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.4	0.0	0.4
Final Form Total	0.4	0.0	0.4

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	49.00
Aluminum-based Metal/Alloys	18.68
Other Metal/Alloys	37.56
Other Inorganic Materials	10.68
Cellulose	31.84
Rubber	24.59
Plastic	18.30
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	5.46E-01
Np-237	5.60E-06
Pu-238	5.88E-02
Pu-239	2.53E+00
Pu-240	6.02E-01
Pu-241	1.59E+00
Pu-242	4.06E-05
Th-229	4.26E-13
Th-230	3.30E-09
Th-232	6.03E-16
U-233	4.15E-10
U-234	1.31E-05
U-235	4.70E-05
U-236	6.60E-07
U-238	2.33E-13

No Hazardous Waste Numbers Provided

TRUCON Code(s)

115/215, 116/216, 117/217, 118/218, 119/219, 123/223, 125/225, 154

Waste Stream Description

Graphite

Waste Stream ID: LA-TA-21-06

Appendix A
Waste Profile Report

Site	Los Alamos National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2013		
Stream Name	Combustible debris waste (mixed)			Activity Concentrations Decayed to CY	2013		

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
30-gal Drum	14.9	0.0	14.9
55-gal Drum Dir Ld w/ Liner	184.7	0.0	184.7
85-gal Drum w/ 1 - 55-gal Drum w/ Liner	0.3	0.0	0.3
Cask - Misc w/ 1 - 30-gal Drum	7.9	0.0	7.9
Cask - Misc w/ 2 - 30-gal Drums	73.5	0.0	73.5
Current Form Total	281.3	0.0	281.3

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	326.4	0.0	326.4
Final Form Total	326.4	0.0	326.4

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	26.35
Aluminum-based Metal/Alloys	10.05
Other Metal/Alloys	20.20
Other Inorganic Materials	5.74
Cellulose	17.12
Rubber	13.23
Plastic	9.84
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	2.40E-01
Np-237	2.30E-06
Pu-238	4.22E+01
Pu-239	6.23E-01
Pu-240	1.89E-01
Pu-241	8.05E-01
Pu-242	3.52E-05
Th-229	1.55E-13
Th-230	1.12E-06
Th-232	1.70E-16
U-233	1.60E-10
U-234	5.78E-03
U-235	2.85E-06
U-236	1.96E-07
U-238	1.91E-13

Haz. Waste No(s).

F001, F002

TRUCON Code(s)115/215, 116/216,
117/217, 118/218,
119/219, 123/223,
125/225, 154**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
Waste Profile Report

Site	Los Alamos National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2013		
Stream Name	Metal				Activity Concentrations Decayed to CY	2013	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
30-gal Drum	5.7	0.0	5.7
55-gal Drum Dir Ld w/ Liner	66.6	0.0	66.6
Box - Crate	482.3	0.0	482.3
Cask - Misc w/ 1 - 30-gal Drum	3.1	0.0	3.1
Cask - Misc w/ 2 - 30-gal Drums	43.9	0.0	43.9
Other	7.8	0.0	7.8
Current Form Total	609.4	0.0	609.4

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	142.1	0.0	142.1
SWB Dir Ld w/ Liner	489.5	0.0	489.5
Final Form Total	631.6	0.0	631.6

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	38.86
Aluminum-based Metal/Alloys	14.82
Other Metal/Alloys	29.79
Other Inorganic Materials	8.47
Cellulose	25.25
Rubber	19.51
Plastic	14.52
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	9.27
Packaging Material, Rubber	0.28
Packaging Material, Steel	148.34
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	5.74E-02
Np-237	5.38E-07
Pu-238	1.67E+01
Pu-239	2.82E-01
Pu-240	5.94E-02
Pu-241	1.97E-01
Pu-242	5.30E-06
Th-229	3.45E-14
Th-230	3.16E-07
Th-232	5.03E-17
U-233	3.65E-11
U-234	1.89E-03
U-235	1.83E-08
U-236	5.99E-08
U-238	2.80E-14

Haz. Waste No(s).

D008

TRUCON Code(s)115/215, 116/216,
117/217, 118/218,
119/219, 123/223,
125/225, 154**Waste Stream Description**

Metal

Waste Stream ID: LA-TA-21-08

Appendix A
Waste Profile Report

Site	Los Alamos National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2013		
Stream Name	Glass				Activity Concentrations Decayed to CY	2013	

Waste Volume Detail (m³)

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
Cask - Misc w/ 2 - 30-gal Drums	1.1	0.0	1.1
Current Form Total	3.5	0.0	3.5

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	4.2	0.0	4.2
Final Form Total	4.2	0.0	4.2

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	32.11
Aluminum-based Metal/Alloys	12.24
Other Metal/Alloys	24.61
Other Inorganic Materials	7.00
Cellulose	20.86
Rubber	16.12
Plastic	11.99
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	2.10E-01
Np-237	2.14E-06
Pu-238	2.12E+01
Pu-239	6.41E-01
Pu-240	1.80E-01
Pu-241	6.31E-01
Pu-242	2.70E-05
Th-229	1.62E-13
Th-230	4.60E-07
Th-232	1.81E-16
U-233	1.58E-10
U-234	2.58E-03
U-235	4.70E-08
U-236	1.98E-07
U-238	1.55E-13

No Hazardous Waste Numbers Provided

TRUCON Code(s)

115/215, 116/216, 117/217, 118/218, 119/219, 123/223, 125/225, 154

Waste Stream Description

Glass

Waste Stream ID: LA-TA-21-09

Appendix A
Waste Profile Report

Site	Los Alamos National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2013		
Stream Name	Hepa Filters				Activity Concentrations Decayed to CY	2013	

Waste Volume Detail (m³)

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/ 2 - 30-gal Drums	7.4	0.0	7.4
Current Form Total	8.1	0.0	8.1

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	14.1	0.0	14.1
Final Form Total	14.1	0.0	14.1

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	29.88
Aluminum-based Metal/Alloys	11.39
Other Metal/Alloys	22.90
Other Inorganic Materials	6.51
Cellulose	19.42
Rubber	15.00
Plastic	11.16
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	5.25E-03
Np-237	5.70E-08
Pu-238	1.01E+02
Pu-239	2.54E-02
Pu-240	5.92E-03
Pu-241	1.37E-02
Pu-242	3.44E-07
Th-229	4.82E-15
Th-230	2.45E-06
Th-232	6.59E-18
U-233	4.45E-12
U-234	1.30E-02
U-235	1.92E-09
U-236	6.85E-09
U-238	2.08E-15

No Hazardous Waste Numbers Provided

TRUCON Code(s)
115/215, 116/216,
117/217, 118/218,
119/219, 123/223,
125/225, 154

Waste Stream Description

Hepa Filters

Waste Stream ID: LA-TA-21-12

Appendix A
Waste Profile Report

Site	Los Alamos National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2013		
Stream Name	Non-combustible and combustible debris waste			Activity Concentrations Decayed to CY	2013		

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
30-gal Drum	3.6	0.0	3.6
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	32.4	0.0	32.4
Cask - Misc w/ 2 - 30-gal Drums	89.4	0.0	89.4
Current Form Total	245.1	0.0	245.1

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	335.7	0.0	335.7
SWB Dir Ld w/ Liner	5.7	0.0	5.7
Final Form Total	341.4	0.0	341.4

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	25.88
Aluminum-based Metal/Alloys	9.87
Other Metal/Alloys	19.84
Other Inorganic Materials	5.64
Cellulose	16.82
Rubber	12.99
Plastic	9.67
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	36.47
Packaging Material, Rubber	0.56
Packaging Material, Steel	131.15
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	4.29E-01
Np-237	4.02E-06
Pu-238	1.27E+02
Pu-239	7.99E-01
Pu-240	2.69E-01
Pu-241	1.47E+00
Pu-242	7.28E-05
Th-229	3.63E-04
Th-230	4.30E-06
Th-232	2.28E-16
U-233	1.21E-01
U-234	2.04E-02
U-235	5.73E-06
U-236	2.71E-07
U-238	3.84E-13

No Hazardous Waste Numbers Provided

TRUCON Code(s)

115/215, 116/216, 117/217, 118/218, 119/219, 123/223, 125/225, 154

Waste Stream Description

COMBINED COMBUSTIBLE/NON-COMBUSTIBLE LAB TRASH

Waste Stream ID: LA-TA-21-13

Appendix A
Waste Profile Report

Site	Los Alamos National Laboratory	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2013	
Stream Name	Cemented wastewater treatment sludge (mixed)				Activity Concentrations Decayed to CY	2013	

Waste Volume Detail (m³)

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 - Corrugated Metal Pipe	442.4	0.0	442.4
Current Form Total	457.7	0.0	457.7

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	442.3	0.0	442.3
Final Form Total	457.4	0.0	457.4

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	77.00
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	13.69
Cement	2154.14
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	2.39
Packaging Material, Rubber	0.20
Packaging Material, Steel	152.69
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	2.28E+01
Cs-137	4.20E-04
Np-237	2.22E-05
Pu-238	6.80E-02
Pu-239	1.37E-01
Pu-240	1.04E-06
Pu-241	1.05E-04
Pu-242	6.00E-11
Sr-90	2.94E-04
Th-229	1.28E-14
Th-230	3.56E-10
Th-232	2.68E-17
U-233	1.45E-10
U-234	1.32E-05
U-235	4.67E-05
U-236	1.81E-07
U-238	2.37E-05

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-21-15

Appendix A
Waste Profile Report

Site	Los Alamos National Laboratory	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Solidified Organics		Inventory Date	12/31/2013	
Stream Name	Solidified organics				Activity Concentrations Decayed to CY	2013	

Waste Volume Detail (m³)

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
Current Form Total	3.5	0.0	3.5

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	3.5	0.0	3.5
Final Form Total	3.5	0.0	3.5

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	26.42
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	25.96
Cement	0.00
Solidified Inorganic Material	455.78
Solidified Organic Material	60.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	1.45E-01
Np-237	2.56E-07
Pu-238	2.78E-02
Pu-239	1.34E+00
Pu-240	2.31E-01
Pu-241	2.63E+00
Pu-242	1.34E-05
Th-229	5.46E-16
Th-230	1.30E-10
Th-232	6.08E-18
U-233	3.16E-12
U-234	2.60E-06
U-235	4.47E-08
U-236	4.11E-08
U-238	1.25E-14

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

Waste Stream Description

Solidified organics

Waste Stream ID: LA-TA-21-16

Appendix A
Waste Profile Report

Site	Los Alamos National Laboratory	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2013	
Stream Name	SOLIDIFIED INORGANIC PROCESS SOLID				Activity Concentrations Decayed to CY	2013	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
30-gal Drum	25.9	0.0	25.9
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
Current Form Total	57.7	0.0	57.7

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	57.4	0.0	57.4
Final Form Total	57.4	0.0	57.4

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	7.34
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	1.31
Cement	205.35
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	1.76E+00
Np-237	3.10E-06
Pu-238	4.44E-01
Pu-239	1.10E+01
Pu-240	2.64E+00
Pu-241	3.24E+01
Pu-242	2.17E-04
Th-229	6.61E-15
Th-230	2.23E-09
Th-232	6.94E-17
U-233	3.83E-11
U-234	4.42E-05
U-235	5.69E-05
U-236	4.69E-07
U-238	2.02E-13

Haz. Waste No(s).

D008

No TRUCON
Codes Provided

Waste Stream Description

LEACHED PROCESS RESIDUES

Waste Stream ID: LA-TA-21-17

Appendix A
Waste Profile Report

Site	Los Alamos National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Source Information Not Compiled	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2013		
Stream Name	Process solids	Activity Concentrations Decayed to CY			2013		

Waste Volume Detail (m³)

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
Current Form Total	0.5	0.0	0.5

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.6	0.0	0.6
Final Form Total	0.6	0.0	0.6

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	29.57
Aluminum-based Metal/Alloys	11.28
Other Metal/Alloys	22.67
Other Inorganic Materials	6.44
Cellulose	19.22
Rubber	14.84
Plastic	11.05
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	8.68E-03
Np-237	9.43E-08
Pu-238	9.08E-04
Pu-239	4.19E-02
Pu-240	9.78E-03
Pu-241	2.27E-02
Pu-242	5.68E-07
Th-229	7.98E-15
Th-230	5.43E-11
Th-232	1.09E-17
U-233	7.36E-12
U-234	2.07E-07
U-235	3.17E-09
U-236	1.13E-08
U-238	3.44E-15

No Hazardous Waste Numbers Provided

TRUCON Code(s)

115/215, 116/216, 117/217, 118/218, 119/219, 123/223, 125/225, 154

Waste Stream Description

Special items (precious metals) requiring tracking by CST-7

Waste Stream ID: LA-TA-50-18

Appendix A
Waste Profile Report

Site	Los Alamos National Laboratory	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Materials Production/Recovery Effluents	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2013	
Stream Name	Cemented caustic liquid waste (mixed)				Activity Concentrations Decayed to CY	2013	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.8	0.0	0.8
Current Form Total	0.8	0.0	0.8

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.8	0.0	0.8
Final Form Total	0.8	0.0	0.8

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	0.00
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	1.07
Cement	1071.20
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	1.46E+00
Np-237	4.72E-07
Pu-238	9.35E-01
Pu-239	5.06E-01
Pu-240	1.21E-01
Th-229	3.01E-17
Th-230	8.67E-08
Th-232	5.32E-08
U-233	1.03E-12
U-234	9.43E-03
U-235	4.72E-06
U-236	3.59E-09
U-238	8.75E-07

Haz. Waste No(s).

D007, F001, F002

TRUCON Code(s)

111/211, 114/214

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
Waste Profile Report

Site	Los Alamos National Laboratory	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Materials Production/Recovery Effluents	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2013	
Stream Name	Homogeneous Inorganic Solids			Activity Concentrations Decayed to CY		2013	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	62.4	0.0	62.4
Current Form Total	62.4	0.0	62.4

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	62.4	0.0	62.4
Final Form Total	62.4	0.0	62.4

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	0.09
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	4.54
Cement	0.00
Solidified Inorganic Material	851.28
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	3.45E-01
Np-237	3.90E-06
Pu-238	2.35E-02
Pu-239	2.22E-02
Th-229	2.91E-13
Th-230	4.23E-10
U-233	2.91E-10
U-234	2.59E-06
U-235	7.44E-10

Haz. Waste No(s).

F001

TRUCON Code(s)

111/211

Waste Stream Description

Homogeneous dewatered sludge generated in the TA-50-01 RLWTF main treatment process.

Waste Stream ID: LA-TA-55-19

Appendix A
Waste Profile Report

Site	Los Alamos National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2013		
Stream Name	Combustible debris waste (mixed)				Activity Concentrations Decayed to CY	2013	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	40.6	0.0	40.6
Cask - Misc w/ 1 - 30-gal Drum	0.4	0.0	0.4
Current Form Total	41.0	0.0	41.0

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	41.4	0.0	41.4
Final Form Total	41.4	0.0	41.4

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	66.51
Aluminum-based Metal/Alloys	0.27
Other Metal/Alloys	7.97
Other Inorganic Materials	43.14
Cellulose	5.50
Rubber	8.26
Plastic	25.47
Cement	0.00
Solidified Inorganic Material	1.06
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	5.57E+00
Np-237	8.06E-05
Pu-238	3.38E+00
Pu-239	5.93E+00
Pu-240	2.96E+00
Pu-241	2.42E+01
Pu-242	1.70E-03
Th-229	8.68E-12
Th-230	1.48E-06
Th-232	3.19E-14
U-233	7.43E-09
U-234	5.36E-03
U-235	1.45E-04
U-236	2.22E-05
U-238	3.38E-05

No Hazardous Waste Numbers Provided

TRUCON Code(s)

115/215, 116/216, 117/217, 118/218, 119/219, 122/222, 123/223, 125/225, 133/233, 154

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
Waste Profile Report

Site	Los Alamos National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2013		
Stream Name	Metal debris waste (mixed)	Activity Concentrations Decayed to CY			2013		

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	2.3	0.0	2.3
Current Form Total	2.3	0.0	2.3

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	2.3	0.0	2.3
Final Form Total	2.3	0.0	2.3

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	121.06
Aluminum-based Metal/Alloys	0.49
Other Metal/Alloys	14.51
Other Inorganic Materials	78.51
Cellulose	10.02
Rubber	15.03
Plastic	46.35
Cement	0.00
Solidified Inorganic Material	1.93
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	1.41E-01
Np-237	1.30E-06
Pu-238	1.06E+01
Pu-239	2.54E-01
Pu-240	9.07E-02
Pu-241	5.03E-01
Pu-242	2.41E-05
Th-229	8.30E-14
Th-230	6.77E-07
Th-232	7.67E-17
U-233	8.81E-11
U-234	2.72E-03
U-235	1.79E-08
U-236	9.14E-08
U-238	8.82E-07

Haz. Waste No(s).

D008

TRUCON Code(s)115/215, 116/216,
117/217, 118/218,
119/219, 122/222,
123/223, 125/225,
133/233, 154**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-55-30

Appendix A
Waste Profile Report

Site	Los Alamos National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2013		
Stream Name	Non-combustible and combustible debris waste (mixed)			Activity Concentrations Decayed to CY	2013		

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	65.9	0.0	65.9
Current Form Total	65.9	0.0	65.9

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	65.9	0.0	65.9
Final Form Total	65.9	0.0	65.9

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	79.95
Aluminum-based Metal/Alloys	0.32
Other Metal/Alloys	9.58
Other Inorganic Materials	51.85
Cellulose	6.62
Rubber	9.93
Plastic	30.61
Cement	0.00
Solidified Inorganic Material	1.27
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	3.93E+00
Np-237	3.66E-05
Pu-238	2.58E+00
Pu-239	2.50E+00
Pu-240	1.55E+00
Pu-241	1.38E+01
Pu-242	1.82E-03
Pu-244	3.02E-10
Th-229	2.34E-12
Th-230	2.19E-07
Th-232	1.92E-15
U-233	2.48E-09
U-234	8.37E-04
U-235	8.84E-06
U-236	1.93E-06
U-238	1.27E-04

No Hazardous Waste Numbers Provided

TRUCON Code(s)

115/215, 116/216, 117/217, 118/218, 119/219, 122/222, 123/223, 125/225, 133/233, 154

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).

Waste Stream ID: LA-TA-55-38

Appendix A
Waste Profile Report

Site	Los Alamos National Laboratory	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2013	
Stream Name	LEACHED PROCESS RESIDUES			Activity Concentrations Decayed to CY		2013	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
Cask - Misc w/ 1 - 30-gal Drum	0.4	0.0	0.4
Current Form Total	0.4	0.0	0.4

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.8	0.0	0.8
Final Form Total	0.8	0.0	0.8

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	0.66
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	0.12
Cement	18.46
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	4.34E-02
Np-237	3.68E-07
Pu-238	2.70E+01
Pu-239	2.06E-02
Pu-240	1.03E-02
Pu-241	1.78E-01
Pu-242	8.53E-06
Th-229	1.96E-14
Th-230	1.51E-06
Th-232	7.27E-18
U-233	2.27E-11
U-234	6.57E-03
U-235	1.67E-09
U-236	9.50E-09
U-238	4.10E-14

Haz. Waste No(s).

D008

TRUCON Code(s)

114/214, 126/226

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-TRU-Empty-55

Appendix A
Waste Profile Report

Site	Los Alamos National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Remediation/D&D Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2013	
Stream Name	Empty containers				Activity Concentrations Decayed to CY	2013	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner (LANL)	0.4	0.0	0.4
Current Form Total	0.4	0.0	0.4

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

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	25.72
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.11
Plastic	7.29
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	1.20
Packaging Material, Rubber	0.19
Packaging Material, Steel	153.44
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	3.23E-03
Am-243	1.58E-06
Cs-137	9.70E-07
Np-237	6.32E-07
Pu-238	3.91E-04
Pu-239	1.36E-02
Pu-240	3.18E-03
Pu-241	2.36E-02
Pu-242	1.83E-07
Sr-90	9.67E-07
Th-229	4.57E-09
Th-230	1.09E-12
Th-232	9.30E-21
U-233	5.49E-12
U-234	6.04E-08
U-235	5.32E-10
U-236	1.88E-10
U-238	5.69E-17

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

Waste Stream Description

Empty containers identified as TRU resulting from repackaging/remediation of debris waste streams

Waste Stream ID: LA-TRU-Empty-85

Appendix A
Waste Profile Report

Site	Los Alamos National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Remediation/D&D Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2013	
Stream Name	Empty containers				Activity Concentrations Decayed to CY	2013	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
85-gal Drum w/ 1 - 55-gal Drum w/ Liner (LANL)	155.5	0.0	155.5
Current Form Total	155.5	0.0	155.5

Final Form Volumes			
Container Type	Stored	Proj.	Total
SWB Dir Ld w/ Liner	47.3	0.0	47.3
Final Form Total	47.3	0.0	47.3

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	286.64
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	1.06
Plastic	34.58
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	1.20
Packaging Material, Rubber	0.19
Packaging Material, Steel	153.44
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	7.14E-01
Am-243	1.31E-04
Cm-244	1.72E-06
Cs-137	2.98E-05
Np-237	1.19E-05
Pu-238	4.49E-01
Pu-239	5.76E-01
Pu-240	1.50E-01
Pu-241	1.37E+00
Pu-242	6.33E-06
Pu-244	4.20E-13
Sr-90	2.76E-05
Th-229	5.46E-08
Th-230	6.49E-10
Th-232	2.42E-15
U-233	3.35E-08
U-234	7.12E-05
U-235	5.63E-08
U-236	9.44E-09
U-238	2.74E-07

No Hazardous Waste Numbers Provided

TRUCON Code(s)
116/216, 117/217,
123/223, 125/225

Waste Stream Description

Empty containers identified as TRU resulting from repackaging/remediation of debris waste streams

Waste Stream ID: **LB-T001**

Appendix A
Waste Profile Report

Site	Lawrence Berkeley National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	R&D/R&D Laboratory Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2013		
Stream Name	LBL-Non Mixed Waste				Activity Concentrations Decayed to CY	2013	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
12.2-gal Drum	0.0	0.0	0.1
Current Form Total	0.0	0.0	0.1

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.2	0.2	0.4
Final Form Total	0.2	0.2	0.4

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	0.00
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	7.74
Other Inorganic Materials	2.36
Cellulose	4.95
Rubber	0.00
Plastic	1.86
Cement	0.00
Solidified Inorganic Material	0.56
Solidified Organic Material	0.02
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	2.30E-02
Am-243	4.81E-08
Cs-137	4.16E-07
Np-237	4.11E-05
Pu-239	1.48E-03
Pu-240	4.81E-05
Pu-241	6.37E-04
Pu-242	1.61E-16
Pu-244	6.44E-15
Th-229	3.15E-14
Th-230	9.27E-20
Th-232	2.69E-06
U-233	3.58E-10
U-234	1.01E-14
U-235	2.92E-12
U-236	2.85E-12
U-238	1.88E-09

No Hazardous Waste Numbers Provided

TRUCON Code(s)
125/225

Waste Stream Description

Heterogeneous transuranic, non mixed waste

Waste Stream ID: **LB-T002**

Appendix A
Waste Profile Report

Site	Lawrence Berkeley National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	R&D/R&D Laboratory Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2013		
Stream Name	LBL - Mixed Waste			Activity Concentrations Decayed to CY	2013		

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
2.5-gal Drum	0.0	0.0	0.0
Current Form Total	0.0	0.0	0.0

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.2	0.2	0.4
Final Form Total	0.2	0.2	0.4

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	0.00
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.53
Cellulose	1.78
Rubber	0.00
Plastic	0.00
Cement	0.00
Solidified Inorganic Material	0.03
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	4.34E-05
Am-243	5.77E-08
Np-237	2.79E-07
Pu-239	2.64E-04
Pu-241	2.66E-04
Th-229	2.14E-16
U-233	2.43E-12
U-235	5.21E-13

Haz. Waste No(s).

D007
TRUCON Code(s)
125/225

Waste Stream Description

Heterogeneous transuranic mixed waste

Waste Stream ID: **LL-M001**

Appendix A
Waste Profile Report

Site	Lawrence Livermore National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	R&D/R&D Laboratory Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2013	
Stream Name	R&D Glovebox Waste (Form 1)			Activity Concentrations Decayed to CY		2013	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	12.7	0.0	12.7
55-gal Drum Dir Ld w/o Liner	46.4	393.1	439.5
55-gal POC - 12" w/ Liner	2.9	18.7	21.6
SWB Dir Ld w/o Liner	7.6	49.1	56.7
Current Form Total	69.5	461.0	530.5

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	59.1	393.1	452.2
55-gal POC - 12" w/ Liner	2.9	18.7	21.6
SWB Dir Ld w/o Liner	7.6	49.1	56.7
Final Form Total	69.5	461.0	530.5

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	50.91
Aluminum-based Metal/Alloys	8.21
Other Metal/Alloys	16.02
Other Inorganic Materials	6.57
Cellulose	27.12
Rubber	17.32
Plastic	49.25
Cement	13.28
Solidified Inorganic Material	6.71
Solidified Organic Material	0.56
Soil	0.08
Vitrified	0.00
Packaging Material, Cellulose	5.51
Packaging Material, Plastic	1.51
Packaging Material, Rubber	0.53
Packaging Material, Steel	149.42
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	1.98E+00
Am-243	4.14E-04
Cm-244	1.43E+00
Cs-137	1.27E-03
Np-237	2.04E-05
Pu-238	3.14E+00
Pu-239	2.48E+00
Pu-240	6.79E-01
Pu-241	8.01E+00
Pu-242	2.25E-04
Sr-90	1.27E-03
Th-229	2.47E-06
Th-230	4.60E-07
U-233	6.61E-04
U-234	6.73E-05
U-235	4.03E-06
U-238	1.68E-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, 125/225

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).

Waste Stream ID: LL-T004

Appendix A
Waste Profile Report

Site	Lawrence Livermore National Laboratory	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	R&D/R&D Laboratory Waste	Waste Matrix Code Group	Salt Waste	Inventory Date	12/31/2013		
Stream Name	Pyrochemical salt waste (Form 4)			Activity Concentrations Decayed to CY	2013		

Waste Volume Detail (m³)

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

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

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	120.00
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	1740.00
Cellulose	12.00
Rubber	0.00
Plastic	120.00
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	1.30E-01
Cm-244	8.11E-03
Np-237	1.05E-06
Pu-238	4.87E-02
Pu-239	2.38E-01
Pu-240	1.15E-01
Pu-241	1.12E+00
Pu-242	3.74E-05
Th-229	2.81E-15
Th-230	1.03E-11
Th-232	1.35E-18
U-233	1.65E-11
U-234	5.58E-07
U-235	9.39E-10
U-236	1.37E-08
U-238	2.32E-14

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
Waste Profile Report

Site	Lawrence Livermore National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	R&D/R&D Laboratory Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2013		
Stream Name	Combined metal scrap & incidental combust.(Form 3)			Activity Concentrations Decayed to CY	2013		

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
Box - Misc	120.6	0.0	120.6
SLB2 Dir Ld	0.0	141.5	141.5
SWB Dir Ld w/o Liner	20.8	138.0	158.8
Current Form Total	141.4	279.5	420.9

Final Form Volumes			
Container Type	Stored	Proj.	Total
SLB2 Dir Ld	118.9	141.5	260.4
SWB Dir Ld w/o Liner	20.8	138.0	158.8
Final Form Total	139.7	279.5	419.1

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	55.05
Aluminum-based Metal/Alloys	3.35
Other Metal/Alloys	13.24
Other Inorganic Materials	0.56
Cellulose	14.72
Rubber	2.78
Plastic	2.13
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	2.65
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.16
Packaging Material, Steel	192.02
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	7.49E-02
Cm-244	4.21E-05
Np-237	1.46E-07
Pu-238	5.87E-03
Pu-239	5.12E-02
Pu-240	1.53E-02
Pu-241	3.40E-01
Pu-242	3.31E-06
Th-229	3.40E-16
Th-230	2.83E-12
Th-232	4.04E-19
U-233	1.90E-12
U-234	1.02E-07
U-235	3.03E-10
U-236	2.73E-09
U-238	3.08E-15

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
Waste Profile Report

Site	Lawrence Livermore National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	R&D/R&D Laboratory Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2013	
Stream Name	Sealed Sources			Activity Concentrations Decayed to CY		2013	

Waste Volume Detail (m³)

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/ Liner	0.0	4.2	4.2
Current Form Total	4.2	4.2	8.3

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal POC - 12" w/ Liner	4.2	4.2	8.3
Final Form Total	4.2	4.2	8.3

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	7.11
Aluminum-based Metal/Alloys	1.52
Other Metal/Alloys	4.31
Other Inorganic Materials	3.78
Cellulose	1.54
Rubber	0.00
Plastic	0.03
Cement	0.00
Solidified Inorganic Material	9.30
Solidified Organic Material	4.92
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	135.10
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	528.85
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	1.89E+01
Am-243	2.50E-06
Cm-244	1.74E-04
Cs-137	3.35E-03
Np-237	3.85E-05
Pu-238	3.01E+00
Pu-239	1.44E-01
Pu-240	4.61E-04
Pu-241	7.82E-02
Pu-244	5.57E-23
Sr-90	1.04E-02
Th-229	9.47E-14
Th-230	1.45E-09
Th-232	1.21E-20
U-233	5.17E-10
U-234	5.21E-05
U-235	1.04E-07
U-236	8.20E-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
Waste Profile Report

Site	Lawrence Livermore National Laboratory	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	R&D/R&D Laboratory Waste	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2013	
Stream Name	Solidified Waste (Form 2)			Activity Concentrations Decayed to CY			
				2013			

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	10.6	0.0	10.6
55-gal Drum Dir Ld w/o Liner	7.9	19.8	27.7
Current Form Total	18.5	19.8	38.3

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	18.5	19.8	38.3
Final Form Total	18.5	19.8	38.3

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	13.35
Aluminum-based Metal/Alloys	0.99
Other Metal/Alloys	2.36
Other Inorganic Materials	0.00
Cellulose	3.05
Rubber	4.26
Plastic	37.78
Cement	3.15
Solidified Inorganic Material	202.31
Solidified Organic Material	33.49
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	1.31E+00
Am-243	1.16E-07
Cm-244	1.00E-03
Cs-137	2.00E-06
Np-237	7.27E-05
Pu-238	4.63E+00
Pu-239	2.89E+00
Pu-240	8.09E-01
Pu-241	1.11E+01
Pu-242	1.83E-04
Sr-90	2.00E-06
U-233	6.14E-02
U-234	1.19E-05
U-235	9.91E-06
U-238	7.65E-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)

111/211, 113/213

Waste Stream Description

This waste stream consists of drums classified as homogeneous solids; predominately solidified inorganics with a small percentage of solidified organics.

Waste Stream ID: **ND-T001**

Appendix A
Waste Profile Report

Site	Nuclear Radiation Development Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2013		
Stream Name	AmO2 Bagout/ Silver Bagout				Activity Concentrations Decayed to CY	2013	

Waste Volume Detail (m³)

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

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	0.4	0.0	0.4
Final Form Total	0.4	0.0	0.4

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	211.54
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	10.63
Other Inorganic Materials	5.41
Cellulose	211.54
Rubber	31.73
Plastic	52.88
Cement	0.00
Solidified Inorganic Material	531.73
Solidified Organic Material	10.63
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	7.12E+01
Np-237	4.62E-05
Th-229	1.18E-14
U-233	2.01E-10

Haz. Waste No(s).

D008, D011, D035, D040, F001, F002, F005
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TRUCON Code(s)

125/225

Waste Stream Description

AmO2 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
Waste Profile Report

Site	Nuclear Radiation Development Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Discarding Excess/Expired Materials	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2013		
Stream Name	Returned Smoke Detector Sources	Activity Concentrations Decayed to CY			2013		

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	1.7	0.6	2.3
Current Form Total	1.7	0.6	2.3

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	1.7	0.6	2.3
Final Form Total	1.7	0.6	2.3

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	31.79
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	3.18
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	0.00
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	2.26E+00
Np-237	2.93E-06
Th-229	2.92E-15
U-233	2.49E-11

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
Waste Profile Report

Site	Nevada National Security Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	R&D/R&D Laboratory Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2013		
Stream Name	Combined metal scrap and incidental combustibles			Activity Concentrations Decayed to CY	2013		

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
SWB Dir Ld w/o Liner	47.3	90.7	138.0
Current Form Total	47.3	90.7	138.0

Final Form Volumes			
Container Type	Stored	Proj.	Total
SWB Dir Ld w/o Liner	47.3	90.7	138.0
Final Form Total	47.3	90.7	138.0

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	721.46
Aluminum-based Metal/Alloys	3.68
Other Metal/Alloys	0.00
Other Inorganic Materials	3.68
Cellulose	0.00
Rubber	3.68
Plastic	3.68
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.19
Packaging Material, Steel	153.44
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	8.64E-02
Np-237	9.78E-07
Pu-238	4.22E-02
Pu-239	4.57E-02
Pu-240	3.07E-01
Pu-241	1.72E+00
Pu-242	1.69E-05
Th-229	1.55E-14
Th-230	5.78E-11
Th-232	2.24E-17
U-233	3.68E-11
U-234	1.24E-06
U-235	4.50E-10
U-236	9.08E-08
U-238	2.62E-14

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
Waste Profile Report

Site	Nevada National Security Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	R&D/R&D Laboratory Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2013	
Stream Name	V3XA Spheres			Activity Concentrations Decayed to CY		2013	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
Box - Crate	5.1	0.0	5.1
Current Form Total	5.1	0.0	5.1

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	5.4	0.0	5.4
Final Form Total	5.4	0.0	5.4

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	464.11
Aluminum-based Metal/Alloys	0.98
Other Metal/Alloys	1.56
Other Inorganic Materials	12.57
Cellulose	1.50
Rubber	0.00
Plastic	0.00
Cement	2.22
Solidified Inorganic Material	68.42
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	1.36E+00
Np-237	1.30E-06
Pu-238	2.46E-01
Pu-239	9.44E+00
Pu-240	2.17E+00
Pu-241	1.09E+01
Pu-242	1.92E-04
Th-229	1.03E-13
Th-230	3.57E-08
Th-232	1.42E-17
U-233	3.96E-10
U-234	1.30E-03
U-235	8.90E-06
U-236	1.92E-07
U-238	4.59E-04

No Hazardous Waste Numbers Provided

TRUCON Code(s)
125/225

Waste Stream Description

The two steel vessels are 1-inch thick by 3-foot diameter, weighing about 3300 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-CHEM-CH-HET**

Appendix A
Waste Profile Report

Site	Oak Ridge National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Analytical Laboratory Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2013		
Stream Name	ORNL Analytical Chemistry CH-TRU Debris Waste			Activity Concentrations Decayed to CY	2013		

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	21.0	0.0	21.0
79-gal Drum Dir Ld	0.9	0.0	0.9
Current Form Total	21.9	0.0	21.9

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	21.6	0.0	21.6
Final Form Total	21.6	0.0	21.6

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	22.39
Aluminum-based Metal/Alloys	2.68
Other Metal/Alloys	3.62
Other Inorganic Materials	5.23
Cellulose	41.17
Rubber	26.28
Plastic	32.45
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.27
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	3.19E-02
Am-243	1.14E-04
Cm-244	3.71E-02
Cs-137	3.54E-02
Np-237	1.81E-06
Pu-238	1.26E+01
Pu-239	5.03E-01
Pu-240	1.85E-01
Pu-241	1.39E+00
Pu-242	3.78E-04
Sr-90	4.26E-02
Th-229	2.01E-05
Th-232	9.43E-08
U-233	2.49E-02
U-234	2.58E-04
U-235	5.16E-06
U-236	5.41E-10
U-238	1.51E-04

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
Waste Profile Report

Site	Oak Ridge National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	R&D/R&D Laboratory Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2013	
Stream Name	ORNL General Research & Development CH-TRU Debris Waste				Activity Concentrations Decayed to CY	2013	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	24.8	0.0	24.8
Current Form Total	24.8	0.0	24.8

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	24.8	0.0	24.8
Final Form Total	24.8	0.0	24.8

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	19.22
Aluminum-based Metal/Alloys	4.78
Other Metal/Alloys	4.78
Other Inorganic Materials	19.22
Cellulose	35.41
Rubber	23.30
Plastic	9.67
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.12
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	1.11E-01
Am-243	1.51E-02
Cm-244	2.86E-01
Cs-137	4.70E-05
Np-237	3.60E-04
Pu-238	3.13E-01
Pu-239	1.43E-01
Pu-240	1.98E-02
Pu-241	1.14E-01
Pu-242	5.69E-03
Sr-90	4.70E-05
Th-229	3.49E-06
Th-232	5.97E-07
U-233	5.58E-04
U-234	5.25E-05
U-235	8.12E-08
U-236	1.45E-11
U-238	3.05E-05

Haz. Waste No(s).

D004, D005, D006,
D007, D008, D009,
D010, D011, D019,
D022, D028, F002,
F005

TRUCON Code(s)

125/225

Waste Stream Description

Waste consists of CH-TRU debris from general R&D at ORNL

Waste Stream ID: **OR-GENR-RH-HET**

Appendix A
Waste Profile Report

Site	Oak Ridge National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	RH
Source Cat.	R&D/R&D Laboratory Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2013	
Stream Name	ORNL General Research & Development RH-TRU Debris Waste				Activity Concentrations Decayed to CY	2013	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	2.9	0.0	2.9
Current Form Total	2.9	0.0	2.9

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	3.1	0.0	3.1
Final Form Total	3.1	0.0	3.1

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	36.92
Aluminum-based Metal/Alloys	9.17
Other Metal/Alloys	9.17
Other Inorganic Materials	36.92
Cellulose	68.02
Rubber	44.75
Plastic	18.57
Cement	0.00
Solidified Inorganic Material	0.22
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	45.67
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	7.55E-03
Am-243	5.51E-02
Cm-244	9.93E-02
Cs-137	8.09E-06
Np-237	2.22E-03
Pu-239	3.35E-01
Pu-240	8.66E-04
Pu-241	9.44E-05
Pu-242	1.70E-02
Pu-244	1.00E-11
Sr-90	7.75E-06
Th-229	7.88E-04
Th-230	6.70E-13
Th-232	3.23E-19
U-233	3.20E-01
U-234	5.13E-09
U-235	9.25E-09
U-236	5.39E-10
U-238	6.43E-05

Haz. Waste No(s).

D004, D005, D006,
D007, D008, D009,
D010, D011, D019,
D022, D028, F002,
F005

TRUCON Code(s)

325

Waste Stream Description

Waste consists of RH-TRU debris from general R&D at ORNL

Waste Stream ID: **OR-ISTP-CH-HET**

Appendix A
Waste Profile Report

Site	Oak Ridge National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Materials Production/Recovery Effluents	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2013		
Stream Name	ORNL Isotopes Facilities CH-TRU Debris Waste			Activity Concentrations Decayed to CY	2013		

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
110-gal Drum Dir Ld	2.5	0.0	2.5
55-gal Drum Dir Ld w/o Liner	116.1	0.0	116.1
55-gal POC - 12" w/ Liner	0.2	0.0	0.2
79-gal Drum Dir Ld	1.5	0.0	1.5
85-gal Drum Dir Ld w/o Liner	1.3	0.0	1.3
Box - Misc	2.6	0.0	2.6
Current Form Total	124.1	0.0	124.1

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	118.1	0.0	118.1
55-gal POC - 12" w/ Liner	0.2	0.0	0.2
55-gal POC - 6" w/ Liner	5.4	0.0	5.4
Final Form Total	123.8	0.0	123.8

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	52.59
Aluminum-based Metal/Alloys	2.76
Other Metal/Alloys	15.10
Other Inorganic Materials	3.25
Cellulose	26.30
Rubber	14.45
Plastic	47.56
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.32
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	9.62
Packaging Material, Plastic	1.68
Packaging Material, Rubber	0.57
Packaging Material, Steel	139.74
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	1.62E+01
Am-243	4.56E-03
Cm-244	1.15E+01
Cs-137	6.40E-04
Np-237	9.95E-04
Pu-238	1.84E+01
Pu-239	6.82E-01
Pu-240	3.86E+00
Pu-241	8.93E+01
Pu-242	2.58E-02
Pu-244	6.14E-07
Sr-90	1.22E-04
Th-229	4.56E-06
Th-230	1.68E-05
Th-232	1.81E-06
U-233	6.81E-03
U-234	7.48E-04
U-235	3.29E-06
U-236	6.28E-03
U-238	5.00E-06

Haz. Waste No(s).

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 isotopes production at ORNL

Waste Stream ID: **OR-ISTP-RH-HET**

Appendix A
Waste Profile Report

Site	Oak Ridge National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	RH
Source Cat.	Materials Production/Recovery Effluents	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2013	
Stream Name	ORNL Isotopes Facilities RH-TRU Debris Waste				Activity Concentrations Decayed to CY	2013	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	12.3	0.0	12.3
Cask - Misc	8.3	0.0	8.3
Current Form Total	20.6	0.0	20.6

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	20.0	0.0	20.0
Final Form Total	20.0	0.0	20.0

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	169.06
Aluminum-based Metal/Alloys	8.87
Other Metal/Alloys	48.53
Other Inorganic Materials	10.44
Cellulose	84.53
Rubber	46.44
Plastic	152.89
Cement	0.00
Solidified Inorganic Material	1.04
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	45.67
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	5.75E+00
Am-243	1.32E-03
Cm-244	1.35E+01
Cs-137	5.57E-06
Np-237	4.94E-04
Pu-238	3.71E+00
Pu-239	3.98E-01
Pu-240	6.14E-01
Pu-241	3.16E+00
Pu-242	8.10E-04
Pu-244	2.66E-10
Sr-90	5.34E-06
Th-229	1.27E-05
Th-230	1.97E-07
Th-232	5.01E-05
U-233	4.62E-03
U-234	9.24E-04
U-235	1.02E-05
U-236	4.85E-07
U-238	8.54E-07

Haz. Waste No(s).

D005, D006, D007,
D008, D009, D011,
D019, D022, F002,
F005

TRUCON Code(s)

325

Waste Stream Description

Waste consists of RH-TRU debris from isotopes production at ORNL

Waste Stream ID: **OR-NBL-CH-HET**

Appendix A
Waste Profile Report

Site	Oak Ridge National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	R&D/R&D Laboratory Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2013		
Stream Name	New Brunswick Laboratory CH-TRU Debris Waste			Activity Concentrations Decayed to CY	2013		

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	12.7	0.0	12.7
79-gal Drum Dir Ld	0.3	0.0	0.3
Current Form Total	13.0	0.0	13.0

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	12.9	0.0	12.9
Final Form Total	12.9	0.0	12.9

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	25.98
Aluminum-based Metal/Alloys	1.70
Other Metal/Alloys	33.62
Other Inorganic Materials	69.62
Cellulose	10.19
Rubber	18.17
Plastic	10.19
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.34
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	9.31E-02
Am-243	4.87E-05
Cm-244	5.06E-03
Cs-137	5.79E-05
Np-237	3.99E-06
Pu-238	1.66E-02
Pu-239	1.94E-01
Pu-240	7.59E-02
Pu-241	6.33E-01
Pu-242	1.64E-05
Sr-90	6.76E-05
Th-229	8.61E-07
Th-232	1.14E-06
U-233	1.63E-04
U-234	2.47E-04
U-235	7.96E-06
U-238	8.43E-05

Haz. Waste No(s).D004, D005, D007,
D008, D009, D011,
D022, F002, F005**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
Waste Profile Report

Site	Oak Ridge National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Remediation/D&D Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2013	
Stream Name	Nuclear Fuel Services CH-TRU Waste				Activity Concentrations Decayed to CY	2013	

Waste Volume Detail (m³)

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	98.2	0.0	98.2
85-gal Drum Dir Ld w/o Liner	6.4	0.0	6.4
Current Form Total	105.9	0.0	105.9

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	103.0	0.0	103.0
Final Form Total	103.0	0.0	103.0

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	59.82
Aluminum-based Metal/Alloys	5.28
Other Metal/Alloys	4.84
Other Inorganic Materials	320.66
Cellulose	12.32
Rubber	2.64
Plastic	33.87
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.44
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	5.92E-01
Am-243	9.01E-06
Cm-244	1.47E-03
Cs-137	2.81E-06
Np-237	7.73E-06
Pu-238	1.32E-01
Pu-239	1.11E+00
Pu-240	3.90E-01
Pu-241	3.31E+00
Pu-242	9.54E-05
Sr-90	2.81E-06
Th-229	1.19E-05
Th-232	7.97E-06
U-233	1.53E-03
U-234	4.03E-04
U-235	8.93E-07
U-238	1.61E-05

Haz. Waste No(s).D006, D008, D009,
D011, F002**TRUCON Code(s)**

125/225

Waste Stream Description

Waste consists of CH-TRU debris from NFS

Waste Stream ID: **OR-NFS-CH-HOM**

Appendix A
Waste Profile Report

Site	Oak Ridge National Laboratory	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Remediation/D&D Waste	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2013	
Stream Name	Nuclear Fuel Services CH-TRU Homogeneous Waste				Activity Concentrations Decayed to CY	2013	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	11.2	0.0	11.2
Current Form Total	11.2	0.0	11.2

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	11.2	0.0	11.2
Final Form Total	11.2	0.0	11.2

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	6.77
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	13.53
Cement	10.78
Solidified Inorganic Material	66.74
Solidified Organic Material	10.87
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	5.48E+00
Am-243	1.40E-04
Cs-137	8.45E-06
Np-237	4.91E-05
Pu-238	1.05E+00
Pu-239	1.08E+01
Pu-240	3.48E+00
Pu-241	2.95E+01
Pu-242	6.41E-04
Sr-90	8.45E-06
Th-229	1.45E-06
Th-232	4.31E-06
U-233	1.13E-03
U-234	6.15E-05
U-235	1.03E-05
U-238	2.39E-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
Waste Profile Report

Site	Oak Ridge National Laboratory	Summary Category	S4000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Remediation/D&D Waste	Waste Matrix Code Group	Contaminated Soil/Debris Waste		Inventory Date	12/31/2013	
Stream Name	Nuclear Fuel Services CH-TRU Soil Waste				Activity Concentrations Decayed to CY	2013	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	190.7	0.0	190.7
Current Form Total	190.7	0.0	190.7

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	190.7	0.0	190.7
Final Form Total	190.7	0.0	190.7

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	0.00
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	2.61
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	17.39
Soil	849.70
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	7.75E-02
Cs-137	3.14E-06
Np-237	1.25E-07
Pu-238	1.32E-02
Pu-239	1.47E-01
Pu-240	4.96E-02
Pu-241	2.01E-01
Pu-242	2.61E-06
Sr-90	4.60E-08
Th-230	1.20E-07
Th-232	8.57E-07
U-233	2.55E-04
U-234	1.23E-05
U-235	4.78E-07
U-238	9.65E-06

Haz. Waste No(s).

F002
TRUCON Code(s)
111/211

Waste Stream Description

Waste consists of soils from NFS

Waste Stream ID: **OR-PGDP-CH-HET**

Appendix A
Waste Profile Report

Site	Oak Ridge National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Materials Production/Recovery Effluents	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2013		
Stream Name	Paducah Gaseous Diffusion Plant CH-TRU Debris Waste			Activity Concentrations Decayed to CY	2013		

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	5.4	0.0	5.4
Current Form Total	5.4	0.0	5.4

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	5.4	0.0	5.4
Final Form Total	5.4	0.0	5.4

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	125.38
Aluminum-based Metal/Alloys	22.80
Other Metal/Alloys	56.99
Other Inorganic Materials	11.40
Cellulose	96.89
Rubber	79.79
Plastic	148.18
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	28.50
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	3.83E-02
Cs-137	6.89E-06
Np-237	2.80E-02
Pu-238	4.38E-02
Pu-239	2.06E-01
Pu-240	7.59E-02
Pu-241	1.62E-01
Pu-242	7.59E-06
Sr-90	6.60E-06
Th-229	3.75E-06
Th-230	2.06E-07
Th-232	9.25E-06
U-233	3.94E-04
U-234	8.02E-04
U-235	1.19E-04
U-236	6.60E-02
U-238	3.14E-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
Waste Profile Report

Site	Oak Ridge National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	R&D/R&D Laboratory Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2013	
Stream Name	ORNL Radiochemical Processing Research & Development CH-TRU Debris Waste				Activity Concentrations Decayed to CY	2013	

Waste Volume Detail (m³)

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	31.6	0.0	31.6
Current Form Total	32.9	0.0	32.9

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	32.2	0.0	32.2
Final Form Total	32.2	0.0	32.2

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	50.47
Aluminum-based Metal/Alloys	1.88
Other Metal/Alloys	7.00
Other Inorganic Materials	5.79
Cellulose	29.07
Rubber	7.13
Plastic	32.17
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	1.08
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	1.50E-01
Am-243	3.85E-03
Cm-244	1.35E+00
Cs-137	1.39E-03
Np-237	5.12E-04
Pu-238	5.85E-01
Pu-239	2.63E-01
Pu-240	3.44E-02
Pu-241	3.46E-01
Pu-242	6.00E-05
Pu-244	1.80E-05
Sr-90	1.73E-03
Th-229	6.03E-06
Th-232	9.97E-07
U-233	1.20E-03
U-234	1.18E-04
U-235	9.72E-07
U-236	2.14E-09
U-238	1.55E-06

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&D at ORNL

Waste Stream ID: **OR-RADP-CH-SOILS**

Appendix A
Waste Profile Report

Site	Oak Ridge National Laboratory	Summary Category	S4000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Remediation/D&D Waste	Waste Matrix Code Group	Contaminated Soil/Debris Waste		Inventory Date	12/31/2013	
Stream Name	ORNL Radiochemical Processing Research & Development CH-TRU Soil Waste				Activity Concentrations Decayed to CY	2013	

Waste Volume Detail (m³)

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

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

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	0.00
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	1.74
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	3.47
Soil	168.40
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	1.19E-02
Am-243	1.56E-06
Cs-137	1.80E-07
Np-237	1.06E-07
Pu-238	3.37E-03
Pu-239	1.60E-02
Pu-240	6.52E-03
Pu-241	1.14E-02
Pu-242	1.95E-06
Sr-90	1.72E-07
Th-229	5.24E-15
Th-230	3.97E-11
Th-232	2.24E-08
U-233	6.41E-12
U-234	2.98E-07
U-235	4.40E-10
U-236	5.41E-09
U-238	8.47E-15

Haz. Waste No(s).

F002

TRUCON Code(s)

111/211

Waste Stream Description

Waste consists of CH-TRU soils from radiochemical processing R&D at ORNL

Waste Stream ID: **OR-RADP-RH-HET**

Appendix A
Waste Profile Report

Site	Oak Ridge National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	RH
Source Cat.	R&D/R&D Laboratory Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2013	
Stream Name	ORNL Radiochemical Processing Research & Development RH-TRU Debris Waste				Activity Concentrations Decayed to CY	2013	

Waste Volume Detail (m³)

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

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	1.2	0.0	1.2
Final Form Total	1.2	0.0	1.2

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	70.09
Aluminum-based Metal/Alloys	2.62
Other Metal/Alloys	9.72
Other Inorganic Materials	8.04
Cellulose	40.37
Rubber	9.91
Plastic	44.67
Cement	0.00
Solidified Inorganic Material	1.50
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	45.67
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	3.47E-03
Am-243	5.41E-01
Cm-244	2.24E+00
Np-237	1.13E-04
Pu-239	4.16E-01
Pu-240	1.73E-02
Pu-244	6.85E-15
Th-229	1.86E-08
Th-232	5.99E-18
U-233	7.57E-06
U-235	1.39E-05
U-236	1.03E-08

Haz. Waste No(s).

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

TRUCON Code(s)

325

Waste Stream Description

Waste consists of RH-TRU debris from radiochemical processing R&D at ORNL

Waste Stream ID: **OR-REDC-CH-HET**

Appendix A
Waste Profile Report

Site	Oak Ridge National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	R&D/R&D Laboratory Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2013		
Stream Name	Radiochemical Engineering Development Center CH-TRU Waste			Activity Concentrations Decayed to CY	2013		

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
110-gal Drum Dir Ld	8.3	0.0	8.3
55-gal Drum Dir Ld w/o Liner	428.5	15.0	443.5
85-gal Drum Dir Ld w/ Liner	0.6	0.0	0.6
Current Form Total	437.4	15.0	452.4

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	433.1	15.0	448.0
Final Form Total	433.1	15.0	448.0

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	58.42
Aluminum-based Metal/Alloys	2.83
Other Metal/Alloys	1.77
Other Inorganic Materials	22.66
Cellulose	8.50
Rubber	2.30
Plastic	80.55
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	3.22E-01
Am-243	3.67E-03
Cm-244	4.88E+00
Cs-137	1.02E-02
Np-237	7.09E-05
Pu-238	4.32E-01
Pu-239	6.54E-02
Pu-240	1.44E-01
Pu-241	2.80E+00
Pu-242	3.58E-04
Pu-244	1.50E-10
Sr-90	1.57E-01
Th-229	6.43E-06
Th-232	2.63E-07
U-233	7.93E-04
U-234	1.97E-04
U-235	1.33E-06
U-236	2.93E-04
U-238	7.19E-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
Waste Profile Report

Site	Oak Ridge National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	RH
Source Cat.	R&D/R&D Laboratory Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2013	
Stream Name	Radiochemical Engineering Development Center RH-TRU Waste				Activity Concentrations Decayed to CY	2013	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	15.6	0.0	15.6
Cask - Misc	142.7	132.8	275.5
Current Form Total	158.3	132.8	291.1

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can NS30 w/ Liner	51.2	61.0	112.2
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	101.1	62.4	163.5
Final Form Total	152.3	123.4	275.7

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	298.03
Aluminum-based Metal/Alloys	0.05
Other Metal/Alloys	29.79
Other Inorganic Materials	84.58
Cellulose	33.67
Rubber	8.37
Plastic	43.45
Cement	0.00
Solidified Inorganic Material	6.10
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	334.44
Packaging Material, Rubber	0.34
Packaging Material, Steel	1210.06
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	3.70E-02
Am-243	2.84E-03
Cm-244	8.51E-01
Cs-137	3.28E-02
Np-237	5.27E-05
Pu-238	1.47E-02
Pu-239	2.83E-03
Pu-240	1.46E-02
Pu-241	3.61E-02
Pu-242	1.41E-04
Pu-244	2.78E-10
Sr-90	2.06E-01
Th-229	1.52E-08
Th-230	2.82E-08
Th-232	1.69E-12
U-233	6.18E-06
U-234	1.76E-06
U-235	1.74E-09
U-236	1.44E-08
U-238	3.10E-07

Haz. Waste No(s).

D004, 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

Waste Stream ID: **OR-RF-CH-HET**

Appendix A
Waste Profile Report

Site	Oak Ridge National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	R&D/R&D Laboratory Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2013	
Stream Name	ORNL Reactor Fuels Research & Development CH-TRU Debris Waste				Activity Concentrations Decayed to CY	2013	

Waste Volume Detail (m³)

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	47.8	0.0	47.8
79-gal Drum Dir Ld	0.3	0.0	0.3
Box - Misc	10.2	0.0	10.2
Current Form Total	59.2	0.0	59.2

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	58.7	0.0	58.7
Final Form Total	58.7	0.0	58.7

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	84.12
Aluminum-based Metal/Alloys	15.29
Other Metal/Alloys	38.23
Other Inorganic Materials	7.65
Cellulose	65.00
Rubber	53.53
Plastic	99.41
Cement	0.00
Solidified Inorganic Material	19.12
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	1.07E+00
Am-243	2.28E-04
Cm-244	1.82E-01
Cs-137	1.04E-02
Np-237	1.10E-05
Pu-238	4.68E-01
Pu-239	2.10E+00
Pu-240	9.99E-01
Pu-241	1.79E+01
Pu-242	2.34E-04
Sr-90	1.37E-03
Th-229	3.20E-05
Th-232	2.05E-04
U-233	9.35E-02
U-234	1.37E-03
U-235	4.36E-06
U-236	4.16E-07
U-238	3.66E-06

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&D at ORNL

Waste Stream ID: **OR-RF-CH-HOM**

Appendix A
Waste Profile Report

Site	Oak Ridge National Laboratory	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	R&D/R&D Laboratory Waste	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2013	
Stream Name	ORNL Reactor Fuels Research & Development CH-TRU Homogeneous Waste				Activity Concentrations Decayed to CY	2013	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	4.8	0.0	4.8
Current Form Total	4.8	0.0	4.8

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	4.8	0.0	4.8
Final Form Total	4.8	0.0	4.8

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	12.20
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	24.41
Cement	20.34
Solidified Inorganic Material	124.06
Solidified Organic Material	20.34
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	1.44E-02
Cs-137	2.87E-04
Np-237	1.31E-07
Pu-238	2.47E-03
Pu-239	1.43E-02
Pu-240	7.02E-03
Pu-241	7.60E-03
Pu-242	1.90E-06
Sr-90	3.51E-03
Th-229	6.50E-15
Th-230	4.86E-09
Th-232	4.03E-18
U-233	7.93E-12
U-234	1.90E-05
U-235	2.98E-07
U-236	5.83E-09
U-238	3.56E-06

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&D at ORNL

Waste Stream ID: **OR-RF-RH-HET**

Appendix A
Waste Profile Report

Site	Oak Ridge National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	RH
Source Cat.	R&D/R&D Laboratory Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2013		
Stream Name	ORNL Reactor Fuels Research & Development RH-TRU Debris Waste			Activity Concentrations Decayed to CY	2013		

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	11.0	0.0	11.0
79-gal Drum Dir Ld	0.3	0.0	0.3
Box - Misc	2.6	0.0	2.6
Cask - Misc	48.1	5.0	53.1
Current Form Total	62.0	5.0	67.0

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	59.9	5.0	64.9
Final Form Total	59.9	5.0	64.9

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	218.26
Aluminum-based Metal/Alloys	49.60
Other Metal/Alloys	44.64
Other Inorganic Materials	49.60
Cellulose	69.45
Rubber	14.88
Plastic	39.68
Cement	0.00
Solidified Inorganic Material	9.92
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	45.67
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	8.13E-02
Am-243	9.88E-05
Cm-244	1.42E-02
Cs-137	2.48E+00
Np-237	5.81E-06
Pu-238	1.63E-02
Pu-239	1.22E-01
Pu-240	5.60E-02
Pu-241	8.32E-02
Pu-242	3.84E-06
Pu-244	4.62E-16
Sr-90	3.48E-01
Th-229	5.09E-04
Th-230	5.96E-08
Th-232	2.49E-06
U-233	2.07E-01
U-234	2.32E-04
U-235	4.84E-06
U-236	3.88E-06
U-238	8.11E-06

Haz. Waste No(s).

D008, D009, D011

TRUCON Code(s)

325

Waste Stream Description

Waste consists of RH-TRU debris from reactor fuels R&D at ORNL

Waste Stream ID: **OR-SWSA-CH-HET**

Appendix A
Waste Profile Report

Site	Oak Ridge National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Remediation/D&D Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2013	
Stream Name	ORNL Solid Waste Storage Area 5 North 7802N Trench Area Debris Waste				Activity Concentrations Decayed to CY	2013	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	1.0	0.0	1.0
Current Form Total	1.0	0.0	1.0

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	1.0	0.0	1.0
Final Form Total	1.0	0.0	1.0

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	9.58
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	237.49
Cellulose	1.26
Rubber	0.00
Plastic	1.26
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	2.52
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	1.85E-01
Am-243	2.21E-04
Cm-244	6.03E-01
Cs-137	1.36E-04
Np-237	7.58E-05
Pu-238	2.72E-01
Pu-239	1.91E-03
Pu-240	4.79E-04
Pu-241	2.82E-03
Pu-242	1.25E-07
Sr-90	1.36E-04
Th-229	4.51E-06
Th-232	1.07E-06
U-233	1.64E-02
U-234	1.80E-04

Haz. Waste No(s).

D004, D005, D006,
D007, D008, D009,
D010, D011, D019,
D028, F001, F002,
F005

TRUCON Code(s)

125/225

Waste Stream Description

Waste consists of CH-TRU debris from SWSA 5 7802N Trench area

Waste Stream ID: **OR-SWSA-CH-SOIL**

Appendix A
Waste Profile Report

Site	Oak Ridge National Laboratory	Summary Category	S4000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Remediation/D&D Waste	Waste Matrix Code Group	Contaminated Soil/Debris Waste		Inventory Date	12/31/2013	
Stream Name	ORNL Solid Waste Storage Area 5 North 7802N Trench Area Soil Waste				Activity Concentrations Decayed to CY	2013	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	3.3	0.0	3.3
Current Form Total	3.3	0.0	3.3

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	3.3	0.0	3.3
Final Form Total	3.3	0.0	3.3

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	3.10
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	1.55
Other Inorganic Materials	6.98
Cellulose	3.10
Rubber	0.00
Plastic	17.05
Cement	0.00
Solidified Inorganic Material	125.57
Solidified Organic Material	3.10
Soil	614.69
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	1.91E+00
Am-243	6.74E-05
Cs-137	4.48E-06
Np-237	2.33E-06
Pu-238	5.55E-02
Pu-239	2.29E-02
Pu-240	7.63E-03
Pu-241	6.95E-02
Pu-242	1.27E-05
Sr-90	4.48E-06
Th-229	2.00E-07
Th-232	8.32E-07
U-233	1.48E-06
U-234	3.61E-06
U-235	7.78E-08

Haz. Waste No(s).

D004, D005, D006,
D007, D008, D009,
D010, D011, D019,
D028, F001, F002,
F005

TRUCON Code(s)

111/211

Waste Stream Description

Waste consists of CH-TRU soils from SWSA 5 7802N Trench area

Waste Stream ID: **OR-TBD-CH-HET**

Appendix A
Waste Profile Report

Site	Oak Ridge National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Other/Multiple Sources	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2013	
Stream Name	TBD CH-TRU Debris Waste			Activity Concentrations Decayed to CY		2013	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	11.2	0.0	11.2
79-gal Drum Dir Ld	0.9	0.0	0.9
Current Form Total	12.1	0.0	12.1

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	11.9	0.0	11.9
Final Form Total	11.9	0.0	11.9

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	28.60
Aluminum-based Metal/Alloys	5.20
Other Metal/Alloys	13.00
Other Inorganic Materials	2.60
Cellulose	22.10
Rubber	18.20
Plastic	33.80
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	6.50
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	4.42E+00
Am-243	1.34E-01
Cm-244	4.82E-03
Cs-137	8.27E-04
Np-237	3.54E-03
Pu-238	1.90E+01
Pu-239	3.52E+00
Pu-240	9.64E+00
Pu-241	2.64E+00
Pu-242	7.51E-04
Pu-244	4.65E-17
Sr-90	1.60E-05
Th-229	1.58E-04
Th-230	2.28E-07
Th-232	5.53E-15
U-233	6.42E-02
U-234	1.70E-03
U-235	2.65E-06
U-236	8.00E-06
U-238	1.30E-05

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

Waste Stream ID: **OR-TBD-RH-HET**

Appendix A
Waste Profile Report

Site	Oak Ridge National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	RH
Source Cat.	Other/Multiple Sources	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2013	
Stream Name	TBD RH-TRU Debris Waste			Activity Concentrations Decayed to CY		2013	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	5.0	0.0	5.0
Cask - Misc	47.5	5.0	52.4
Current Form Total	52.5	5.0	57.4

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	50.5	5.6	56.2
Final Form Total	50.5	5.6	56.2

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	241.55
Aluminum-based Metal/Alloys	54.90
Other Metal/Alloys	49.41
Other Inorganic Materials	54.90
Cellulose	76.86
Rubber	16.47
Plastic	43.92
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	10.98
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	45.67
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	8.54E-01
Am-243	5.74E-11
Cm-244	7.99E-02
Cs-137	3.46E+01
Np-237	9.80E-06
Pu-238	9.47E-01
Pu-239	1.35E-01
Pu-240	7.36E-02
Pu-241	8.85E-02
Pu-242	3.08E-07
Pu-244	6.57E-08
Sr-90	2.12E+01
Th-229	1.15E-04
Th-230	1.05E-07
Th-232	4.51E-07
U-233	4.65E-02
U-234	4.49E-04
U-235	1.23E-05
U-236	6.09E-08
U-238	1.00E-04

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
Waste Profile Report

Site	Oak Ridge National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Other/Multiple Sources	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2013	
Stream Name	ORNL Newly Generated Debris - Post 2013				Activity Concentrations Decayed to CY	2013	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	0.0	84.9	84.9
Current Form Total	0.0	84.9	84.9

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	0.0	84.9	84.9
Final Form Total	0.0	84.9	84.9

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	79.33
Aluminum-based Metal/Alloys	3.85
Other Metal/Alloys	2.40
Other Inorganic Materials	30.77
Cellulose	11.54
Rubber	3.13
Plastic	109.38
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	1.14E-02
Am-243	8.13E-04
Cm-244	9.79E-03
Cs-137	4.24E-02
Pu-238	8.57E-03
Pu-239	1.56E-04
Pu-240	7.37E-03
Pu-241	1.02E-01
Pu-242	1.07E-04
Sr-90	3.14E-01
U-234	1.44E-07
U-235	6.35E-09
U-236	7.25E-10
U-238	5.12E-08

No Hazardous Waste Numbers Provided

TRUCON Code(s)
125/225

Waste Stream Description

Hot Cell Debris Waste

Waste Stream ID: **OR-W213-RH-SOILS**

Appendix A
Waste Profile Report

Site	Oak Ridge National Laboratory	Summary Category	S4000	Defense Determination	Defense-Related	Handling	RH
Source Cat.	Remediation/D&D Waste	Waste Matrix Code Group	Contaminated Soil/Debris Waste		Inventory Date	12/31/2013	
Stream Name	ER RH TRU Soils			Activity Concentrations Decayed to CY		2013	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	0.2	0.0	0.2
Box - Misc	34.6	0.0	34.6
Current Form Total	34.8	0.0	34.8

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	10.6	0.0	10.6
Final Form Total	10.6	0.0	10.6

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	0.00
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	25.30
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	50.59
Soil	2453.73
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	45.67
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	1.06E-01
Am-243	3.26E-05
Cm-244	2.54E-04
Cs-137	9.56E-01
Np-237	1.09E-04
Pu-238	1.88E-02
Pu-239	5.18E-02
Pu-240	4.93E-04
Pu-241	1.76E-01
Pu-242	2.86E-05
Sr-90	7.83E-03
Th-229	7.63E-02
Th-230	1.29E-04
Th-232	1.22E-03
U-233	9.91E-02
U-234	5.65E-03
U-235	8.41E-05
U-236	8.91E-05
U-238	1.07E-03

No Hazardous Waste Numbers Provided

TRUCON Code(s)
311

Waste Stream Description

This waste is made up of soils.

Waste Stream ID: **OR-WSTR-CH-HET**

Appendix A
Waste Profile Report

Site	Oak Ridge National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2013		
Stream Name	ORNL-Liquid Waste Treatment CH-TRU Debris Waste			Activity Concentrations Decayed to CY	2013		

Waste Volume Detail (m³)

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

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

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	38.16
Aluminum-based Metal/Alloys	6.94
Other Metal/Alloys	17.35
Other Inorganic Materials	3.47
Cellulose	29.49
Rubber	24.28
Plastic	45.10
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	8.67
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	2.27E-02
Am-243	2.61E-05
Cm-244	5.38E-04
Cs-137	1.60E-03
Np-237	1.85E-06
Pu-238	7.52E-03
Pu-239	6.88E-02
Pu-240	8.12E-05
Pu-241	2.40E-04
Pu-242	1.20E-06
Sr-90	1.15E-03
Th-230	2.34E-06
Th-232	3.85E-06
U-233	4.32E-04
U-234	1.81E-04
U-235	2.80E-06
U-236	2.80E-06
U-238	5.40E-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
Waste Profile Report

Site	Oak Ridge National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Materials Production/Recovery Effluents	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2013		
Stream Name	Oak Ridge Y-12 CH-TRU Debris Waste			Activity Concentrations Decayed to CY	2013		

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	0.6	0.0	0.6
Current Form Total	0.6	0.0	0.6

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	0.6	0.0	0.6
Final Form Total	0.6	0.0	0.6

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	38.78
Aluminum-based Metal/Alloys	7.05
Other Metal/Alloys	17.63
Other Inorganic Materials	3.53
Cellulose	29.97
Rubber	24.68
Plastic	45.83
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	8.81
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Np-237	1.02E-02
Pu-238	4.25E-04
Pu-239	4.97E-02
Pu-240	2.08E-05
U-234	8.80E-04
U-235	1.20E-04
U-238	9.84E-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: **RL100D-08**

Appendix A
Waste Profile Report

Site	Hanford (Richland) Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	RH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2013		
Stream Name	RH-TRU Non Mixed Debris Waste from 100-D			Activity Concentrations Decayed to CY	2013		

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
85-gal Drum Dir Ld w/ Liner	0.3	0.0	0.3
Current Form Total	0.3	0.0	0.3

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	0.6	0.0	0.6
Final Form Total	0.6	0.0	0.6

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	1714.74
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	0.00
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	45.67
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	4.71E-02
Am-243	2.15E-05
Cs-137	7.13E-01
Np-237	3.62E-06
Pu-238	9.60E-03
Pu-239	1.34E-02
Pu-240	1.73E-02
Pu-241	1.28E+00
Pu-242	6.75E-06
Sr-90	5.11E-01
Th-229	6.91E-16
Th-230	1.26E-13
Th-232	1.26E-20
U-233	1.57E-11
U-234	2.73E-08
U-235	3.51E-06
U-236	5.12E-10
U-238	2.60E-05

No Hazardous Waste Numbers Provided

TRUCON Code(s)
325

Waste Stream Description

Not available

Waste Stream ID: **RL105-01**

Appendix A
Waste Profile Report

Site	Hanford (Richland) Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2013	
Stream Name	105-C, 105KE, and 105-N Bldg TRU CH Mixed Debris				Activity Concentrations Decayed to CY	2013	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	29.7	0.0	29.7
85-gal Drum Dir Ld w/ Liner	0.6	0.0	0.6
Box - Misc	54.2	0.0	54.2
Current Form Total	84.6	0.0	84.6

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	37.9	0.0	37.9
SWB Dir Ld w/ Liner	68.0	0.0	68.0
Final Form Total	105.9	0.0	105.9

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	75.59
Aluminum-based Metal/Alloys	3.85
Other Metal/Alloys	0.00
Other Inorganic Materials	25.04
Cellulose	15.41
Rubber	13.48
Plastic	28.50
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	14.02
Packaging Material, Rubber	0.33
Packaging Material, Steel	145.34
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	1.90E-01
Am-243	5.20E-04
Cm-244	8.48E-03
Cs-137	1.20E+00
Np-237	2.29E-04
Pu-238	4.36E-02
Pu-239	1.44E-01
Pu-240	5.80E-02
Pu-241	5.00E+00
Pu-242	1.72E-05
Sr-90	4.26E-01
Th-229	6.82E-13
Th-230	1.35E-09
Th-232	1.43E-15
U-233	3.88E-09
U-234	3.68E-05
U-235	2.04E-05
U-236	7.25E-06
U-238	3.33E-04

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

CH TRU 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, cartridge-type water filters from the Primary Recirculation System, and absorbed liquids.

Waste Stream ID: **RL105-03**

Appendix A
Waste Profile Report

Site	Hanford (Richland) Site	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2013	
Stream Name	NLOP sludge				Activity Concentrations Decayed to CY	2013	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	68.4	0.0	68.4
Current Form Total	68.4	0.0	68.4

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	68.4	0.0	68.4
Final Form Total	68.4	0.0	68.4

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	36.09
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	12.59
Cellulose	0.00
Rubber	0.00
Plastic	0.00
Cement	930.62
Solidified Inorganic Material	620.41
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	5.41E-01
Cs-137	1.54E+00
Np-237	9.34E-06
Pu-238	6.65E-02
Pu-239	3.38E-01
Pu-240	1.86E-01
Pu-241	6.98E+00
Pu-242	8.86E-05
Sr-90	7.69E+00
Th-229	4.11E-14
Th-230	2.75E-08
Th-232	3.40E-18
U-233	1.90E-10
U-234	5.99E-04
U-235	2.25E-05
U-236	2.75E-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
Waste Profile Report

Site	Hanford (Richland) Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	RH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2013		
Stream Name	105-C, 105KE, and 105-N Bldg RH-TRU Mixed Debris			Activity Concentrations Decayed to CY	2013		

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	3.7	0.0	3.7
Box - Misc	120.5	0.0	120.5
SWB Dir Ld w/ Liner	3.8	0.0	3.8
Current Form Total	128.0	0.0	128.0

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	161.0	0.0	161.0
Final Form Total	161.0	0.0	161.0

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	106.95
Aluminum-based Metal/Alloys	5.45
Other Metal/Alloys	0.00
Other Inorganic Materials	35.42
Cellulose	21.80
Rubber	19.07
Plastic	38.15
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	45.67
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	9.60E-02
Am-243	3.78E-08
Cm-244	9.27E-04
Cs-137	1.58E+00
Np-237	1.03E-06
Pu-238	2.44E-02
Pu-239	7.75E-02
Pu-240	4.22E-02
Pu-241	9.24E-01
Pu-242	1.73E-06
Sr-90	7.22E-01
Th-229	4.14E-14
Th-230	2.36E-09
Th-232	4.95E-08
U-233	7.52E-11
U-234	3.23E-05
U-235	1.61E-06
U-236	5.63E-06
U-238	3.89E-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)

325

Waste Stream Description

The 105-KE RH waste stream is composed solely of cartridge-type water filters from the Primary Recirculation System. The water filters, accumulated waste and associated packaging. Other 100 area 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 Reactor Facility/Equipment Operation and Maintenance Waste activities.

Waste Stream ID: **RL105-09**

Appendix A
Waste Profile Report

Site	Hanford (Richland) Site	Summary Category	S3000	Defense Determination	Defense-Related	Handling	RH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2013	
Stream Name	105KE TRU RH Non-mixed solidified inorganics				Activity Concentrations Decayed to CY	2013	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
85-gal Drum Dir Ld w/ Liner	0.6	0.0	0.6
Sludge Transport and Storage Container	258.1	0.0	258.1
Current Form Total	258.7	0.0	258.7

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	1011.5	0.0	1011.5
Final Form Total	1011.5	0.0	1011.5

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	2.62
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.10
Cellulose	0.00
Rubber	0.00
Plastic	0.00
Cement	0.71
Solidified Inorganic Material	6.42
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	45.67
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	7.07E-01
Cs-137	3.47E+00
Np-237	5.90E-05
Pu-238	8.21E-02
Pu-239	4.03E-01
Pu-240	2.33E-01
Pu-241	3.32E+00
Pu-242	9.74E-05
Sr-90	4.84E+00
Th-229	5.35E-13
Th-230	7.71E-08
Th-232	5.28E-14
U-233	1.75E-09
U-234	1.20E-03
U-235	4.86E-05
U-236	1.53E-04
U-238	1.06E-03

No Hazardous Waste Numbers Provided

TRUCON Code(s)
311

Waste Stream Description

Solidified inorganic RH TRU waste generated from Facility/Equipment Operation and Maintenance activities at the Reactor facility.

Waste Stream ID: **RL200-01**

Appendix A
Waste Profile Report

Site	Hanford (Richland) Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Other/Multiple Sources	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2013	
Stream Name	Misc 200 Area TRU Mixed Debris					Activity Concentrations Decayed to CY	2013

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	71.1	0.0	71.1
Box - Misc	46.3	0.0	46.3
SWB Dir Ld w/ Liner	1.9	0.0	1.9
Current Form Total	119.3	0.0	119.3

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	88.8	0.0	88.8
SWB Dir Ld w/ Liner	60.5	0.0	60.5
Final Form Total	149.3	0.0	149.3

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	567.18
Aluminum-based Metal/Alloys	128.32
Other Metal/Alloys	0.00
Other Inorganic Materials	33.59
Cellulose	24.62
Rubber	8.49
Plastic	33.60
Cement	0.00
Solidified Inorganic Material	5.39
Solidified Organic Material	0.00
Soil	2.90
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	22.54
Packaging Material, Rubber	0.42
Packaging Material, Steel	139.95
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	5.39E-01
Cs-137	3.23E-03
Np-237	1.23E-06
Pu-238	9.14E-04
Pu-239	6.36E-03
Pu-240	2.28E-03
Pu-241	3.13E-02
Pu-242	2.21E-07
Sr-90	2.40E-04
Th-229	3.79E-15
Th-230	6.03E-13
Th-232	8.16E-20
U-233	1.85E-11
U-234	1.86E-08
U-235	4.38E-11
U-236	4.72E-10
U-238	2.40E-16

Haz. Waste No(s).

D004, D005, D006,
D007, D008, D009,
D010, D011, F001,
F002, F003, F004,
F005

TRUCON Code(s)

125/225

Waste Stream Description

Containers with both combustible and noncombustible waste items from various general operations/maintenance/evaporator in 200 area. 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
Waste Profile Report

Site	Hanford (Richland) Site	Summary Category	S4000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Other/Multiple Sources	Waste Matrix Code Group	Contaminated Soil/Debris Waste		Inventory Date	12/31/2013	
Stream Name	Soil from Groundwater projects. And contaminated soil from PFP				Activity Concentrations Decayed to CY	2013	

Waste Volume Detail (m³)

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	3.2	0.0	3.2
Uncontained	0.0	1841.4	1841.4
Current Form Total	10.5	1841.4	1851.9

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	10.4	0.0	10.4
SWB Dir Ld w/ Liner	0.0	1491.2	1491.2
Final Form Total	10.4	1491.2	1501.6

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	3.59
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	513.52
Cellulose	4.73
Rubber	2.19
Plastic	9.25
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	543.68
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	1.45
Packaging Material, Rubber	0.19
Packaging Material, Steel	153.28
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	4.80E-01
Cs-137	3.02E-04
Np-237	1.22E-05
Pu-238	7.53E-02
Pu-239	1.66E+00
Pu-240	4.38E-01
Pu-241	2.68E+00
Pu-242	3.31E-05
Sr-90	2.73E-04
Th-229	2.06E-14
Th-230	8.93E-12
Th-232	2.88E-18
U-233	1.57E-10
U-234	6.45E-07
U-235	4.92E-09
U-236	3.89E-08
U-238	1.54E-14

Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, 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: **RL201-03**

Appendix A
Waste Profile Report

Site	Hanford (Richland) Site	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Remediation/D&D Waste	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2013	
Stream Name	201C TRU Mixed Solid Inorganic			Activity Concentrations Decayed to CY		2013	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	11.4	0.0	11.4
Current Form Total	11.4	0.0	11.4

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	13.5	0.0	13.5
Final Form Total	13.5	0.0	13.5

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	0.00
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	27.63
Other Inorganic Materials	9.16
Cellulose	64.47
Rubber	119.33
Plastic	32.23
Cement	0.00
Solidified Inorganic Material	0.93
Solidified Organic Material	0.00
Soil	314.38
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	2.09E+00
Cs-137	1.90E-01
Np-237	1.36E-06
Pu-238	6.76E-05
Pu-239	1.39E-01
Pu-240	3.43E-02
Pu-241	3.17E-03
Pu-242	5.00E-08
Sr-90	4.92E+00
Th-229	3.47E-16
Th-230	2.91E-14
Th-232	1.00E-19
U-233	5.92E-12
U-234	3.17E-09
U-235	2.74E-10
U-236	2.03E-09
U-238	5.18E-04

Haz. Waste No(s).

D007, D010

TRUCON Code(s)

122/222

Waste Stream Description

Generated from tank CX-70 sludge cleanout/remediation. A vacuuming process loaded sludge waste into cloth lined 16 gal drums. A 16 gal drum was placed into each 55 gal drum. Diatomaceous earth was added to ensure no free liquid process waste.

Waste Stream ID: **RL202S-01**

Appendix A
Waste Profile Report

Site	Hanford (Richland) Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Remediation/D&D Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2013	
Stream Name	202S TRU Mixed Debris			Activity Concentrations Decayed to CY		2013	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.8	0.0	0.8
Current Form Total	0.8	0.0	0.8

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	1.0	0.0	1.0
Final Form Total	1.0	0.0	1.0

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	2.74
Aluminum-based Metal/Alloys	0.91
Other Metal/Alloys	0.77
Other Inorganic Materials	0.00
Cellulose	3.34
Rubber	0.77
Plastic	53.09
Cement	0.00
Solidified Inorganic Material	3.59
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	4.73E-02
Cs-137	1.06E-07
Np-237	1.88E-06
Pu-238	1.07E-02
Pu-239	6.29E-02
Pu-240	2.35E-02
Pu-241	1.38E-01
Pu-242	2.70E-06
Sr-90	9.56E-08
Th-229	3.19E-15
Th-230	1.26E-12
Th-232	1.55E-19
U-233	2.43E-11
U-234	9.13E-08
U-235	1.86E-10
U-236	2.09E-09
U-238	1.26E-15

Haz. Waste No(s).

D006, D007, D008, D009

TRUCON Code(s)

125/225

Waste Stream Description

Generated from investigations at the North Sample Gallery of the 202-S Canyon (REDOX CANYON AND SERVICE FACILITY). Debris waste of personal protective equipment, sharp metal objects, and cleanup material generated in S canyon investigation, waste characterization samples. Predominant debris waste consists of over 80% plastic.

Waste Stream ID: **RL209E-01**

Appendix A
Waste Profile Report

Site	Hanford (Richland) Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	R&D/R&D Laboratory Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2013	
Stream Name	209E TRU Mixed Debris			Activity Concentrations Decayed to CY		2013	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	12.1	0.0	12.1
85-gal Drum Dir Ld w/ Liner	1.6	0.0	1.6
Box - Misc	213.8	0.0	213.8
SWB Dir Ld w/ Liner	66.2	0.0	66.2
Current Form Total	293.6	0.0	293.6

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	15.4	0.0	15.4
SWB Dir Ld w/ Liner	334.5	0.0	334.5
Final Form Total	349.9	0.0	349.9

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	70.85
Aluminum-based Metal/Alloys	0.03
Other Metal/Alloys	0.72
Other Inorganic Materials	8.56
Cellulose	39.53
Rubber	15.06
Plastic	34.22
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	2.78
Packaging Material, Rubber	0.21
Packaging Material, Steel	152.44
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	7.44E+00
Cs-137	1.48E-08
Np-237	6.60E-05
Pu-238	1.52E+00
Pu-239	1.09E+01
Pu-240	3.99E+00
Pu-241	4.22E+01
Pu-242	5.85E-04
Sr-90	1.33E-08
Th-229	4.81E-14
Th-230	4.14E-09
Th-232	1.17E-17
U-233	5.54E-10
U-234	2.30E-04
U-235	8.10E-06
U-236	2.36E-07
U-238	2.07E-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
Waste Profile Report

Site	Hanford (Richland) Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	RH
Source Cat.	R&D/R&D Laboratory Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2013	
Stream Name	209E TRU RH Mixed Debris			Activity Concentrations Decayed to CY		2013	

Waste Volume Detail (m³)

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

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	0.6	0.0	0.6
Final Form Total	0.6	0.0	0.6

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	2.40
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.80
Cellulose	24.04
Rubber	3.21
Plastic	23.08
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	45.67
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	4.18E+00
Np-237	3.70E-05
Pu-238	8.27E-01
Pu-239	5.59E+00
Pu-240	1.96E+00
Pu-241	1.80E+01
Pu-242	2.44E-04
Th-229	2.14E-13
Th-230	3.99E-10
Th-232	5.15E-17
U-233	8.47E-10
U-234	1.43E-05
U-235	3.31E-08
U-236	3.48E-07
U-238	2.27E-13

Haz. Waste No(s).

D006, D007, D018, D019, F002, F003, F005
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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
Waste Profile Report

Site	Hanford (Richland) Site	Summary Category	S4000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Contaminated Soil/Debris Waste		Inventory Date	12/31/2013	
Stream Name	216-Z-9 TRU Mixed Soil			Activity Concentrations Decayed to CY		2013	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	183.5	0.0	183.5
85-gal Drum Dir Ld w/ Liner	28.7	0.0	28.7
Box - Misc	12.7	0.0	12.7
SWB Dir Ld w/ Liner	1.9	0.0	1.9
Current Form Total	226.7	0.0	226.7

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	290.4	0.0	290.4
SWB Dir Ld w/ Liner	18.9	0.0	18.9
Final Form Total	309.3	0.0	309.3

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	2.12
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	17.18
Cellulose	0.35
Rubber	0.00
Plastic	1.06
Cement	0.00
Solidified Inorganic Material	18.83
Solidified Organic Material	0.00
Soil	18.85
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	34.88
Packaging Material, Rubber	0.54
Packaging Material, Steel	132.15
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	4.34E+00
Np-237	4.22E-06
Pu-238	1.20E+00
Pu-239	1.46E+01
Pu-240	3.43E+00
Pu-241	4.91E+01
Pu-242	2.05E-04
Th-229	1.81E-15
Th-230	6.31E-11
Th-232	1.00E-17
U-233	2.46E-11
U-234	6.85E-06
U-235	2.87E-08
U-236	2.03E-07
U-238	6.35E-14

Haz. Waste No(s).

D005, D006, D007,
D008, D009, D011,
D039, F001, F002,
F003, F005

TRUCON Code(s)

125/225

Waste Stream Description

Soil contaminated with large quantities of plutonium, americium, organics, and neutralized acid waste solutions that were removed from the 216-Z-9 Crib. Original packaging material (e.g., 10-L stainless steel slip-lid cans, plastic bags, and vermiculite) now waste due to deterioration and TRU contamination.

Waste Stream ID: **RL221U-03**

Appendix A
Waste Profile Report

Site	Hanford (Richland) Site	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2013	
Stream Name	221U Solidified sludge				Activity Concentrations Decayed to CY	2013	

Waste Volume Detail (m³)

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

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

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	9.89
Aluminum-based Metal/Alloys	1.38
Other Metal/Alloys	0.41
Other Inorganic Materials	1.84
Cellulose	1.06
Rubber	0.25
Plastic	0.93
Cement	0.00
Solidified Inorganic Material	0.17
Solidified Organic Material	0.00
Soil	0.19
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	5.65E-04
Cs-137	1.43E-03
Np-237	3.62E-10
Pu-238	7.62E-05
Pu-239	3.26E-03
Pu-240	7.45E-04
Pu-241	4.23E-03
Pu-242	6.35E-08
Sr-90	1.30E-03
Th-229	9.20E-20
Th-230	3.99E-15
Th-232	2.18E-21
U-233	1.57E-15
U-234	4.33E-10
U-235	6.43E-12
U-236	4.41E-11
U-238	1.97E-17

Haz. Waste No(s).

D006, D007, D008,
D009, D011, D027,
D030, D032, D033,
D034, D036, D037,
F001, F002

TRUCON Code(s)

122/222

Waste Stream Description

Solidified sludge and laboratory sample debris (e.g., glass sample bottles, plastic, and tape) from characterization efforts of U Plant.

Waste Stream ID: **RL221U-09**

Appendix A
Waste Profile Report

Site	Hanford (Richland) Site	Summary Category	S3000	Defense Determination	Defense-Related	Handling	RH
Source Cat.	Remediation/D&D Waste	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2013	
Stream Name	U Plant Tank 10 Projected Waste			Activity Concentrations Decayed to CY		2013	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
Box - Misc	28.1	0.0	28.1
Current Form Total	28.1	0.0	28.1

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	35.6	0.0	35.6
Final Form Total	35.6	0.0	35.6

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	0.00
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	0.00
Cement	0.00
Solidified Inorganic Material	193.99
Solidified Organic Material	1.96
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	45.67
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	4.90E-01
Am-243	1.91E-08
Cm-244	1.90E-02
Cs-137	1.41E+01
Np-237	1.77E-03
Pu-238	1.82E-01
Pu-239	1.37E+00
Pu-240	3.88E-01
Pu-241	1.71E+01
Pu-242	3.92E-05
Sr-90	1.08E+01
Th-229	1.31E-11
Th-230	2.60E-07
Th-232	2.66E-07
U-233	5.23E-08
U-234	7.08E-03
U-235	7.42E-06
U-236	4.60E-08
U-238	1.39E-04

Haz. Waste No(s).

D007, D008, D010

**No TRUCON
Codes Provided**

Waste Stream Description

RH-TRU Nitrate Salts in the heel of U Plant Tank 10. Waste is under a CERCLA ROD to dispose of TRU constituents at WIPP.

Waste Stream ID: **RL222S-01**

Appendix A
Waste Profile Report

Site	Hanford (Richland) Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	R&D/R&D Laboratory Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2013	
Stream Name	222S TRU Mixed Debris			Activity Concentrations Decayed to CY		2013	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	54.5	0.0	54.5
85-gal Drum Dir Ld w/ Liner	1.9	0.0	1.9
Box - Misc	44.0	0.0	44.0
Current Form Total	100.4	0.0	100.4

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	66.8	0.0	66.8
SWB Dir Ld w/ Liner	56.7	0.0	56.7
Final Form Total	123.5	0.0	123.5

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	520.54
Aluminum-based Metal/Alloys	103.27
Other Metal/Alloys	0.01
Other Inorganic Materials	34.65
Cellulose	52.66
Rubber	20.79
Plastic	58.43
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	8.69
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	20.60
Packaging Material, Rubber	0.39
Packaging Material, Steel	141.18
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	1.69E-01
Am-243	3.40E-07
Cs-137	1.29E-03
Np-237	2.50E-05
Pu-238	1.10E-02
Pu-239	6.03E-02
Pu-240	2.72E-02
Pu-241	6.37E-01
Pu-242	1.96E-06
Sr-90	1.15E-03
Th-229	6.78E-08
Th-230	4.84E-12
Th-232	1.79E-19
U-233	2.57E-04
U-234	2.23E-07
U-235	4.70E-09
U-236	2.42E-09
U-238	1.12E-04

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

Combustible waste and Noncombustible waste - TRU wastes were generated from multiple operations, primarily from the hot cells, the hoods, or from within the gloveboxes (for standards laboratory tasks) located in the Analytical laboratory.

Waste Stream ID: **RL222S-08**

Appendix A
Waste Profile Report

Site	Hanford (Richland) Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	RH
Source Cat.	R&D/R&D Laboratory Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2013	
Stream Name	222S TRU RH Mixed Debris			Activity Concentrations Decayed to CY		2013	

Waste Volume Detail (m³)

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
Current Form Total	1.3	0.0	1.3

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	2.5	0.0	2.5
Final Form Total	2.5	0.0	2.5

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	379.68
Aluminum-based Metal/Alloys	59.95
Other Metal/Alloys	0.00
Other Inorganic Materials	29.31
Cellulose	72.03
Rubber	30.74
Plastic	73.76
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	10.55
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	45.67
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	1.31E-01
Am-243	1.02E-02
Cs-137	1.03E-01
Np-237	1.12E-03
Pu-238	2.28E-02
Pu-239	2.52E+00
Pu-240	6.45E-02
Pu-241	5.58E+00
Pu-242	2.24E-04
Pu-244	9.32E-07
Sr-90	1.70E-01
Th-229	1.08E-04
Th-230	1.52E-11
Th-232	2.31E-18
U-233	1.76E-01
U-234	4.67E-07
U-235	4.26E-06
U-236	1.34E-08
U-238	1.57E-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

Combustible waste and Noncombustible waste- TRU wastes were generated from multiple operations, primarily from the hot cells, the hoods, or from within the gloveboxes (for standards laboratory tasks) located in the Analytical laboratory.

Waste Stream ID: **RL231Z-01**

Appendix A
Waste Profile Report

Site	Hanford (Richland) Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	R&D/R&D Laboratory Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2013	
Stream Name	231-Z TRU Mixed Debris			Activity Concentrations Decayed to CY		2013	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	147.7	0.0	147.7
85-gal Drum Dir Ld w/ Liner	13.5	0.0	13.5
Box - Misc	1054.9	0.0	1054.9
SWB Dir Ld w/ Liner	26.5	0.0	26.5
Current Form Total	1242.6	0.0	1242.6

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	193.9	0.0	193.9
SWB Dir Ld w/ Liner	1345.7	0.0	1345.7
Final Form Total	1539.5	0.0	1539.5

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	102.36
Aluminum-based Metal/Alloys	0.44
Other Metal/Alloys	1.64
Other Inorganic Materials	15.50
Cellulose	20.06
Rubber	3.68
Plastic	26.34
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	5.72
Packaging Material, Rubber	0.24
Packaging Material, Steel	150.58
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	1.74E-01
Am-243	3.20E-06
Cs-137	3.69E-05
Np-237	1.47E-05
Pu-238	4.47E-02
Pu-239	3.88E-01
Pu-240	1.03E-01
Pu-241	1.15E+00
Pu-242	1.24E-05
Sr-90	3.34E-05
Th-229	2.52E-14
Th-230	1.52E-09
Th-232	6.79E-19
U-233	1.92E-10
U-234	5.54E-05
U-235	1.46E-06
U-236	9.18E-09
U-238	9.12E-06

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 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.

Waste Stream ID: **RL231Z-03**

Appendix A
Waste Profile Report

Site	Hanford (Richland) Site	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	R&D/R&D Laboratory Waste	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2013	
Stream Name	231Z TRU Mixed Solid Inorganic			Activity Concentrations Decayed to CY		2013	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
85-gal Drum Dir Ld w/ Liner	0.6	0.0	0.6
Current Form Total	0.6	0.0	0.6

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.6	0.0	0.6
Final Form Total	0.6	0.0	0.6

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	0.00
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	104.98
Other Inorganic Materials	0.19
Cellulose	6.57
Rubber	1.56
Plastic	20.58
Cement	0.00
Solidified Inorganic Material	93.37
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	1.85E-01
Np-237	1.98E-06
Pu-238	1.31E-04
Pu-239	4.95E-01
Pu-240	1.71E-01
Pu-241	1.89E-01
Pu-242	1.53E-05
Th-229	1.42E-13
Th-230	2.35E-12
Th-232	1.45E-16
U-233	1.44E-10
U-234	1.44E-08
U-235	1.66E-08
U-236	1.72E-07
U-238	8.05E-14

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
Waste Profile Report

Site	Hanford (Richland) Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Other/Multiple Sources	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2013	
Stream Name	233S TRU Mixed Debris			Activity Concentrations Decayed to CY		2013	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	6.9	0.0	6.9
85-gal Drum Dir Ld w/ Liner	3.5	0.0	3.5
SWB Dir Ld w/ Liner	28.4	0.0	28.4
Current Form Total	38.8	0.0	38.8

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	10.0	0.0	10.0
SWB Dir Ld w/ Liner	34.0	0.0	34.0
Final Form Total	44.0	0.0	44.0

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	197.17
Aluminum-based Metal/Alloys	0.83
Other Metal/Alloys	1.80
Other Inorganic Materials	4.49
Cellulose	13.49
Rubber	2.92
Plastic	16.01
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.52
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	9.34
Packaging Material, Rubber	0.28
Packaging Material, Steel	148.30
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	4.21E-01
Cs-137	3.68E-05
Np-237	1.77E-04
Pu-238	8.36E-02
Pu-239	6.31E-01
Pu-240	2.06E-01
Pu-241	1.83E+00
Pu-242	6.20E-05
Sr-90	3.33E-05
Th-229	3.04E-13
Th-230	1.01E-10
Th-232	1.35E-18
U-233	2.31E-09
U-234	4.02E-06
U-235	1.12E-07
U-236	1.83E-08
U-238	1.66E-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
Waste Profile Report

Site	Hanford (Richland) Site	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Remediation/D&D Waste	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2013	
Stream Name	233S solidified inorganic waste			Activity Concentrations Decayed to CY		2013	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	4.2	0.0	4.2
Current Form Total	4.2	0.0	4.2

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	5.2	0.0	5.2
Final Form Total	5.2	0.0	5.2

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	0.04
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	513.33
Cellulose	0.00
Rubber	0.04
Plastic	0.65
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	7.41E-02
Cs-137	1.11E-06
Np-237	6.00E-05
Pu-238	1.74E-02
Pu-239	7.02E-02
Pu-240	2.83E-02
Pu-241	1.41E-01
Pu-242	1.79E-05
Sr-90	9.20E-07
Th-229	1.79E-13
Th-230	3.69E-12
Th-232	3.31E-19
U-233	1.02E-09
U-234	2.00E-07
U-235	2.77E-10
U-236	3.35E-09
U-238	1.11E-14

Haz. Waste No(s).

D007

TRUCON Code(s)

122/222

Waste Stream Description

Solidified inorganic CH TRU waste generated from 233 Facility/Equipment Operation and Maintenance activities

Waste Stream ID: **RL300-01**

Appendix A
Waste Profile Report

Site	Hanford (Richland) Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Other/Multiple Sources	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2013	
Stream Name	300 Area TRU Mixed Debris			Activity Concentrations Decayed to CY		2013	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	17.3	0.0	17.3
85-gal Drum Dir Ld w/ Liner	10.3	0.0	10.3
Box - Misc	89.5	0.0	89.5
SWB Dir Ld w/ Liner	35.9	0.0	35.9
Current Form Total	153.0	0.0	153.0

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	26.6	0.0	26.6
SWB Dir Ld w/ Liner	149.3	0.0	149.3
Final Form Total	175.9	0.0	175.9

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	61.70
Aluminum-based Metal/Alloys	0.09
Other Metal/Alloys	6.71
Other Inorganic Materials	27.52
Cellulose	10.03
Rubber	2.09
Plastic	17.80
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	6.63
Packaging Material, Rubber	0.25
Packaging Material, Steel	150.01
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	1.57E+00
Am-243	2.87E-05
Cs-137	1.43E-04
Np-237	3.65E-05
Pu-238	4.39E-01
Pu-239	2.21E+00
Pu-240	1.02E+00
Pu-241	1.44E+01
Pu-242	1.97E-04
Sr-90	1.30E-04
Th-229	2.75E-14
Th-230	8.71E-09
Th-232	1.92E-06
U-233	3.14E-10
U-234	4.75E-04
U-235	2.13E-05
U-236	6.02E-08
U-238	4.97E-04

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

Combustible and noncombustible debris waste generated from operations, including fuel fabrication, reactor studies, 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
Waste Profile Report

Site	Hanford (Richland) Site	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Other/Multiple Sources	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2013	
Stream Name	300 Area Mixed Solidified Inorganics			Activity Concentrations Decayed to CY		2013	

Waste Volume Detail (m³)

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	1.3	0.0	1.3
Current Form Total	3.8	0.0	3.8

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

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	2.89
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	30.55
Cement	567.31
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	3.26E+00
Cs-137	5.53E-04
Np-237	2.13E-05
Pu-238	7.51E-01
Pu-239	4.01E+00
Pu-240	2.05E+00
Pu-241	2.96E+01
Pu-242	3.40E-04
Sr-90	6.86E-04
Th-229	1.53E-14
Th-230	9.23E-10
Th-232	5.99E-18
U-233	1.77E-10
U-234	5.23E-05
U-235	1.69E-06
U-236	1.21E-07
U-238	2.91E-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 studies, research and development, maintenance, and laboratory operations in the Hanford 300 Area.

Waste Stream ID: **RL300-08**

Appendix A
Waste Profile Report

Site	Hanford (Richland) Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	RH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2013		
Stream Name	300 Area TRU RH Mixed Debris	Activity Concentrations Decayed to CY			2013		

Waste Volume Detail (m³)

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	1.0	0.0	1.0
Box - Misc	202.7	0.0	202.7
SWB Dir Ld w/ Liner	3.8	0.0	3.8
Current Form Total	236.1	0.0	236.1

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	295.8	0.0	295.8
Final Form Total	295.8	0.0	295.8

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	79.40
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	607.94
Cellulose	19.85
Rubber	0.00
Plastic	4.96
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	45.67
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	3.66E+00
Am-243	1.28E-02
Cm-244	2.29E+00
Cs-137	6.93E+02
Np-237	9.08E-05
Pu-238	1.00E+00
Pu-239	2.54E-01
Pu-240	2.92E-01
Pu-241	2.32E+01
Pu-242	9.98E-04
Pu-244	1.11E-13
Sr-90	4.09E+02
Th-229	1.76E-07
Th-230	7.39E-09
Th-232	8.73E-15
U-233	6.66E-04
U-234	2.72E-04
U-235	5.39E-06
U-236	5.90E-05
U-238	1.68E-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, 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.

Waste Stream ID: **RL308-01**

Appendix A
Waste Profile Report

Site	Hanford (Richland) Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Remediation/D&D Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2013	
Stream Name	308 TRU Mixed Debris			Activity Concentrations Decayed to CY		2013	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	24.5	0.0	24.5
85-gal Drum Dir Ld w/ Liner	5.2	0.0	5.2
Box - Misc	308.8	0.0	308.8
SWB Dir Ld w/ Liner	170.1	0.0	170.1
Current Form Total	508.6	0.0	508.6

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	31.8	0.0	31.8
SWB Dir Ld w/ Liner	557.6	0.0	557.6
Final Form Total	589.4	0.0	589.4

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	189.41
Aluminum-based Metal/Alloys	0.18
Other Metal/Alloys	3.56
Other Inorganic Materials	3.36
Cellulose	6.69
Rubber	1.49
Plastic	7.70
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	3.14
Packaging Material, Rubber	0.21
Packaging Material, Steel	152.22
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	3.39E+01
Am-243	3.15E-06
Cs-137	3.08E-04
Np-237	2.75E-05
Pu-238	1.00E+01
Pu-239	1.61E+01
Pu-240	1.04E+01
Pu-241	2.06E+02
Pu-242	9.85E-03
Sr-90	2.79E-04
Th-229	2.23E-08
Th-230	4.95E-09
Th-232	8.99E-07
U-233	1.27E-04
U-234	2.98E-04
U-235	2.38E-05
U-236	6.16E-07
U-238	3.45E-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

Debris waste stream associated with the 308 Bldg. fuel development laboratory, fuel fabrication capabilities, and deactivation. Waste items 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: **RL308-03**

Appendix A
Waste Profile Report

Site	Hanford (Richland) Site	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Remediation/D&D Waste	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2013	
Stream Name	308 Building TRU Solid Inorganics			Activity Concentrations Decayed to CY		2013	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
85-gal Drum Dir Ld w/ Liner	0.3	0.0	0.3
Current Form Total	0.3	0.0	0.3

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.4	0.0	0.4
Final Form Total	0.4	0.0	0.4

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	94.95
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	7.21
Cement	228.97
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	6.08E-01
Np-237	4.82E-06
Pu-238	1.14E-01
Pu-239	8.03E-01
Pu-240	3.05E-01
Pu-241	1.43E+00
Pu-242	3.69E-05
Th-229	1.98E-13
Th-230	1.14E-09
Th-232	1.51E-16
U-233	2.65E-10
U-234	9.25E-06
U-235	2.06E-08
U-236	2.35E-07
U-238	1.49E-13

No Hazardous Waste Numbers Provided

TRUCON Code(s)
122/222

Waste Stream Description

Waste materials consist of absorbed liquids, including oils or hydraulic fluids, and inorganic debris (such as iron-based metal containers). Materials associated with waste packaging include plastic liners and various absorbents (including Cleanup-IV, Nochar A610, vermiculite, diatomaceous earth, and Radsorb). A limited amount of debris waste materials (glassware, rags, wipes, etc.) may also be present in the containers.

Waste Stream ID: **RL308-08**

Appendix A
Waste Profile Report

Site	Hanford (Richland) Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	RH
Source Cat.	Remediation/D&D Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2013	
Stream Name	308 Building TRU RH Non-Mixed Debris			Activity Concentrations Decayed to CY		2013	

Waste Volume Detail (m³)

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

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	0.6	0.0	0.6
Final Form Total	0.6	0.0	0.6

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	16.36
Aluminum-based Metal/Alloys	0.04
Other Metal/Alloys	2.50
Other Inorganic Materials	2.25
Cellulose	2.88
Rubber	0.92
Plastic	6.26
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	45.67
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	2.31E-03
Cs-137	1.88E-01
Np-237	3.00E-09
Pu-238	2.97E-03
Pu-239	4.28E-04
Pu-240	7.21E-04
Sr-90	9.82E+00
Th-229	2.99E-18
Th-230	6.29E-13
Th-232	8.42E-21
U-233	2.55E-14
U-234	3.40E-08
U-235	1.69E-12
U-236	8.54E-11

No Hazardous Waste Numbers Provided

TRUCON Code(s)
325

Waste Stream Description

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, 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
Waste Profile Report

Site	Hanford (Richland) Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	R&D/R&D Laboratory Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2013	
Stream Name	325 TRU Mixed Debris			Activity Concentrations Decayed to CY		2013	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	540.2	0.0	540.2
85-gal Drum Dir Ld w/ Liner	39.3	0.0	39.3
Box - Misc	301.5	0.0	301.5
SWB Dir Ld w/ Liner	62.4	0.0	62.4
Uncontained	0.0	54.7	54.7
Current Form Total	943.3	54.7	998.0

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	697.8	54.7	752.5
SWB Dir Ld w/ Liner	440.4	0.0	440.4
Final Form Total	1138.2	54.7	1192.9

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	71.20
Aluminum-based Metal/Alloys	0.28
Other Metal/Alloys	3.17
Other Inorganic Materials	22.71
Cellulose	12.58
Rubber	3.26
Plastic	21.87
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.24
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	23.83
Packaging Material, Rubber	0.43
Packaging Material, Steel	139.14
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	1.50E+00
Am-243	3.83E-04
Cm-244	6.14E-03
Cs-137	7.93E-04
Np-237	1.71E-04
Pu-238	7.17E-01
Pu-239	1.43E+00
Pu-240	5.78E-01
Pu-241	9.43E+00
Pu-242	1.71E-04
Sr-90	7.89E-04
Th-229	8.03E-09
Th-230	4.90E-09
Th-232	1.56E-06
U-233	4.57E-05
U-234	2.69E-04
U-235	9.19E-06
U-236	3.42E-08
U-238	9.07E-05

Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D022, D027, D028, D029, D030, D032, D033, D034, D035, D036, D037, D038, D039, D040, D043, F001, F002, F003, F004, F005

TRUCON Code(s)

125/225

Waste Stream Description

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: **RL325-03**

Appendix A
Waste Profile Report

Site	Hanford (Richland) Site	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	R&D/R&D Laboratory Waste	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2013	
Stream Name	325 TRU Mixed Solid Inorganic			Activity Concentrations Decayed to CY		2013	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	6.7	0.0	6.7
85-gal Drum Dir Ld w/ Liner	8.4	0.0	8.4
Box - Misc	1.7	0.0	1.7
Current Form Total	16.7	0.0	16.7

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	16.0	0.0	16.0
Final Form Total	16.0	0.0	16.0

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	69.89
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.01
Other Inorganic Materials	425.36
Cellulose	1.78
Rubber	1.77
Plastic	16.43
Cement	36.43
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	77.23
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	2.94E+00
Am-243	7.56E-03
Cm-244	3.59E+00
Cs-137	5.67E-03
Np-237	2.68E-04
Pu-238	8.97E-01
Pu-239	3.24E+00
Pu-240	1.51E+00
Pu-241	3.56E+01
Pu-242	2.80E-04
Sr-90	2.20E-02
Th-229	2.04E-13
Th-230	1.04E-09
Th-232	4.40E-18
U-233	2.32E-09
U-234	5.90E-05
U-235	2.14E-06
U-236	8.91E-08
U-238	3.25E-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 from liquid laboratory samples 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
Waste Profile Report

Site	Hanford (Richland) Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	RH
Source Cat.	R&D/R&D Laboratory Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2013	
Stream Name	325 TRU RH Mixed Debris			Activity Concentrations Decayed to CY		2013	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	35.6	0.0	35.6
85-gal Drum Dir Ld w/ Liner	2.3	0.0	2.3
Box - Misc	146.9	0.0	146.9
SWB Dir Ld w/ Liner	28.4	0.0	28.4
Uncontained	0.0	45.3	45.3
Current Form Total	213.1	45.3	258.4

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	260.2	45.6	305.8
Final Form Total	260.2	45.6	305.8

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	115.48
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	980.27
Cellulose	0.00
Rubber	0.00
Plastic	24.64
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	45.67
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	4.21E-01
Am-243	5.56E-04
Cm-244	1.18E-01
Cs-137	1.10E+00
Np-237	3.90E-04
Pu-238	6.45E-01
Pu-239	9.71E-02
Pu-240	9.77E-02
Pu-241	7.29E+00
Pu-242	1.26E-04
Sr-90	7.57E+00
Th-229	6.15E-11
Th-230	9.76E-10
Th-232	1.70E-07
U-233	3.84E-08
U-234	5.49E-05
U-235	3.13E-06
U-236	6.64E-09
U-238	4.87E-06

Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D021, D022, D027, D028, D029, D030, D032, D033, D034, 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. 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.

Waste Stream ID: **RL618-01**

Appendix A
Waste Profile Report

Site	Hanford (Richland) Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2013		
Stream Name	618 - 10&11 Burial Grounds TRU Mixed Debris			Activity Concentrations Decayed to CY	2013		

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
Uncontained	19.0	0.0	19.0
Current Form Total	19.0	0.0	19.0

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	19.1	0.0	19.1
Final Form Total	19.1	0.0	19.1

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	12.64
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	22.75
Other Inorganic Materials	21.92
Cellulose	1.69
Rubber	3.37
Plastic	3.37
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	8.43
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	3.60E+00
Cs-137	1.94E+01
Np-237	8.14E-06
Pu-238	1.78E+00
Pu-239	7.81E-01
Pu-240	7.43E+00
Pu-241	4.70E+00
Pu-242	9.41E+00
Sr-90	1.76E+01
Th-229	2.50E-14
Th-230	1.17E-09
Th-232	2.66E-16
U-233	1.22E-10
U-234	3.61E-05
U-235	5.38E-09
U-236	1.54E-06
U-238	1.02E-08

No Hazardous Waste Numbers Provided

TRUCON Code(s)
125/225

Waste Stream Description

Retrieved containerized debris waste from Burial Grounds 618 - 10 and 11

Waste Stream ID: **RL618-08**

Appendix A
Waste Profile Report

Site	Hanford (Richland) Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	RH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2013		
Stream Name	618 - 10&11 Burial Grounds TRU RH Mixed Debris			Activity Concentrations Decayed to CY	2013		

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
Uncontained	681.8	0.0	681.8
Current Form Total	681.8	0.0	681.8

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	682.0	0.0	682.0
Final Form Total	682.0	0.0	682.0

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	247.70
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	446.67
Other Inorganic Materials	478.95
Cellulose	33.03
Rubber	66.05
Plastic	66.05
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	165.14
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	45.67
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	3.61E+00
Cs-137	1.95E+01
Np-237	8.16E-06
Pu-238	1.78E+00
Pu-239	7.83E-01
Pu-240	7.45E+00
Pu-241	4.71E+00
Pu-242	9.43E+00
Sr-90	1.76E+01
Th-229	2.51E-14
Th-230	1.18E-09
Th-232	2.67E-16
U-233	1.22E-10
U-234	3.62E-05
U-235	5.40E-09
U-236	1.54E-06
U-238	1.02E-08

No Hazardous Waste Numbers Provided

TRUCON Code(s)
325

Waste Stream Description

Retrieved containerized debris waste from Burial Grounds 618 - 10 and 11.

Waste Stream ID: **RLALE-02**

Appendix A
Waste Profile Report

Site	Hanford (Richland) Site	Summary Category	S4000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	R&D/R&D Laboratory Waste	Waste Matrix Code Group	Contaminated Soil/Debris Waste		Inventory Date	12/31/2013	
Stream Name	TRU Soils/Absorbents from the Arid Lands Ecology Reserve				Activity Concentrations Decayed to CY	2013	

Waste Volume Detail (m³)

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

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.6	0.0	0.6
Final Form Total	0.6	0.0	0.6

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	2.56
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	3.21
Plastic	81.41
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	381.41
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	2.50E-04
Cs-137	5.29E-07
Np-237	1.54E-10
Pu-238	4.15E-05
Pu-239	8.49E-02
Pu-240	2.75E-03
Pu-241	7.94E-03
Pu-242	2.69E-07
Pu-244	3.64E-11
Sr-90	4.81E-07
Th-229	3.83E-20
Th-230	2.17E-15
Th-232	8.03E-21
U-233	6.59E-16
U-234	2.36E-10
U-235	1.67E-10
U-236	1.63E-10
U-238	8.34E-17

No Hazardous Waste Numbers Provided

TRUCON Code(s)
125/225

Waste Stream Description

Soils and debris from the 6652H building.

Waste Stream ID: **RLARG-01**

Appendix A
Waste Profile Report

Site	Hanford (Richland) Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	R&D/R&D Laboratory Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2013	
Stream Name	Argonne Nat Lab TRU Mixed Debris			Activity Concentrations Decayed to CY		2013	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	10.6	0.0	10.6
Current Form Total	10.6	0.0	10.6

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	13.3	0.0	13.3
Final Form Total	13.3	0.0	13.3

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	478.69
Aluminum-based Metal/Alloys	64.94
Other Metal/Alloys	8.00
Other Inorganic Materials	32.10
Cellulose	78.38
Rubber	33.59
Plastic	79.87
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	21.15
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	4.43E+00
Np-237	3.60E-05
Pu-238	1.70E+01
Pu-239	3.29E+00
Pu-240	1.67E+00
Pu-241	1.49E+01
Pu-242	5.78E-05
Th-229	1.65E-12
Th-230	2.01E-07
Th-232	1.09E-06
U-233	2.08E-09
U-234	1.51E-03
U-235	9.08E-08
U-236	1.39E-06
U-238	2.51E-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-08**

Appendix A
Waste Profile Report

Site	Hanford (Richland) Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	RH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2013		
Stream Name	Bartlesville RH-TRU Mixed Debris	Activity Concentrations Decayed to CY			2013		

Waste Volume Detail (m³)

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

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	0.6	0.0	0.6
Final Form Total	0.6	0.0	0.6

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	253.04
Aluminum-based Metal/Alloys	39.95
Other Metal/Alloys	0.00
Other Inorganic Materials	19.54
Cellulose	48.01
Rubber	20.49
Plastic	49.16
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	7.03
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	45.67
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	7.13E-01
Np-237	7.59E-06
Pu-238	6.75E-07
Pu-239	5.41E-06
Pu-240	2.62E-06
Pu-241	6.41E-06
Pu-242	7.57E-10
Th-229	5.01E-13
Th-230	1.06E-14
Th-232	1.96E-21
U-233	5.32E-10
U-234	6.93E-11
U-235	1.71E-13
U-236	2.49E-12
U-238	3.76E-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
Waste Profile Report

Site	Hanford (Richland) Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2013		
Stream Name	Battelle Columbus TRU Mixed Debris			Activity Concentrations Decayed to CY	2013		

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	13.3	0.0	13.3
85-gal Drum Dir Ld w/ Liner	3.9	0.0	3.9
Box - Misc	20.4	0.0	20.4
Current Form Total	37.6	0.0	37.6

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	18.7	0.0	18.7
SWB Dir Ld w/ Liner	26.5	0.0	26.5
Final Form Total	45.2	0.0	45.2

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	561.11
Aluminum-based Metal/Alloys	118.24
Other Metal/Alloys	0.00
Other Inorganic Materials	35.60
Cellulose	42.97
Rubber	16.03
Plastic	50.31
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	7.58
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	16.06
Packaging Material, Rubber	0.35
Packaging Material, Steel	144.05
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	1.76E-01
Np-237	3.09E-05
Pu-238	2.55E+00
Pu-239	2.43E-01
Pu-240	9.22E-02
Pu-241	1.89E+00
Pu-242	5.22E-06
Th-229	5.31E-14
Th-230	1.09E-08
Th-232	1.16E-07
U-233	4.03E-10
U-234	4.08E-04
U-235	1.46E-05
U-236	8.19E-09
U-238	1.24E-05

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
Waste Profile Report

Site	Hanford (Richland) Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	RH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2013	
Stream Name	BATCO TRU RH Mixed Debris			Activity Concentrations Decayed to CY	2013		

Waste Volume Detail (m³)

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
Current Form Total	4.7	0.0	4.7

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	6.9	0.0	6.9
Final Form Total	6.9	0.0	6.9

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	1492.62
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	13.33
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	0.00
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	45.67
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	6.79E-01
Am-243	4.18E-03
Cm-244	2.98E-01
Cs-137	8.74E+00
Np-237	2.24E-06
Pu-238	4.99E-01
Pu-239	6.98E-02
Pu-240	1.14E-01
Pu-241	5.38E+00
Pu-242	3.04E-04
Sr-90	5.64E+00
Th-229	1.81E-12
Th-230	6.85E-09
Th-232	6.26E-15
U-233	1.91E-09
U-234	7.56E-05
U-235	2.76E-06
U-236	1.15E-05
U-238	5.34E-05

Haz. Waste No(s).

D006, D008, P015

TRUCON Code(s)

325

Waste Stream Description

Typically, drums contain metals. 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
Waste Profile Report

Site	Hanford (Richland) Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	RH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2013		
Stream Name	Bettis TRU Non-Mixed Debris	Activity Concentrations Decayed to CY			2013		

Waste Volume Detail (m³)

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

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	0.6	0.0	0.6
Final Form Total	0.6	0.0	0.6

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	108.39
Aluminum-based Metal/Alloys	17.08
Other Metal/Alloys	0.00
Other Inorganic Materials	8.44
Cellulose	20.62
Rubber	8.84
Plastic	21.01
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	2.95
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	45.67
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	8.80E-03
Cs-137	1.46E-04
Np-237	5.62E-09
Pu-238	3.28E-03
Pu-239	1.58E-02
Pu-240	8.88E-03
Pu-241	8.60E-02
Pu-242	3.53E-07
Sr-90	1.32E-04
Th-229	1.42E-18
Th-230	4.75E-09
Th-232	2.59E-20
U-233	2.44E-14
U-234	2.58E-04
U-235	9.47E-06
U-236	5.25E-10
U-238	1.00E-07

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.

Waste Stream ID: **RLBW-01**

Appendix A
Waste Profile Report

Site	Hanford (Richland) Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Remediation/D&D Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2013	
Stream Name	Babcock and Wilcox TRU Mixed Debris			Activity Concentrations Decayed to CY		2013	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	18.5	0.0	18.5
85-gal Drum Dir Ld w/ Liner	29.3	0.0	29.3
Box - Misc	127.5	0.0	127.5
Current Form Total	175.3	0.0	175.3

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	43.7	0.0	43.7
SWB Dir Ld w/ Liner	160.7	0.0	160.7
Final Form Total	204.3	0.0	204.3

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	48.08
Aluminum-based Metal/Alloys	0.21
Other Metal/Alloys	4.84
Other Inorganic Materials	31.92
Cellulose	23.25
Rubber	4.97
Plastic	25.30
Cement	0.00
Solidified Inorganic Material	0.82
Solidified Organic Material	0.14
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	8.87
Packaging Material, Rubber	0.27
Packaging Material, Steel	148.59
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	1.54E+00
Am-243	8.83E-08
Cs-137	3.47E-04
Np-237	9.93E-06
Pu-238	3.55E-01
Pu-239	2.02E+00
Pu-240	9.60E-01
Pu-241	1.28E+01
Pu-242	1.72E-04
Sr-90	3.14E-04
Th-229	2.77E-08
Th-230	7.96E-10
Th-232	2.81E-18
U-233	1.57E-04
U-234	4.43E-05
U-235	1.13E-06
U-236	5.69E-08
U-238	2.44E-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
Waste Profile Report

Site	Hanford (Richland) Site	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Remediation/D&D Waste	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2013	
Stream Name	Babcock & Wilcox solidified inorganics			Activity Concentrations Decayed to CY		2013	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	1.2	0.0	1.2
85-gal Drum Dir Ld w/ Liner	1.6	0.0	1.6
Current Form Total	2.9	0.0	2.9

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	2.9	0.0	2.9
Final Form Total	2.9	0.0	2.9

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	4.55
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	648.89
Cellulose	0.00
Rubber	0.00
Plastic	18.20
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	4.11E+00
Cs-137	2.35E-07
Np-237	2.14E-05
Pu-238	8.67E-01
Pu-239	4.62E+00
Pu-240	2.35E+00
Pu-241	3.29E+01
Pu-242	3.78E-04
Sr-90	2.17E-07
Th-229	3.23E-14
Th-230	3.14E-09
Th-232	1.54E-17
U-233	2.53E-10
U-234	1.18E-04
U-235	3.45E-06
U-236	2.09E-07
U-238	5.61E-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
Waste Profile Report

Site	Hanford (Richland) Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	RH
Source Cat.	Remediation/D&D Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2013	
Stream Name	Babcock and Wilcox TRU RH Mixed Debris			Activity Concentrations Decayed to CY		2013	

Waste Volume Detail (m³)

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
Current Form Total	0.5	0.0	0.5

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	1.2	0.0	1.2
Final Form Total	1.2	0.0	1.2

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	4.08
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.20
Other Inorganic Materials	2.04
Cellulose	27.35
Rubber	0.31
Plastic	18.37
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	45.67
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	8.04E-01
Np-237	1.47E-06
Pu-238	1.53E-01
Pu-239	6.09E-01
Pu-240	3.44E-01
Pu-241	9.91E+00
Pu-242	1.39E-05
Th-229	3.20E-15
Th-230	7.36E-11
Th-232	9.04E-18
U-233	1.84E-11
U-234	2.65E-06
U-235	3.60E-09
U-236	6.11E-08
U-238	1.29E-14

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
Waste Profile Report

Site	Hanford (Richland) Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2013		
Stream Name	Kerr McGee TRU Mixed Debris			Activity Concentrations Decayed to CY	2013		

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	1.2	0.0	1.2
85-gal Drum Dir Ld w/ Liner	2.6	0.0	2.6
Current Form Total	3.8	0.0	3.8

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	3.3	0.0	3.3
Final Form Total	3.3	0.0	3.3

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	478.22
Aluminum-based Metal/Alloys	2.23
Other Metal/Alloys	0.47
Other Inorganic Materials	48.06
Cellulose	53.78
Rubber	11.64
Plastic	76.17
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.12
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	1.86E+00
Cs-137	8.49E-08
Np-237	2.17E-06
Pu-238	3.62E-01
Pu-239	2.23E+00
Pu-240	1.13E+00
Pu-241	1.42E+01
Pu-242	1.84E-04
Sr-90	7.68E-08
Th-229	1.68E-15
Th-230	4.41E-10
Th-232	4.85E-09
U-233	1.66E-11
U-234	1.75E-05
U-235	5.10E-07
U-236	1.00E-07
U-238	1.35E-05

Haz. Waste No(s).

D007, D008, D009, D040, F001, F002, F003
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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
Waste Profile Report

Site	Hanford (Richland) Site	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2013	
Stream Name	Kerr McGee TRU Mixed Solid Inorganic				Activity Concentrations Decayed to CY	2013	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	4.8	0.0	4.8
Current Form Total	4.8	0.0	4.8

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	5.0	0.0	5.0
Final Form Total	5.0	0.0	5.0

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	31.04
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	22.27
Other Inorganic Materials	456.10
Cellulose	8.21
Rubber	0.99
Plastic	34.11
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	1.17E+00
Np-237	1.12E-06
Pu-238	3.52E+00
Pu-239	1.44E+00
Pu-240	7.05E-01
Pu-241	8.71E+00
Pu-242	8.91E-05
Th-229	6.36E-16
Th-230	7.05E-10
Th-232	4.64E-18
U-233	7.26E-12
U-234	4.06E-05
U-235	4.62E-07
U-236	6.26E-08
U-238	9.82E-06

Haz. Waste No(s).D007, D008, D009,
F001, F002, F003**TRUCON Code(s)**

122/222

Waste Stream Description

Waste generated from R&D/R&D Laboratory Waste activities at the Kerr McGee.

Waste Stream ID: **RLCH2-01**

Appendix A
Waste Profile Report

Site	Hanford (Richland) Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Remediation/D&D Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2013	
Stream Name	Tank Farms TRU Mixed Debris			Activity Concentrations Decayed to CY		2013	

Waste Volume Detail (m³)

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
Uncontained	0.0	7.7	7.7
Current Form Total	2.1	7.7	9.8

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.2	7.9	8.1
SWB Dir Ld w/ Liner	1.9	0.0	1.9
Final Form Total	2.1	7.9	10.0

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	21.50
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	19.01
Other Inorganic Materials	11.06
Cellulose	1.61
Rubber	0.01
Plastic	1.90
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	30.29
Packaging Material, Rubber	0.50
Packaging Material, Steel	135.05
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	1.37E-02
Cs-137	1.87E-01
Np-237	1.33E-08
Pu-238	1.28E-03
Pu-239	9.63E-03
Pu-240	2.47E-03
Pu-241	2.11E-02
Sr-90	8.33E-01
Th-229	1.99E-07
Th-230	1.54E-13
Th-232	1.63E-20
U-233	7.53E-04
U-234	1.11E-08
U-235	9.77E-07
U-236	2.20E-10
U-238	2.13E-05

Haz. Waste No(s).

D004, D006, D007,
D008, D009, D010,
F001, F002, F003,
F004, F005

TRUCON Code(s)

125/225

Waste Stream Description

CH waste- 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: **RLCH2-09**

Appendix A
Waste Profile Report

Site	Hanford (Richland) Site	Summary Category	S3000	Defense Determination	Defense-Related	Handling	RH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Solidified Organics		Inventory Date	12/31/2013	
Stream Name	Tank Farms Absorbed Oils				Activity Concentrations Decayed to CY	2013	

Waste Volume Detail (m³)

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

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	0.6	0.0	0.6
Final Form Total	0.6	0.0	0.6

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	0.00
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.72
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	0.00
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	36.35
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	45.67
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	2.48E-03
Cs-137	1.76E-01
Pu-238	3.64E-05
Pu-239	1.15E-03
Pu-240	2.47E-04
Sr-90	1.67E+00

Haz. Waste No(s).

D007, F001, F002, F003, F004, F005

TRUCON Code(s)

314

Waste Stream Description

Solidified organic waste generated during Tank Farms operations.

Waste Stream ID: RLESG-01

Appendix A
Waste Profile Report

Site	Hanford (Richland) Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2013		
Stream Name	Energy Systems Group TRU Mixed Debris			Activity Concentrations Decayed to CY	2013		

Waste Volume Detail (m³)

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	3.5	0.0	3.5
Box - Misc	14.9	0.0	14.9
Current Form Total	31.5	0.0	31.5

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	16.8	0.0	16.8
SWB Dir Ld w/ Liner	18.9	0.0	18.9
Final Form Total	35.7	0.0	35.7

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	228.99
Aluminum-based Metal/Alloys	0.68
Other Metal/Alloys	7.31
Other Inorganic Materials	30.12
Cellulose	28.62
Rubber	19.12
Plastic	38.84
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	18.10
Packaging Material, Rubber	0.37
Packaging Material, Steel	142.75
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	7.33E-01
Cs-137	3.14E-03
Np-237	6.51E-06
Pu-238	1.08E-01
Pu-239	6.57E-01
Pu-240	2.99E-01
Pu-241	4.46E+00
Pu-242	5.57E-05
Sr-90	2.56E-03
Th-229	4.75E-15
Th-230	1.91E-08
Th-232	2.51E-07
U-233	5.47E-11
U-234	1.04E-03
U-235	2.65E-05
U-236	1.77E-08
U-238	2.59E-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-03

Appendix A
Waste Profile Report

Site	Hanford (Richland) Site	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2013	
Stream Name	Energy Systems Group TRU Solid Inorganics				Activity Concentrations Decayed to CY	2013	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.8	0.0	0.8
Current Form Total	0.8	0.0	0.8

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	1.0	0.0	1.0
Final Form Total	1.0	0.0	1.0

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	29.72
Aluminum-based Metal/Alloys	29.72
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	29.72
Rubber	29.72
Plastic	29.72
Cement	22.43
Solidified Inorganic Material	62.50
Solidified Organic Material	0.00
Soil	126.03
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	1.06E-02
Cs-137	3.56E-03
Np-237	6.31E-09
Pu-238	5.35E-03
Pu-239	1.58E-01
Pu-240	3.89E-02
Pu-241	5.23E-01
Pu-242	2.54E-06
Sr-90	3.23E-03
Th-229	1.54E-18
Th-230	2.80E-13
Th-232	1.13E-19
U-233	2.67E-14
U-234	3.04E-08
U-235	3.11E-10
U-236	2.30E-09
U-238	7.88E-16

No Hazardous Waste Numbers Provided

TRUCON Code(s)
122/222

Waste Stream Description

Absorbed/solidified liquids from operations and decommissioning of the Nuclear Materials Development Facility.

Waste Stream ID: RLESG-08

Appendix A
Waste Profile Report

Site	Hanford (Richland) Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	RH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2013		
Stream Name	Energy Systems Group RH TRU Mixed Debris			Activity Concentrations Decayed to CY	2013		

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	12.9	0.0	12.9
85-gal Drum Dir Ld w/ Liner	9.0	0.0	9.0
Current Form Total	21.9	0.0	21.9

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	23.7	0.0	23.7
Final Form Total	23.7	0.0	23.7

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	6.97
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	33.18
Other Inorganic Materials	3.14
Cellulose	83.05
Rubber	9.84
Plastic	44.74
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	45.67
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	2.07E-01
Cs-137	7.84E-02
Np-237	1.32E-07
Pu-238	3.75E-02
Pu-239	1.62E-01
Pu-240	8.78E-02
Pu-241	2.60E+00
Pu-242	3.38E-06
Sr-90	2.40E-02
Th-229	3.33E-17
Th-230	1.96E-12
Th-232	2.56E-19
U-233	5.69E-13
U-234	2.13E-07
U-235	3.19E-10
U-236	5.20E-09
U-238	1.05E-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
Waste Profile Report

Site	Hanford (Richland) Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2013		
Stream Name	Exxon TRU Mixed Debris	Activity Concentrations Decayed to CY			2013		

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	42.8	0.0	42.8
85-gal Drum Dir Ld w/ Liner	1.3	0.0	1.3
Current Form Total	44.1	0.0	44.1

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	129.8	0.0	129.8
Final Form Total	129.8	0.0	129.8

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	40.00
Aluminum-based Metal/Alloys	0.16
Other Metal/Alloys	7.91
Other Inorganic Materials	25.93
Cellulose	4.75
Rubber	1.09
Plastic	5.08
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	2.28E+00
Np-237	8.11E-06
Pu-238	9.34E-01
Pu-239	5.93E-01
Pu-240	5.06E-01
Pu-241	1.42E+01
Pu-242	6.16E-04
Th-229	5.46E-15
Th-230	1.11E-09
Th-232	1.48E-18
U-233	6.42E-11
U-234	6.30E-05
U-235	7.61E-07
U-236	3.00E-08
U-238	3.04E-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
Waste Profile Report

Site	Hanford (Richland) Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Remediation/D&D Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2013	
Stream Name	FFTF TRU Non-Mixed Debris			Activity Concentrations Decayed to CY		2013	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.8	0.0	0.8
Current Form Total	0.8	0.0	0.8

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	1.0	0.0	1.0
Final Form Total	1.0	0.0	1.0

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	116.67
Aluminum-based Metal/Alloys	0.47
Other Metal/Alloys	23.06
Other Inorganic Materials	75.63
Cellulose	13.85
Rubber	3.19
Plastic	1.54
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	1.17E-02
Cs-137	1.07E-02
Np-237	7.51E-09
Pu-238	3.43E-03
Pu-239	1.06E-02
Pu-240	9.15E-03
Pu-241	8.50E-02
Sr-90	7.20E-03
Th-229	1.91E-18
Th-230	1.80E-13
Th-232	2.67E-20
U-233	3.26E-14
U-234	1.95E-08
U-235	2.09E-11
U-236	5.42E-10

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
Waste Profile Report

Site	Hanford (Richland) Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	RH
Source Cat.	Remediation/D&D Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2013	
Stream Name	FFTF RH-TRU Non-Mixed Debris			Activity Concentrations Decayed to CY	2013		

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
85-gal Drum Dir Ld w/ Liner	0.3	0.0	0.3
Current Form Total	0.3	0.0	0.3

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	0.6	0.0	0.6
Final Form Total	0.6	0.0	0.6

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	2.64
Aluminum-based Metal/Alloys	0.01
Other Metal/Alloys	0.52
Other Inorganic Materials	1.71
Cellulose	0.31
Rubber	0.07
Plastic	0.33
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	45.67
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	4.37E-03
Am-243	1.82E-11
Cs-137	8.14E-01
Np-237	5.43E-09
Pu-238	1.23E-03
Pu-239	3.77E-03
Pu-240	3.24E-03
Pu-241	5.46E-02
Sr-90	8.74E-04
Th-229	5.29E-18
Th-230	2.60E-13
Th-232	3.78E-20
U-233	4.54E-14
U-234	1.41E-08
U-235	1.48E-11
U-236	3.83E-10

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.

Waste Stream ID: **RLGEV-01**

Appendix A
Waste Profile Report

Site	Hanford (Richland) Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Remediation/D&D Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2013	
Stream Name	GE San Jose and Vallecitos TRU Mixed Debris			Activity Concentrations Decayed to CY		2013	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	17.1	0.0	17.1
85-gal Drum Dir Ld w/ Liner	8.1	0.0	8.1
Box - Misc	147.2	0.0	147.2
SWB Dir Ld w/ Liner	15.1	0.0	15.1
Current Form Total	187.4	0.0	187.4

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	23.9	0.0	23.9
SWB Dir Ld w/ Liner	200.3	0.0	200.3
Final Form Total	224.3	0.0	224.3

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	231.42
Aluminum-based Metal/Alloys	0.26
Other Metal/Alloys	4.60
Other Inorganic Materials	24.63
Cellulose	20.70
Rubber	5.14
Plastic	51.89
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	5.03
Packaging Material, Rubber	0.23
Packaging Material, Steel	151.02
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	4.91E-01
Cs-137	1.31E-07
Np-237	2.33E-06
Pu-238	1.18E-01
Pu-239	6.31E-01
Pu-240	2.75E-01
Pu-241	4.24E+00
Pu-242	4.35E-05
Sr-90	1.18E-07
Th-229	1.63E-15
Th-230	5.48E-09
Th-232	8.04E-19
U-233	1.90E-11
U-234	2.98E-04
U-235	6.33E-06
U-236	1.63E-08
U-238	2.16E-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
Waste Profile Report

Site	Hanford (Richland) Site	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Remediation/D&D Waste	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2013	
Stream Name	GE Vallecitos TRU Homogeneous Solids			Activity Concentrations Decayed to CY		2013	

Waste Volume Detail (m³)

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

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

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	4.72
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.24
Cellulose	5.42
Rubber	0.04
Plastic	9.41
Cement	0.00
Solidified Inorganic Material	427.04
Solidified Organic Material	6.56
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	4.61E+00
Cs-137	3.78E-08
Np-237	4.39E-06
Pu-238	9.53E-01
Pu-239	3.71E+00
Pu-240	2.09E+00
Pu-241	6.98E+01
Pu-242	8.45E-05
Sr-90	3.50E-08
Th-229	2.55E-15
Th-230	1.48E-10
Th-232	1.38E-17
U-233	2.87E-11
U-234	9.43E-06
U-235	5.38E-08
U-236	1.86E-07
U-238	6.41E-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
Waste Profile Report

Site	Hanford (Richland) Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	RH
Source Cat.	Remediation/D&D Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2013	
Stream Name	GE San Jose and Vallecitos TRU RH Non-Mixed Debris				Activity Concentrations Decayed to CY	2013	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
Box - Misc	5.3	0.0	5.3
Current Form Total	5.3	0.0	5.3

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	6.9	0.0	6.9
Final Form Total	6.9	0.0	6.9

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	1062.29
Aluminum-based Metal/Alloys	167.73
Other Metal/Alloys	0.00
Other Inorganic Materials	82.01
Cellulose	201.53
Rubber	86.00
Plastic	206.38
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	29.52
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	45.67
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	1.72E+00
Cs-137	1.31E+00
Np-237	1.71E-05
Pu-238	7.11E-02
Pu-239	9.17E+01
Pu-240	9.54E+00
Pu-241	1.83E-01
Pu-242	3.86E-01
Sr-90	9.81E-01
Th-229	9.87E-13
Th-230	9.73E-10
Th-232	6.28E-15
U-233	1.12E-09
U-234	6.79E-06
U-235	2.71E-06
U-236	8.48E-06
U-238	1.80E-09

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.

Waste Stream ID: **RLHAN-01**

Appendix A
Waste Profile Report

Site	Hanford (Richland) Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Other/Multiple Sources	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2013	
Stream Name	Trench Designation waste stream			Activity Concentrations Decayed to CY		2013	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	78.8	0.0	78.8
85-gal Drum Dir Ld w/ Liner	108.2	0.0	108.2
Box - Misc	225.5	0.0	225.5
SWB Dir Ld w/ Liner	177.7	0.0	177.7
Current Form Total	590.2	0.0	590.2

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	166.8	0.0	166.8
SWB Dir Ld w/ Liner	474.4	0.0	474.4
Final Form Total	641.2	0.0	641.2

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	23.82
Aluminum-based Metal/Alloys	0.08
Other Metal/Alloys	5.63
Other Inorganic Materials	7.85
Cellulose	20.56
Rubber	7.09
Plastic	24.68
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	10.53
Packaging Material, Rubber	0.29
Packaging Material, Steel	147.54
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	4.46E-01
Cs-137	8.23E-08
Np-237	1.28E-06
Pu-238	6.79E-02
Pu-239	7.12E-01
Pu-240	2.48E-01
Pu-241	2.29E+00
Pu-242	3.74E-05
Sr-90	7.44E-08
Th-229	1.70E-15
Th-230	8.05E-12
Th-232	1.63E-18
U-233	1.39E-11
U-234	5.81E-07
U-235	2.10E-09
U-236	2.20E-08
U-238	1.74E-14

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

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: **RLHAN-03**

Appendix A
Waste Profile Report

Site	Hanford (Richland) Site	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2013	
Stream Name	Trench Designation waste stream			Activity Concentrations Decayed to CY		2013	

Waste Volume Detail (m³)

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

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

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	184.62
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	111.06
Cellulose	0.00
Rubber	0.00
Plastic	74.04
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	1.54E-01
Np-237	9.83E-08
Pu-238	1.87E-02
Pu-239	7.21E-02
Pu-240	4.07E-02
Pu-241	1.41E+00
Th-229	2.49E-17
Th-230	9.80E-13
Th-232	1.19E-19
U-233	4.26E-13
U-234	1.06E-07
U-235	1.42E-10
U-236	2.41E-09

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)

114/214

Waste Stream Description

Trench Designation waste stream

Waste Stream ID: **RLHAN-08**

Appendix A
Waste Profile Report

Site	Hanford (Richland) Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	RH
Source Cat.	Other/Multiple Sources	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2013	
Stream Name	Trench Designation waste stream			Activity Concentrations Decayed to CY		2013	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.2	0.0	0.2
Box - Misc	14.5	0.0	14.5
SWB Dir Ld w/ Liner	3.8	0.0	3.8
Current Form Total	18.5	0.0	18.5

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	23.7	0.0	23.7
Final Form Total	23.7	0.0	23.7

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	31.99
Aluminum-based Metal/Alloys	0.11
Other Metal/Alloys	7.45
Other Inorganic Materials	10.55
Cellulose	27.83
Rubber	9.42
Plastic	33.62
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	45.67
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	2.96E-01
Am-243	2.66E-06
Cs-137	6.28E-02
Np-237	3.09E-06
Pu-238	1.73E-02
Pu-239	1.77E-01
Pu-240	2.86E-02
Pu-241	9.92E-01
Pu-242	1.14E-06
Sr-90	4.78E-02
Th-229	1.48E-08
Th-230	9.06E-13
Th-232	8.35E-20
U-233	8.43E-05
U-234	9.83E-08
U-235	3.49E-10
U-236	1.69E-09
U-238	3.55E-16

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: **RLIAEA-03**

Appendix A
Waste Profile Report

Site	Hanford (Richland) Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	R&D/R&D Laboratory Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2013	
Stream Name	International Atomic Energy Agency TRU Non-Mixed Debris			Activity Concentrations Decayed to CY		2013	

Waste Volume Detail (m³)

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

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.4	0.0	0.4
Final Form Total	0.4	0.0	0.4

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	552.00
Aluminum-based Metal/Alloys	87.00
Other Metal/Alloys	0.00
Other Inorganic Materials	43.00
Cellulose	105.00
Rubber	45.00
Plastic	107.00
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	15.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	1.89E+00
Cs-137	4.04E-05
Np-237	1.83E-06
Pu-238	1.00E+00
Pu-239	5.31E-01
Pu-240	6.82E-01
Pu-241	3.87E+00
Pu-242	1.01E-03
Sr-90	3.66E-05
Th-229	1.05E-15
Th-230	1.19E-10
Th-232	4.49E-18
U-233	1.20E-11
U-234	8.57E-06
U-235	1.57E-09
U-236	6.06E-08
U-238	4.69E-13

No Hazardous Waste Numbers Provided

TRUCON Code(s)
122/222

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.

Waste Stream ID: **RLMLB-08**

Appendix A
Waste Profile Report

Site	Hanford (Richland) Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	RH
Source Cat.	R&D/R&D Laboratory Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2013	
Stream Name	Lawrence Berkeley Nat Lab TRU Mixed Debris			Activity Concentrations Decayed to CY		2013	

Waste Volume Detail (m³)

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

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	0.6	0.0	0.6
Final Form Total	0.6	0.0	0.6

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	401.22
Aluminum-based Metal/Alloys	63.24
Other Metal/Alloys	0.00
Other Inorganic Materials	31.25
Cellulose	76.32
Rubber	32.71
Plastic	77.77
Cement	0.00
Solidified Inorganic Material	10.90
Solidified Organic Material	0.00
Soil	13.08
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	45.67
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	1.37E-01
Cm-244	1.96E+01
Np-237	1.23E-06
Pu-238	1.72E-02
Pu-239	8.34E-02
Pu-240	1.70E-01
Pu-241	4.06E-01
Pu-242	1.90E-06
Th-229	6.87E-14
Th-230	2.53E-10
Th-232	7.05E-17
U-233	7.82E-11
U-234	1.70E-06
U-235	2.55E-09
U-236	1.11E-07
U-238	9.14E-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
Waste Profile Report

Site	Hanford (Richland) Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	R&D/R&D Laboratory Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2013	
Stream Name	Lawrence Livermore TRU Mixed Debris			Activity Concentrations Decayed to CY		2013	

Waste Volume Detail (m³)

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
Current Form Total	0.7	0.0	0.7

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	1.0	0.0	1.0
Final Form Total	1.0	0.0	1.0

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	393.83
Aluminum-based Metal/Alloys	62.07
Other Metal/Alloys	0.00
Other Inorganic Materials	30.68
Cellulose	74.91
Rubber	32.11
Plastic	76.34
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	10.70
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	8.37E-02
Np-237	9.79E-07
Pu-238	9.60E-03
Pu-239	5.00E-02
Pu-240	2.82E-02
Pu-241	1.58E-01
Pu-242	1.14E-06
Th-229	9.10E-14
Th-230	2.47E-10
Th-232	3.30E-17
U-233	8.05E-11
U-234	1.27E-06
U-235	1.97E-09
U-236	3.34E-08
U-238	7.08E-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.

Waste Stream ID: **RLP11-01**

Appendix A
Waste Profile Report

Site	Hanford (Richland) Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Remediation/D&D Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2013	
Stream Name	P11 Criticality Facility TRU Mixed Debris			Activity Concentrations Decayed to CY		2013	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
Box - Misc	51.2	0.0	51.2
Current Form Total	51.2	0.0	51.2

Final Form Volumes			
Container Type	Stored	Proj.	Total
SWB Dir Ld w/ Liner	64.3	0.0	64.3
Final Form Total	64.3	0.0	64.3

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	22.61
Aluminum-based Metal/Alloys	11.34
Other Metal/Alloys	0.00
Other Inorganic Materials	22.61
Cellulose	11.28
Rubber	0.00
Plastic	11.28
Cement	11.34
Solidified Inorganic Material	0.10
Solidified Organic Material	0.10
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	1.20
Packaging Material, Rubber	0.19
Packaging Material, Steel	153.44
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	4.64E-02
Np-237	4.34E-08
Pu-238	9.58E-03
Pu-239	3.73E-02
Pu-240	2.11E-02
Pu-241	7.01E-01
Pu-242	8.49E-07
Th-229	2.45E-17
Th-230	1.14E-12
Th-232	1.38E-19
U-233	2.80E-13
U-234	8.20E-08
U-235	1.10E-10
U-236	1.87E-09
U-238	3.95E-16

Haz. Waste No(s).

D005, D006, D007

TRUCON Code(s)

125/225

Waste Stream Description

Misc. demolition debris.

Waste Stream ID: **RLPFP-01**

Appendix A
Waste Profile Report

Site	Hanford (Richland) Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2013	
Stream Name	2345Z TRU Mixed Debris			Activity Concentrations Decayed to CY		2013	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	1645.3	0.0	1645.3
85-gal Drum Dir Ld w/ Liner	175.2	0.0	175.2
Box - Misc	4306.0	0.0	4306.0
SLB2 Dir Ld	84.9	0.0	84.9
SWB Dir Ld w/ Liner	551.9	0.0	551.9
Uncontained	0.0	2206.0	2206.0
Current Form Total	6763.3	2206.0	8969.3

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	2145.9	0.0	2145.9
SLB2 Dir Ld	84.9	396.2	481.1
SWB Dir Ld w/ Liner	5934.6	1810.6	7745.2
Final Form Total	8165.4	2206.8	10372.3

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	60.03
Aluminum-based Metal/Alloys	0.29
Other Metal/Alloys	1.30
Other Inorganic Materials	9.54
Cellulose	14.96
Rubber	8.47
Plastic	23.56
Cement	0.00
Solidified Inorganic Material	0.02
Solidified Organic Material	0.02
Soil	0.17
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	8.57
Packaging Material, Rubber	0.27
Packaging Material, Steel	151.63
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	1.06E+00
Am-243	1.41E-05
Cs-137	9.85E-01
Np-237	9.94E-06
Pu-238	4.77E-01
Pu-239	1.12E+00
Pu-240	5.04E-01
Pu-241	9.50E+00
Pu-242	1.97E-04
Sr-90	1.24E-04
Th-229	3.19E-09
Th-230	3.11E-06
Th-232	9.65E-07
U-233	1.81E-05
U-234	1.69E-01
U-235	9.42E-07
U-236	2.99E-08
U-238	1.53E-05

Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D022, D027, D028, D029, D030, D032, D034, D035, D036, D037, D043, F001, F002, F003, F004, F005
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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.

Waste Stream ID: **RLPFP-03**

Appendix A
Waste Profile Report

Site	Hanford (Richland) Site	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	R&D/R&D Laboratory Waste	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2013	
Stream Name	PFP Absorbed Plutonium Nitrate Solutions			Activity Concentrations Decayed to CY		2013	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	13.9	0.0	13.9
85-gal Drum Dir Ld w/ Liner	0.6	0.0	0.6
Current Form Total	14.6	0.0	14.6

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	15.2	0.0	15.2
Final Form Total	15.2	0.0	15.2

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	3.34
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.01
Other Inorganic Materials	0.23
Cellulose	3.95
Rubber	0.04
Plastic	11.12
Cement	0.00
Solidified Inorganic Material	396.63
Solidified Organic Material	18.94
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	7.26E+00
Cs-137	3.81E-06
Np-237	4.09E-05
Pu-238	1.86E+00
Pu-239	1.44E+01
Pu-240	4.48E+00
Pu-241	5.83E+01
Pu-242	8.31E-04
Sr-90	3.45E-06
Th-229	2.89E-14
Th-230	1.99E-08
Th-232	1.31E-17
U-233	3.36E-10
U-234	1.09E-03
U-235	5.39E-06
U-236	2.65E-07
U-238	4.39E-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
Waste Profile Report

Site	Hanford (Richland) Site	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Solidified Organics		Inventory Date	12/31/2013	
Stream Name	PFP Comprehensive Homogenous Solids				Activity Concentrations Decayed to CY	2013	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	15.8	0.0	15.8
85-gal Drum Dir Ld w/ Liner	2.3	0.0	2.3
Current Form Total	18.1	0.0	18.1

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	19.6	0.0	19.6
Final Form Total	19.6	0.0	19.6

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	17.98
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.50
Other Inorganic Materials	0.00
Cellulose	11.72
Rubber	0.23
Plastic	16.66
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	90.37
Soil	0.41
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	3.66E+00
Cs-137	1.24E-04
Np-237	3.35E-05
Pu-238	8.26E-01
Pu-239	9.53E+00
Pu-240	2.69E+00
Pu-241	3.64E+01
Pu-242	3.18E-04
Sr-90	1.13E-04
Th-229	2.44E-14
Th-230	3.49E-09
Th-232	7.86E-18
U-233	2.81E-10
U-234	1.92E-04
U-235	6.26E-06
U-236	1.59E-07
U-238	9.36E-05

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
Waste Profile Report

Site	Hanford (Richland) Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	RH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2013	
Stream Name	2345Z RH-TRU Mixed Debris			Activity Concentrations Decayed to CY		2013	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	19.8	0.0	19.8
85-gal Drum Dir Ld w/ Liner	7.7	0.0	7.7
Uncontained	0.0	197.0	197.0
Current Form Total	27.5	197.0	224.5

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	26.2	197.2	223.4
Final Form Total	26.2	197.2	223.4

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	38.06
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	23.30
Other Inorganic Materials	19.63
Cellulose	5.38
Rubber	10.51
Plastic	29.34
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	45.67
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	1.89E+00
Cs-137	5.85E-06
Np-237	1.14E-05
Pu-238	4.69E-01
Pu-239	2.64E+00
Pu-240	9.67E-01
Pu-241	1.90E+01
Pu-242	1.82E-04
Sr-90	5.31E-06
Th-229	8.08E-15
Th-230	2.07E-10
Th-232	2.91E-18
U-233	9.36E-11
U-234	1.26E-05
U-235	3.37E-07
U-236	5.81E-08
U-238	6.53E-07

Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D019, D022, D030, F001, F002, F003, F004, 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.

Waste Stream ID: **RLPURX-01**

Appendix A
Waste Profile Report

Site	Hanford (Richland) Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2013		
Stream Name	202A and 202AL TRU Mixed Debris			Activity Concentrations Decayed to CY	2013		

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	309.5	0.0	309.5
85-gal Drum Dir Ld w/ Liner	2.9	0.0	2.9
Box - Misc	260.2	0.0	260.2
SWB Dir Ld w/ Liner	7.6	0.0	7.6
Current Form Total	580.2	0.0	580.2

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	387.3	0.0	387.3
SWB Dir Ld w/ Liner	334.5	0.0	334.5
Final Form Total	721.8	0.0	721.8

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	37.38
Aluminum-based Metal/Alloys	0.13
Other Metal/Alloys	0.44
Other Inorganic Materials	11.61
Cellulose	14.97
Rubber	14.29
Plastic	25.30
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.01
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	20.45
Packaging Material, Rubber	0.39
Packaging Material, Steel	141.28
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	4.09E+00
Am-243	6.24E-07
Cs-137	1.47E-02
Np-237	1.13E-05
Pu-238	1.85E+00
Pu-239	9.70E+00
Pu-240	3.70E+00
Pu-241	1.10E+02
Pu-242	8.69E-04
Sr-90	1.33E-02
Th-229	4.05E-07
Th-230	1.96E-10
Th-232	1.08E-17
U-233	2.30E-03
U-234	1.59E-05
U-235	1.96E-07
U-236	2.19E-07
U-238	2.90E-06

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 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: **RLPURX-08**

Appendix A
Waste Profile Report

Site	Hanford (Richland) Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	RH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2013		
Stream Name	202A & 202AL TRU RH Mixed Debris			Activity Concentrations Decayed to CY	2013		

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	13.1	0.0	13.1
Box - Misc	11.5	0.0	11.5
Current Form Total	24.6	0.0	24.6

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	31.8	0.0	31.8
Final Form Total	31.8	0.0	31.8

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	21.10
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.53
Other Inorganic Materials	15.83
Cellulose	10.55
Rubber	35.88
Plastic	26.38
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	45.67
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	6.74E-02
Np-237	4.93E-07
Pu-238	2.82E-03
Pu-239	9.11E-03
Pu-240	2.17E-03
Pu-241	4.76E-01
Pu-242	1.19E-07
Th-229	2.34E-14
Th-230	5.40E-11
Th-232	1.95E-18
U-233	2.82E-11
U-234	3.21E-07
U-235	3.14E-10
U-236	2.26E-09
U-238	6.44E-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
Waste Profile Report

Site	Hanford (Richland) Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2013		
Stream Name	Rocky Flats TRU Mixed Debris				Activity Concentrations Decayed to CY	2013	

Waste Volume Detail (m³)

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
Current Form Total	204.8	0.0	204.8

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	253.1	0.0	253.1
Final Form Total	253.1	0.0	253.1

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	362.70
Aluminum-based Metal/Alloys	50.51
Other Metal/Alloys	15.18
Other Inorganic Materials	67.36
Cellulose	38.72
Rubber	9.19
Plastic	34.16
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.01
Soil	6.41
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	3.12E-01
Np-237	2.97E-06
Pu-238	3.38E-03
Pu-239	1.61E-02
Pu-240	9.10E-03
Pu-241	8.66E-02
Pu-242	3.68E-07
Th-229	1.59E-13
Th-230	4.30E-11
Th-232	5.60E-18
U-233	1.87E-10
U-234	3.11E-07
U-235	4.61E-10
U-236	7.82E-09
U-238	1.66E-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
Waste Profile Report

Site	Hanford (Richland) Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Remediation/D&D Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2013	
Stream Name	GE San Jose TRU Mixed Debris			Activity Concentrations Decayed to CY		2013	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	3.3	0.0	3.3
Current Form Total	3.3	0.0	3.3

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	4.2	0.0	4.2
Final Form Total	4.2	0.0	4.2

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	233.45
Aluminum-based Metal/Alloys	0.23
Other Metal/Alloys	5.58
Other Inorganic Materials	21.84
Cellulose	18.96
Rubber	4.64
Plastic	49.67
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	1.30E+01
Np-237	1.13E-04
Pu-238	1.65E+00
Pu-239	7.93E+00
Pu-240	4.47E+00
Pu-241	4.05E+01
Pu-242	1.79E-04
Th-229	5.90E-12
Th-230	2.26E-08
Th-232	2.95E-15
U-233	6.94E-09
U-234	1.57E-04
U-235	2.34E-07
U-236	3.98E-06
U-238	8.35E-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
Waste Profile Report

Site	Hanford (Richland) Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Other/Multiple Sources	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2013	
Stream Name	SWOC TRU Mixed Debris			Activity Concentrations Decayed to CY		2013	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	33.3	0.0	33.3
85-gal Drum Dir Ld w/ Liner	13.5	0.0	13.5
Box - Misc	175.6	0.0	175.6
SWB Dir Ld w/ Liner	66.2	0.0	66.2
Uncontained	0.0	57.9	57.9
Current Form Total	288.6	57.9	346.5

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	44.1	57.6	101.7
SWB Dir Ld w/ Liner	285.4	0.0	285.4
Final Form Total	329.5	57.6	387.1

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	19.75
Aluminum-based Metal/Alloys	0.33
Other Metal/Alloys	0.58
Other Inorganic Materials	4.08
Cellulose	12.09
Rubber	43.26
Plastic	45.79
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.10
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	10.63
Packaging Material, Rubber	0.29
Packaging Material, Steel	147.48
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	3.77E-01
Am-243	5.85E-08
Cs-137	3.01E-05
Np-237	4.72E-06
Pu-238	1.08E-01
Pu-239	8.22E-01
Pu-240	2.72E-01
Pu-241	3.78E+00
Pu-242	4.13E-05
Sr-90	2.73E-05
Th-229	3.49E-15
Th-230	1.21E-10
Th-232	7.94E-19
U-233	4.00E-11
U-234	6.89E-06
U-235	2.32E-07
U-236	1.61E-08
U-238	1.68E-07

Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D022, D027, D028, D029, D030, D034, D035, D037, D039, 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: **RLWAR-01**

Appendix A
Waste Profile Report

Site	Hanford (Richland) Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Remediation/D&D Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2013	
Stream Name	Ward TRU Mixed Debris					Activity Concentrations Decayed to CY	2013

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	26.8	0.0	26.8
85-gal Drum Dir Ld w/ Liner	10.6	0.0	10.6
Box - Misc	318.2	0.0	318.2
SWB Dir Ld w/ Liner	1.9	0.0	1.9
Current Form Total	357.6	0.0	357.6

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	36.8	0.0	36.8
SWB Dir Ld w/ Liner	408.2	0.0	408.2
Final Form Total	445.1	0.0	445.1

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	89.27
Aluminum-based Metal/Alloys	0.40
Other Metal/Alloys	1.95
Other Inorganic Materials	14.53
Cellulose	18.87
Rubber	4.95
Plastic	27.90
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.01
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	4.17
Packaging Material, Rubber	0.22
Packaging Material, Steel	151.56
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	7.29E-01
Am-243	1.93E-15
Cs-137	4.07E-08
Np-237	4.24E-06
Pu-238	2.63E-01
Pu-239	3.31E-01
Pu-240	2.10E-01
Pu-241	5.15E+00
Pu-242	1.64E-04
Sr-90	3.69E-08
Th-229	3.00E-15
Th-230	2.81E-09
Th-232	1.32E-08
U-233	3.48E-11
U-234	1.53E-04
U-235	5.69E-06
U-236	1.24E-08
U-238	3.15E-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
Waste Profile Report

Site	Hanford (Richland) Site	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Remediation/D&D Waste	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2013	
Stream Name	WARD solidified inorganics			Activity Concentrations Decayed to CY		2013	

Waste Volume Detail (m³)

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
Current Form Total	6.4	0.0	6.4

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

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	0.80
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.11
Other Inorganic Materials	0.00
Cellulose	3.20
Rubber	0.00
Plastic	41.39
Cement	401.34
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	6.37E-01
Cs-137	9.92E-08
Np-237	2.56E-06
Pu-238	1.62E-01
Pu-239	5.44E-01
Pu-240	2.64E-01
Pu-241	4.87E+00
Pu-242	1.04E-04
Th-229	8.86E-15
Th-230	4.95E-09
Th-232	4.82E-18
U-233	4.38E-11
U-234	1.09E-04
U-235	5.22E-06
U-236	3.91E-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
Waste Profile Report

Site	Hanford (Richland) Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	RH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2013		
Stream Name	Waste Treatment Plant TRU RH Mixed Debris	Activity Concentrations Decayed to CY			2013		

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
Uncontained	0.0	74.5	74.5
Current Form Total	0.0	74.5	74.5

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	0.0	45.6	45.6
Final Form Total	0.0	45.6	45.6

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	73.87
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	19.59
Cellulose	0.00
Rubber	0.00
Plastic	0.00
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	45.67
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	6.97E-03
Cs-137	2.09E+00
Np-237	7.37E-06
Pu-238	4.95E-03
Pu-239	2.45E-03
Pu-240	5.23E-04
Pu-241	1.17E-03
Sr-90	2.34E+00
Th-229	4.23E-08
Th-230	7.51E-10
Th-232	7.91E-17
U-233	6.87E-05
U-234	1.17E-05
U-235	4.58E-07
U-236	2.29E-07
U-238	1.03E-05

No Hazardous Waste Numbers Provided

TRUCON Code(s)
325

Waste Stream Description

RH debris waste to be generated from future WTP operations

Waste Stream ID: SA-W134-B

Appendix A
Waste Profile Report

Site	Sandia National Laboratories	Summary Category	S5000	Defense Determination	Defense-Related	Handling	RH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2013		
Stream Name	RH TRU Debris waste from hot cell and previous RH campaign			Activity Concentrations Decayed to CY	2013		

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum	0.2	0.0	0.2
Bag	0.0	0.0	0.0
Current Form Total	0.2	0.0	0.2

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/o Liner	0.6	0.0	0.6
Final Form Total	0.6	0.0	0.6

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	64.10
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	8.01
Other Inorganic Materials	0.00
Cellulose	0.02
Rubber	5.61
Plastic	2.40
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	8.70
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	1.31E-02
Cs-137	1.25E-01
Np-237	8.50E-09
Pu-238	4.57E-04
Pu-239	1.70E-03
Sr-90	1.25E-01
Th-229	2.17E-18
Th-230	9.17E-11
U-233	3.70E-14
U-234	4.99E-06
U-235	3.77E-07
U-238	1.27E-08

No Hazardous Waste Numbers Provided

TRUCON Code(s)
321

Waste Stream Description

manipulator equipment and headspace gas syringes and filters

Waste Stream ID: SA-W135

Appendix A
Waste Profile Report

Site	Sandia National Laboratories	Summary Category	S5000	Defense Determination	Defense-Related	Handling	RH
Source Cat.	R&D/R&D Laboratory Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2013	
Stream Name	TRU Waste from SNL/NM - Remote Handled				Activity Concentrations Decayed to CY	2013	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
30-gal Drum	0.3	0.0	0.3
Box - Misc	3.5	0.0	3.5
Cask - FD	4.2	0.0	4.2
Cask - Misc	0.1	0.0	0.1
Cask - Paco	0.3	0.0	0.3
Experimental Vessels	0.7	0.0	0.7
Current Form Total	9.0	0.0	9.0

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/o Liner	7.5	0.0	7.5
Final Form Total	7.5	0.0	7.5

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	113.25
Aluminum-based Metal/Alloys	13.33
Other Metal/Alloys	6.66
Other Inorganic Materials	26.71
Cellulose	0.01
Rubber	0.01
Plastic	0.01
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	8.70
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	5.51E+00
Am-243	1.40E-02
Cs-137	4.18E+01
Np-237	1.40E-02
Pu-238	2.16E+00
Pu-239	2.03E+00
Pu-240	1.71E+00
Pu-241	1.51E+01
Pu-242	1.40E-02
Sr-90	3.13E+01
Th-229	2.47E-06
Th-230	2.58E-07
Th-232	1.38E-12
U-233	1.40E-02
U-234	1.40E-02
U-235	1.40E-02
U-236	1.40E-02
U-238	1.40E-02

Haz. Waste No(s).

D004, D005, D006,
D007, D008, D009,
D011, D019, D022,
D028, F002, F005

TRUCON Code(s)

321

Waste Stream Description

Heterogeneous RH fuel pieces from accident scenarios R&D and experimental vessels

Waste Stream ID: SA-W135-C

Appendix A
Waste Profile Report

Site	Sandia National Laboratories	Summary Category	S5000	Defense Determination	Defense-Related	Handling	RH
Source Cat.	R&D/R&D Laboratory Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2013	
Stream Name	RH TRU waste from experimental fuel experiments				Activity Concentrations Decayed to CY	2013	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
Pigs	0.0	0.0	0.0
Current Form Total	0.0	0.0	0.0

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/o Liner	0.6	0.0	0.6
Final Form Total	0.6	0.0	0.6

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	0.00
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.93
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	0.02
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	8.70
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	2.55E-02
Cs-137	2.77E-01
Pu-238	4.45E-03
Pu-239	3.84E-04
Pu-240	1.36E-03
Pu-242	9.79E-06
Sr-90	2.77E-01
U-234	2.45E-06
U-235	6.27E-08
U-238	3.23E-07

No Hazardous Waste Numbers Provided

TRUCON Code(s)

321

Waste Stream Description

small pieces of experiment fuel in plastic capsules, then in metal vials, then in Pb pig

Waste Stream ID: SA-W136

Appendix A
Waste Profile Report

Site	Sandia National Laboratories	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	R&D/R&D Laboratory Waste	Waste Matrix Code Group	Uncategorized Metal Waste	Inventory Date	12/31/2013		
Stream Name	CH TRU Debris waste from Z-machine			Activity Concentrations Decayed to CY	2013		

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
SWB Dir Ld w/o Liner	3.8	47.3	51.0
Current Form Total	3.8	47.3	51.0

Final Form Volumes			
Container Type	Stored	Proj.	Total
SWB Dir Ld w/o Liner	3.8	47.3	51.0
Final Form Total	3.8	47.3	51.0

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	217.20
Aluminum-based Metal/Alloys	1.84
Other Metal/Alloys	1.15
Other Inorganic Materials	0.01
Cellulose	0.00
Rubber	0.29
Plastic	0.17
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.20
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.19
Packaging Material, Steel	153.44
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	2.59E-03
Np-237	2.13E-09
Pu-238	4.08E-03
Pu-239	1.32E-01
Pu-240	3.01E-02
Pu-241	1.60E-01
Pu-242	3.57E-06
Th-229	1.11E-18
Th-230	4.84E-13
Th-232	1.98E-19
U-233	1.31E-14
U-234	3.50E-08
U-235	3.89E-10
U-236	2.68E-09
U-238	1.66E-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: SA-W137

Appendix A
Waste Profile Report

Site	Sandia National Laboratories	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	R&D/R&D Laboratory Waste	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2013	
Stream Name	CH TRU solidified waste				Activity Concentrations Decayed to CY	2013	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
20-gal Pail	0.1	0.0	0.1
5-gal Pail	0.0	0.0	0.0
Current Form Total	0.1	0.0	0.1

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

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	0.00
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.48
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	0.00
Cement	0.02
Solidified Inorganic Material	27.40
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	5.77E-04
Cs-137	3.41E-02
Np-237	3.74E-10
Pu-239	6.25E-03
Pu-240	6.15E-04
Pu-241	5.89E-04
Th-229	9.54E-20
Th-232	1.80E-21
U-233	1.63E-15
U-235	1.23E-11
U-236	3.64E-11

No Hazardous Waste Numbers Provided

TRUCON Code(s)
125/225

Waste Stream Description

Solidified PuNO₃ sample used for instrumental analysis, and Am-241 salt standard.

Waste Stream ID: SA-W138M

Appendix A
Waste Profile Report

Site	Sandia National Laboratories	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	R&D/R&D Laboratory Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2013		
Stream Name	CH TRU sealed source	Activity Concentrations Decayed to CY			2013		

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
20-gal Pail	0.1	0.0	0.1
5-gal Pail	0.0	0.0	0.0
Current Form Total	0.1	0.0	0.1

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

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	0.00
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.01
Other Inorganic Materials	26.20
Cellulose	0.00
Rubber	0.00
Plastic	0.00
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	5.70E-03
Np-237	4.48E-09
Th-229	1.61E-18
U-233	2.33E-14

Haz. Waste No(s).

D008, D011

TRUCON Code(s)

125/225

Waste Stream Description

Sealed sources from instrumentation and on circuit boards.

Waste Stream ID: SR-221H-EUOx

Appendix A
Waste Profile Report

Site	Savannah River Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Discarding Excess/Expired Materials	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2013	
Stream Name	221H U Oxide CH TRU Debris				Activity Concentrations Decayed to CY	2013	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal POC - 12" w/ Liner	6.3	0.0	6.3
Current Form Total	6.3	0.0	6.3

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal POC - 12" w/ Liner	6.2	0.0	6.2
Final Form Total	6.2	0.0	6.2

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	181.67
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	48.85
Other Inorganic Materials	424.59
Cellulose	0.00
Rubber	0.00
Plastic	37.20
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	135.10
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	528.85
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	1.24E-03
Cm-244	3.09E-04
Cs-137	3.09E-04
Np-237	3.09E-04
Pu-238	1.24E-03
Pu-239	8.11E-02
Pu-242	3.09E-04
Sr-90	3.09E-04
Th-229	4.64E-03
Th-230	9.28E-04
Th-232	3.09E-04
U-233	1.16E+00
U-234	1.69E+00
U-235	1.36E-01
U-238	4.02E-03

No Hazardous Waste Numbers Provided

TRUCON Code(s)
125/225

Waste Stream Description

The uranium oxide material is being blended and packaged specifically for disposal at WIPP.

Waste Stream ID: SR-221H-PuOx

Appendix A
Waste Profile Report

Site	Savannah River Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Discarding Excess/Expired Materials	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2013		
Stream Name	221H Pu Oxide CH TRU Debris			Activity Concentrations Decayed to CY	2013		

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal POC - 12" w/ Liner	94.1	0.0	94.1
Current Form Total	94.1	0.0	94.1

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal POC - 12" w/ Liner	93.2	0.0	93.2
Final Form Total	93.2	0.0	93.2

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	181.67
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	48.85
Other Inorganic Materials	424.59
Cellulose	0.00
Rubber	0.00
Plastic	37.20
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	135.10
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	528.85
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	1.96E+01
Np-237	1.29E-04
Pu-238	7.28E+00
Pu-239	3.27E+01
Pu-240	9.48E+00
Pu-241	1.38E+02
Pu-242	4.77E-03
U-235	4.88E-05
U-238	3.25E-06

Haz. Waste No(s).

D006, D007, D008, D011

TRUCON Code(s)

125/225

Waste Stream Description

The plutonium oxide material is being blended and packaged specifically for disposal at WIPP.

Waste Stream ID: **SR-AGNS-HOM**

Appendix A
Waste Profile Report

Site	Savannah River Site	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	R&D/R&D Laboratory Waste	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2013	
Stream Name	SR-AGNS-HOM				Activity Concentrations Decayed to CY	2013	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.4	0.0	0.4
SWB w/ 4 - 55-gal Drums w/ Liners	1.8	0.0	1.8
Current Form Total	2.2	0.0	2.2

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.4	0.0	0.4
SWB w/ 4 - 55-gal Drums w/ Liners	1.9	0.0	1.9
Final Form Total	2.3	0.0	2.3

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	51.17
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	0.00
Cement	1236.34
Solidified Inorganic Material	1.25
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	20.04
Packaging Material, Rubber	0.46
Packaging Material, Steel	196.62
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	3.66E-01
Np-237	2.94E-04
Pu-238	2.68E-01
Pu-239	5.82E-01
Pu-240	1.37E-01
Pu-241	1.28E+00
Pu-242	2.39E-05
Th-229	6.06E-11
Th-230	1.60E-08
Th-232	1.09E-16
U-233	4.19E-08
U-234	6.63E-05
U-235	1.89E-06
U-236	1.34E-07
U-238	4.02E-05

Haz. Waste No(s).D004, D005, D006,
D007, D008, D009,
D011, F005**TRUCON Code(s)**

111/211, 154

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-BCLDP.003.001**

Appendix A
Waste Profile Report

Site	Savannah River Site	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Discarding Excess/Expired Materials	Waste Matrix Code Group	Solidified Organics		Inventory Date	12/31/2013	
Stream Name	BCL JN-1 CH TRU Homogeneous Sludge				Activity Concentrations Decayed to CY	2013	

Waste Volume Detail (m³)

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

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

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	1.61
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.24
Cellulose	1.88
Rubber	0.00
Plastic	6.17
Cement	0.00
Solidified Inorganic Material	93.09
Solidified Organic Material	165.89
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	1.26E-01
Am-243	1.10E-04
Cm-244	9.64E-03
Cs-137	4.01E-02
Np-237	1.34E-06
Pu-238	1.20E-01
Pu-239	1.56E-02
Pu-240	2.55E-02
Pu-241	2.04E+00
Pu-242	7.60E-05
Sr-90	4.01E-02
U-233	1.61E-10
U-234	2.14E-05
U-235	3.72E-07
U-236	9.93E-07
U-238	2.20E-06

Haz. Waste No(s).

D004, D005, D006,
D007, D008, D009,
D011, D019, F002,
F005

TRUCON Code(s)

127/227

Waste Stream Description

This waste consists of CH Hydraulic Sludge and Debris

Waste Stream ID: SR-BCLDP.004.004

Appendix A
Waste Profile Report

Site	Savannah River Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Discarding Excess/Expired Materials	Waste Matrix Code Group	Composite Filter Waste	Inventory Date	12/31/2013		
Stream Name	CH Mixed TRU Cartridge Water Filters(S5000)			Activity Concentrations Decayed to CY	2013		

Waste Volume Detail (m³)

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

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

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	0.00
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	94.72
Cellulose	90.19
Rubber	3.47
Plastic	17.34
Cement	0.00
Solidified Inorganic Material	26.42
Solidified Organic Material	34.42
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	4.87E-02
Am-243	1.32E-04
Cs-137	5.27E-03
Np-237	1.88E-05
Pu-238	2.34E-01
Pu-239	3.96E-03
Pu-240	6.52E-03
Pu-242	7.74E-08
Sr-90	5.19E-03
Th-229	1.84E-12
Th-230	4.49E-09
Th-232	4.76E-19
U-233	2.50E-09
U-234	5.22E-05
U-235	8.11E-07
U-236	1.93E-09
U-238	1.57E-05

Haz. Waste No(s).

D004, D005, D006,
D007, D008, D009,
D011, D019, F002,
F005

TRUCON Code(s)

119/219

Waste Stream Description

This waste consists of CH Cartridge Water Filters

Waste Stream ID: SR-BCLDP-HET

Appendix A
Waste Profile Report

Site	Savannah River Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Remediation/D&D Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2013		
Stream Name	BCL JN-4 CH TRU Heterogeneous Debris			Activity Concentrations Decayed to CY	2013		

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
SWB Dir Ld w/o Liner	3.6	0.0	3.6
Current Form Total	3.6	0.0	3.6

Final Form Volumes			
Container Type	Stored	Proj.	Total
SWB Dir Ld w/o Liner	3.8	0.0	3.8
Final Form Total	3.8	0.0	3.8

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	198.44
Aluminum-based Metal/Alloys	2.03
Other Metal/Alloys	1.02
Other Inorganic Materials	4.06
Cellulose	52.78
Rubber	11.67
Plastic	81.20
Cement	0.00
Solidified Inorganic Material	156.82
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.19
Packaging Material, Steel	153.44
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	2.46E-02
Pu-238	7.84E+00
Pu-239	2.65E-02
Pu-240	1.23E-02
Pu-241	2.83E-01
Pu-242	3.79E-06

Haz. Waste No(s).

D005, D006, D007,
D008, D009, D011,
F002, F005

TRUCON Code(s)

121/221

Waste Stream Description

Heterogeneous debris waste from the D&D of Battelle Columbus Lab Building JN-4

Waste Stream ID: SR-DWPF-HET

Appendix A
Waste Profile Report

Site	Savannah River Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Analytical Laboratory Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2013		
Stream Name	CH TRU - Heterogeneous debris from the DWPF laboratory			Activity Concentrations Decayed to CY	2013		

Waste Volume Detail (m³)

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

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

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	7.05
Aluminum-based Metal/Alloys	3.52
Other Metal/Alloys	0.00
Other Inorganic Materials	14.10
Cellulose	34.06
Rubber	0.00
Plastic	58.73
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	4.56E-01
Cs-137	1.42E-02
Np-237	4.57E-06
Pu-238	9.46E-02
Pu-239	1.49E-02
Pu-240	2.35E-01
Pu-241	3.60E-01
Sr-90	1.40E-02
Th-229	8.76E-06
Th-230	6.24E-11
Th-232	8.41E-18
U-233	1.42E-02
U-234	1.92E-06
U-235	1.97E-06
U-236	4.87E-08
U-238	5.58E-05

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-HBL-235F-HET

Appendix A
Waste Profile Report

Site	Savannah River Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Remediation/D&D Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2013		
Stream Name	Commingled waste from HBL and 235F.			Activity Concentrations Decayed to CY	2013		

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.6	0.0	0.6
SWB Dir Ld w/o Liner	1.8	0.0	1.8
Current Form Total	2.4	0.0	2.4

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.6	0.0	0.6
SWB Dir Ld w/o Liner	1.9	0.0	1.9
Final Form Total	2.5	0.0	2.5

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	171.35
Aluminum-based Metal/Alloys	11.80
Other Metal/Alloys	18.92
Other Inorganic Materials	18.92
Cellulose	28.26
Rubber	1.78
Plastic	21.02
Cement	0.00
Solidified Inorganic Material	1.37
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	9.20
Packaging Material, Rubber	0.29
Packaging Material, Steel	147.81
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Np-237	6.85E-05
Pu-238	5.42E-01
Pu-239	3.75E-04
Pu-240	2.05E-04
Pu-241	1.12E-02
Pu-242	2.44E-07

Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D022, D029, D043, F002, F005, U133

TRUCON Code(s)

125/225, 154

Waste Stream Description

This waste consists of repackaged waste from a large steel box that was originally loaded from two separate SRS generator facilities (i.e. H-B line and 235F)

Waste Stream ID: SR-KAC-HET

Appendix A
Waste Profile Report

Site	Savannah River Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2013		
Stream Name	CH TRU Heterogeneous debris from the K Area Plutonium surveillance program			Activity Concentrations Decayed to CY	2013		

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	1.7	7.6	9.2
Current Form Total	1.7	7.6	9.2

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	1.7	7.5	9.2
Final Form Total	1.7	7.5	9.2

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	24.60
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	2.28
Rubber	21.07
Plastic	158.65
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	7.32E-01
Np-237	4.83E-06
Pu-238	2.45E-01
Pu-239	2.02E+00
Pu-240	5.25E-01
Pu-241	5.61E+00
Pu-242	1.73E-04
U-235	3.84E-06
U-238	1.35E-07

No Hazardous Waste Numbers Provided

TRUCON Code(s)
125/225, 154

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
Waste Profile Report

Site	Savannah River Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2013		
Stream Name	CH TRU Heterogeneous debris from the Los Alamos Scientific Laboratory (LASL)			Activity Concentrations Decayed to CY	2013		

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	4.6	0.0	4.6
Current Form Total	4.6	0.0	4.6

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	4.6	0.0	4.6
Final Form Total	4.6	0.0	4.6

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	64.55
Aluminum-based Metal/Alloys	0.05
Other Metal/Alloys	1.16
Other Inorganic Materials	6.72
Cellulose	7.81
Rubber	6.60
Plastic	7.89
Cement	0.00
Solidified Inorganic Material	0.18
Solidified Organic Material	0.01
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	8.80E-01
Am-243	3.80E-07
Cs-137	2.69E-06
Np-237	4.60E-05
Pu-238	4.17E+02
Pu-239	4.73E-01
Pu-240	7.48E-01
Pu-241	7.96E+00
Pu-242	9.49E-04
Sr-90	3.22E-06
Th-232	6.50E-08
U-233	1.45E-04
U-234	7.38E-02
U-235	1.13E-06

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
Waste Profile Report

Site	Savannah River Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Remediation/D&D Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2013	
Stream Name	CH Mixed TRU/F listed solvents - Heterogeneous debris from Mound Laboratories				Activity Concentrations Decayed to CY	2013	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	1.3	0.0	1.3
55-gal Drum Dir Ld w/o Liner	0.2	0.0	0.2
SLB2 Dir Ld	6.6	0.0	6.6
SWB Dir Ld w/o Liner	12.6	0.0	12.6
Current Form Total	20.7	0.0	20.7

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	1.2	0.0	1.2
55-gal Drum Dir Ld w/o Liner	0.2	0.0	0.2
SLB2 Dir Ld	5.7	0.0	5.7
SWB Dir Ld w/o Liner	13.2	0.0	13.2
Final Form Total	20.3	0.0	20.3

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	85.40
Aluminum-based Metal/Alloys	0.29
Other Metal/Alloys	1.61
Other Inorganic Materials	14.86
Cellulose	29.80
Rubber	4.42
Plastic	21.49
Cement	0.00
Solidified Inorganic Material	0.56
Solidified Organic Material	0.00
Soil	5.06
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	2.27
Packaging Material, Rubber	0.21
Packaging Material, Steel	169.09
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	3.39E-02
Am-243	8.65E-08
Cm-244	4.29E-06
Cs-137	6.95E-06
Np-237	7.23E-06
Pu-238	6.26E+00
Pu-239	8.80E-02
Pu-240	1.36E-02
Pu-241	3.72E-01
Pu-242	8.56E-06
Sr-90	6.95E-06
Th-230	2.49E-06
Th-232	2.63E-07
U-233	1.84E-03
U-234	1.07E-03
U-235	4.90E-07
U-238	8.80E-06

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

TRUCON Code(s)

125/225, 154, 425

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-PAD1**

Appendix A
Waste Profile Report

Site	Savannah River Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2013		
Stream Name	CH TRU Heterogeneous debris from the Mound Plant			Activity Concentrations Decayed to CY	2013		

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	15.3	0.0	15.3
SLB2 Dir Ld	59.7	0.0	59.7
SWB Dir Ld w/o Liner	30.6	0.0	30.6
Current Form Total	105.6	0.0	105.6

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	15.2	0.0	15.2
SLB2 Dir Ld	50.9	0.0	50.9
SWB Dir Ld w/o Liner	32.1	0.0	32.1
Final Form Total	98.3	0.0	98.3

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	64.01
Aluminum-based Metal/Alloys	0.13
Other Metal/Alloys	0.79
Other Inorganic Materials	7.36
Cellulose	20.70
Rubber	2.71
Plastic	12.02
Cement	0.00
Solidified Inorganic Material	0.64
Solidified Organic Material	0.30
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	5.73
Packaging Material, Rubber	0.23
Packaging Material, Steel	182.14
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	5.92E-01
Am-243	2.13E-06
Cm-244	1.32E-03
Cs-137	3.09E-03
Np-237	6.22E-05
Pu-238	3.13E+02
Pu-239	3.72E-01
Pu-240	5.06E-01
Pu-241	5.32E+00
Pu-242	6.17E-04
Sr-90	3.09E-03
Th-232	1.82E-06
U-234	5.58E-02
U-235	1.17E-06
U-238	4.30E-06

Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D019, D022, D027, D028, D029, D030, D032, D034, D037, D043, F002, F004, F005

TRUCON Code(s)

125/225, 154, 425

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
Waste Profile Report

Site	Savannah River Site	Summary Category	S4000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Remediation/D&D Waste	Waste Matrix Code Group	Contaminated Soil/Debris Waste		Inventory Date	12/31/2013	
Stream Name	CH Mixed TRU Soil / Gravel (S4000)				Activity Concentrations Decayed to CY	2013	

Waste Volume Detail (m³)

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	1.9	0.0	1.9
Current Form Total	2.1	0.0	2.1

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	1.9	0.0	1.9
Final Form Total	2.1	0.0	2.1

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	0.10
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	68.94
Cellulose	0.34
Rubber	0.12
Plastic	5.07
Cement	0.00
Solidified Inorganic Material	20.13
Solidified Organic Material	0.00
Soil	843.39
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	3.71
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	7.46E-03
Cs-137	2.29E-06
Np-237	1.03E-06
Pu-238	5.24E-01
Pu-239	1.25E-02
Pu-240	1.81E-03
Pu-241	2.41E-02
Pu-242	2.41E-06
Sr-90	2.29E-06
U-234	8.86E-05

Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, F002, F003, F004, F005, F007, F009

TRUCON Code(s)

111/211, 411

Waste Stream Description

Soil mixed with absorbent and some commingled debris.

Waste Stream ID: SR-NIST-HET

Appendix A
Waste Profile Report

Site	Savannah River Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Other/Multiple Sources	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2013	
Stream Name	Heterogeneous Debris Waste from the NIST				Activity Concentrations Decayed to CY	2013	

Waste Volume Detail (m³)

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

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

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	106.73
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	13.34
Cement	139.42
Solidified Inorganic Material	7.36
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	3.18E+01
Np-237	2.01E-04
Pu-238	3.44E+01
Pu-239	1.24E+01
Pu-240	2.93E+00
Pu-241	5.12E+01
Pu-242	5.23E-04
Th-229	5.04E-12
Th-230	5.80E-07
Th-232	3.74E-13
U-233	8.64E-09
U-234	4.18E-03
U-235	3.04E-05
U-236	3.80E-04
U-238	1.20E-06

No Hazardous Waste Numbers Provided

TRUCON Code(s)
125/225, 154

Waste Stream Description

This material consist of a combination of unirradiated PuO/Uo fuel pellets, Pacemaker source and solidified Pu solutions

Waste Stream ID: **SR-RH-221H.01**

Appendix A
Waste Profile Report

Site	Savannah River Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	RH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2013		
Stream Name	RH TRU Heterogeneous debris from the HB-Line			Activity Concentrations Decayed to CY	2013		

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	3.8	0.0	3.8
Current Form Total	3.8	0.0	3.8

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	3.7	0.0	3.7
Final Form Total	3.7	0.0	3.7

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	152.39
Aluminum-based Metal/Alloys	8.81
Other Metal/Alloys	11.45
Other Inorganic Materials	61.66
Cellulose	51.97
Rubber	130.37
Plastic	460.69
Cement	0.00
Solidified Inorganic Material	2.64
Solidified Organic Material	0.88
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	45.67
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	1.51E-02
Np-237	6.17E-01
Pu-238	3.84E+02
Pu-239	3.02E-01
Pu-240	1.56E-01
Pu-241	8.29E+00
Pu-242	1.80E-04
U-234	4.35E-03
U-235	1.53E-05
U-236	4.24E-06
U-238	1.35E-08

Haz. Waste No(s).

D006, D008, D009,
D019, D022, D029,
D039, D040, D043,
F001, F002, F003,
F005, U133

TRUCON Code(s)

321, 322, 325

Waste Stream Description

This waste stream is defense related, remote handled TRU waste and is composed of dry heterogeneous organic and inorganic debris.

Waste Stream ID: SR-RH-221H.02

Appendix A
Waste Profile Report

Site	Savannah River Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	RH
Source Cat.	Discarding Excess/Expired Materials	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2013		
Stream Name	RH TRU spent Berl saddles from H-Canyon dissolver off-gas system.			Activity Concentrations Decayed to CY	2013		

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	3.2	0.0	3.2
Current Form Total	3.2	0.0	3.2

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	3.1	0.0	3.1
Final Form Total	3.1	0.0	3.1

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	90.46
Aluminum-based Metal/Alloys	5.23
Other Metal/Alloys	6.80
Other Inorganic Materials	36.60
Cellulose	30.85
Rubber	77.39
Plastic	273.48
Cement	0.00
Solidified Inorganic Material	1.57
Solidified Organic Material	0.52
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	45.67
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Np-237	2.90E-04
Pu-238	7.14E-01
Pu-239	6.16E-03
Pu-240	4.20E-03
Pu-242	7.24E-05
U-234	7.24E-05

Haz. Waste No(s).

D007, D009, D011

TRUCON Code(s)

321

Waste Stream Description

This waste stream is defense related, remote handled TRU waste and is composed of spent Berl saddles (silicon dioxide and aluminum oxide).

Waste Stream ID: **SR-RH-235F.01**

Appendix A
Waste Profile Report

Site	Savannah River Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	RH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2013		
Stream Name	RH TRU Heterogeneous debris from the 235F facility.			Activity Concentrations Decayed to CY	2013		

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	1.1	0.0	1.1
Current Form Total	1.1	0.0	1.1

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	1.2	0.0	1.2
Final Form Total	1.2	0.0	1.2

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	57.57
Aluminum-based Metal/Alloys	3.14
Other Metal/Alloys	1.53
Other Inorganic Materials	16.72
Cellulose	9.78
Rubber	58.79
Plastic	74.00
Cement	0.00
Solidified Inorganic Material	0.69
Solidified Organic Material	0.13
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	45.67
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	7.01E+01
Np-237	2.83E-02
Pu-238	3.15E+02
Pu-239	2.40E+00
Pu-240	6.35E-01
Pu-241	4.76E+03
Pu-242	2.31E-04

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
Waste Profile Report

Site	Savannah River Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	RH
Source Cat.	Analytical Laboratory Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2013	
Stream Name	RH TRU Heterogeneous debris from the 772F and 772-1F laboratories.				Activity Concentrations Decayed to CY	2013	

Waste Volume Detail (m³)

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

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	0.6	0.0	0.6
Final Form Total	0.6	0.0	0.6

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	116.34
Aluminum-based Metal/Alloys	8.54
Other Metal/Alloys	23.48
Other Inorganic Materials	234.81
Cellulose	58.70
Rubber	43.76
Plastic	581.68
Cement	0.00
Solidified Inorganic Material	1.07
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	45.67
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	1.40E-02
Cs-137	1.10E+00
Np-237	6.37E-06
Pu-238	5.40E-02
Pu-239	4.29E-02
Pu-240	1.31E-02
Pu-241	8.23E-02
Pu-242	2.14E-06
Sr-90	1.09E+00
Th-229	1.45E-13
Th-230	4.33E-10
Th-232	1.42E-16
U-233	3.01E-10
U-234	5.14E-06
U-235	2.96E-08
U-236	2.65E-07
U-238	3.65E-15

Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D019, D022, D028, D029, F002, F003, F005

TRUCON Code(s)

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.

Waste Stream ID: **SR-RH-773A.01**

Appendix A
Waste Profile Report

Site	Savannah River Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	RH
Source Cat.	Analytical Laboratory Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2013	
Stream Name	RH TRU Heterogeneous debris from the SRNL				Activity Concentrations Decayed to CY	2013	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	16.2	0.0	16.2
55-gal Drum Dir Ld w/o Liner	0.4	11.3	11.8
Current Form Total	16.6	11.3	27.9

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	16.2	0.0	16.2
RH Can w/ Remov Lid w/ 3 - 55-gal w/o Liner	0.6	11.2	11.9
Final Form Total	16.8	11.2	28.1

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	192.09
Aluminum-based Metal/Alloys	2.11
Other Metal/Alloys	12.86
Other Inorganic Materials	126.46
Cellulose	68.83
Rubber	104.22
Plastic	215.86
Cement	0.00
Solidified Inorganic Material	4.36
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	30.06
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	1.53E-01
Am-243	5.19E-02
Cm-244	4.42E+00
Cs-137	9.53E-01
Np-237	3.81E-06
Pu-238	2.75E+00
Pu-239	7.35E-02
Pu-240	4.11E-02
Pu-241	5.70E-01
Pu-242	2.06E-05
Pu-244	2.06E-14
Sr-90	7.01E-01
Th-229	5.40E-14
Th-230	3.03E-09
Th-232	2.24E-18
U-233	1.39E-10
U-234	7.23E-05
U-235	6.52E-10
U-236	1.03E-08
U-238	2.88E-14

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.

Waste Stream ID: SR-RH-FBL.01

Appendix A
Waste Profile Report

Site	Savannah River Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	RH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2013		
Stream Name	RH TRU Heterogeneous debris from the FB-Line			Activity Concentrations Decayed to CY	2013		

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.8	0.0	0.8
Current Form Total	0.8	0.0	0.8

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	1.2	0.0	1.2
Final Form Total	1.2	0.0	1.2

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	27.60
Aluminum-based Metal/Alloys	0.32
Other Metal/Alloys	0.71
Other Inorganic Materials	129.81
Cellulose	6.10
Rubber	9.28
Plastic	77.34
Cement	0.00
Solidified Inorganic Material	0.08
Solidified Organic Material	0.46
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	45.67
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	3.26E+00
Cs-137	4.82E-06
Np-237	8.22E-06
Pu-238	1.49E+00
Pu-239	1.47E+00
Pu-240	1.45E+00
Pu-241	1.41E+01
Pu-242	7.18E-05
Sr-90	4.75E-06
Th-229	7.39E-06
Th-230	1.24E-08
Th-232	6.78E-17
U-233	1.05E-02
U-234	1.86E-04
U-235	2.98E-06
U-236	3.44E-07
U-238	2.09E-05

Haz. Waste No(s).

D005, D006, D007, D008, D009, D011, D018, D019, D022, D029, D039, D040, D043, F002, F005, U002, U151

TRUCON Code(s)

321

Waste Stream Description

This waste stream consists primarily of dry heterogeneous organic debris.

Waste Stream ID: SR-RH-FBL.02

Appendix A
Waste Profile Report

Site	Savannah River Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	RH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2013		
Stream Name	RH TRU Heterogeneous debris from the F-Canyon dissolver off-gas system.			Activity Concentrations Decayed to CY	2013		

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	1.9	0.0	1.9
Current Form Total	1.9	0.0	1.9

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	1.9	0.0	1.9
Final Form Total	1.9	0.0	1.9

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	0.00
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	899.37
Cellulose	0.00
Rubber	0.00
Plastic	65.62
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	45.67
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	1.03E-03
Np-237	3.31E-05
Pu-238	2.73E-05
Pu-239	1.01E-03
Pu-240	7.35E-04
Pu-241	6.32E-03
Pu-242	2.76E-01
Th-229	4.00E-13
Th-230	4.54E-06
Th-232	1.92E-15
U-233	1.14E-09
U-234	6.18E-02
U-235	7.86E-01
U-236	4.86E-06
U-238	3.94E-02

Haz. Waste No(s).

D006, D007, D008,
D009, D011, D019,
D022, D028, D029,
F002, F005

TRUCON Code(s)

321

Waste Stream Description

This waste stream is primarily solids consisting silver coated ceramics (Berl or Beryl saddles) and debris materials.

Waste Stream ID: **SR-RH-MNDPAD1.01**

Appendix A
Waste Profile Report

Site	Savannah River Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	RH
Source Cat.	Remediation/D&D Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2013	
Stream Name	RH Debris from Mound Laboratories				Activity Concentrations Decayed to CY	2013	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	2.7	0.0	2.7
Current Form Total	2.7	0.0	2.7

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	3.1	0.0	3.1
Final Form Total	3.1	0.0	3.1

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	61.25
Aluminum-based Metal/Alloys	0.04
Other Metal/Alloys	0.48
Other Inorganic Materials	8.38
Cellulose	3.70
Rubber	2.91
Plastic	6.77
Cement	0.00
Solidified Inorganic Material	0.36
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	45.67
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	7.10E-02
Np-237	3.57E-08
Pu-238	7.49E+02
Pu-239	5.31E-01
Pu-240	2.90E-01
Pu-241	1.38E+01
Pu-242	3.45E-04
Th-229	1.06E-17
Th-230	8.89E-08
Th-232	1.91E-18
U-233	1.58E-13
U-234	6.42E-03
U-235	1.57E-09
U-236	2.58E-08
U-238	1.61E-13

Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D019, D022, D027, D028, D029, D030, D032, D034, D037, D043, F002, F004, F005

TRUCON Code(s)

325

Waste Stream Description

Process equipment and exchange resin

Waste Stream ID: SR-RH-SDD.01

Appendix A
Waste Profile Report

Site	Savannah River Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	RH
Source Cat.	Discarding Excess/Expired Materials	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2013		
Stream Name	Remote Handled PuBe Sources	Activity Concentrations Decayed to CY			2013		

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.6	0.0	0.6
Current Form Total	0.6	0.0	0.6

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	0.6	0.0	0.6
Final Form Total	0.6	0.0	0.6

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	1810.90
Aluminum-based Metal/Alloys	53.29
Other Metal/Alloys	15.22
Other Inorganic Materials	0.00
Cellulose	1924.68
Rubber	0.00
Plastic	0.00
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	45.67
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	9.35E+00
Np-237	1.77E-05
Pu-238	1.45E+02
Pu-239	2.28E+00
Pu-240	1.37E+00
Pu-241	5.91E+01
Pu-242	2.29E-03
Th-229	3.92E-14
Th-230	7.01E-08
Th-232	3.61E-17
U-233	2.24E-10
U-234	2.52E-03
U-235	1.35E-08
U-236	2.44E-07
U-238	2.13E-12

No Hazardous Waste Numbers Provided

TRUCON Code(s)

320

Waste Stream Description

This waste stream consists of three PuBe sources.

Waste Stream ID: **SR-RH-SWD.01**

Appendix A
Waste Profile Report

Site	Savannah River Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	RH
Source Cat.	Remediation/D&D Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2013	
Stream Name	Remote Handled (RH) Mixed TRU Debris (S5000)				Activity Concentrations Decayed to CY	2013	

Waste Volume Detail (m³)

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

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	0.6	0.0	0.6
Final Form Total	0.6	0.0	0.6

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	8.49
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	267.15
Other Inorganic Materials	33.81
Cellulose	31.57
Rubber	5.61
Plastic	80.77
Cement	0.00
Solidified Inorganic Material	11.81
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	45.67
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	5.20E-02
Am-243	2.96E-02
Cm-244	1.48E+00
Cs-137	5.69E-03
Np-237	2.15E-04
Pu-238	1.06E-01
Pu-239	1.38E-01
Pu-240	4.67E-02
Pu-241	6.35E-01
Pu-242	1.51E-05
Pu-244	1.29E-15
Sr-90	3.93E-03
Th-229	1.32E-11
Th-230	4.90E-10
Th-232	1.05E-17
U-233	1.67E-08
U-234	5.78E-06
U-235	2.45E-09
U-236	2.40E-08
U-238	4.20E-14

Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D019, D022, D027, D028, D029, D043, F002, F004, F005, U133

TRUCON Code(s)

322

Waste Stream Description

RH Mixed TRU waste resulting from solvent tank emptying and closure in the E-Area of SRS.

Waste Stream ID: SR-SDD-HET-A

Appendix A
Waste Profile Report

Site	Savannah River Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Remediation/D&D Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2013		
Stream Name	CH TRU - Heterogeneous debris from the D&D of the 211-F-Area			Activity Concentrations Decayed to CY	2013		

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	1.9	0.0	1.9
SWB Dir Ld w/o Liner	1.8	0.0	1.8
Current Form Total	3.7	0.0	3.7

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	1.9	0.0	1.9
SWB Dir Ld w/o Liner	1.9	0.0	1.9
Final Form Total	3.8	0.0	3.8

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	51.52
Aluminum-based Metal/Alloys	0.50
Other Metal/Alloys	0.04
Other Inorganic Materials	0.49
Cellulose	2.28
Rubber	0.00
Plastic	22.67
Cement	1.08
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	18.44
Packaging Material, Rubber	0.38
Packaging Material, Steel	142.16
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	1.42E-03
Am-243	5.38E-07
Cm-244	5.58E-05
Cs-137	2.44E-05
Np-237	7.58E-06
Pu-238	6.24E-01
Pu-239	3.42E-02
Pu-240	4.79E-03
Pu-241	9.24E-02
Pu-242	4.24E-06
Sr-90	5.97E-03
U-233	5.35E-07
U-234	3.90E-06
U-235	8.00E-09
U-236	5.94E-08
U-238	1.71E-07

Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011

TRUCON Code(s)

125/225

Waste Stream Description

This waste stream is defense related, contact handled TRU waste and is composed of metal equipment, tools and debris and small amounts of Portland cement

Waste Stream ID: SR-SDD-HOM-A

Appendix A
Waste Profile Report

Site	Savannah River Site	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Remediation/D&D Waste	Waste Matrix Code Group	Solidified Organics		Inventory Date	12/31/2013	
Stream Name	Organic Sludge from D&D of the SRS F-Area 800 Series Underground Tanks				Activity Concentrations Decayed to CY	2013	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.4	0.0	0.4
55-gal Drum Dir Ld w/o Liner	3.6	0.0	3.6
SWB Dir Ld w/o Liner	1.8	0.0	1.8
Current Form Total	5.8	0.0	5.8

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.4	0.0	0.4
55-gal Drum Dir Ld w/o Liner	3.5	0.0	3.5
SWB Dir Ld w/o Liner	1.9	0.0	1.9
Final Form Total	5.8	0.0	5.8

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	0.00
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	7.79
Cement	520.37
Solidified Inorganic Material	3.90
Solidified Organic Material	27.39
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	2.64
Packaging Material, Rubber	0.45
Packaging Material, Steel	138.10
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	2.51E-02
Am-243	1.41E-04
Np-237	2.01E-02
Pu-238	2.44E+00
Pu-239	2.16E-01
Pu-240	4.10E-02
Pu-241	6.17E-01
Pu-242	9.37E-02
U-233	9.17E-02
U-234	2.07E-01
U-235	1.64E-04
U-236	6.15E-04
U-238	9.96E-03

Haz. Waste No(s).D004, D005, D007,
D008, D009, D011**TRUCON Code(s)**

112/212

Waste Stream Description

Absorbed organic sludge

Waste Stream ID: SR-SDD-HOM-B

Appendix A
Waste Profile Report

Site	Savannah River Site	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Remediation/D&D Waste	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2013	
Stream Name	Sludge from D&D of the SRS F-Area 800 Series Underground Tanks				Activity Concentrations Decayed to CY	2013	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.4	0.0	0.4
55-gal Drum Dir Ld w/o Liner	8.4	0.0	8.4
SWB Dir Ld w/o Liner	1.8	0.0	1.8
Current Form Total	10.6	0.0	10.6

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.4	0.0	0.4
55-gal Drum Dir Ld w/o Liner	8.3	0.0	8.3
SWB Dir Ld w/o Liner	1.9	0.0	1.9
Final Form Total	10.6	0.0	10.6

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	39.57
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	2.86
Cellulose	15.10
Rubber	0.00
Plastic	30.98
Cement	163.56
Solidified Inorganic Material	8.61
Solidified Organic Material	0.05
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	1.45
Packaging Material, Rubber	0.50
Packaging Material, Steel	134.80
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	1.03E-01
Am-243	5.84E-05
Cm-244	3.18E-03
Cs-137	4.81E-04
Np-237	5.87E-04
Pu-238	4.83E+01
Pu-239	2.65E+00
Pu-240	3.71E-01
Pu-241	6.98E+00
Pu-242	1.28E-03
Sr-90	2.09E-04
U-234	3.11E-04
U-235	2.56E-06
U-236	4.77E-06
U-238	7.56E-05

Haz. Waste No(s).D004, D005, D006,
D007, D008, D009,
D010, D011**TRUCON Code(s)**

127/227

Waste Stream Description

Absorbed sludge

Waste Stream ID: SR-SWMF-HET-A

Appendix A
Waste Profile Report

Site	Savannah River Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2013		
Stream Name	CH Mixed TRU Debris (S5000)			Activity Concentrations Decayed to CY	2013		

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.8	0.0	0.8
55-gal Drum Dir Ld w/o Liner	4.8	15.1	20.0
SWB Dir Ld w/o Liner	61.2	0.0	61.2
Current Form Total	66.9	15.1	82.0

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.8	0.0	0.8
55-gal Drum Dir Ld w/o Liner	4.8	15.0	19.8
SWB Dir Ld w/o Liner	64.3	0.0	64.3
Final Form Total	69.9	15.0	84.9

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	61.76
Aluminum-based Metal/Alloys	0.82
Other Metal/Alloys	0.06
Other Inorganic Materials	1.95
Cellulose	7.42
Rubber	4.24
Plastic	19.96
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.36
Packaging Material, Rubber	0.28
Packaging Material, Steel	147.94
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	6.52E-02
Am-243	5.30E-06
Cm-244	1.99E-03
Cs-137	6.30E-05
Np-237	6.63E-05
Pu-238	7.37E+00
Pu-239	1.45E-01
Pu-240	4.11E-02
Pu-241	6.50E-01
Pu-242	1.06E-04
Sr-90	6.30E-05
Th-232	1.68E-09
U-233	5.77E-06
U-234	8.85E-04
U-235	1.35E-07
U-238	5.01E-06

Haz. Waste No(s).

D008, F001, F002, F004, F005, F007, F009, U133, U151

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.

Waste Stream ID: SR-SWMF-HET-B

Appendix A
Waste Profile Report

Site	Savannah River Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Spill Clean-ups/Emergency Response Actions	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2013		
Stream Name	Spill cleanup debris.				Activity Concentrations Decayed to CY	2013	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	1.1	0.0	1.1
Current Form Total	1.1	0.0	1.1

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	1.0	0.0	1.0
Final Form Total	1.0	0.0	1.0

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	130.29
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	32.40
Cellulose	25.91
Rubber	0.00
Plastic	24.62
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	3.46E-01
Am-243	4.27E-01
Cm-244	4.25E+01
Cs-137	5.89E-06
Pu-238	6.89E-01
Pu-239	8.65E-04
Pu-240	1.47E-01
Pu-241	2.94E-01
Pu-242	1.35E-04
Sr-90	5.89E-06

Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D019, D022, D027, D028, D029, D043, F002, F004, F005, U133

TRUCON Code(s)

125/225, 154

Waste Stream Description

Solid Waste Management Facility debris resulting from spill cleanup activities

Waste Stream ID: **SR-T001-WSB-1**

Appendix A
Waste Profile Report

Site	Savannah River Site	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Materials Production/Recovery Effluents	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2013	
Stream Name	N/A					Activity Concentrations Decayed to CY	2013

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	0.0	3986.6	3986.6
Current Form Total	0.0	3986.6	3986.6

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	0.0	3948.7	3948.7
Final Form Total	0.0	3948.7	3948.7

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	19.32
Aluminum-based Metal/Alloys	32.22
Other Metal/Alloys	18.31
Other Inorganic Materials	29.76
Cellulose	26.60
Rubber	31.91
Plastic	100.66
Cement	0.00
Solidified Inorganic Material	4.44
Solidified Organic Material	3.64
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	2.99E+02
Pu-238	6.77E-03
Pu-239	4.44E-02
Pu-240	1.69E-02
Pu-241	8.17E+00
U-234	1.32E-03
U-235	4.25E-05
U-236	6.83E-07
U-238	3.84E-07

No Hazardous Waste Numbers Provided

TRUCON Code(s)
125/225

Waste Stream Description

This waste stream will consist of a neutralized aqueous stream solidified in an inorganic matrix.

Waste Stream ID: **SR-W026-221F-HEPA**

Appendix A
Waste Profile Report

Site	Savannah River Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Composite Filter Waste	Inventory Date	12/31/2013		
Stream Name	CH Mixed TRU HEPA Filters (S5000)	Activity Concentrations Decayed to CY			2013		

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.8	0.0	0.8
Current Form Total	0.8	0.0	0.8

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.8	0.0	0.8
Final Form Total	0.8	0.0	0.8

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	25.16
Aluminum-based Metal/Alloys	0.24
Other Metal/Alloys	0.00
Other Inorganic Materials	1.56
Cellulose	10.41
Rubber	0.00
Plastic	18.22
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	2.55E-01
Cs-137	2.25E-07
Np-237	1.55E-06
Pu-238	7.54E-02
Pu-239	9.42E-01
Pu-240	2.53E-01
Pu-241	3.18E+00
Pu-242	3.19E-05
Sr-90	2.25E-07
U-233	2.37E-04
U-234	3.25E-05
U-235	7.05E-07
U-238	5.15E-08

Haz. Waste No(s).

D005, D007, D009, D011, D019, D022, D028, D029, D043, F002, F005

TRUCON Code(s)

119/219, 154

Waste Stream Description

HEPA Filters in Filtered Polyethylene Boxes

Waste Stream ID: SR-W026-221F-HET

Appendix A
Waste Profile Report

Site	Savannah River Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Materials Production/Recovery Effluents	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2013		
Stream Name	CH Mixed TRU/Thirds Heterogeneous debris from 221F			Activity Concentrations Decayed to CY	2013		

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.8	0.0	0.8
SLB2 Dir Ld	6.6	0.0	6.6
SWB Dir Ld w/o Liner	7.2	0.0	7.2
Current Form Total	14.7	0.0	14.7

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.8	0.0	0.8
SLB2 Dir Ld	5.7	0.0	5.7
SWB Dir Ld w/o Liner	7.6	0.0	7.6
Final Form Total	14.1	0.0	14.1

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	46.77
Aluminum-based Metal/Alloys	0.49
Other Metal/Alloys	0.57
Other Inorganic Materials	7.46
Cellulose	32.55
Rubber	7.77
Plastic	34.52
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.03
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	2.19
Packaging Material, Rubber	0.19
Packaging Material, Steel	177.11
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	3.65E-01
Am-243	8.50E-07
Cm-244	5.83E-03
Cs-137	9.87E-05
Np-237	4.84E-06
Pu-238	4.35E-01
Pu-239	1.67E+00
Pu-240	4.61E-01
Pu-241	7.64E+00
Pu-242	2.85E-04
Sr-90	9.87E-05
Th-232	5.26E-08
U-234	1.83E-04
U-235	2.44E-06
U-238	1.63E-05

Haz. Waste No(s).

D006, D007, D008,
D009, D022, D028,
D029, F001, F002,
F003, F005

TRUCON Code(s)

125/225, 154

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-HET-A

Appendix A
Waste Profile Report

Site	Savannah River Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Remediation/D&D Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2013	
Stream Name	CH Mixed TRU/Thirds Heterogeneous debris from 221F				Activity Concentrations Decayed to CY	2013	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	4.6	0.0	4.6
SLB2 Dir Ld	6.6	0.0	6.6
Current Form Total	11.3	0.0	11.3

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	4.6	0.0	4.6
SLB2 Dir Ld	5.7	0.0	5.7
Final Form Total	10.2	0.0	10.2

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	0.00
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.71
Other Inorganic Materials	48.30
Cellulose	0.06
Rubber	0.00
Plastic	2.78
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	16.57
Packaging Material, Rubber	0.33
Packaging Material, Steel	177.65
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	9.10E-02
Cm-244	3.02E-03
Cs-137	8.29E-02
Np-237	8.46E-07
Pu-238	1.35E-02
Pu-239	2.37E-01
Pu-240	5.96E-02
Pu-241	1.92E+00
Pu-242	1.03E-05
Sr-90	2.33E-02
U-233	3.09E-06
U-234	7.51E-05
U-235	2.38E-06
U-236	3.41E-07
U-238	9.08E-07

Haz. Waste No(s).

D006, D007, D008,
D009, D011, D019,
D022, D028, D029,
F002, F005

TRUCON Code(s)

125/225, 154

Waste Stream Description

200 Areas (F Separations Facilities). This waste consists of silver impregnated ceramic saddles removed from the F-Canyon dissolver off-gas system.

Waste Stream ID: SR-W026-221F-HOM

Appendix A
Waste Profile Report

Site	Savannah River Site	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Materials Production/Recovery Effluents	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2013	
Stream Name	CH Mixed TRU Solids (S3000)				Activity Concentrations Decayed to CY	2013	

Waste Volume Detail (m³)

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

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	1.5	0.0	1.5
Final Form Total	1.5	0.0	1.5

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	1.69
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	1.64
Rubber	0.63
Plastic	26.90
Cement	0.00
Solidified Inorganic Material	257.73
Solidified Organic Material	4.42
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	5.22E-01
Am-243	1.16E-07
Cs-137	1.51E-02
Np-237	1.79E-05
Pu-238	3.09E-01
Pu-239	1.85E+00
Pu-240	4.14E-01
Pu-241	1.61E+00
Pu-242	5.87E-05
Sr-90	7.63E-06
Th-229	1.55E-12
Th-230	8.65E-09
Th-232	1.60E-16
U-233	1.60E-09
U-234	5.16E-05
U-235	6.31E-08
U-236	2.82E-07
U-238	3.11E-07

Haz. Waste No(s).

D005, D006, D007,
D008, D009, D011,
D019, D022, D028,
D029, D043, F002,
F004, 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
Waste Profile Report

Site	Savannah River Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	R&D/R&D Laboratory Waste	Waste Matrix Code Group	Combustible Waste		Inventory Date	12/31/2013	
Stream Name	CH Mixed TRU/Thirds Heterogeneous debris from 772F				Activity Concentrations Decayed to CY	2013	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	4.0	50.4	54.4
SWB Dir Ld w/o Liner	1.8	23.4	25.2
Current Form Total	5.8	73.8	79.6

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	4.0	49.9	53.9
SWB Dir Ld w/o Liner	1.9	24.6	26.5
Final Form Total	5.8	74.5	80.3

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	11.03
Aluminum-based Metal/Alloys	0.65
Other Metal/Alloys	0.87
Other Inorganic Materials	18.36
Cellulose	6.44
Rubber	4.14
Plastic	44.19
Cement	0.00
Solidified Inorganic Material	0.08
Solidified Organic Material	0.01
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	24.86
Packaging Material, Rubber	0.44
Packaging Material, Steel	138.24
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	2.23E-01
Am-243	2.11E-06
Cm-244	3.24E-03
Cs-137	9.42E-04
Np-237	2.38E-04
Pu-238	8.85E+00
Pu-239	3.90E-01
Pu-240	9.70E-02
Pu-241	2.08E+00
Pu-242	4.46E-05
Sr-90	9.37E-04
Th-229	5.05E-09
Th-232	5.09E-07
U-233	7.57E-05
U-234	1.47E-03
U-235	1.54E-06
U-238	1.29E-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-MFFF-1**

Appendix A
Waste Profile Report

Site	Savannah River Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2013		
Stream Name	UNKNOWN				Activity Concentrations Decayed to CY	2013	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	0.0	2755.6	2755.6
Current Form Total	0.0	2755.6	2755.6

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	0.0	2729.4	2729.4
Final Form Total	0.0	2729.4	2729.4

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	19.32
Aluminum-based Metal/Alloys	32.22
Other Metal/Alloys	18.31
Other Inorganic Materials	29.76
Cellulose	26.60
Rubber	31.91
Plastic	100.66
Cement	0.00
Solidified Inorganic Material	4.44
Solidified Organic Material	3.64
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Pu-238	4.16E-01
Pu-239	2.81E+00
Pu-240	6.47E-01
Pu-241	5.00E+01
Pu-242	1.91E-04
U-234	1.05E-08
U-235	9.44E-07
U-236	1.51E-08
U-238	8.57E-09

Haz. Waste No(s).

D008

TRUCON Code(s)

125/225

Waste Stream Description

This waste stream will be composed of heterogeneous debris which could include HEPA filters, plastic, protective clothing, metal, gloves, lead lined gloves and sludges.

Waste Stream ID: SR-W026-WSB-2

Appendix A
Waste Profile Report

Site	Savannah River Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2013		
Stream Name	N/A	Activity Concentrations Decayed to CY				2013	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	0.0	520.4	520.4
Current Form Total	0.0	520.4	520.4

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	0.0	515.4	515.4
Final Form Total	0.0	515.4	515.4

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	3.64
Aluminum-based Metal/Alloys	0.77
Other Metal/Alloys	13.74
Other Inorganic Materials	8.55
Cellulose	33.50
Rubber	62.29
Plastic	148.67
Cement	0.00
Solidified Inorganic Material	8.42
Solidified Organic Material	6.88
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	7.12E+01
Pu-238	1.77E-03
Pu-239	1.23E-02
Pu-240	4.24E-03
Pu-241	2.11E-01
Pu-242	8.04E-06
U-234	1.12E-07
U-235	1.03E-05
U-236	1.66E-07
U-238	9.69E-08

Haz. Waste No(s).

D008
TRUCON Code(s)
125/225

Waste Stream Description

This waste stream will be composed of heterogeneous debris with could include HEPA filters, plastic, protective clothing, metal, gloves, lead lined gloves, and sludges.

Waste Stream ID: SR-W027-221F-HET-A

Appendix A
Waste Profile Report

Site	Savannah River Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Materials Production/Recovery Effluents	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2013		
Stream Name	CH Mixed TRU/F listed solvents - Heterogeneous debris from 221F			Activity Concentrations Decayed to CY	2013		

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	2.1	0.0	2.1
SWB Dir Ld w/o Liner	5.4	0.0	5.4
Current Form Total	7.5	0.0	7.5

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	2.1	0.0	2.1
SWB Dir Ld w/o Liner	5.7	0.0	5.7
Final Form Total	7.8	0.0	7.8

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	46.71
Aluminum-based Metal/Alloys	0.13
Other Metal/Alloys	0.02
Other Inorganic Materials	1.89
Cellulose	40.36
Rubber	0.59
Plastic	18.62
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	9.95
Packaging Material, Rubber	0.29
Packaging Material, Steel	147.35
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	1.83E-01
Am-243	1.97E-07
Cm-244	3.06E-05
Cs-137	5.04E-07
Np-237	1.57E-06
Pu-238	5.43E-02
Pu-239	6.38E-01
Pu-240	1.61E-01
Pu-241	2.05E+00
Pu-242	1.52E-05
Sr-90	5.04E-07
U-233	9.22E-06
U-234	2.56E-05
U-235	1.03E-07
U-238	3.20E-07

Haz. Waste No(s).D006, D008, D009,
F001, F002, 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
Waste Profile Report

Site	Savannah River Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Composite Filter Waste	Inventory Date	12/31/2013		
Stream Name	CH TRU HEPA filters				Activity Concentrations Decayed to CY	2013	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	2.7	0.0	2.7
55-gal Drum Dir Ld w/o Liner	0.0	3.4	3.4
SLB2 Dir Ld	6.6	0.0	6.6
SWB Dir Ld w/o Liner	66.6	10.8	77.4
Current Form Total	76.0	14.2	90.1

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	2.7	0.0	2.7
55-gal Drum Dir Ld w/o Liner	0.0	3.3	3.3
SLB2 Dir Ld	5.7	0.0	5.7
SWB Dir Ld w/o Liner	69.9	11.3	81.3
Final Form Total	78.3	14.7	93.0

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	4.19
Aluminum-based Metal/Alloys	23.19
Other Metal/Alloys	0.00
Other Inorganic Materials	9.90
Cellulose	6.48
Rubber	0.09
Plastic	13.41
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	1.08
Packaging Material, Rubber	0.21
Packaging Material, Steel	155.75
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	1.29E-02
Am-243	1.21E-07
Cs-137	1.55E-03
Np-237	4.03E-05
Pu-238	9.62E+00
Pu-239	3.62E-02
Pu-240	1.02E-02
Pu-241	2.33E-01
Pu-242	1.83E-05
Sr-90	1.55E-03
U-234	1.68E-03
U-235	1.11E-07

Haz. Waste No(s).

D006, D007, D008, D009, D011, 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
Waste Profile Report

Site	Savannah River Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Materials Production/Recovery Effluents	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2013		
Stream Name	CH Mixed TRU/F listed solvents - Heterogeneous debris from 221H			Activity Concentrations Decayed to CY	2013		

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	4.0	0.0	4.0
55-gal Drum Dir Ld w/o Liner	0.2	0.0	0.2
SWB Dir Ld w/o Liner	79.2	0.0	79.2
Current Form Total	83.4	0.0	83.4

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	4.0	0.0	4.0
55-gal Drum Dir Ld w/o Liner	0.2	0.0	0.2
SWB Dir Ld w/o Liner	83.2	0.0	83.2
Final Form Total	87.3	0.0	87.3

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	24.59
Aluminum-based Metal/Alloys	1.15
Other Metal/Alloys	0.38
Other Inorganic Materials	9.08
Cellulose	5.83
Rubber	16.03
Plastic	50.67
Cement	0.00
Solidified Inorganic Material	0.13
Solidified Organic Material	0.01
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	1.68
Packaging Material, Rubber	0.21
Packaging Material, Steel	152.36
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	1.10E-01
Am-243	1.77E-06
Cm-244	2.93E-03
Cs-137	1.49E-05
Np-237	1.47E-03
Pu-238	7.80E+01
Pu-239	2.48E-01
Pu-240	6.98E-02
Pu-241	6.22E+00
Pu-242	1.58E-04
Sr-90	1.49E-05
Th-232	2.23E-06
U-233	3.50E-04
U-234	1.37E-02
U-235	2.26E-06
U-238	2.36E-06

Haz. Waste No(s).

D006, D008, D009, D019, D022, D029, D039, D040, D043, F001, F002, F003, F005, U133

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-C

Appendix A
Waste Profile Report

Site	Savannah River Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Materials Production/Recovery Effluents	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2013		
Stream Name	CH Mixed TRU - Heterogeneous debris from 221H			Activity Concentrations Decayed to CY	2013		

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	1.1	0.0	1.1
55-gal Drum Dir Ld w/o Liner	6.1	79.0	85.1
SWB Dir Ld w/o Liner	10.8	32.4	43.2
Current Form Total	17.9	111.4	129.3

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	1.0	0.0	1.0
55-gal Drum Dir Ld w/o Liner	6.0	78.2	84.2
SWB Dir Ld w/o Liner	11.3	34.0	45.4
Final Form Total	18.4	112.2	130.6

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	45.61
Aluminum-based Metal/Alloys	6.94
Other Metal/Alloys	0.30
Other Inorganic Materials	15.55
Cellulose	4.24
Rubber	25.42
Plastic	52.44
Cement	0.00
Solidified Inorganic Material	1.49
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.30
Packaging Material, Rubber	0.44
Packaging Material, Steel	138.64
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	2.25E-01
Am-243	6.99E-06
Cs-137	3.18E-05
Np-237	2.30E-03
Pu-238	1.78E+00
Pu-239	8.44E-01
Pu-240	2.03E-01
Pu-241	1.74E+00
Pu-242	1.15E-04
Sr-90	3.18E-05
U-233	1.72E-05
U-234	4.49E-04
U-235	7.04E-06
U-238	4.30E-07

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. Small HEPA filters, sludges, resins, absorbed liquids, and large metal equipment are also in this waste stream.

Waste Stream ID: SR-W027-221H-HOM

Appendix A
Waste Profile Report

Site	Savannah River Site	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Materials Production/Recovery Effluents	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2013	
Stream Name	CH Mixed TRU Absorbed / Stabilized Liquids				Activity Concentrations Decayed to CY	2013	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.6	0.0	0.6
55-gal Drum Dir Ld w/o Liner	0.2	0.0	0.2
Current Form Total	0.8	0.0	0.8

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.6	0.0	0.6
55-gal Drum Dir Ld w/o Liner	0.2	0.0	0.2
Final Form Total	0.8	0.0	0.8

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	6.05
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	106.84
Cellulose	4.03
Rubber	4.03
Plastic	46.37
Cement	0.00
Solidified Inorganic Material	32.25
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	27.80
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	3.23E-01
Am-243	1.17E-07
Cs-137	5.71E-03
Np-237	1.40E-04
Pu-238	7.84E-01
Pu-239	8.05E-01
Pu-240	2.19E-01
Pu-241	2.77E+00
Pu-242	7.83E-05
Sr-90	5.71E-03
U-233	5.61E-06
U-234	1.51E-03
U-235	2.91E-05
U-236	6.36E-06
U-238	1.53E-06

Haz. Waste No(s).

D006, D007, D008,
D009, D011, D019,
D022, D029, D043,
F002, F005, U133

TRUCON Code(s)

127/227

Waste Stream Description

This waste stream is comprised of greater than 50 percent by volume absorbed liquid waste

Waste Stream ID: **SR-W027-235F-HEPA**

Appendix A
Waste Profile Report

Site	Savannah River Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Materials Production/Recovery Effluents	Waste Matrix Code Group	Composite Filter Waste	Inventory Date	12/31/2013		
Stream Name	CH Mixed TRU consisting of HEPA Filters from the 235-F.			Activity Concentrations Decayed to CY	2013		

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.8	0.0	0.8
SWB Dir Ld w/o Liner	9.0	0.0	9.0
Current Form Total	9.8	0.0	9.8

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/o Liner	9.5	0.0	9.5
Final Form Total	10.3	0.0	10.3

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	2.76
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.67
Cellulose	27.08
Rubber	0.00
Plastic	16.90
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	3.00
Packaging Material, Rubber	0.22
Packaging Material, Steel	151.60
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	1.07E-02
Cs-137	7.23E-08
Np-237	1.70E-04
Pu-238	9.86E-01
Pu-239	6.49E-03
Pu-240	2.81E-03
Pu-241	4.86E-02
Pu-242	4.97E-06
Sr-90	7.23E-08
U-234	2.86E-04
U-235	2.50E-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
Waste Profile Report

Site	Savannah River Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Materials Production/Recovery Effluents	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2013		
Stream Name	CH Mixed TRU/F listed solvents - Heterogeneous debris from 235F			Activity Concentrations Decayed to CY	2013		

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	3.2	0.0	3.2
SWB Dir Ld w/o Liner	3.6	0.0	3.6
Current Form Total	6.8	0.0	6.8

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	3.1	0.0	3.1
SWB Dir Ld w/o Liner	3.8	0.0	3.8
Final Form Total	6.9	0.0	6.9

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	55.32
Aluminum-based Metal/Alloys	1.56
Other Metal/Alloys	2.76
Other Inorganic Materials	7.75
Cellulose	9.55
Rubber	26.07
Plastic	47.06
Cement	0.00
Solidified Inorganic Material	0.18
Solidified Organic Material	0.09
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.36
Packaging Material, Steel	143.19
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	2.08E-01
Am-243	1.47E-06
Cm-244	3.52E-04
Cs-137	2.58E-06
Np-237	4.28E-03
Pu-238	1.24E+02
Pu-239	1.62E-01
Pu-240	6.99E-02
Pu-241	5.96E+00
Pu-242	1.34E-04
Sr-90	2.57E-06
Th-232	1.51E-06
U-233	2.21E-04
U-234	3.07E-02
U-235	3.18E-06
U-238	1.45E-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-W027-321-322M-HET

Appendix A
Waste Profile Report

Site	Savannah River Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Materials Production/Recovery Effluents	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2013		
Stream Name	CH Mixed TRU Debris (S5000)			Activity Concentrations Decayed to CY	2013		

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	1.3	0.0	1.3
Current Form Total	1.3	0.0	1.3

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	1.2	0.0	1.2
Final Form Total	1.2	0.0	1.2

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	141.74
Aluminum-based Metal/Alloys	3.63
Other Metal/Alloys	8.34
Other Inorganic Materials	18.49
Cellulose	23.56
Rubber	68.51
Plastic	97.15
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	1.09
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	6.48E-01
Np-237	5.00E-04
Pu-238	2.52E-02
Pu-239	4.21E-02
Pu-240	9.96E-03
Pu-241	1.52E+02
Pu-242	1.73E-06

Haz. Waste No(s).

D008, D009, F001, F002

TRUCON Code(s)

125/225, 129/229

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

Appendix A
Waste Profile Report

Site	Savannah River Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	R&D/R&D Laboratory Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2013	
Stream Name	CH Mixed TRU/F listed solvents - Heterogeneous debris from 773A				Activity Concentrations Decayed to CY	2013	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	12.4	0.0	12.4
55-gal Drum Dir Ld w/o Liner	3.2	56.5	59.6
SLB2 Dir Ld	6.6	0.0	6.6
SWB Dir Ld w/o Liner	70.2	30.6	100.8
Current Form Total	92.4	87.1	179.5

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	12.3	0.0	12.3
55-gal Drum Dir Ld w/o Liner	3.1	56.0	59.1
SLB2 Dir Ld	5.7	0.0	5.7
SWB Dir Ld w/o Liner	73.7	32.1	105.8
Final Form Total	94.8	88.1	182.8

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	35.23
Aluminum-based Metal/Alloys	0.67
Other Metal/Alloys	1.22
Other Inorganic Materials	13.81
Cellulose	11.13
Rubber	6.76
Plastic	30.75
Cement	0.00
Solidified Inorganic Material	0.15
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	2.49
Packaging Material, Rubber	0.34
Packaging Material, Steel	146.52
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	1.56E-01
Am-243	1.05E-03
Cm-244	9.96E-02
Cs-137	8.16E-04
Np-237	2.36E-04
Pu-238	1.02E+01
Pu-239	4.21E-01
Pu-240	9.69E-02
Pu-241	1.85E+00
Pu-242	2.09E-05
Sr-90	8.16E-04
Th-232	5.24E-07
U-233	4.53E-05
U-234	1.80E-03
U-235	1.09E-06
U-238	1.04E-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, 154, 425

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-W027-773A-HOM

Appendix A
Waste Profile Report

Site	Savannah River Site	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Analytical Laboratory Waste	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2013	
Stream Name	CH Mixed TRU Homogeneous Solids (S3000)				Activity Concentrations Decayed to CY	2013	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	1.1	0.0	1.1
Current Form Total	1.1	0.0	1.1

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	1.0	0.0	1.0
Final Form Total	1.0	0.0	1.0

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	1.46
Aluminum-based Metal/Alloys	0.03
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	6.96
Rubber	2.20
Plastic	22.02
Cement	0.00
Solidified Inorganic Material	90.10
Solidified Organic Material	243.27
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	5.95E-04
Cs-137	4.88E-03
Np-237	1.36E-05
Pu-238	5.92E+01
Pu-239	4.20E-05
Pu-240	2.14E-05
Pu-241	2.14E-04
Pu-242	2.06E-05
Sr-90	4.76E-03
Th-229	7.45E-13
Th-230	2.11E-06
Th-232	4.52E-21
U-233	9.97E-10
U-234	1.50E-02
U-235	7.03E-13
U-236	1.08E-11
U-238	5.43E-14

Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D019, D022, D027, D028, D029, D043, F002, F004, F005

TRUCON Code(s)

127/227

Waste Stream Description

CH Mixed TRU Homogeneous Solids resulting from liquid absorption at the SRNL.

Waste Stream ID: SR-W027-FB-Pre86-C

Appendix A
Waste Profile Report

Site	Savannah River Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Materials Production/Recovery Effluents	Waste Matrix Code Group	Combustible Waste		Inventory Date	12/31/2013	
Stream Name	CH Mixed TRU - Heterogeneous debris from FB-Line				Activity Concentrations Decayed to CY	2013	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	31.9	0.0	31.9
SWB Dir Ld w/o Liner	34.2	0.0	34.2
Current Form Total	66.1	0.0	66.1

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	31.6	0.0	31.6
SWB Dir Ld w/o Liner	35.9	0.0	35.9
Final Form Total	67.5	0.0	67.5

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	25.47
Aluminum-based Metal/Alloys	0.26
Other Metal/Alloys	0.32
Other Inorganic Materials	8.60
Cellulose	9.15
Rubber	8.30
Plastic	58.14
Cement	0.00
Solidified Inorganic Material	0.19
Solidified Organic Material	0.04
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	17.36
Packaging Material, Rubber	0.37
Packaging Material, Steel	142.82
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	7.81E-01
Am-243	1.29E-06
Cm-244	3.37E-03
Cs-137	4.97E-06
Np-237	4.73E-05
Pu-238	3.76E-01
Pu-239	2.51E+00
Pu-240	7.21E-01
Pu-241	1.08E+01
Pu-242	1.32E-04
Sr-90	4.98E-06
Th-232	7.04E-08
U-233	1.19E-05
U-234	5.83E-05
U-235	1.73E-07
U-238	7.63E-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, 425

Waste Stream Description

This waste stream is primarily solids consisting of booties, lab coats, floor sweeping, labware, rags, and other job control waste. Small HEPA filters, sludges, resins, absorbed liquids, and metal equipment is also in present in the waste stream.

Waste Stream ID: **SR-W027-HBL-Box**

Appendix A
Waste Profile Report

Site	Savannah River Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Remediation/D&D Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2013	
Stream Name	CH mixed TRU from 221H				Activity Concentrations Decayed to CY	2013	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	4.2	0.0	4.2
SLB2 Dir Ld	46.4	0.0	46.4
SWB Dir Ld w/o Liner	36.0	0.0	36.0
Current Form Total	86.6	0.0	86.6

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	4.2	0.0	4.2
SLB2 Dir Ld	39.6	0.0	39.6
SWB Dir Ld w/o Liner	37.8	0.0	37.8
Final Form Total	81.6	0.0	81.6

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	44.79
Aluminum-based Metal/Alloys	0.01
Other Metal/Alloys	0.04
Other Inorganic Materials	3.71
Cellulose	52.16
Rubber	1.84
Plastic	30.62
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.19
Packaging Material, Steel	182.45
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	5.87E-03
Am-243	5.37E-10
Cm-244	7.10E-05
Cs-137	2.46E-05
Np-237	4.59E-05
Pu-238	2.91E+00
Pu-239	1.49E-02
Pu-240	4.44E-03
Pu-241	8.49E-02
Pu-242	8.64E-06
Sr-90	2.46E-05
U-234	4.89E-04
U-235	4.77E-09

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 is defense related debris consisting of large equipment and job control waste packaged in large steel boxes

APPENDIX B POTENTIAL TRU WASTE PROFILE REPORTS

The following waste profile reports contain information on Potential TRU waste streams as of the inventory date, December 31, 2013. These waste streams have been placed in the Potential category for various reasons as stated in section 4.0 of this report, if available.

The TRU waste generator sites that have reported Potential TRU waste streams are:

AW	Material and Fuels Complex
BL	Babcock and Wilcox Nuclear Energy Services
IN	Idaho National Laboratory
LA	Los Alamos National Laboratory
RL	Hanford (Richland) Site
RP	Hanford (River Protection) Site
SR	Savannah River Site
WV	West Valley Demonstration Project

Waste Stream ID: **AW-IN-TRA-BE-01**

Appendix B
Waste Profile Report

Site	Material and Fuels Complex	Summary Category	S5000	Defense Determination	Defense-Related	Handling	RH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Uncategorized Metal Waste	Inventory Date	12/31/2013		
Stream Name	TRA Beryllium Blocks				Activity Concentrations as of CY	2001	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
Beryllium Reflector Block	4.4	3.5	7.9
Outer Shim Control Cylinder	1.8	1.0	2.8
Current Form Total	6.2	4.5	10.7

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid - Dir Ld	15.1	10.7	25.8
Final Form Total	15.1	10.7	25.8

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	0.00
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	429.85
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	0.00
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.00
Packaging Material, Steel	560.67
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
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 (Be) reflector blocks and outer shim control cylinders (OSCCs) removed from the Advanced Test Reactor (ATR) at INL. Reactor core internal changeouts (CIC) which generate this waste is scheduled approximately every 10 years. The next is anticipated in 2018.

Waste Stream ID: **BL-Parks**

Appendix B
Waste Profile Report

Site	Babcock and Wilcox Nuclear Energy Services	Summary Category	S5000	Defense Determination	Pending Determination	Handling	CH
Source Cat.	Source Information Not Compiled	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2013	
Stream Name	Parks Township TRU Waste			Activity Concentrations as of CY 2000			

Waste Volume Detail (m³)

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
Current Form Total	9.6	0.0	9.6

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
Final Form Total	9.6	0.0	9.6

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	0.00
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	0.00
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.35
Packaging Material, Steel	144.13
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
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

Waste from Parks Township ROD 63FR3629, 65FR82985, 69FR39446 amended 27 February 2008 Point of Contact William Spurgeon.

Waste Stream ID: **BL-Parks-A**

Appendix B
Waste Profile Report

Site	Babcock and Wilcox Nuclear Energy Services	Summary Category	S5000	Defense Determination	Pending Determination	Handling	RH
Source Cat.	Source Information Not Compiled	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2013		
Stream Name	Parks Township TRU Waste			Activity Concentrations as of CY 2000			

Waste Volume Detail (m³)

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
Current Form Total	0.4	0.0	0.4

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/o Liner	0.6	0.0	0.6
Final Form Total	0.6	0.0	0.6

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	0.00
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	0.00
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	8.70
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	3.35E-01
Pu-239	6.29E+00

No Hazardous
Waste Numbers
Provided

No TRUCON
Codes Provided

Waste Stream Description

Waste from Parks Township ROD 63FR3629, 65FR82985, 69FR39446 amended 27 February 2008 Point of Contact William Spurgeon

Waste Stream ID: **IN-JH826CH**

Appendix B
Waste Profile Report

Site	Idaho National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Remediation/D&D Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2013		
Stream Name	J.C. Haynes Waste					Activity Concentrations as of CY	1985

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
Box - Misc	3.2	0.0	3.2
Current Form Total	3.2	0.0	3.2

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.8	0.0	0.8
Final Form Total	0.8	0.0	0.8

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	0.00
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	0.00
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	1.27E+01

No Hazardous
Waste Numbers
Provided

No TRUCON
Codes Provided

Waste Stream Description

Am-241 contaminated debris waste

Waste Stream ID: **IN-SBW-01A**

Appendix B
Waste Profile Report

Site	Idaho National Laboratory	Summary Category	S3000	Defense Determination	Defense-Related	Handling	RH
Source Cat.	Materials Production/Recovery Effluents	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2013	
Stream Name	SBW Treatment - Steam Reforming - Carbonate Waste Form				Activity Concentrations as of CY	2006	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
Tank(s)	3520.0	0.0	3520.0
Current Form Total	3520.0	0.0	3520.0

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid - Dir Ld	599.0	0.0	599.0
Final Form Total	599.0	0.0	599.0

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	0.00
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	0.00
Cement	0.00
Solidified Inorganic Material	1334.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.00
Packaging Material, Steel	560.67
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
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 B
Waste Profile Report

Site	Idaho National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	RH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2013		
Stream Name	SBW Treatment - Steam Reforming Process - Debris			Activity Concentrations as of CY	2014		

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid - Dir Ld	0.0	89.0	89.0
Current Form Total	0.0	89.0	89.0

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid - Dir Ld	0.0	89.0	89.0
Final Form Total	0.0	89.0	89.0

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	700.00
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	2.00
Cellulose	0.00
Rubber	0.00
Plastic	0.00
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.00
Packaging Material, Steel	560.67
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
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-W139**

Appendix B
Waste Profile Report

Site	Idaho National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Discarding Excess/Expired Materials	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2013		
Stream Name	Mexican Americium Waste					Activity Concentrations as of CY	1986

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.8	0.0	0.8
Current Form Total	0.8	0.0	0.8

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.8	0.0	0.8
Final Form Total	0.8	0.0	0.8

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	0.00
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	0.00
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	2.50E+00

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

Waste Stream Description

This waste stream consists of Americium contaminated debris waste.

Waste Stream ID: **IN-W269**

Appendix B
Waste Profile Report

Site	Idaho National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	R&D/R&D Laboratory Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2013	
Stream Name	Laboratory Waste				Activity Concentrations as of CY	2013	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	12.3	0.0	12.3
Current Form Total	12.3	0.0	12.3

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	12.3	0.0	12.3
Final Form Total	12.3	0.0	12.3

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	0.00
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	0.00
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	3.85E-03
Cs-137	4.06E-04
Pu-238	1.37E-01
Pu-239	4.82E+00
Pu-240	1.07E+00
Pu-241	9.18E+00
Pu-242	1.39E-04
Sr-90	4.46E-04

Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D022, D027, D028, D029, D030, D032, D033, D034, D037, D043, F001, F002, F004, F005, F006, F007, F009, P030, P098, P099, P106, U003, U103, U108, U134, U151
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**No TRUCON
Codes Provided**

Waste Stream Description

This waste generated at multiple locations at the INL (INTEC, CFA, TRA, and RWMC) may include paper, PPE, wood, plastic, cloth, metal, lead, lab ware, and radioactive sources. Waste may also contain less than 50% by volume unused samples, dissolved samples absorbed on Oil-Dri® or other absorbent or analytical samples and may contain organics from laboratory operations.

Waste Stream ID: LA-TA-00-04

Appendix B
Waste Profile Report

Site	Los Alamos National Laboratory	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Solidified Organics		Inventory Date	12/31/2013	
Stream Name	Absorbed Liquid Waste					Activity Concentrations as of CY	2007

Waste Volume Detail (m³)

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

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

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	1.22
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	1.20
Cement	0.00
Solidified Inorganic Material	20.99
Solidified Organic Material	2.76
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	4.03E-03
Pu-238	1.26E-03
Pu-239	4.29E-02
Pu-240	1.00E-02
Pu-241	1.53E-01
Pu-242	5.81E-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, U080, U196, U213
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TRUCON Code(s)

112/212

Waste Stream Description

Inorganic particulate waste generated during TA-55 R&D/fabrication and associated recovery, facility and equipment maintenance, D&D, waste repackaging, and below-grade retrieval operations.

Waste Stream ID: **RL300-11**

Appendix B
Waste Profile Report

Site	Hanford (Richland) Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	RH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2013	
Stream Name	300 Area TRU RH Non-Mixed Debris				Activity Concentrations as of CY	2001	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
Box - Misc	5.7	0.0	5.7
Current Form Total	5.7	0.0	5.7

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	7.5	0.0	7.5
Final Form Total	7.5	0.0	7.5

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	87.00
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	666.12
Cellulose	21.75
Rubber	0.00
Plastic	5.44
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	45.67
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	7.35E-01
Am-243	3.33E-01
Cs-137	5.32E+05
Np-237	2.32E-06
Pu-238	8.20E-01
Pu-239	3.22E-01
Pu-240	1.23E-01
Pu-241	5.42E+00
Pu-242	2.17E-04
Sr-90	3.85E+05
Th-232	1.25E-05
U-234	4.64E-05
U-235	7.08E-07
U-236	1.72E-06
U-238	1.25E-05

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 B
Waste Profile Report

Site	Hanford (Richland) Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	RH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2013	
Stream Name	Tank Farms TRU RH Mixed Debris				Activity Concentrations as of CY	2001	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
SWB Dir Ld w/ Liner	1.9	0.0	1.9
Current Form Total	1.9	0.0	1.9

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	2.5	0.0	2.5
Final Form Total	2.5	0.0	2.5

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	3.09
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	374.77
Other Inorganic Materials	7.39
Cellulose	0.00
Rubber	46.03
Plastic	12.79
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	45.67
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	4.97E-02
Cs-137	4.45E+00
Pu-238	7.73E-04
Pu-239	4.45E-02
Pu-240	8.61E-03
Sr-90	2.04E+02
U-235	1.74E-05
U-238	4.05E-04

Haz. Waste No(s).

D030, D032, F001, F002, F003, F004, F005
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TRUCON Code(s)

325

Waste Stream Description

RH waste- 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: **RLPFP-02**

Appendix B
Waste Profile Report

Site	Hanford (Richland) Site	Summary Category	S4000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Remediation/D&D Waste	Waste Matrix Code Group	Contaminated Soil/Debris Waste	Inventory Date	12/31/2013		
Stream Name	PFP CH-TRU Contaminated Soil			Activity Concentrations as of CY		2010	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
Uncontained	0.0	29.3	29.3
Current Form Total	0.0	29.3	29.3

Final Form Volumes			
Container Type	Stored	Proj.	Total
SWB Dir Ld w/ Liner	0.0	37.8	37.8
Final Form Total	0.0	37.8	37.8

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	0.00
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	0.00
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	1.20
Packaging Material, Rubber	0.19
Packaging Material, Steel	153.44
Packaging Material, Lead	0.00

No Final Form
Radionuclides ProvidedNo Hazardous
Waste Numbers
Provided

TRUCON Code(s) 125/225

Waste Stream Description

Soil remediation wastes in PFP Zone.

Waste Stream ID: **RLPRC-01**

Appendix B
Waste Profile Report

Site	Hanford (Richland) Site	Summary Category	S5000	Defense Determination	Unknown	Handling	CH
Source Cat.	R&D/R&D Laboratory Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2013	
Stream Name	CUPRC TRU Non-Mixed Debris				Activity Concentrations as of CY	1987	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
SWB Dir Ld w/ Liner	1.9	0.0	1.9
Current Form Total	1.9	0.0	1.9

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

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	0.00
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	46.45
Other Inorganic Materials	661.59
Cellulose	0.00
Rubber	0.00
Plastic	0.00
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	1.20
Packaging Material, Rubber	0.19
Packaging Material, Steel	153.44
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	4.89E-02
Pu-238	1.99E-02
Pu-239	1.82E-01
Pu-240	4.65E-02
Pu-241	1.28E+00
Pu-242	3.11E-06
Th-232	5.50E-05
U-234	6.24E-07
U-235	2.82E-08
U-238	6.06E-07

No Hazardous Waste Numbers Provided

TRUCON Code(s)
125/225

Waste Stream Description

The waste is generated from R&D/R&D Laboratory Waste activities at the CEER University Laboratory.

Waste Stream ID: **RLPURX-02**

Appendix B
Waste Profile Report

Site	Hanford (Richland) Site	Summary Category	S4000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Other/Multiple Sources	Waste Matrix Code Group	Contaminated Soil/Debris Waste	Inventory Date	12/31/2013		
Stream Name	Contaminated Soil from vicinity of PUREX			Activity Concentrations as of CY		2011	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
Uncontained	0.0	370.0	370.0
Current Form Total	0.0	370.0	370.0

Final Form Volumes			
Container Type	Stored	Proj.	Total
SWB Dir Ld w/ Liner	0.0	372.3	372.3
Final Form Total	0.0	372.3	372.3

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	0.00
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	0.00
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	1.20
Packaging Material, Rubber	0.19
Packaging Material, Steel	153.44
Packaging Material, Lead	0.00

No Final Form
Radionuclides ProvidedNo Hazardous
Waste Numbers
Provided

TRUCON Code(s) 125/225

Waste Stream Description

Soil from Groundwater projects. And contaminated soil from PUREX

Waste Stream ID: **RP-TFC001**

Appendix B
Waste Profile Report

Site	Hanford (River Protection) Site	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Materials Production/Recovery Effluents	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2013	
Stream Name	Bismuth Phosphate Process TRU Solids			Activity Concentrations as of CY 2004			

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
Tank(s)	1200.0	0.0	1200.0
Current Form Total	1200.0	0.0	1200.0

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	438.7	0.0	438.7
Final Form Total	438.7	0.0	438.7

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	0.00
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	0.00
Cement	0.00
Solidified Inorganic Material	1.60
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
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).

D002, 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-W754**

Appendix B
Waste Profile Report

Site	Hanford (River Protection) Site	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Materials Production/Recovery Effluents	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2013	
Stream Name	224 Waste				Activity Concentrations as of CY	2004	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
Tank(s)	1060.0	0.0	1060.0
Current Form Total	1060.0	0.0	1060.0

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	323.2	0.0	323.2
Final Form Total	323.2	0.0	323.2

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	0.00
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	0.00
Cement	0.00
Solidified Inorganic Material	1.60
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
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).

D002, 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 B
Waste Profile Report

Site	Hanford (River Protection) Site	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Materials Production/Recovery Effluents	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2013	
Stream Name	Bismuth Phosphate Process TRU Solids				Activity Concentrations as of CY	2004	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
Tank(s)	3090.0	0.0	3090.0
Current Form Total	3090.0	0.0	3090.0

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	793.5	0.0	793.5
Final Form Total	793.5	0.0	793.5

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	0.00
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	0.00
Cement	0.00
Solidified Inorganic Material	1.60
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
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).

D002, 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-W027-773A-HET-CLAS

Appendix B
Waste Profile Report

Site	Savannah River Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	R&D/R&D Laboratory Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2013		
Stream Name	CH TRU - Sensitive waste from 773A			Activity Concentrations as of CY		1990	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
SWB Dir Ld w/o Liner	3.6	0.0	3.6
Current Form Total	3.6	0.0	3.6

Final Form Volumes			
Container Type	Stored	Proj.	Total
SWB Dir Ld w/o Liner	3.8	0.0	3.8
Final Form Total	3.8	0.0	3.8

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	134.98
Aluminum-based Metal/Alloys	2.56
Other Metal/Alloys	4.67
Other Inorganic Materials	52.90
Cellulose	42.64
Rubber	25.89
Plastic	117.80
Cement	0.00
Solidified Inorganic Material	0.58
Solidified Organic Material	0.01
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.19
Packaging Material, Steel	153.44
Packaging Material, Lead	0.00

No Final Form
Radionuclides ProvidedNo 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: **WV-M010a**

Appendix B
Waste Profile Report

Site	West Valley Demonstration Project	Summary Category	S3000	Defense Determination	Pending Determination	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Solidified Organics		Inventory Date	12/31/2013	
Stream Name	TRU Spent Absorbents CH					Activity Concentrations as of CY	2008

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
Box - Misc	17.5	0.0	17.5
Current Form Total	17.5	0.0	17.5

Final Form Volumes			
Container Type	Stored	Proj.	Total
SWB Dir Ld w/o Liner	9.5	0.0	9.5
Final Form Total	9.5	0.0	9.5

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	0.00
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	187.30
Cellulose	0.00
Rubber	0.00
Plastic	0.00
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	62.43
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.19
Packaging Material, Steel	153.44
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	1.16E-01
Am-243	6.54E-03
Cs-137	1.05E-02
Np-237	1.01E-06
Pu-238	4.89E-02
Pu-239	5.72E-02
Pu-240	4.37E-02
Pu-241	6.12E-01
Pu-242	2.57E-03
Sr-90	4.75E-01
Th-230	9.59E-06
Th-232	6.70E-04
U-233	4.30E-04
U-234	2.05E-04
U-235	7.73E-05
U-236	2.32E-04
U-238	3.72E-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 B
Waste Profile Report

Site	West Valley Demonstration Project	Summary Category	S3000	Defense Determination	Pending Determination	Handling	CH
Source Cat.	Remediation/D&D Waste	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2013	
Stream Name	TRU Liquids					Activity Concentrations as of CY	2004

Waste Volume Detail (m³)

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

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	0.4	0.0	0.4
Final Form Total	0.4	0.0	0.4

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	0.00
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	0.00
Cement	163.46
Solidified Inorganic Material	81.73
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	2.96E-03
Am-243	2.24E-04
Cm-244	3.13E-04
Cs-137	7.40E-02
Pu-238	1.02E-03
Pu-239	7.04E-04
Pu-240	5.34E-04
Pu-241	2.25E-02
Pu-242	2.40E-05
Sr-90	2.74E-02
Th-230	7.28E-08
Th-232	1.13E-09
U-233	4.86E-05
U-234	2.26E-05
U-235	2.03E-06
U-236	6.08E-06
U-238	1.52E-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 B
Waste Profile Report

Site	West Valley Demonstration Project	Summary Category	S5000	Defense Determination	Pending Determination	Handling	CH
Source Cat.	Remediation/D&D Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2013	
Stream Name	CH TRU General Waste				Activity Concentrations as of CY 2006		

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	86.7	0.0	86.7
Box - Misc	30.2	0.0	30.2
SWB Dir Ld w/o Liner	94.5	0.0	94.5
Current Form Total	211.4	0.0	211.4

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	87.2	0.0	87.2
SWB Dir Ld w/o Liner	113.4	0.0	113.4
Final Form Total	200.6	0.0	200.6

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	0.00
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	62.33
Other Inorganic Materials	64.82
Cellulose	59.83
Rubber	24.93
Plastic	37.40
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.36
Packaging Material, Steel	143.59
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	4.34E-01
Am-243	3.29E-02
Cm-244	4.60E-02
Cs-137	6.58E-03
Pu-238	3.27E-01
Pu-239	1.47E-01
Pu-240	1.12E-01
Pu-241	4.72E+00
Pu-242	3.96E-03
Sr-90	2.52E-02
Th-230	5.25E-05
Th-232	7.61E-07
U-233	2.46E-04
U-234	1.23E-04
U-235	1.19E-05
U-236	3.57E-05
U-238	8.88E-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 B
Waste Profile Report

Site	West Valley Demonstration Project	Summary Category	S5000	Defense Determination	Pending Determination	Handling	RH
Source Cat.	Remediation/D&D Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2013	
Stream Name	RH TRU General Waste			Activity Concentrations as of CY		2004	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	124.0	0.0	124.0
Box - Misc	194.9	0.0	194.9
Uncontained	0.0	61.0	61.0
Current Form Total	318.8	61.0	379.8

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/o Liner	229.0	60.5	289.5
Final Form Total	229.0	60.5	289.5

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	0.00
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	158.07
Other Inorganic Materials	157.20
Cellulose	157.20
Rubber	63.32
Plastic	94.76
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	8.70
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	6.59E+00
Cm-244	2.28E-01
Cs-137	1.86E+01
Np-237	1.72E-02
Pu-238	2.92E+00
Pu-239	2.61E+00
Pu-240	2.00E+00
Pu-242	1.24E-03
Sr-90	1.74E+01
Th-232	7.57E-05
U-233	2.88E-03
U-234	1.61E-03
U-235	1.34E-04
U-236	4.05E-04
U-238	4.58E-04

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-T017b**

Appendix B
Waste Profile Report

Site	West Valley Demonstration Project	Summary Category	S5000	Defense Determination	Pending Determination	Handling	RH
Source Cat.	Remediation/D&D Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2013	
Stream Name	RH TRU Spent Filter Media				Activity Concentrations as of CY 2008		

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
Box - Misc	27.2	0.0	27.2
Current Form Total	27.2	0.0	27.2

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/o Liner	7.5	0.0	7.5
Final Form Total	7.5	0.0	7.5

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	0.00
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	251.07
Cellulose	0.00
Rubber	0.00
Plastic	0.00
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	8.70
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	3.79E-02
Cs-137	1.80E+01
Np-237	5.21E-05
Pu-238	1.70E-02
Pu-239	4.11E-02
Pu-240	3.14E-02
Pu-241	3.84E-01
Sr-90	5.93E-01
Th-230	2.01E-05
Th-232	2.52E-05
U-235	9.26E-05
U-236	2.78E-04
U-238	1.46E-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 radiologically contaminated equipment was stored.

Waste Stream ID: **WV-W024a**

Appendix B
Waste Profile Report

Site	West Valley Demonstration Project	Summary Category	S5000	Defense Determination	Pending Determination	Handling	CH
Source Cat.	Remediation/D&D Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2013	
Stream Name	CH TRU Mixed Waste					Activity Concentrations as of CY	2006

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	2.7	0.0	2.7
SWB Dir Ld w/o Liner	5.7	0.0	5.7
Current Form Total	8.4	0.0	8.4

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	2.7	0.0	2.7
SWB Dir Ld w/o Liner	5.7	0.0	5.7
Final Form Total	8.4	0.0	8.4

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	0.00
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	100.31
Cellulose	100.31
Rubber	40.12
Plastic	60.19
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.31
Packaging Material, Steel	146.12
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	8.71E-02
Am-243	6.59E-03
Cm-244	9.21E-03
Cs-137	1.64E-02
Pu-238	3.42E-02
Pu-239	2.03E-02
Pu-240	1.55E-02
Pu-241	6.48E-01
Pu-242	2.42E-03
Sr-90	9.54E-02
Th-230	1.98E-06
Th-232	3.04E-08
U-233	1.30E-03
U-234	6.15E-04
U-235	3.93E-05
U-236	1.18E-04
U-238	2.94E-04

Haz. Waste No(s).

D006, D007, D008, D009

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-W024b**

Appendix B
Waste Profile Report

Site	West Valley Demonstration Project	Summary Category	S5000	Defense Determination	Pending Determination	Handling	RH
Source Cat.	Remediation/D&D Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2013	
Stream Name	RH TRU Mixed Waste			Activity Concentrations as of CY 2004			

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	26.2	0.0	26.2
Box - Misc	33.8	0.0	33.8
Current Form Total	60.0	0.0	60.0

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/o Liner	44.9	0.0	44.9
Final Form Total	44.9	0.0	44.9

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	200.10
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	249.29
Cellulose	0.00
Rubber	50.08
Plastic	75.01
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	8.70
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	1.21E+01
Am-243	7.34E-01
Cm-244	1.49E-01
Cs-137	3.25E+02
Np-237	1.10E-02
Pu-238	2.34E+00
Pu-239	5.99E+00
Pu-240	4.56E+00
Pu-241	3.04E+01
Pu-242	2.11E-02
Sr-90	2.78E+02
Th-229	5.33E-04
Th-230	1.97E-04
Th-232	1.42E-04
U-233	2.36E-02
U-234	1.12E-02
U-235	2.05E-03
U-236	6.34E-03
U-238	6.34E-03

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-W050a**

Appendix B
Waste Profile Report

Site	West Valley Demonstration Project	Summary Category	S3000	Defense Determination	Pending Determination	Handling	CH
Source Cat.	Remediation/D&D Waste	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2013	
Stream Name	TRU Mixed Liquids					Activity Concentrations as of CY	2004

Waste Volume Detail (m³)

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

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	6.0	0.0	6.0
Final Form Total	6.0	0.0	6.0

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	0.00
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	0.00
Cement	364.72
Solidified Inorganic Material	182.36
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	2.85E-03
Cs-137	7.15E-02
Pu-238	9.86E-04
Pu-239	6.80E-04
Pu-240	5.14E-04
Pu-242	2.34E-05
Sr-90	2.65E-02
U-233	4.68E-05
U-234	2.17E-05
U-238	1.47E-05

Haz. Waste No(s).D002, D006, D007,
D008, D009, D010No TRUCON
Codes Provided**Waste Stream Description**

This waste stream consists of RCRA hazardous liquid waste with associated fissile material generated from decontamination and decommissioning activities.

Waste Stream ID: **WV-Z001**

Appendix B
Waste Profile Report

Site	West Valley Demonstration Project	Summary Category	S5000	Defense Determination	Pending Determination	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2013		
Stream Name	West Valley Buried TRU Waste			Activity Concentrations as of CY		N/A	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
Uncontained	0.0	4300.0	4300.0
Current Form Total	0.0	4300.0	4300.0

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	0.0	4300.0	4300.0
Final Form Total	0.0	4300.0	4300.0

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	0.00
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	251.16
Cellulose	0.00
Rubber	0.00
Plastic	0.00
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
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 C HISTORIC CROSSWALK OF WASTE STREAMS

From one release of the ATWIR report to the next, waste streams may undergo reorganization by the TRU waste generator sites. Waste streams may be renamed, divided, consolidated, created, or removed from the inventory altogether (i.e., shipped to WIPP or reclassified as LLW). This appendix contains a crosswalk that maps current ATWIR-2014 TRU waste site waste streams to the ATWIR-2013 TRU waste site waste streams. This appendix does not include any emplaced waste at the WIPP.

Table C-1 displays the association of each ATWIR-2014 waste stream to its respective ATWIR-2013 waste stream(s). Waste streams that are newly reported in the ATWIR-2014 and that do not map to a previous waste stream from ATWIR-2013 are indicated as “*New Waste Stream.*”

Table C-2 shows the inverse of Table C-1. Table C-2 displays the association of each ATWIR-2013 waste stream to its respective ATWIR-2014 waste stream(s). Waste streams that were previously reported in the ATWIR-2013 and that do not map to a current ATWIR-2014 waste stream are indicated as “*Depleted Waste Stream*” along with a reason, if available.

Site Code and Site Name:

AE	Argonne National Laboratory
AW	Material and Fuels Complex
BL	Babcock and Wilcox Nuclear Energy Services
BT	Bettis Atomic Power Laboratory
IN	Idaho National Laboratory
KA	Knolls Atomic Power Laboratory - Schenectady
KN	Knolls Atomic Power Laboratory - Nuclear Fuel Services
LA	Los Alamos National Laboratory
LB	Lawrence Berkeley National Laboratory
LL	Lawrence Livermore National Laboratory
MC	U.S. Army Materiel Command
ND	Nuclear Radiation Development Site
NT	Nevada National Security Site
OR	Oak Ridge National Laboratory
PA	Paducah Gaseous Diffusion Plant
RL	Hanford (Richland) Site
RP	Hanford (River Protection) Site
SA	Sandia National Laboratories
SR	Savannah River Site
WV	West Valley Demonstration Project

Table C-1. Crosswalk of ATWIR-2014 to ATWIR-2013 Waste Streams

Site Code	ATWIR-2014 Waste Streams	ATWIR-2013 Waste Streams
AE	AE-T001	AE-T001
AE	AE-T003	AE-T003
AE	AE-T009	AE-T009
AW	AW-5410N	AW-5410N
AW	AW-5649N	AW-5649N
AW	AW-5882N	AW-5882N
AW	AW-IN-TRA-BE-01	AW-IN-TRA-BE-01
AW	AW-N027.531	AW-N027.531
AW	AW-T031.1322	AW-T031.1322
AW	AW-T033.1325	AW-T033.1325
AW	AW-W020.13	AW-W020.13
BL	BL-Parks	BL-Parks
BL	BL-Parks-A	BL-Parks-A
BT	BT-T001	BT-T001
IN	IN-AE-AGHC-02	IN-AE-AGHC-02
IN	IN-AE-AGHC-02T	IN-AE-AGHC-02T
IN	IN-BN004	IN-BN004
IN	IN-BN050	IN-BN050
IN	IN-BN090	IN-BN090
IN	IN-BN203	IN-BN203
IN	IN-BN204	IN-BN204
IN	IN-BN222	IN-BN222
IN	IN-BN290	IN-BN290
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-BN432	IN-BN432
IN	IN-BN510	IN-BN510
IN	IN-BN510.1	IN-BN510.1
IN	IN-BN510.3	IN-BN510.1, IN-MFC-S5490, IN-W170, IN-W171, IN-W259, IN-W287, IN-W338, IN-W339, IN-W350, LA-MHD01.001
IN	IN-BN600	IN-BN600
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

Table C-1. Crosswalk of ATWIR-2014 to ATWIR-2013 Waste Streams
Continued

Site Code	ATWIR-2014 Waste Streams	ATWIR-2013 Waste Streams
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-ID-ANLE-BIN	IN-BN510.1, IN-W259
IN	IN-ID-ANLW-W269-RH	IN-ID-Miscellaneous
IN	IN-ID-BTO-030	IN-ID-BTO-030
IN	IN-ID-EBR-S5000	IN-ID-EBR-S5000
IN	IN-ID-HFEF-S5000-RP	IN-ID-HFEF-S5000-RP
IN	IN-ID-INL-152M	IN-ID-INL-152M
IN	IN-ID-MFC-S5400	IN-ID-MFC-S5400
IN	IN-ID-MFC-SOLID	IN-ID-MFC-SOLID
IN	IN-ID-Miscellaneous	IN-ID-Miscellaneous, IN-W337, IN-W342R, IN-W358
IN	IN-ID-RF-S3114	IN-ID-RF-S3114
IN	IN-ID-RF-S3150-A	IN-ID-RF-S3150-A
IN	IN-ID-RF-S5000-RH	IN-ID-RF-S5000-RH
IN	IN-ID-RF-S5126	IN-ID-RF-S5126
IN	IN-ID-RF-S5300-A	IN-ID-RF-S5300-A
IN	IN-ID-Sample Fuel	IN-W322
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-ID-Silver Drum	IN-BN510
IN	IN-ID-Source Material	<i>New Waste Stream</i>
IN	IN-ID-SRP-S3000	IN-BNINW216, IN-ID-RF-S3114
IN	IN-ID-TRA-W345-RH	IN-ID-Miscellaneous
IN	IN-JH826CH	IN-JH826CH
IN	IN-NRF-SPC-103	IN-NRF-SPC-103
IN	IN-SBW-01A	IN-SBW-01A
IN	IN-SBW-01B	IN-SBW-01B
IN	IN-W139	IN-W139
IN	IN-W269	IN-W269
IN	IN-W323	IN-W323
IN	IN-W345	IN-W345
IN	IN-W347	IN-W347
IN	IN-W351	IN-W351
KA	KA-T001	KA-T001
KA	KA-T002	<i>New Waste Stream</i>
KA	KA-W016	KA-W016

Table C-1. Crosswalk of ATWIR-2014 to ATWIR-2013 Waste Streams
Continued

Site Code	ATWIR-2014 Waste Streams	ATWIR-2013 Waste Streams
KN	KN-B234TRU	KN-B234TRU
LA	LA-CIN01.001	LA-CIN01.001, LA-MHD01.001
LA	LA-CIN02.001	LA-CIN02.001
LA	LA-CIN03.001	LA-CIN03.001, LA-MHD03.001
LA	LA-LANHD01	<i>New Waste Stream</i>
LA	LA-MHD01.001	LA-CIN01.001, LA-LAMHD02238, LA-LAMIN04S, LA-LANIN03NC, LA-MHD01.001, LA-MIN02-V.001, LA-TA-55-19
LA	LA-MHD03.001	LA-MHD03.001, LA-TA-03-01, LA-TA-03-10, LA-TA-03-42
LA	LA-MHD04.001	LA-MHD04.001
LA	LA-MHD05-ITRI.001	LA-MHD05-ITRI.001
LA	LA-MHD08.001	LA-MHD01.001, LA-MHD08.001
LA	LA-MHD09.001	LA-MHD09.001
LA	LA-MIN02-V.001	LA-CIN01.001, LA-MIN02-V.001, LA-MIN04-S.001
LA	LA-MIN03-NC.001	LA-MHD09.001, LA-MIN03-NC.001
LA	LA-MIN04-S.001	LA-LAMIN04S, LA-MIN04-S.001
LA	LA-MIN05-V.001	LA-MHD03.001
LA	LA-MSG04.001	LA-MSG04.001
LA	LA-OS-00-01.001	LA-OS-00-01.001
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-03-14	LA-TA-03-14
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-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-21-12	LA-TA-21-12
LA	LA-TA-21-13	LA-TA-21-13
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-50-18	LA-TA-50-18
LA	LA-TA-50-19	LA-TA-50-19
LA	LA-TA-55-19	LA-TA-55-19
LA	LA-TA-55-21	LA-TA-55-21

Table C-1. Crosswalk of ATWIR-2014 to ATWIR-2013 Waste Streams
Continued

Site Code	ATWIR-2014 Waste Streams	ATWIR-2013 Waste Streams
LA	LA-TA-55-30	LA-TA-55-30
LA	LA-TA-55-38	LA-TA-55-38
LA	LA-TRU-Empty-55	LA-TRU-Empty-55
LA	LA-TRU-Empty-85	LA-TRU-Empty-55, LA-TRU-Empty-85
LB	LB-T001	LB-T001
LB	LB-T002	LB-T002
LL	LL-M001	LL-M001
LL	LL-T004	LL-T004
LL	LL-W018-S5100	LL-W018-S5100
LL	LL-W018-SS	LL-W018-SS
LL	LL-W019	LL-W019
ND	ND-T001	ND-T001
ND	ND-T002	ND-T002
NT	NT-JAS-01	NT-JAS-01
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-GENR-RH-HET	OR-GENR-RH-HET
OR	OR-ISTP-CH-HET	OR-ISTP-CH-HET
OR	OR-ISTP-RH-HET	OR-ISTP-RH-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-RADP-CH-SOILS
OR	OR-RADP-RH-HET	OR-RADP-RH-HET
OR	OR-REDC-CH-HET	OR-REDC-CH-HET, OR-REDC-RH-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-RF-RH-HET	OR-RF-RH-HET
OR	OR-SWSA-CH-HET	OR-SWSA-CH-HET
OR	OR-SWSA-CH-SOIL	OR-SWSA-CH-SOIL
OR	OR-TBD-CH-HET	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

Table C-1. Crosswalk of ATWIR-2014 to ATWIR-2013 Waste Streams
Continued

Site Code	ATWIR-2014 Waste Streams	ATWIR-2013 Waste Streams
RL	RL100D-08	RL100D-08
RL	RL105-01	RL105-01
RL	RL105-03	RL105-03
RL	RL105-08	RL105-08
RL	RL105-09	RL105-09
RL	RL200-01	RL200-01
RL	RL200-02	RL200-02
RL	RL201-03	RL201-03
RL	RL202S-01	RL202S-01
RL	RL209E-01	RL209E-01
RL	RL209E-08	RL209E-08
RL	RL216Z-02	RL216Z-02
RL	RL221U-03	RL221U-03
RL	RL221U-09	RL221U-09
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	RL308-03	RL308-03
RL	RL308-08	RL308-08
RL	RL325-01	RL325-01
RL	RL325-03	RL325-03
RL	RL325-08	RL325-08
RL	RL618-01	RL618-01
RL	RL618-08	RL618-08
RL	RLALE-02	RLALE-02
RL	RLARG-01	RLARG-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

Table C-1. Crosswalk of ATWIR-2014 to ATWIR-2013 Waste Streams
Continued

Site Code	ATWIR-2014 Waste Streams	ATWIR-2013 Waste Streams
RL	RLCFF-01	RLCFF-01
RL	RLCFF-03	RLCFF-03
RL	RLCH2-01	RLCH2-01
RL	RLCH2-08	RLCH2-08
RL	RLCH2-09	<i>New Waste Stream</i>
RL	RLESG-01	RLESG-01
RL	RLESG-03	RLESG-03
RL	RLESG-08	RLESG-08
RL	RLEXX-01	RLEXX-01
RL	RLFFTF-01	RLFFTF-01
RL	RLFFTF-08	RLFFTF-08
RL	RLGEV-01	RLGEV-01
RL	RLGEV-03	RLGEV-03
RL	RLGEV-08	RLGEV-08
RL	RLHAN-01	RLHAN-01
RL	RLHAN-03	RLHAN-03
RL	RLHAN-08	RLHAN-08
RL	RLIAEA-03	RLIAEA-03
RL	RLMLB-08	RLMLB-08
RL	RLMLL-01	RLMLL-01
RL	RLP11-01	RLP11-01
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-02	RLPURX-02
RL	RLPURX-08	RLPURX-08
RL	RLRFET-01	RLRFET-01
RL	RLSAN-01	RLSAN-01
RL	RLSWO-01	RL221T-01, RLSWO-01
RL	RLWAR-01	RLWAR-01
RL	RLWAR-03	RLWAR-03
RL	RLWTP-08	RLWTP-08
RP	RP-TFC001	RP-TFC001
RP	RP-W754	RP-W754
RP	RP-W755	RP-W755
SA	SA-W134-B	<i>New Waste Stream</i>
SA	SA-W135	SA-W135-A

Table C-1. Crosswalk of ATWIR-2014 to ATWIR-2013 Waste Streams
Continued

Site Code	ATWIR-2014 Waste Streams	ATWIR-2013 Waste Streams
SA	SA-W135-C	<i>New Waste Stream</i>
SA	SA-W136	SA-W136
SA	SA-W137	SA-W137
SA	SA-W138M	SA-W138M
SR	SR-221H-EUOx	<i>New Waste Stream</i>
SR	SR-221H-PuOx	SR-221H-PuOx
SR	SR-AGNS-HOM	SR-AGNS-HOM
SR	SR-BCLDP-HET	SR-BCLDP-HET
SR	SR-BCLDP.003.001	SR-BCLDP.003.001
SR	SR-BCLDP.004.004	SR-BCLDP.004.004
SR	SR-DWPF-HET	SR-DWPF-HET
SR	SR-HBL-235F-HET	SR-HBL-235F-HET
SR	SR-KAC-HET	SR-KAC-HET
SR	SR-LA-PAD1	SR-LA-PAD1
SR	SR-MD-HET	SR-MD-HET
SR	SR-MD-PAD1	SR-MD-PAD1
SR	SR-MD-SOIL	SR-MD-SOIL
SR	SR-NIST-HET	SR-NIST-HET
SR	SR-RH-221H.01	SR-RH-221H.01
SR	SR-RH-221H.02	SR-RH-221H.02
SR	SR-RH-235F.01	SR-RH-235F.01
SR	SR-RH-772F.01	SR-RH-772F.01
SR	SR-RH-773A.01	SR-RH-773A.01
SR	SR-RH-FBL.01	SR-RH-FBL.01, SR-W026-221F-HET, SR-W027-FB-Pre86-C
SR	SR-RH-FBL.02	SR-RH-FBL.02
SR	SR-RH-MNDPAD1.01	SR-RH-MNDPAD1.01
SR	SR-RH-SDD.01	SR-RH-SDD.01
SR	SR-RH-SWD.01	SR-RH-SWD.01, SR-SWMF-HET-B
SR	SR-SDD-HET-A	SR-SDD-HET-A
SR	SR-SDD-HOM-A	SR-SDD-HOM-A
SR	SR-SDD-HOM-B	SR-SDD-HOM-B
SR	SR-SWMF-HET-A	SR-SWMF-HET-A, SR-SWMF-HET-B
SR	SR-SWMF-HET-B	SR-SWMF-HET-B
SR	SR-T001-WSB-1	SR-T001-WSB-1
SR	SR-W026-221F-HEPA	SR-W026-221F-HEPA
SR	SR-W026-221F-HET	SR-W026-221F-HET
SR	SR-W026-221F-HET-A	SR-RH-FBL.02
SR	SR-W026-221F-HOM	SR-W026-221F-HOM
SR	SR-W026-772F-HET	SR-W026-772F-HET
SR	SR-W026-MFFF-1	SR-W026-MFFF-1

Table C-1. Crosswalk of ATWIR-2014 to ATWIR-2013 Waste Streams
Continued

Site Code	ATWIR-2014 Waste Streams	ATWIR-2013 Waste Streams
SR	SR-W026-WSB-2	SR-W026-WSB-2
SR	SR-W027-221F-HET-A	SR-W027-221F-HET-A
SR	SR-W027-221H-HEPA	SR-W027-221H-HEPA
SR	SR-W027-221H-HET	SR-W027-221H-HET
SR	SR-W027-221H-HET-C	SR-SWMF-HET-B, SR-W027-221H-HET-C
SR	SR-W027-221H-HOM	SR-W027-221H-HOM
SR	SR-W027-235F-HEPA	SR-RH-235F.01, SR-W027-235F-HEPA
SR	SR-W027-235F-HET	SR-RH-235F.01, SR-W027-235F-HET
SR	SR-W027-321-322M-HET	SR-W027-321-322M-HET
SR	SR-W027-773A-HET	SR-W027-773A-HET
SR	SR-W027-773A-HET-CLAS	SR-W027-773A-HET-CLAS
SR	SR-W027-773A-HOM	SR-RH-773A.01, SR-W027-773A-HOM
SR	SR-W027-FB-Pre86-C	SR-W027-FB-Pre86-C
SR	SR-W027-HBL-Box	SR-W027-HBL-Box
WV	WV-M010a	WV-M010a
WV	WV-T004	WV-T004
WV	WV-T006a	WV-T006a
WV	WV-T006b	WV-T006b
WV	WV-T017b	WV-T017b
WV	WV-W024a	WV-W024a
WV	WV-W024b	WV-W024b
WV	WV-W050a	WV-W050a
WV	WV-Z001	WV-Z001

Data Source: CID Data Version D.13.01 (LANL-CO 2014a). Note: This table contains data for WIPP-bound and Potential waste streams only; it does not include data for Emplaced waste streams.

Table C-2. Crosswalk of ATWIR-2013 to ATWIR-2014 Waste Streams

Site Code	ATWIR-2013 Waste Streams	ATWIR-2014 Waste Streams
AE	AE-T001	AE-T001
AE	AE-T003	AE-T003
AE	AE-T009	AE-T009
AW	AW-5410N	AW-5410N
AW	AW-5649N	AW-5649N
AW	AW-5882N	AW-5882N
AW	AW-IN-TRA-BE-01	AW-IN-TRA-BE-01
AW	AW-N027.531	AW-N027.531
AW	AW-T031.1322	AW-T031.1322
AW	AW-T033.1325	AW-T033.1325
AW	AW-W020.13	AW-W020.13
BL	BL-Parks	BL-Parks
BL	BL-Parks-A	BL-Parks-A
BT	BT-T001	BT-T001
IN	IN-AE-AGHC-02	IN-AE-AGHC-02
IN	IN-AE-AGHC-02T	IN-AE-AGHC-02T
IN	IN-BN004	IN-BN004
IN	IN-BN050	IN-BN050
IN	IN-BN090	IN-BN090
IN	IN-BN203	IN-BN203
IN	IN-BN204	IN-BN204
IN	IN-BN222	IN-BN222
IN	IN-BN290	IN-BN290
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-BN432	IN-BN432
IN	IN-BN510	IN-BN510, IN-ID-Silver Drum
IN	IN-BN510.1	IN-BN510.1, IN-BN510.3, IN-ID-ANLE-BIN
IN	IN-BN600	IN-BN600
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

Table C-2. Crosswalk of ATWIR-2013 to ATWIR-2014 Waste Streams
Continued

Site Code	ATWIR-2013 Waste Streams	ATWIR-2014 Waste Streams
IN	IN-BNINW216	IN-BNINW216, IN-ID-SRP-S3000
IN	IN-BNINW218	IN-BNINW218
IN	IN-ID-BTO-030	IN-ID-BTO-030
IN	IN-ID-EBR-S5000	IN-ID-EBR-S5000
IN	IN-ID-HFEF-S5000-RP	IN-ID-HFEF-S5000-RP
IN	IN-ID-INL-152M	IN-ID-INL-152M
IN	IN-ID-MFC-S5400	IN-ID-MFC-S5400
IN	IN-ID-MFC-SOLID	IN-ID-MFC-SOLID
IN	IN-ID-Miscellaneous	IN-ID-ANLW-W269-RH, IN-ID-Miscellaneous, IN-ID-TRA-W345-RH
IN	IN-ID-RF-S3114	IN-ID-RF-S3114, IN-ID-SRP-S3000
IN	IN-ID-RF-S3150-A	IN-ID-RF-S3150-A
IN	IN-ID-RF-S5000-RH	IN-ID-RF-S5000-RH
IN	IN-ID-RF-S5126	IN-ID-RF-S5126
IN	IN-ID-RF-S5300-A	IN-ID-RF-S5300-A
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-JH826CH	IN-JH826CH
IN	IN-MFC-S5490	IN-BN510.3
IN	IN-NRF-SPC	<i>Depleted Waste Stream - Shipped to WIPP</i>
IN	IN-NRF-SPC-103	IN-NRF-SPC-103
IN	IN-SBW-01A	IN-SBW-01A
IN	IN-SBW-01B	IN-SBW-01B
IN	IN-W139	IN-W139
IN	IN-W170	IN-BN510.3
IN	IN-W171	IN-BN510.3
IN	IN-W259	IN-BN510.3, IN-ID-ANLE-BIN
IN	IN-W269	IN-W269
IN	IN-W287	IN-BN510.3
IN	IN-W322	IN-ID-Sample Fuel
IN	IN-W323	IN-W323
IN	IN-W337	IN-ID-Miscellaneous
IN	IN-W338	IN-BN510.3
IN	IN-W339	IN-BN510.3
IN	IN-W342R	IN-ID-Miscellaneous
IN	IN-W345	IN-W345
IN	IN-W347	IN-W347
IN	IN-W350	IN-BN510.3
IN	IN-W351	IN-W351
IN	IN-W358	IN-ID-Miscellaneous

Table C-2. Crosswalk of ATWIR-2013 to ATWIR-2014 Waste Streams
Continued

Site Code	ATWIR-2013 Waste Streams	ATWIR-2014 Waste Streams
KA	KA-T001	KA-T001
KA	KA-W016	KA-W016
KN	KN-B234TRU	KN-B234TRU
LA	LA-CIN01.001	LA-CIN01.001, LA-MHD01.001, LA-MIN02-V.001
LA	LA-CIN02.001	LA-CIN02.001
LA	LA-CIN03.001	LA-CIN03.001
LA	LA-LAMHD02238	LA-MHD01.001
LA	LA-LAMIN04S	LA-MHD01.001, LA-MIN04-S.001
LA	LA-LANHD02238	<i>Depleted Waste Stream - Shipped to WIPP</i>
LA	LA-LANIN03NC	LA-MHD01.001
LA	LA-MHD01.001	IN-BN510.3, LA-CIN01.001, LA-MHD01.001, LA-MHD08.001
LA	LA-MHD03.001	LA-CIN03.001, LA-MHD03.001, LA-MIN05-V.001
LA	LA-MHD04.001	LA-MHD04.001
LA	LA-MHD05-ITRI.001	LA-MHD05-ITRI.001
LA	LA-MHD08.001	LA-MHD08.001
LA	LA-MHD09.001	LA-MHD09.001, LA-MIN03-NC.001
LA	LA-MHD10.001	<i>Depleted Waste Stream - Shipped to WIPP</i>
LA	LA-MIN02-V.001	LA-MHD01.001, LA-MIN02-V.001
LA	LA-MIN03-NC.001	LA-MIN03-NC.001
LA	LA-MIN04-S.001	LA-MIN02-V.001, LA-MIN04-S.001
LA	LA-MSG04.001	LA-MSG04.001
LA	LA-NCD01	<i>Depleted Waste Stream - Shipped to WIPP</i>
LA	LA-OS-00-01.001	LA-OS-00-01.001
LA	LA-OS-00-04	<i>Depleted Waste Stream - Shipped to WIPP</i>
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-MHD03.001
LA	LA-TA-03-10	LA-MHD03.001
LA	LA-TA-03-14	LA-TA-03-14
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-03-42	LA-MHD03.001
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-21-12	LA-TA-21-12

Table C-2. Crosswalk of ATWIR-2013 to ATWIR-2014 Waste Streams
Continued

Site Code	ATWIR-2013 Waste Streams	ATWIR-2014 Waste Streams
LA	LA-TA-21-13	LA-TA-21-13
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-50-18	LA-TA-50-18
LA	LA-TA-50-19	LA-TA-50-19
LA	LA-TA-55-19	LA-MHD01.001, LA-TA-55-19
LA	LA-TA-55-21	LA-TA-55-21
LA	LA-TA-55-30	LA-TA-55-30
LA	LA-TA-55-38	LA-TA-55-38
LA	LA-TA-55-43	<i>Depleted Waste Stream - Shipped to WIPP</i>
LA	LA-TRU-Empty-55	LA-TRU-Empty-55, LA-TRU-Empty-85
LA	LA-TRU-Empty-85	LA-TRU-Empty-85
LB	LB-T001	LB-T001
LB	LB-T002	LB-T002
LL	LL-M001	LL-M001
LL	LL-T004	LL-T004
LL	LL-W018-S5100	LL-W018-S5100
LL	LL-W018-SS	LL-W018-SS
LL	LL-W019	LL-W019
ND	ND-T001	ND-T001
ND	ND-T002	ND-T002
NT	NT-JAS-01	NT-JAS-01
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-GENR-RH-HET	OR-GENR-RH-HET
OR	OR-ISTP-CH-HET	OR-ISTP-CH-HET
OR	OR-ISTP-RH-HET	OR-ISTP-RH-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-RADP-CH-SOILS
OR	OR-RADP-RH-HET	OR-RADP-RH-HET
OR	OR-REDC-CH-HET	OR-REDC-CH-HET
OR	OR-REDC-RH-HET	OR-REDC-CH-HET, OR-REDC-RH-HET
OR	OR-RF-CH-HET	OR-RF-CH-HET
OR	OR-RF-CH-HOM	OR-RF-CH-HOM

Table C-2. Crosswalk of ATWIR-2013 to ATWIR-2014 Waste Streams
Continued

Site Code	ATWIR-2013 Waste Streams	ATWIR-2014 Waste Streams
OR	OR-RF-RH-HET	OR-RF-RH-HET
OR	OR-SWSA-CH-HET	OR-SWSA-CH-HET
OR	OR-SWSA-CH-SOIL	OR-SWSA-CH-SOIL
OR	OR-TBD-CH-HET	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
RL	RL100D-08	RL100D-08
RL	RL105-01	RL105-01
RL	RL105-03	RL105-03
RL	RL105-08	RL105-08
RL	RL105-09	RL105-09
RL	RL200-01	RL200-01
RL	RL200-02	RL200-02
RL	RL201-03	RL201-03
RL	RL202S-01	RL202S-01
RL	RL209E-01	RL209E-01
RL	RL209E-08	RL209E-08
RL	RL216Z-02	RL216Z-02
RL	RL221T-01	RLSWO-01
RL	RL221U-03	RL221U-03
RL	RL221U-09	RL221U-09
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	RL308-03	RL308-03
RL	RL308-08	RL308-08
RL	RL325-01	RL325-01
RL	RL325-03	RL325-03
RL	RL325-08	RL325-08
RL	RL618-01	RL618-01

Table C-2. Crosswalk of ATWIR-2013 to ATWIR-2014 Waste Streams
Continued

Site Code	ATWIR-2013 Waste Streams	ATWIR-2014 Waste Streams
RL	RL618-08	RL618-08
RL	RLALE-02	RLALE-02
RL	RLARG-01	RLARG-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-03	RLESG-03
RL	RLESG-08	RLESG-08
RL	RLEXX-01	RLEXX-01
RL	RLFFTF-01	RLFFTF-01
RL	RLFFTF-08	RLFFTF-08
RL	RLGEV-01	RLGEV-01
RL	RLGEV-03	RLGEV-03
RL	RLGEV-08	RLGEV-08
RL	RLHAN-01	RLHAN-01
RL	RLHAN-03	RLHAN-03
RL	RLHAN-08	RLHAN-08
RL	RLIAEA-03	RLIAEA-03
RL	RLMLB-08	RLMLB-08
RL	RLMLL-01	RLMLL-01
RL	RLP11-01	RLP11-01
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-02	RLPURX-02
RL	RLPURX-08	RLPURX-08
RL	RLRFET-01	RLRFET-01
RL	RLSAN-01	RLSAN-01

Table C-2. Crosswalk of ATWIR-2013 to ATWIR-2014 Waste Streams
Continued

Site Code	ATWIR-2013 Waste Streams	ATWIR-2014 Waste Streams
RL	RLSWO-01	RLSWO-01
RL	RLWAR-01	RLWAR-01
RL	RLWAR-03	RLWAR-03
RL	RLWTP-08	RLWTP-08
RP	RP-TFC001	RP-TFC001
RP	RP-W754	RP-W754
RP	RP-W755	RP-W755
SA	SA-W135-A	SA-W135
SA	SA-W136	SA-W136
SA	SA-W137	SA-W137
SA	SA-W138M	SA-W138M
SR	SR-221H-PuOx	SR-221H-PuOx
SR	SR-AGNS-HOM	SR-AGNS-HOM
SR	SR-BCLDP-HET	SR-BCLDP-HET
SR	SR-BCLDP.003.001	SR-BCLDP.003.001
SR	SR-BCLDP.004.004	SR-BCLDP.004.004
SR	SR-DWPF-HET	SR-DWPF-HET
SR	SR-HBL-235F-HET	SR-HBL-235F-HET
SR	SR-KAC-HET	SR-KAC-HET
SR	SR-LA-PAD1	SR-LA-PAD1
SR	SR-MD-HET	SR-MD-HET
SR	SR-MD-PAD1	SR-MD-PAD1
SR	SR-MD-SOIL	SR-MD-SOIL
SR	SR-NIST-HET	SR-NIST-HET
SR	SR-RH-221H.01	SR-RH-221H.01
SR	SR-RH-221H.02	SR-RH-221H.02
SR	SR-RH-235F.01	SR-RH-235F.01, SR-W027-235F-HEPA, SR-W027-235F-HET
SR	SR-RH-772F.01	SR-RH-772F.01
SR	SR-RH-773A.01	SR-RH-773A.01, SR-W027-773A-HOM
SR	SR-RH-FBL.01	SR-RH-FBL.01
SR	SR-RH-FBL.02	SR-RH-FBL.02, SR-W026-221F-HET-A
SR	SR-RH-MNDPAD1.01	SR-RH-MNDPAD1.01
SR	SR-RH-SDD.01	SR-RH-SDD.01
SR	SR-RH-SWD.01	SR-RH-SWD.01
SR	SR-SDD-HET-A	SR-SDD-HET-A
SR	SR-SDD-HOM-A	SR-SDD-HOM-A
SR	SR-SDD-HOM-B	SR-SDD-HOM-B
SR	SR-SWMF-HET-A	SR-SWMF-HET-A
SR	SR-SWMF-HET-B	SR-RH-SWD.01, SR-SWMF-HET-A, SR-SWMF-HET-B, SR-W027-221H-HET-C

Table C-2. Crosswalk of ATWIR-2013 to ATWIR-2014 Waste Streams
Continued

Site Code	ATWIR-2013 Waste Streams	ATWIR-2014 Waste Streams
SR	SR-T001-WSB-1	SR-T001-WSB-1
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-W026-772F-HET
SR	SR-W026-MFFF-1	SR-W026-MFFF-1
SR	SR-W026-WSB-2	SR-W026-WSB-2
SR	SR-W027-221F-HET-A	SR-W027-221F-HET-A
SR	SR-W027-221H-HEPA	SR-W027-221H-HEPA
SR	SR-W027-221H-HET	SR-W027-221H-HET
SR	SR-W027-221H-HET-C	SR-W027-221H-HET-C
SR	SR-W027-221H-HOM	SR-W027-221H-HOM
SR	SR-W027-235F-HEPA	SR-W027-235F-HEPA
SR	SR-W027-235F-HET	SR-W027-235F-HET
SR	SR-W027-321-322M-HET	SR-W027-321-322M-HET
SR	SR-W027-321M-HOM	<i>Depleted Waste Stream - Shipped to WIPP</i>
SR	SR-W027-773A-HET	SR-W027-773A-HET
SR	SR-W027-773A-HET-CLAS	SR-W027-773A-HET-CLAS
SR	SR-W027-773A-HOM	SR-W027-773A-HOM
SR	SR-W027-FB-Pre86-C	SR-RH-FBL.01, SR-W027-FB-Pre86-C
SR	SR-W027-HBL-Box	SR-W027-HBL-Box
SR	SR-W027-UNK	<i>Determined to be LLW</i>
WV	WV-M010a	WV-M010a
WV	WV-T004	WV-T004
WV	WV-T006a	WV-T006a
WV	WV-T006b	WV-T006b
WV	WV-T017b	WV-T017b
WV	WV-W024a	WV-W024a
WV	WV-W024b	WV-W024b
WV	WV-W050a	WV-W050a
WV	WV-Z001	WV-Z001

Data Source: CID Data Version D.13.01 (LANL-CO 2014a). Note: This table contains data for WIPP-bound and Potential waste streams only; it does not include data for Emplaced waste streams.

APPENDIX D 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

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
TRU Determination 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.
Defense Determination 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.
Regulatory Restrictions <ul style="list-style-type: none"> • Surface Dose > 1000 R/hr • Activity >23 Ci/L (or 23,000 Ci/m³) averaged over the volume of the canister • Prohibited hazardous constituents • Summary category groups other than S3000, S4000, S5000 • And other regulatory restrictions 	Will remain potential until the waste stream meets all acceptance criteria for WIPP. This may involve: <ul style="list-style-type: none"> • Repackaging waste stream • Treating waste stream • Removal of restricted items from waste stream • Any other process that would remediate the regulatory restriction
Incomplete Data <ul style="list-style-type: none"> • Incomplete or missing radionuclide concentrations • Incomplete or missing WMP 	Will remain potential until the waste stream reports all required data.

Screening Criteria	Comment
densities <ul style="list-style-type: none"> • Incomplete or missing final form container information • Unknown waste stream information • Any other incomplete or missing waste stream information that is required for PA 	
Directed by DOE to move to Potential	Will remain potential until DOE directs to remove waste stream from potential.

DOE/CBFO Compliance Certification Manager



Russ Patterson



Date