

ANNUAL TRANSURANIC WASTE INVENTORY REPORT – 2017
(Data Cutoff Date 12/31/2016)

DOE/TRU-17-3425

Revision 0

December 2017



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Carlsbad Field Office

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HISTORY OF REVISION/CHANGE

Revision Number	Pages Affected	Description of Revision/Change
0	All	Initial issue to document the inventory estimate of transuranic waste reported by the TRU waste generator sites as of December 31, 2016.

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ACRONYMS AND ABBREVIATIONS

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

AK	acceptable knowledge
ANL	Argonne National Laboratory
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 Overpack
CFR	Code of Federal Regulations
CH	contact-handled
Ci	curie(s)
CID	Comprehensive Inventory Database
CIT	CID Import Template
CPR	cellulose, plastic, and rubber
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(s)
l	liter
LANL	Los Alamos National Laboratory
LANL-CO	Los Alamos National Laboratory – Carlsbad Operations
LBNL	Lawrence Berkeley National Laboratory
LLNL	Lawrence Livermore National Laboratory
LLW	low-level waste
LQS	large quantity site
LWA	Land Withdrawal Act
m ³	cubic meter(s)
MFC	Material and Fuels Complex

ACRONYMS AND ABBREVIATIONS, cont.

NNSS	Nevada National Security Site
NRD	Nuclear Radiation Development
ORIGEN-S	Oak Ridge Isotope Generation and Depletion Code
ORNL	Oak Ridge National Laboratory
OSRP	Offsite Source Recovery Program
PA	performance assessment
PAIR	Performance Assessment Inventory Report
PM	packaging material
QA	quality assurance
QAPD	Quality Assurance Program Document
RH	remote-handled
RL	Hanford (Richland) Site
RP	Hanford Site – Office of River Protection
SCALE	Standardized Computer Analysis for Licensing Evaluation
SNL	Sandia National Laboratories
SPRU	Separations Process Research Unit
SRS	Savannah River Site
TRU	transuranic
WAC	Waste Acceptance Criteria
WAP	Waste Analysis Plan
WCS	Waste Control Specialists, LLC
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 purpose of this *Annual Transuranic Waste Inventory Report – 2017* (ATWIR-2017) is to document the inventory estimate of transuranic (TRU) waste reported by the TRU waste generator sites as of December 31, 2016. This report also notes major changes to the inventory documented in the *Annual Transuranic Waste Inventory Report – 2016* (ATWIR-2016) (DOE 2016) that had a cutoff date of December 31, 2015. This updated inventory information is provided to the U.S. Department of Energy (DOE) Carlsbad Field Office (CBFO) and is available to the DOE TRU waste complex, Waste Isolation Pilot Plant (WIPP) stakeholders, and regulators. The TRU waste inventory information is used for strategic planning, and supports DOE/CBFO's input into documents (e.g., WIPP Documented Safety Analysis and National Environmental Policy Act analyses), the development of new containers or shipping packages, planned changes, and other design changes that may take place in the repository. Furthermore, if requested by DOE/CBFO, this report will provide the basis for the Performance Assessment Inventory Report (PAIR) for performance assessment (PA) modeling. This report focuses on the TRU waste stored or projected to be generated (up through calendar year [CY] 2050) at the TRU waste generator sites.

This ATWIR-2017 was developed from an annual inventory data update provided by the TRU waste generator sites and reflects the changes in the data that have occurred in the defense-related TRU waste inventory since the cutoff date of the last published report. This inventory report includes estimates for TRU waste volumes, waste material parameters, packaging materials, complexing agents, oxyanions, and radionuclides (decayed to common years 2016 and 2050; see section 2.2.3). Changes in the data from the ATWIR-2016 are also presented.

Los Alamos National Laboratory and Idaho National Laboratory have a small volume of waste temporarily stored at Waste Control Specialists, LLC (WCS) near Andrews, Texas. The waste temporarily stored at WCS is reported separately based on a query of the WIPP Waste Data System (WDS). The waste temporarily stored at WCS is not disposed of at the WIPP, and is reported only to provide a comprehensive TRU waste inventory. Specific information on the waste temporarily stored at WCS may be obtained from the DOE/CBFO WDS administrator.

All TRU waste must meet the WIPP requirements (e.g., WIPP Waste Acceptance Criteria and the WIPP Hazardous Waste Facility Permit Waste Analysis Plan) before it can be disposed of at the WIPP, regardless of its designation or status in this report.

The body of this report presents updated data for volume, activity, waste material mass and chemical constituents. Table ES-1 presents an overview of the changes in the data that have occurred since the data reported in the ATWIR-2016. Specific details of these changes are discussed in section 3.0 of this report.

Table ES-1. Summary of Parameter Changes

Parameter	ATWIR-2016 Total	ATWIR-2017 Total	Net Change	Percent Change
Volume (m ³) ¹	1.71E+05	1.69E+05	-1.36E+03	-0.79%
Waste and Packaging Material Mass (kg) ¹	9.92E+07	9.77E+07	-1.55E+06	-1.56%
Radionuclide Activity (Ci) ^{1,2}	4.07E+06	4.13E+06	+6.42E+04	+1.58%
Complexing Agents Mass (kg) ³	2.24E+04	2.16E+04	-7.21E+02	-3.23%
Oxyanions Mass (kg) ³	9.00E+05	8.88E+05	-1.29E+04	-1.43%

Data Source: CID Data Versions D.15.00 (LANL-CO 2016a) and D.16.01 (LANL-CO 2017a). Note: Actual numerical values in this table are rounded to three significant figures for presentation within this report.

¹Data includes WIPP-bound waste streams at the TRU waste generator sites, waste emplaced at WIPP, and waste in temporary storage at WCS.

²Data decay-corrected through CY 2050.

³Since these components are not tracked in the WDS, data only includes WIPP-bound waste streams at the TRU waste generator sites.

1.0 INTRODUCTION

Each year, transuranic (TRU) waste inventory information is updated, reported in a TRU waste inventory report, and provided to the U.S. Department of Energy (DOE) complex, Waste Isolation Pilot Plant (WIPP) stakeholders, and regulators. The *Annual Transuranic Waste Inventory Report – 2017* (ATWIR-2017) also provides the Carlsbad Field Office (CBFO) with an accurate, complete, and consistent TRU waste inventory to facilitate achieving national TRU waste disposal objectives and commitments. The inventory data used to develop this report support numerous tasks such as planned changes, National Environmental Policy Act activities, design changes, identifying waste containing oxyanions and complexing agents, and various analyses such as the WIPP Documented Safety Analysis. In addition, this report provides the basis for the Performance Assessment Inventory Report (PAIR) for performance assessment (PA) modeling purposes, when requested by the DOE/CBFO.

This seven-section report documents the updated total inventory of TRU waste as reported by the TRU waste generator sites. Section 1.0 introduces the TRU waste inventory updates, the generator sites, the sources and the uses of the inventory information. Section 2.0 describes the methodology used to develop and compile the inventory information. Section 3.0 discusses the updated TRU waste inventory estimates and the changes in the data since the last published report, the *Annual Transuranic Waste Inventory Report – 2016* (ATWIR-2016) (DOE 2016), with a cutoff date of December 31, 2015. Section 4.0 discusses potential TRU waste streams. Section 5.0 presents a summary of this report, section 6.0 provides a glossary, and section 7.0 provides references used for this report. This report contains four appendices. Appendix A presents the WIPP-bound waste profile reports (WPRs), Appendix B presents the WPRs for potential waste streams, Appendix C presents the historic crosswalk of waste streams, and Appendix D contains the potential waste stream screening memorandum (Patterson 2010).

This ATWIR-2017 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 DOE/CBFO *Quality Assurance Program Document* (QAPD) (DOE 2017). The processes used by the LANL-CO TRU Waste Inventory Team to collect, maintain, and report inventory information are graded and implemented to QAPD requirements under the LANL-CO Quality Assurance (QA) Program, which includes the software QA procedures used to qualify the Comprehensive Inventory Database (CID) and other software used in the development of this report. The LANL-CO software QA Program is documented in LCO-QPD-02, *LANL-CO Software Quality Assurance Plan* (LANL-CO 2017b) and LCO-QP19-1, *Software Quality Assurance* (LANL-CO 2017c).

1.1 Annual TRU Waste Inventory Updates

The TRU waste inventory at the generator sites changes frequently due to retrieval, treatment, characterization, and shipping activities; therefore, the inventory is updated on an annual basis. This report is an update based on the sites' estimated inventory as of December 31, 2016.

Since the ATWIR-2016, a number of changes and improvements have occurred that affected the volume, non-radiological, and radiological characteristics of TRU waste streams. These changes were largely based on:

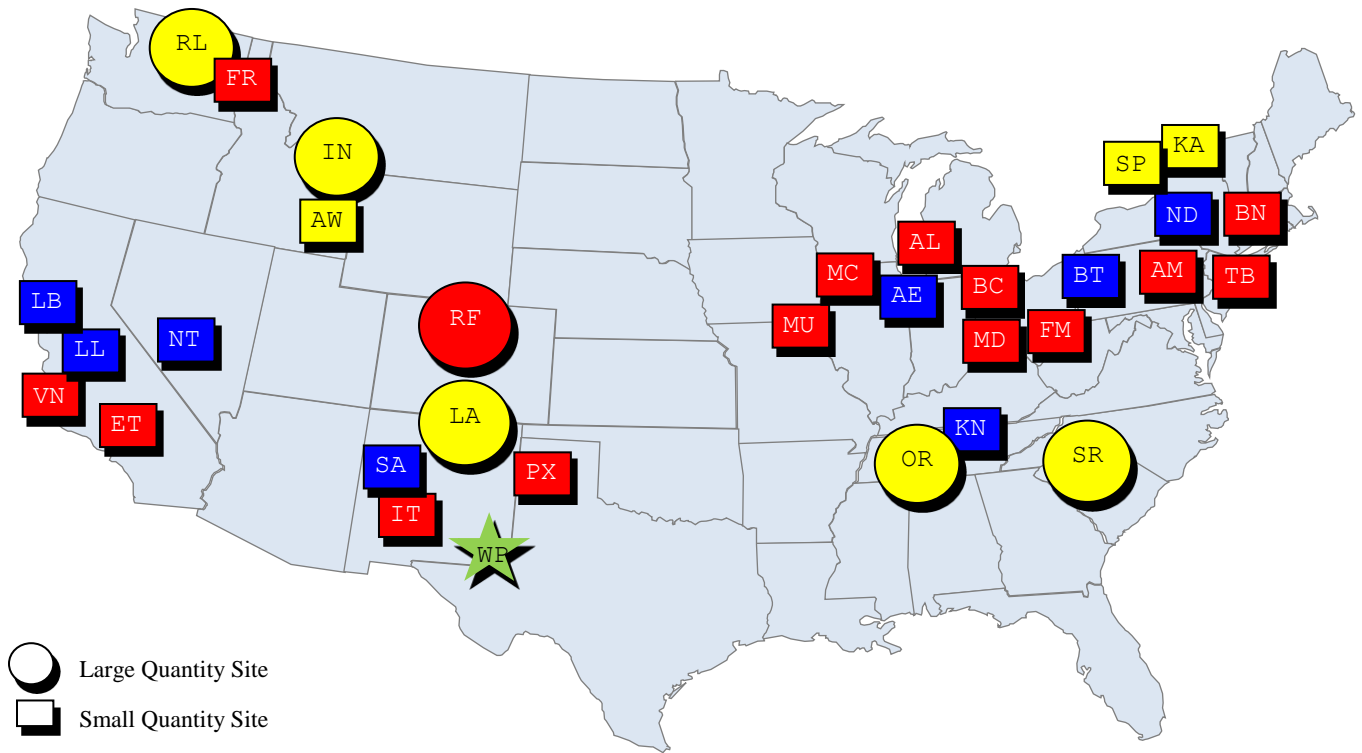
- Hanford (Richland) Site (RL) now forecasting the use of remote-handled (RH) shielded containers as a final form container type for 20 RH waste streams
- A total decrease of 3,770 m³ from RL waste streams RL200-02 and RLPFP-01, due to waste volume revisions in uncontained waste based on ongoing retrieval and projected decontamination and decommissioning (D&D) efforts
- A decrease of 4,093 Criticality Control Overpack (CCO) containers reported from Savannah River Site (SRS)
- An increase of 4,380 m³ projected volume from Los Alamos National Laboratory (LANL) due to updated estimates of future laboratory activities
- More accurate data and better estimates, resulting from an increase in characterization data

1.2 TRU Waste Generator Sites

TRU waste is currently stored at both small quantity sites and large quantity sites (LQSs) across the country, as seen in Figure 1-1. This figure presents the DOE TRU waste generator sites as of December 31, 2016, which are divided into three categories: active TRU waste generator sites (yellow), sites de-inventoried of all TRU waste (red), and sites that were de-inventoried of their legacy TRU waste but continue to manage additional defense TRU waste (blue).

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

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 — de-inventoried - shipped to RL
- IN Idaho National Laboratory
- IT 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
- MD Mound Plant – de-inventoried - shipped to SR
- MU University of Missouri Research Reactor
- ND Nuclear Radiation Development Site
- NT Nevada National Security Site
- OR Oak Ridge National Laboratory
- PX Pantex Plant
- RF Rocky Flats Environmental Technology Site
- RL Hanford (Richland) Site
- SA Sandia National Laboratories
- SP Separations Process Research Unit
- SR Savannah River Site
- TB Teledyne Brown Engineering
- VN General Electric Vallecitos Nuclear Center
- WP Waste Isolation Pilot Plant

1.3 Temporary Storage of TRU Waste

Since the WIPP was in a recovery period during calendar year (CY) 2016, no shipments were received and no waste was emplaced. However, the TRU waste generator sites continued to characterize and certify TRU waste using the existing certification program, and built backlogs of TRU waste so that there is sufficient certified waste ready to ship to the WIPP.

Subsequent to events occurring at the WIPP in February 2014, LANL shipped TRU waste to Waste Control Specialists, LLC (WCS) near Andrews, Texas, to meet LANL's cleanup commitment to the State of New Mexico to remove 3,706 m³ of TRU waste stored above ground at Area G. In addition, Idaho National Laboratory (INL) shipped TRU waste to WCS. All shipments to WCS were suspended in 2014; however, the waste still remains at WCS, and is accounted for in Table 3-3, Table 3-5, and Table 3-11. These values are based on a query of the WIPP Waste Data System (WDS). The waste temporarily stored at WCS is not disposed of at WIPP, and is reported only to provide a comprehensive TRU waste inventory. Specific information on the waste temporarily stored at WCS may be obtained from the DOE/CBFO WDS administrator.

1.4 Sources of Transuranic Waste Inventory Information

The sources of TRU waste inventory information are: 1) the ATWIR-2016, 2) updated information provided by the TRU waste generator sites, 3) Acceptable Knowledge (AK) reports, and 4) WDS, the official database of record for waste emplaced in the WIPP. Each year, the sites update their data from the previous year. For ATWIR-2017, the TRU waste generator sites began with the inventory data from the ATWIR-2016, and they updated the information using data obtained from their site-specific databases and AK reports which provide information, such as chemicals and radionuclides, pertaining to waste streams being characterized.

1.5 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. In past years, DOE/CBFO management has used this inventory information to support strategic decisions related to waste retrieval, treatment, repackaging, characterization, shipment, and disposal for both stored and projected waste initiatives. Also, site-specific project plans and schedules, which detail approaches for moving TRU waste to the WIPP, were developed and are updated, as requested, based on current TRU waste inventory information. When inventory data are needed for PA modeling, DOE/CBFO will request a PAIR that provides a scaled inventory to model a full repository, based on the latest inventory data.

In addition to radiological information, DOE has many reasons for obtaining and tracking non-radiological information about the TRU waste destined for the WIPP. For example, DOE tracks the waste materials that go into the WIPP repository, such as cellulose, plastic, and rubber (CPR), which may affect gas generation and the amount of magnesium oxide emplaced 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 1.0). The following steps were completed 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.
4. Obtained the validation of the updated CID information from the DOE TRU waste generator site representatives.
5. Generated the required data tables by decaying the radionuclides and performing necessary calculations in the CID.

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

The process used to collect TRU waste inventory from the generator sites and to enter the data into the CID is documented in LANL-CO procedure INV-SP-01, *Data Collection and Entry for the Comprehensive Inventory* (LANL-CO 2016b). On December 13, 2016, in accordance with the procedure, a letter was sent from DOE/CBFO (Patterson 2016) to current 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 Microsoft[®] Excel data template (DT) workbook file containing last year's validated data along with guidance explaining the steps required to update the DT information.

The TRU waste generator sites were asked to update the information on their site's waste streams. The site designates each waste stream as either WIPP-bound or potential. The data for WIPP-bound waste streams are discussed in section 3.0 and potential waste streams are discussed in section 4.0. At the time of the collection cutoff date, WIPP-bound waste streams appear to meet the requirements for emplacement in the WIPP. Conversely, potential waste streams have one or more criteria, as described in section 4.0, to resolve before they can be designated as WIPP-bound. The data for WIPP-bound waste streams are used for PA calculations; however, the data for potential waste streams are not included in PA calculations. Regardless of its designation in this report, TRU waste must meet all WIPP requirements (e.g., WIPP Waste Acceptance Criteria [WAC], WIPP Hazardous Waste Facility Permit Waste Analysis Plan [WAP]) before it can be disposed of at the WIPP.

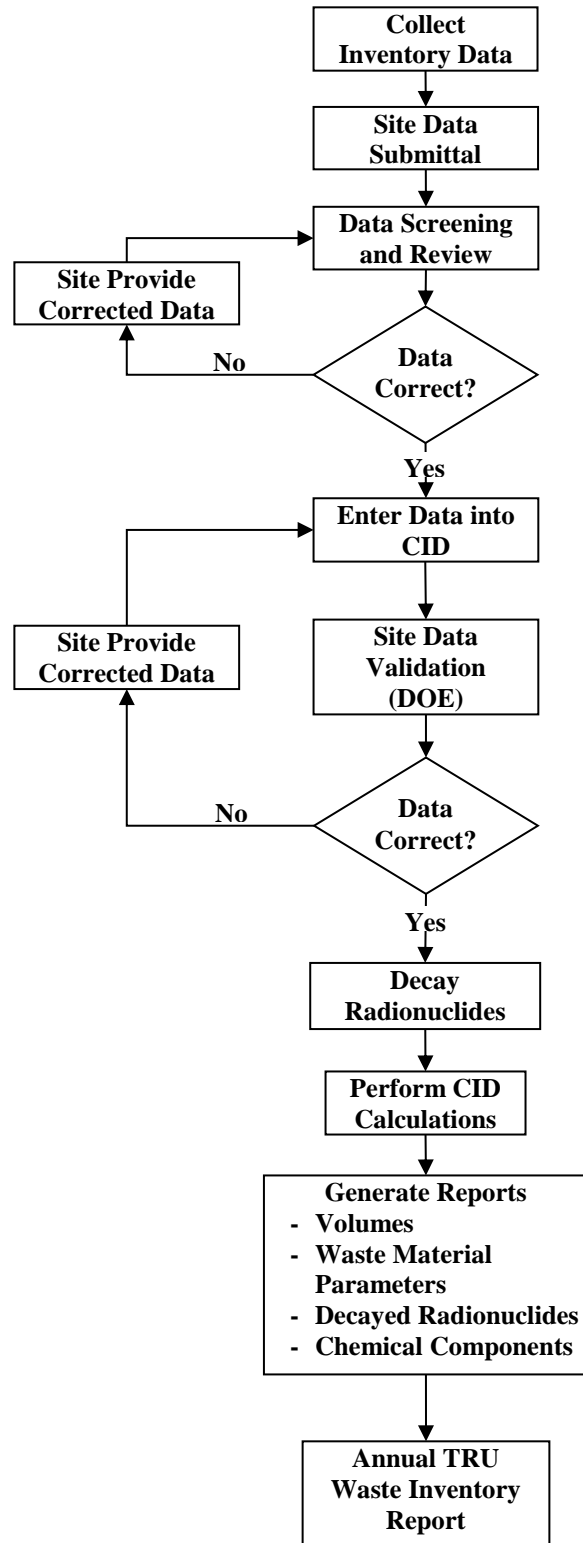
The Inventory Team worked with personnel from current TRU waste generator sites to assist in the updating process and to resolve issues. After the DTs were completed, the team checked them for accuracy and consistency. During these data checks, the Inventory Team verified that the inventory updates included all of the available information. The Inventory Team contacted

the sites if there were any completeness, accuracy, or consistency issues. The data checks included, but were not limited to:

- Verification that WIPP-bound waste streams contain all required information, and potential waste streams meet the screening memo criteria as discussed in section 4.0;
- Verification of radionuclide isotopic inputs (e.g., confirm TRU alpha concentration is greater than 100 nanocuries per gram);
- Verification of radionuclide threshold limits to determine if the waste stream is categorized correctly as contact-handled (CH) or RH;
- Verification that activity concentration for RH-TRU waste streams does not exceed the WIPP Land Withdrawal Act (LWA) limits (i.e., confirm waste does not exceed 23 curies per liter [Ci/l] averaged over the volume of the RH-TRU canister);
- Verification that waste does not exceed mass limits for reported final form container types;
- Verification that complexing agents and oxyanions identified in AK are reported during data update;
- Verification that the waste matrix code group is consistent with the waste material parameters (WMPs) reported;
- Comparison of the ATWIR-2017 waste stream data to the ATWIR-2016 waste stream data to identify and understand any significant differences.

Once all issues were resolved, the TRU waste inventory information was uploaded from the Microsoft® Excel DT or entered manually into the CID. Once the data were entered and verified, waste stream data reports were prepared and sent to the DOE TRU waste generator site representative (manager or 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. The CID data were then labeled as data version D.16.01 and protected from further revision. Figure 2-1 presents a flowchart of the TRU waste inventory process.

Figure 2-1. TRU Waste Inventory Process Flowchart



2.2 Data Generated from CID Reports

Data tables included in this report were generated from 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 DOE/CBFO QAPD. The LANL-CO software QA Program is documented in LCO-QPD-02, *LANL-CO Software Quality Assurance Plan* (LANL-CO 2017b), and LCO-QP19-1, *Software Quality Assurance* (LANL-CO 2017c). The CID is used to manage, maintain, and perform specific qualified calculations using inventory data. The data are then used to generate qualified data reports and tables.

The TRU waste generator sites were asked to update the information for each waste stream's current and final form volume and to provide data that reflected the total composition of each waste stream's WMPs, radionuclides, and chemical components. For the WMPs and radionuclides update, the sites were asked to report only the data for the stored waste (already generated but not shipped), even if the waste stream included waste that is projected (will be generated in the future through CY 2050). The DOE uses CY 2050 for strategic planning and the projected waste during this time frame includes D&D data known at the time of the cutoff date. The CID then derived projected mass and activity based on the projected-to-stored volume ratio for each waste stream; however, if a waste stream consisted only of projected waste, then the sites reported their estimates of the projected data for that particular waste stream. The anticipated data were calculated by summing the stored and projected data. The stored, projected, and anticipated values for volumes, WMPs, radionuclides, and chemical components presented throughout this report are aggregate sums of the individual waste stream values for the specified categories (site, CH/RH designation, etc.).

Information for waste emplaced at the WIPP and in temporary storage at WCS was obtained from the DOE/CBFO WDS administrator (see section 2.3). After this information was transformed for use in the CID (Van Soest 2017), the WIPP and WCS data were then imported into the CID.

2.2.1 Volume Reporting

The waste stream volume information collected from the TRU waste generator sites includes stored and projected waste. The sites also report both current form and final form waste container information for their waste streams. The current form represents the waste in its current packaging configuration. The final form represents estimates of the WIPP-compliant container type(s) that will ultimately be used to ship the waste to the WIPP. Final form container types and counts reported are determined from the waste currently in its final form containers, in addition to waste not in WIPP-compliant containers, taking into account factors such as volume, repackaging, treatment, and regulatory limits.

The final form stored and projected waste stream volumes were derived by applying standardized WIPP-approved container type volumes, which are maintained within the CID, to the respective stored and projected container type counts reported by the TRU waste generator sites. In this report, CH-TRU waste volume in overpacks reflects the outer container volume and the RH-TRU waste volume in overpacks reflects the inner container volume.

Appendices A and B present data on stored and projected volume for current form and final form container types for each waste stream.

2.2.2 Waste Material Parameter and Packaging Materials Reporting

The WMPs are non-radiological materials present in TRU waste. The TRU waste generator sites reported the total mass of each waste stream's WMPs under the following categories, where applicable:

- Aluminum-based Metal/Alloys – Aluminum or aluminum-based alloys in the waste materials.
- Cellulose – Material generally derived from high-polymer plant carbohydrates (e.g., paper, cardboard, wood, and cloth).
- Cement – An agent used to solidify liquid, particulate, and sludge. Cement may be reacted (hydrated by setting up under aqueous conditions), or unreacted (added under dry, non-aqueous conditions as an absorbent or neutralizer).
- Iron-based Metal/Alloys – Includes iron and steel alloys in the waste, but does not include the waste container materials.
- Other Inorganic Materials – Nonmetallic inorganic waste materials (e.g., concrete, glass, firebrick, ceramics, sand, and inorganic sorbents) not categorized under Solidified Inorganic Material.
- Other Metal/Alloys – All other metal/alloys (e.g., copper, zirconium, tantalum), not categorized under Aluminum- or Iron-based Metal/Alloys, including the lead portion of leaded rubber gloves/aprons.
- Plastic – Generally man-made materials, often derived from petroleum feedstock (e.g., polyethylene and polyvinyl chloride).
- Rubber – Natural or man-made elastic latex materials (e.g., surgical gloves and leaded rubber gloves [rubber portion only]).
- 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.
- Solidified Inorganic Material (Inorganic Matrix) – Any homogeneous materials consisting of sludge or aqueous-based liquids that are solidified (e.g., wastewater treatment sludge and inorganic particulates).
- Solidified Organic Material (Organic Matrix) – Organic resin, solidified organic liquids, and sludges.

- Vitrified – Waste that was melted or fused at high temperatures with glass-forming additives (e.g., soil or silica) in appropriate proportions to result in a homogeneous glass-like matrix. (Unoxidized metallic phases, if present, are included in the Iron-based Metal/Alloys category.)

The packaging materials (PMs) are non-radiological materials (steel, plastic, cellulose, rubber and lead) used as components of the WIPP-approved containers that hold TRU waste. The PM masses for all WIPP-approved containers are maintained in the CID, which uses these values to generate each waste stream's overall PM makeup based upon the respective final form containers reported by the TRU waste generator sites. These PMs are standardized and defined for each WIPP-approved 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 expressed in kilograms per cubic meter (kg/m^3) for each waste stream. These densities were calculated by dividing the total mass of each material by the total final form volume for each waste stream.

2.2.3 Radionuclide Reporting

The TRU waste generator sites reported the activity of each radionuclide for their waste streams. In addition, they provided the most recent assay year or projected generation year for each waste stream. These assay years were used to determine the time basis for decay and buildup calculations (“decay-correction”).

The sites provided radionuclide data, which may or may not have included the complete set of associated daughters. Since the site data consisted of radionuclide activities at the date of assay, which varied for each waste stream, they were decay-corrected to common dates for reporting purposes (see section 3.3). Radionuclides are decayed through 2016 to bring all sites' radionuclides to the common collection year. Radionuclides are also decayed through 2050, which allows the current reported activity to be compared to previously reported activity. The CID automates the radionuclide decay process by using the Oak Ridge Isotope Generation and Depletion Code (ORIGEN-S), a modular code system for performing Standardized Computer Analysis for Licensing Evaluation (SCALE) Version 6 (ORNL 2009), which is a depletion and decay library that is qualified for use under the LANL-CO QA Program, in accordance with LCO-QPD-02 and LCO-QP19-1. The CID first exports the radionuclide activities reported by the TRU waste generator sites in the form of ORIGEN-S input files for each waste stream. Next, the CID 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 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 by the total final form volume for each waste stream. The radionuclides in Appendix B are not decay-corrected.

2.2.4 Chemical Component Reporting

The TRU waste generator sites reported stored and projected mass separately for each waste stream's complexing agents (acetic acid, citric acid, oxalic acid, acetate, citrate, oxalate, and ethylenediaminetetraacetic acid [EDTA]), oxyanions (nitrates, phosphates, and sulfates), and other chemical components (e.g., asbestos, beryllium, and graphite).

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 2017d), to support the preparation of this report.

To update the TRU waste emplaced inventory data within the CID, a documented request was submitted to the DOE/CBFO WDS database administrator to supply data for the waste emplaced in the WIPP repository, en route to the WIPP, or in above-ground storage at the WIPP or other designated storage location (WCS), as of December 31, 2016. The WDS data were migrated into a standardized CID Import Template (CIT) file, which 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-40, *WDS Data Transformation for Insertion in the 2016 Inventory CID Import Template* (Van Soest 2017). The CIT file was subsequently imported into the CID to update the emplaced TRU waste information. Additional transformations were developed and included in this analysis for waste streams with waste containers residing in more than one location (WIPP underground, WIPP above ground, or WCS). By using different waste stream identification prefixes, these waste streams were separately transformed and tracked in the CIT file for each location reported.

3.0 TRANSURANIC WASTE INVENTORY ESTIMATES AND CHANGES

This section presents the TRU waste inventory data that were collected using the methodology discussed in section 2.0. These data were labeled and secured as CID data version D.16.01 (LANL-CO 2017a). Actual numerical values in this section are rounded to three significant figures for presentation purposes within this report.

The emplaced and temporary storage inventory totals reported from the WDS are not included in the data reported by the sites, but are presented as summations under WIPP (Emplaced) and WCS (Temporary Storage) within Table 3-3, Table 3-5, and Table 3-11. These tables compare the volumes, WMPs and PMs, and radionuclides in this report to those that were reported in ATWIR-2016. Chemical components are not reported in the emplaced or temporary storage inventory because the WDS does not track these components. More specific information on the waste emplaced or temporarily stored at WCS can be obtained from the DOE/CBFO WDS administrator at the WIPP Information Center at 1-800-336-WIPP (9477) or at infocntr@wipp.ws. The WDS is the official database of record including container-level data on the emplaced TRU waste.

3.1 TRU Waste Volume Estimates

This section presents the TRU waste inventory final form volume estimates for CH- and RH-TRU waste and a discussion of changes since the ATWIR-2016.

3.1.1 TRU Waste Inventory Total Volumes by Site

The tables of this section present only final form data. Section 2.2 describes how volumes are reported. The sites' current form container types and volumes by waste stream are listed in the WPRs in Appendices A and B.

Table 3-1 shows the total CH-TRU stored, projected, and anticipated waste volumes. An estimated anticipated final form total of 74,700 m³ of CH-TRU waste is currently being reported at the sites and could be shipped to the WIPP in the future, provided all WIPP requirements are met. Approximately 97 percent 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.

Table 3-2 shows the total RH-TRU stored, projected, and anticipated waste volumes. An estimated anticipated final form total of 3,040 m³ of RH-TRU waste is currently being reported by the sites and could be shipped to the WIPP in the future, provided all WIPP requirements are met. Approximately 92 percent of the anticipated RH-TRU waste is stored or will be generated at LQs: RL, INL, LANL, ORNL, and SRS.

Table 3-1. CH Waste Inventory Total Volumes

TRU Waste Generator Site	Stored Volumes (m ³)	Projected Volumes (m ³)	Anticipated Volumes (m ³)
Argonne National Laboratory	4.31E+01	8.47E+01	1.28E+02
Hanford (Richland) Site	1.62E+04	7.49E+03	2.37E+04
Idaho National Laboratory	2.08E+04	--	2.08E+04
Knolls Atomic Power Laboratory - Nuclear Fuel Services	8.96E+01	6.08E+02	6.98E+02
Lawrence Berkeley National Laboratory	4.16E-01	4.16E-01	8.32E-01
Lawrence Livermore National Laboratory	2.83E+02	5.96E+02	8.79E+02
Los Alamos National Laboratory	3.43E+03	9.64E+03	1.31E+04
Material and Fuels Complex	3.33E+00	4.95E+01	5.28E+01
Nevada National Security Site	6.59E+01	5.67E+01	1.23E+02
Nuclear Radiation Development Site	2.08E+00	--	2.08E+00
Oak Ridge National Laboratory	1.27E+03	6.88E+02	1.95E+03
Sandia National Laboratories	1.38E+01	3.78E+01	5.16E+01
Savannah River Site	7.49E+02	1.25E+04	1.33E+04

Table 3-1. CH Waste Inventory Total Volumes
Continued

TRU Waste Generator Site	Stored Volumes (m ³)	Projected Volumes (m ³)	Anticipated Volumes (m ³)
Separations Process Research Unit	6.29E+00	--	6.29E+00
Grand Total	4.30E+04	3.18E+04	7.47E+04

Data Source: CID Data Version D.16.01 (LANL-CO 2017a). Note: This table only contains data for WIPP-bound waste streams at the TRU waste generator sites.

Table 3-2. RH Waste Inventory Total Volumes

TRU Waste Generator Site	Stored Volumes (m ³)	Projected Volumes (m ³)	Anticipated Volumes (m ³)
Argonne National Laboratory	3.18E+01	2.39E+01	5.56E+01
Bettis Atomic Power Laboratory	--	1.50E+01	1.50E+01
Hanford (Richland) Site	1.72E+03	1.27E+02	1.84E+03
Idaho National Laboratory	2.90E+02	--	2.90E+02
Knolls Atomic Power Laboratory - Schenectady	--	1.37E+01	1.37E+01
Los Alamos National Laboratory	8.01E+01	--	8.01E+01
Material and Fuels Complex	6.86E+00	1.38E+02	1.45E+02
Oak Ridge National Laboratory	1.17E+02	4.27E+02	5.45E+02
Sandia National Laboratories	5.62E+00	--	5.62E+00
Savannah River Site	3.37E+01	9.98E+00	4.37E+01
Separations Process Research Unit	2.50E+00	--	2.50E+00
Grand Total	2.28E+03	7.55E+02	3.04E+03

Data Source: CID Data Version D.16.01 (LANL-CO 2017a). Note: This table only contains data for WIPP-bound waste streams at the TRU waste generator sites.

3.1.2 Changes to TRU Waste Volumes

Table 3-3 shows the net changes for final form total volumes (anticipated) of the combined CH- and RH-TRU waste between the ATWIR-2016 and this report. The net change column includes both increases and decreases in waste streams as reported by the sites, and the volume of emplaced waste and waste in temporary storage reported in the WDS. The net anticipated volume reported by the sites overall slightly decreased 1,360 m³. The main contributors to the volume decrease are from RL, INL, and SRS, with a combined decrease of 5,620 m³. The primary contributors to this change are from RL waste streams RL200-02 and RLPFP-01, which decreased a combined total of approximately 3,770 m³ due to waste volume revisions in uncontained waste based on ongoing retrieval and projected D&D efforts. The only site that reported an increase in volume was LANL, which reported an additional 4,010 m³ of projected volume for LA-MHD01.001 and LA-MHD03.001, due to new waste generation estimates more accurately reflecting the ongoing and future activities through 2050.

Table 3-3. CH/RH Waste Volume Changes

TRU Waste Generator Site	ATWIR-2016 Total (m ³)	ATWIR-2017 Total (m ³)	Net Change (m ³)
Hanford (Richland) Site	2.94E+04	2.55E+04	-3.83E+03
Idaho National Laboratory	2.20E+04	2.11E+04	-9.09E+02
Los Alamos National Laboratory	8.79E+03	1.32E+04	+4.36E+03
Oak Ridge National Laboratory	2.52E+03	2.50E+03	-1.96E+01
Savannah River Site	1.42E+04	1.33E+04	-8.82E+02
Small Quantity Sites	2.25E+03	2.18E+03	-7.63E+01
Anticipated Total	7.91E+04	7.78E+04	-1.36E+03
WIPP (Emplaced)	9.11E+04	9.11E+04	--
WCS (Temporary Storage)	3.85E+02	3.85E+02	--
Emplaced/Temporary Storage Total	9.15E+04	9.15E+04	--
Grand Total	1.71E+05	1.69E+05	-1.36E+03

Data Source: CID Data Versions D.15.00 (LANL-CO 2016a) and D.16.01 (LANL-CO 2017a).

3.2 Non-Radiological Material Estimates

This section presents the non-radiological properties (WMPs, PMs, and chemical components) of the TRU waste inventory as reported by the TRU waste generator sites, and a discussion of changes to the data since the ATWIR-2016.

3.2.1 Waste Material Parameters and Packaging Materials

WMPs and PMs for CH- and RH-TRU waste are reported as final form anticipated mass, and are presented in Table 3-4. See section 2.2 for details on how WMPs and PMs are derived.

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

Waste Material	CH Mass (kg)	RH Mass (kg)	Total Mass (kg)
Aluminum-based Metal/Alloys	3.45E+05	1.54E+04	3.60E+05
Cellulose	1.08E+06	6.01E+04	1.14E+06
Cement	1.73E+06	7.55E+04	1.81E+06
Iron-based Metal/Alloys	4.59E+06	2.40E+05	4.83E+06
Other Inorganic Materials	4.66E+06	5.74E+05	5.23E+06
Other Metal/Alloys	3.96E+05	4.35E+04	4.40E+05
Plastic	2.24E+06	1.19E+05	2.36E+06
Rubber	6.12E+05	1.62E+04	6.28E+05
Soil	4.88E+06	1.72E+04	4.90E+06
Solidified Inorganic Material	3.53E+06	1.21E+05	3.65E+06

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

Waste Material	CH Mass (kg)	RH Mass (kg)	Total Mass (kg)
Solidified Organic Material	2.72E+06	2.46E+03	2.72E+06
Vitrified	--	--	--
Packaging Material, Cellulose	5.42E+05	--	5.42E+05
Packaging Material, Lead	--	1.80E+06	1.80E+06
Packaging Material, Plastic	1.41E+06	1.58E+05	1.57E+06
Packaging Material, Rubber	3.37E+04	1.90E+03	3.56E+04
Packaging Material, Steel	1.25E+07	4.10E+06	1.66E+07
Grand Total	4.13E+07	7.35E+06	4.87E+07

Data Source: CID Data Version D.16.01 (LANL-CO 2017a). Note: This table only contains data for WIPP-bound waste streams at the TRU waste generator sites.

3.2.2 Waste and Packaging Material Parameter Changes

The changes in WMP and PM data between the ATWIR-2016 and this report are presented in Table 3-5. Data for the WMPs and PMs improve as additional waste is characterized and the sites apply the information to estimate the WMPs remaining in that waste stream at the site. The net change column includes both increases and decreases in waste streams as reported by the TRU waste generator sites. Since no waste was shipped or received at WCS during CY 2016, the waste in temporary storage at WCS reported from the WDS did not change.

As shown in Table 3-5, the total change in anticipated WMP mass decreased by approximately 3.96 million kg and anticipated PM mass increased by approximately 2.41 million kg. The decrease in anticipated WMPs can be attributed primarily to RL waste stream RL200-02, which had an approximate 3.02 million kg decrease in WMP mass as a result of a decrease in projected soil remediation waste. The increase in PM mass can mainly be attributed to RL revising a significant amount of reported final form containers from RH canisters to RH lead shielded containers for their RH waste.

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

Waste Material Parameter	ATWIR-2016 Total (kg)	ATWIR-2017 Total (kg)	Net Change (kg)
Aluminum-based Metal/Alloys	3.59E+05	3.60E+05	+1.01E+03
Cellulose	1.16E+06	1.14E+06	-2.22E+04
Cement	2.12E+06	1.81E+06	-3.09E+05

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

Waste Material Parameter	ATWIR-2016 Total (kg)	ATWIR-2017 Total (kg)	Net Change (kg)
Iron-based Metal/Alloys	4.96E+06	4.83E+06	-1.36E+05
Other Inorganic Materials	6.82E+06	5.23E+06	-1.59E+06
Other Metal/Alloys	6.87E+05	4.40E+05	-2.48E+05
Plastic	2.30E+06	2.36E+06	+6.55E+04
Rubber	6.63E+05	6.28E+05	-3.52E+04
Soil	6.74E+06	4.90E+06	-1.84E+06
Solidified Inorganic Material	3.32E+06	3.65E+06	+3.29E+05
Solidified Organic Material	2.89E+06	2.72E+06	-1.75E+05
Vitrified	--	--	--
Anticipated Waste Total	3.20E+07	2.81E+07	-3.96E+06
WIPP (Emplaced) Waste Total	2.84E+07	2.84E+07	--
WCS (Temporary Storage) Waste Total	8.29E+04	8.29E+04	--
Emplaced/Temporary Storage Waste Total	2.85E+07	2.85E+07	--
Package Material			
Packaging Material, Cellulose	5.80E+05	5.42E+05	-3.78E+04
Packaging Material, Lead	1.21E+04	1.80E+06	+1.79E+06
Packaging Material, Plastic	1.55E+06	1.57E+06	+2.14E+04
Packaging Material, Rubber	3.54E+04	3.56E+04	+2.28E+02
Packaging Material, Steel	1.60E+07	1.66E+07	+6.36E+05
Anticipated Packaging Total	1.82E+07	2.06E+07	+2.41E+06
WIPP (Emplaced) Packaging Total	2.04E+07	2.04E+07	--
WCS (Temporary Storage) Packaging Total	7.56E+04	7.56E+04	--
Emplaced/Temporary Storage Packaging Total	2.05E+07	2.05E+07	--
Grand Total	9.92E+07	9.77E+07	-1.55E+06

Data Source: CID Data Versions D.15.00 (LANL-CO 2016a) and D.16.01 (LANL-CO 2017a).

3.2.3 Chemical Components

This report is the mechanism DOE uses to track chemical components (e.g., complexing agents and oxyanions) for anticipated TRU waste at the sites. The chemical component mass totals for this report are presented in Table 3-6. The changes to complexing agents and oxyanions are listed in Table 3-7.

3.2.3.1 Complexing Agents and Oxyanions

DOE tracks the mass of complexing agents and oxyanions destined for emplacement in the WIPP repository because of their potential impact on solubility of actinides and gas generation in the waste. Table 3-6 presents a summary of the anticipated mass estimated for the CH- and RH-TRU waste complexing agents and oxyanions by site and the grand totals of each.

Table 3-6. CH/RH Complexing Agent and Oxyanion Mass (kg) by Site

Chemical Component	ANL	Hanford (RL)	INL	LANL	LBNL	LLNL	ORNL	SNL	Grand Total
Complexing Agents									
Acetate	--	7.94E+03	4.24E+02	--	--	--	2.79E+01	--	8.39E+03
Acetic Acid	3.20E+02	3.71E+03	2.02E+03	8.56E-01	--	7.28E+00	2.79E+01	2.00E-09	6.08E+03
Citrate	--	2.69E+02	1.48E+02	--	--	--	2.79E+01	--	4.45E+02
Citric Acid	3.04E+02	1.07E+03	3.87E+01	9.43E+01	--	7.28E+00	2.79E+01	2.00E-09	1.54E+03
EDTA	3.04E+02	7.81E+01	1.99E+00	--	--	1.99E+00	2.79E+01	--	4.14E+02
Oxalate	3.04E+02	4.54E+02	2.16E-03	--	--	--	2.79E+01	--	7.86E+02
Oxalic Acid	3.25E+02	3.49E+03	7.35E+01	4.77E+01	--	7.28E+00	2.79E+01	--	3.97E+03
Oxyanions									
Nitrate	4.27E+02	1.49E+05	2.38E+05	2.06E+05	1.20E-01	7.28E+00	1.84E+04	1.00E-06	6.12E+05
Phosphate	2.87E+02	1.37E+05	1.89E+04	--	--	7.28E+00	2.03E+03	--	1.59E+05
Sulfate	2.88E+02	2.11E+04	6.03E+04	3.51E+04	--	7.28E+00	2.79E+01	--	1.17E+05

Data Source: CID Data Version D.16.01 (LANL-CO 2017a). Note: This table only contains data for WIPP-bound waste streams at the TRU waste generator sites.

3.2.3.2 Changes to Complexing Agents and Oxyanions

Table 3-7 shows the changes in the total estimated CH- and RH-TRU waste complexing agent and oxyanion mass between the ATWIR-2016 and this report. These data represent only the complexing agents and oxyanions that are currently being reported by the TRU waste generator sites and do not include complexing agents or oxyanions emplaced at the WIPP or in temporary storage since they are not reported in WDS.

As shown in Table 3-7, the total change in anticipated complexing agent mass was a decrease of 721 kg and the total change in anticipated oxyanion mass was a decrease of 1,290 kg.

The largest decrease in complexing agents is primarily attributed to Argonne National Laboratory's (ANL) AE-T001 waste stream, for which they reported 619 kg less in total complexing agents from last year due to a decrease in projected volume based on new TRU planning documentation.

The largest decrease in oxyanions is attributed to ORNL's OR-REDC-RH-HOM waste stream, which is reported to have 11,200 kg less nitrate than last year. This is due to efforts at ORNL to minimize the TRU content in liquid waste discharges, which delays the need to implement RH TRU liquid solidification until 2033, resulting in a substantial decrease in projected waste through 2050.

Table 3-7. CH/RH Complexing Agent and Oxyanion Changes

Chemical Component	ATWIR-2016 Total (kg)	ATWIR-2017 Total (kg)	Net Change (kg)
Complexing Agents			
Acetate	8.40E+03	8.39E+03	-5.86E+00
Acetic Acid	6.23E+03	6.08E+03	-1.50E+02
Citrate	4.51E+02	4.45E+02	-5.86E+00
Citric Acid	1.68E+03	1.54E+03	-1.35E+02
EDTA	5.48E+02	4.14E+02	-1.35E+02
Oxalate	9.20E+02	7.86E+02	-1.35E+02
Oxalic Acid	4.13E+03	3.97E+03	-1.56E+02
Grand Total	2.24E+04	2.16E+04	-7.21E+02
Oxyanions			
Nitrate	6.24E+05	6.12E+05	-1.15E+04
Phosphate	1.60E+05	1.59E+05	-1.34E+03
Sulfate	1.17E+05	1.17E+05	-1.19E+02
Grand Total	9.00E+05	8.88E+05	-1.29E+04

Data Source: CID Data Versions D.15.00 (LANL-CO 2016a) and D.16.01 (LANL-CO 2017a). Note: This table only contains data for WIPP-bound waste streams at the TRU waste generator sites.

3.3 TRU Waste Radionuclide Estimates

This section presents the updated TRU waste radionuclide activity inventory collected from the TRU waste generator sites. The sites' waste stream radionuclide activities, shown in Table 3-8, Table 3-9, and Table 3-10, are decay-corrected through the end of CY 2016 (as described in section 2.2.3). Table 3-11 shows a comparison between ATWIR-2016 and ATWIR-2017 activity totals. The values in Table 3-11 are decay-corrected through the end of CY 2050 so that a comparison can be presented.

3.3.1 Radionuclide Inventory by Site

Table 3-8 and Table 3-9 provide the comprehensive WIPP-bound anticipated activity inventory estimates for CH- and RH-TRU waste, respectively. Table 3-10 sums the CH and RH site totals to produce a total anticipated activity by site.

Table 3-8. Total CH Radionuclide Activity (Ci) on a Site Basis Decayed through 2016

Radionuclide	ANL	Hanford (RL)	INL	KAPL-NFS	LANL	LBNL	LLNL	MFC	NNSS	NRD	ORNL	SNL	SPRU	SRS	Grand Total
Ac-225	9.09E-04	8.93E-04	1.60E-05	1.42E-03	1.35E-01	1.00E-18	9.62E-04	5.69E-15	3.64E-12	1.01E-13	3.66E-02	3.63E-13	5.78E-19	3.10E-02	2.07E-01
Ac-227	1.14E-05	4.70E-07	5.90E-04	7.61E-06	7.04E+00	8.02E-23	3.35E-03	2.95E-13	5.74E-10	--	1.06E+01	5.07E-12	4.36E-11	6.64E-03	1.76E+01
Ac-228	4.84E-06	5.17E-03	2.29E-05	6.46E-02	1.19E-04	1.34E-08	1.94E-06	6.80E-20	1.29E-15	--	2.60E-04	2.42E-05	--	6.88E-04	7.08E-02
Ag-108	4.21E-05	--	--	--	4.66E-07	--	--	--	--	--	--	--	--	--	4.26E-05
Ag-108m	4.84E-04	--	--	--	5.36E-06	--	--	--	--	--	--	--	--	--	4.89E-04
Ag-109m	2.21E-06	--	--	--	--	--	2.63E-04	--	--	--	3.31E-05	1.65E-06	--	--	3.00E-04
Ag-110	--	--	--	--	--	--	--	--	--	--	1.07E-02	--	--	--	1.07E-02
Ag-110m	--	--	--	--	--	--	--	--	--	--	7.86E-01	--	--	--	7.86E-01
Am-241	2.62E+01	4.51E+04	1.12E+05	1.60E+02	7.80E+04	1.08E-02	1.40E+03	1.51E+02	1.56E+01	3.32E+01	2.86E+03	5.32E+02	2.80E-02	4.22E+05	6.62E+05
Am-242	1.80E-03	1.52E-02	--	--	--	--	3.63E+00	--	--	--	2.41E-04	--	--	1.06E-02	3.66E+00
Am-242m	1.81E-03	1.52E-02	--	--	--	--	3.65E+00	--	--	--	2.42E-04	--	--	1.07E-02	3.68E+00
Am-243	9.01E+00	8.07E-01	1.17E-02	--	2.39E+00	1.80E-03	1.27E-01	2.03E-02	--	--	1.24E+01	--	--	7.21E-01	2.55E+01
Am-245	2.53E-08	--	--	--	6.50E-04	--	--	--	--	--	1.67E-04	--	--	--	8.17E-04
Am-246	1.56E-09	--	--	--	--	--	--	--	--	--	2.08E-09	--	--	--	3.64E-09
At-217	9.09E-04	8.93E-04	1.60E-05	1.42E-03	1.35E-01	1.00E-18	9.62E-04	5.69E-15	3.64E-12	1.01E-13	3.66E-02	3.63E-13	5.78E-19	3.10E-02	2.07E-01
Ba-133	2.03E-05	4.34E-04	--	--	1.04E-05	--	--	--	--	--	4.75E-04	--	--	8.95E-06	9.49E-04
Ba-137m	1.17E+01	7.85E+03	6.15E-01	--	3.45E+01	1.60E-07	3.55E-01	7.56E-01	--	--	4.52E+01	3.36E-01	3.00E+00	1.35E+00	7.95E+03
Bi-210	1.37E-02	8.10E-04	2.75E-03	1.24E-04	7.00E-04	5.45E-11	8.77E-11	2.04E-15	3.13E-11	--	4.16E-01	3.11E-06	4.21E-14	7.15E-06	4.34E-01
Bi-211	1.14E-05	4.70E-07	3.07E-04	7.61E-06	3.61E+00	7.30E-24	1.69E-03	4.00E-14	5.74E-10	--	6.04E+00	5.07E-12	4.36E-11	6.65E-03	9.66E+00
Bi-212	8.01E-05	3.59E+03	4.11E-04	1.05E-01	1.97E+01	1.80E-10	7.53E-04	3.80E-21	7.62E-16	--	2.25E-01	2.43E-05	--	9.21E-02	3.61E+03
Bi-213	9.09E-04	8.93E-04	1.60E-05	1.42E-03	1.35E-01	1.00E-18	9.62E-04	5.69E-15	3.64E-12	1.01E-13	3.66E-02	3.63E-13	5.78E-19	3.10E-02	2.07E-01
Bi-214	2.93E-02	5.35E-03	1.33E+00	1.09E-03	3.41E-01	2.68E-08	9.66E-08	3.91E-12	5.18E-10	--	1.04E+00	8.02E-13	4.16E-12	1.21E-04	2.74E+00
Bk-249	1.74E-03	--	--	--	4.48E+01	--	--	--	--	--	1.15E+01	--	--	--	5.63E+01
Bk-250	9.67E-10	--	--	--	--	--	--	--	--	--	1.29E-09	--	--	--	2.26E-09
C-14	2.85E-03	6.00E-04	--	--	--	--	--	--	--	--	2.93E-05	--	1.39E-06	1.81E-03	5.30E-03
Ca-45	5.88E-10	--	--	--	--	--	--	--	--	--	--	--	--	--	5.88E-10
Cd-109	2.21E-06	--	--	--	--	--	2.63E-04	--	--	--	3.31E-05	1.65E-06	--	--	3.00E-04
Cd-113	1.94E-24	--	--	--	--	--	--	--	--	--	--	--	--	--	1.94E-24
Cd-113m	1.86E-04	--	--	--	--	--	--	--	--	--	--	--	--	--	1.86E-04
Ce-139	--	--	--	--	--	--	--	--	--	--	1.11E-04	6.89E-12	--	--	1.11E-04
Ce-141	--	--	--	--	--	--	--	--	--	--	1.15E+00	--	--	--	1.15E+00
Ce-144	3.31E-03	--	--	--	2.59E-06	--	--	2.72E-02	--	--	7.36E-01	--	--	--	7.66E-01
Cf-249	8.46E-02	1.95E-02	2.50E-02	--	4.58E-01	4.30E-03	6.50E+00	--	--	--	1.57E+00	--	--	1.59E-03	8.66E+00
Cf-250	4.67E-03	--	--	--	--	1.09E-07	--	--	--	--	2.83E+00	--	--	7.45E-11	2.84E+00
Cf-251	6.54E-04	--	--	--	--	--	1.20E-04	--	--	--	1.74E-02	--	--	7.13E-04	1.89E-02
Cf-252	3.52E-05	--	--	--	--	--	2.51E-03	--	--	--	6.53E+01	--	--	1.94E+00	6.72E+01
Cf-253	--	--	--	--	--	--	--	--	--	--	2.99E-03	--	--	--	2.99E-03
Cf-254	--	--	--	--	--	--	--	--	--	--	2.37E-03	--	--	--	2.37E-03
Cl-36	1.57E-07	--	--	--	--	--	--	--	--	--	--	--	--	--	1.57E-07
Cm-242	7.61E-04	1.26E-02	--	--	4.59E-05	--	4.21E-01	--	--	--	1.05E+00	--	--	8.71E-03	1.50E+00
Cm-243	2.62E-02	4.89E-01	2.66E-02	--	2.93E-01	7.88E-05	1.04E-01	7.53E-02	--	--	1.42E+00	--	--	4.78E-02	2.49E+00
Cm-244	1.31E+02	5.92E+01	4.22E+01	--	2.62E+03	1.62E-03	3.99E+02	1.87E+00	--	--	7.68E+03	--	--	6.45E+01	1.10E+04
Cm-245	8.27E-05	9.85E+03	2.73E-05	--	3.47E-04	3.51E-08	2.26E-02	--	--	--	3.37E+00	--	--	9.82E-03	9.85E+03
Cm-246	6.60E-03	--	--	--	3.25E-02	1.59E-12	--	--	--	--	6.13E+01	--	--	6.78E-03	6.14E+01
Cm-247	1.15E-09	--	--	--	--	--	1.60E-06	--	--	--	1.16E+00	--	--	7.53E-03	1.16E+00
Cm-248	2.21E-04	--	--	--	--	1.69E-07	8.02E-03	--	--	--	9.71E-01	--	--	1.02E-05	9.79E-01

Table 3-8. Total CH Radionuclide Activity (Ci) on a Site Basis Decayed through 2016
Continued

Radionuclide	ANL	Hanford (RL)	INL	KAPL-NFS	LANL	LBNL	LLNL	MFC	NNSS	NRD	ORNL	SNL	SPRU	SRS	Grand Total
Cm-249	--	--	--	--	--	--	--	--	--	--	9.28E-06	--	--	--	9.28E-06
Cm-250	6.90E-09	--	--	--	--	--	--	--	--	--	9.21E-09	--	--	--	1.61E-08
Co-58	--	--	--	--	--	--	--	--	--	--	5.37E-03	--	--	--	5.37E-03
Co-60	1.36E-02	1.27E-01	1.07E-04	--	1.31E-03	--	8.47E-04	1.78E-03	--	--	1.92E-01	7.87E-05	--	2.92E-03	3.40E-01
Cr-51	--	--	--	--	--	--	--	--	--	--	--	2.06E-26	--	--	2.06E-26
Cs-134	3.63E-02	1.54E-01	--	--	--	--	--	1.78E-02	--	--	4.61E-01	--	--	1.04E-05	6.69E-01
Cs-135	2.95E-07	--	--	--	--	--	--	--	--	--	--	--	--	--	2.95E-07
Cs-137	1.24E+01	8.31E+03	6.51E-01	--	3.65E+01	1.69E-07	3.76E-01	8.01E-01	--	--	4.78E+01	3.55E-01	3.18E+00	1.43E+00	8.41E+03
Es-253	--	--	--	--	--	--	--	--	--	--	4.04E-03	--	--	--	4.04E-03
Eu-152	3.63E-04	5.45E-01	1.39E-04	--	1.03E-03	--	2.12E-04	--	--	--	1.34E+00	7.79E-06	--	1.69E-04	1.88E+00
Eu-154	2.60E-02	3.30E+00	--	--	9.39E-04	--	2.39E-03	4.34E-03	--	--	2.05E+00	1.83E-04	--	5.50E-03	5.39E+00
Eu-155	3.33E-03	1.67E-06	--	--	2.94E-05	--	--	6.23E-03	--	--	1.17E+00	--	--	2.11E-02	1.20E+00
Fe-55	1.06E-02	--	--	--	--	--	--	--	--	--	8.16E-04	--	--	--	1.14E-02
Fe-59	3.94E-18	--	--	--	--	--	--	--	--	--	4.60E-04	--	--	--	4.60E-04
Fr-221	9.09E-04	8.93E-04	1.60E-05	1.42E-03	1.35E-01	1.00E-18	9.62E-04	5.69E-15	3.64E-12	1.01E-13	3.66E-02	3.63E-13	5.78E-19	3.10E-02	2.07E-01
Fr-223	1.58E-07	6.48E-09	8.14E-06	1.05E-07	9.71E-02	1.11E-24	4.62E-05	4.07E-15	7.92E-12	--	1.46E-01	7.00E-14	6.02E-13	9.16E-05	2.43E-01
Gd-152	2.30E-19	5.58E-15	2.50E-20	--	1.87E-19	--	3.81E-20	--	--	--	4.44E-15	7.97E-20	--	7.68E-19	1.00E-14
H-3	8.87E-03	8.74E-05	--	--	1.04E+05	--	--	--	--	--	1.21E-02	--	--	2.96E-04	1.04E+05
Hg-203	--	--	--	--	--	--	--	--	--	--	--	2.48E-19	--	--	2.48E-19
Ho-166m	--	--	--	--	--	--	--	--	--	--	1.42E-03	--	--	3.30E-07	1.42E-03
I-129	3.35E-07	1.58E-06	--	--	--	--	--	--	--	--	1.32E-04	--	--	3.93E-03	4.06E-03
I-131	--	--	--	--	--	--	--	--	--	--	1.88E-06	--	--	--	1.88E-06
In-113m	--	--	--	--	--	--	--	--	--	--	--	3.73E-12	--	--	3.73E-12
K-40	2.11E-04	6.77E-01	--	--	--	--	3.10E-08	--	--	--	6.73E-04	2.16E-04	--	1.10E-06	6.78E-01
Kr-85	6.32E-01	1.03E+00	--	--	5.55E-02	--	--	--	--	--	--	--	--	1.76E-06	1.72E+00
Mn-54	3.66E-04	8.49E-10	--	--	2.40E-07	--	--	6.34E-04	--	--	5.20E-03	--	--	--	6.20E-03
Na-22	3.53E-03	2.40E+04	--	--	1.76E-03	--	1.25E-04	--	--	--	6.61E-08	--	--	1.34E-03	2.40E+04
Nb-93m	2.62E-06	--	--	--	--	--	--	--	--	--	1.01E-03	--	--	--	1.01E-03
Nb-94	--	1.11E-03	--	--	7.95E-05	--	1.18E-08	--	--	--	1.49E-04	--	--	1.79E-07	1.34E-03
Nb-95	1.77E-14	--	--	--	--	--	--	--	--	--	3.18E-01	--	--	--	3.18E-01
Nb-95m	9.47E-17	--	--	--	--	--	--	--	--	--	4.95E-03	--	--	--	4.95E-03
Nd-144	1.15E-19	--	--	--	1.99E-19	--	--	9.42E-19	--	--	2.55E-17	--	--	--	2.67E-17
Ni-59	--	--	--	--	--	--	--	--	--	--	2.53E-02	--	--	6.34E-10	2.53E-02
Ni-63	1.01E-05	--	--	--	--	--	--	--	--	--	1.09E+01	--	--	--	1.09E+01
Np-237	4.06E-02	5.54E-01	5.57E-01	4.07E-04	4.90E-01	1.72E-05	4.55E-02	9.74E-02	1.11E-04	5.64E-05	2.00E+00	3.45E-04	9.06E-09	5.07E+00	8.86E+00
Np-238	8.14E-06	6.86E-05	--	--	5.88E-10	--	1.64E-02	--	--	--	1.09E-06	--	--	4.80E-05	1.66E-02
Np-239	9.01E+00	8.07E-01	1.17E-02	--	2.39E+00	1.80E-03	1.27E-01	2.03E-02	--	--	1.24E+01	--	--	7.21E-01	2.55E+01
Np-240	3.06E-08	2.72E-14	--	--	1.33E-08	1.61E-19	7.64E-15	--	--	--	2.82E-06	--	--	1.09E-16	2.86E-06
Np-240m	2.55E-05	2.27E-11	--	--	1.11E-05	1.34E-16	6.37E-12	--	--	--	2.35E-03	--	--	9.05E-14	2.38E-03
Pa-231	4.95E-09	5.88E-06	2.76E-06	6.49E-05	2.07E-02	7.56E-20	2.58E-02	1.85E-10	6.32E-09	--	4.32E-01	1.52E-10	2.77E-09	3.26E-03	4.82E-01
Pa-233	2.90E-02	5.54E-01	4.25E-01	4.07E-04	4.05E-01	1.05E-05	2.79E-02	5.93E-02	1.11E-04	5.64E-05	1.28E+00	3.45E-04	9.06E-09	3.31E+00	6.10E+00
Pa-234	6.57E-06	9.51E-04	9.92E-03	6.45E-05	5.33E-04	6.59E-13	1.09E-05	3.27E-07	3.22E-06	--	4.95E-05	1.42E-08	2.93E-06	6.64E-04	1.22E-02
Pa-234m	5.05E-03	7.31E-01	7.63E+00	4.96E-02	4.10E-01	5.07E-10	8.37E-03	2.51E-04	2.48E-03	--	3.81E-02	1.10E-05	2.26E-03	5.11E-01	9.39E+00
Pb-209	9.09E-04	8.93E-04	1.60E-05	1.42E-03	1.35E-01	1.00E-18	9.62E-04	5.69E-15	3.64E-12	1.01E-13	3.66E-02	3.63E-13	5.78E-19	3.10E-02	2.07E-01
Pb-210	1.37E-02	8.10E-04	3.55E-03	1.24E-04	9.05E-04	7.06E-11	1.34E-10	3.61E-15	3.13E-11	--	4.16E-01	3.11E-06	4.21E-14	7.15E-06	4.35E-01
Pb-211	1.14E-05	4.70E-07	3.07E-04	7.61E-06	3.61E+00	7.30E-24	1.69E-03	4.00E-14	5.74E-10	--	6.04E+00	5.07E-12	4.36E-11	6.65E-03	9.66E+00

Table 3-8. Total CH Radionuclide Activity (Ci) on a Site Basis Decayed through 2016
Continued

Radionuclide	ANL	Hanford (RL)	INL	KAPL-NFS	LANL	LBNL	LLNL	MFC	NNSS	NRD	ORNL	SNL	SPRU	SRS	Grand Total
Pb-212	8.01E-05	3.59E+03	4.11E-04	1.05E-01	1.97E+01	1.80E-10	7.53E-04	3.80E-21	7.62E-16	--	2.25E-01	2.43E-05	--	9.21E-02	3.61E+03
Pb-214	2.93E-02	5.35E-03	1.33E+00	1.09E-03	3.41E-01	2.68E-08	9.66E-08	3.91E-12	5.18E-10	--	1.04E+00	8.02E-13	4.16E-12	1.21E-04	2.74E+00
Pd-107	1.15E-06	--	--	--	--	--	--	--	--	--	--	--	--	--	1.15E-06
Pm-147	1.24E+00	4.02E+00	--	--	--	--	--	--	--	--	9.02E-01	--	--	--	6.17E+00
Po-210	1.37E-02	8.10E-04	2.14E-04	1.24E-04	4.90E-05	3.51E-12	6.19E-12	7.33E-17	3.13E-11	--	4.15E-01	3.11E-06	1.36E-14	5.22E-06	4.30E-01
Po-211	3.15E-08	1.29E-09	8.44E-07	2.09E-08	9.93E-03	2.01E-26	4.66E-06	1.10E-16	1.58E-12	--	1.66E-02	1.40E-14	1.20E-13	1.83E-05	2.66E-02
Po-212	5.13E-05	2.30E+03	2.63E-04	6.75E-02	1.26E+01	1.15E-10	4.82E-04	2.43E-21	4.88E-16	--	1.44E-01	1.56E-05	--	5.90E-02	2.31E+03
Po-213	8.90E-04	8.74E-04	1.57E-05	1.39E-03	1.32E-01	9.82E-19	9.41E-04	5.57E-15	3.56E-12	9.91E-14	3.58E-02	3.56E-13	5.66E-19	3.03E-02	2.02E-01
Po-214	2.93E-02	5.35E-03	1.33E+00	1.09E-03	3.41E-01	2.68E-08	9.66E-08	3.90E-12	5.18E-10	--	1.04E+00	8.02E-13	4.16E-12	1.21E-04	2.74E+00
Po-215	1.14E-05	4.70E-07	3.07E-04	7.61E-06	3.61E+00	7.30E-24	1.69E-03	4.00E-14	5.74E-10	--	6.04E+00	5.07E-12	4.36E-11	6.65E-03	9.66E+00
Po-216	8.01E-05	3.59E+03	4.11E-04	1.05E-01	1.97E+01	1.80E-10	7.53E-04	3.80E-21	7.62E-16	--	2.25E-01	2.43E-05	--	9.21E-02	3.61E+03
Po-218	2.93E-02	5.35E-03	1.33E+00	1.09E-03	3.41E-01	2.68E-08	9.66E-08	3.91E-12	5.18E-10	--	1.04E+00	8.02E-13	4.16E-12	1.21E-04	2.74E+00
Pr-144	3.31E-03	--	--	--	2.59E-06	--	--	2.72E-02	--	--	7.36E-01	--	--	--	7.66E-01
Pr-144m	4.63E-05	--	--	--	3.62E-08	--	--	3.81E-04	--	--	1.03E-02	--	--	--	1.07E-02
Pu-236	4.74E-10	--	--	--	--	--	--	--	--	--	--	--	--	--	4.74E-10
Pu-238	5.27E+00	1.44E+04	8.13E+03	1.77E+01	4.85E+05	6.69E-03	1.88E+03	1.49E+02	5.10E+00	--	3.97E+03	3.28E-01	2.82E-03	1.02E+05	6.15E+05
Pu-239	1.22E+01	4.94E+04	1.99E+04	5.65E+02	5.54E+04	7.26E-04	2.44E+03	1.32E+01	1.70E+02	--	6.79E+02	5.10E+00	2.58E-01	2.78E+05	4.07E+05
Pu-240	7.29E+01	2.03E+04	4.59E+03	5.65E+02	1.47E+04	2.00E-05	7.01E+02	1.29E-01	3.88E+01	--	8.30E+02	1.45E+00	--	1.33E+05	1.74E+05
Pu-241	3.79E+01	3.14E+05	2.93E+04	5.71E+02	2.10E+05	3.58E-04	5.15E+03	1.11E-02	1.82E+02	--	1.07E+04	9.92E+00	3.34E-02	1.53E+06	2.10E+06
Pu-242	8.10E-02	1.22E+01	5.93E-01	--	1.94E+01	1.48E-19	3.38E-01	8.65E-05	2.55E-03	--	4.87E+00	3.56E-04	4.50E-05	6.16E+01	9.91E+01
Pu-243	1.15E-09	--	--	--	--	--	1.60E-06	--	--	--	1.16E+00	--	--	7.53E-03	1.16E+00
Pu-244	2.56E-05	2.27E-11	--	--	1.11E-05	1.34E-16	6.38E-12	--	--	--	2.35E-03	--	--	9.06E-14	2.39E-03
Pu-246	1.56E-09	--	--	--	--	--	--	--	--	--	2.08E-09	--	--	--	3.64E-09
Ra-223	1.14E-05	4.70E-07	3.07E-04	7.61E-06	3.61E+00	7.30E-24	1.69E-03	4.00E-14	5.74E-10	--	6.04E+00	5.07E-12	4.36E-11	6.65E-03	9.66E+00
Ra-224	8.01E-05	3.59E+03	4.11E-04	1.05E-01	1.97E+01	1.80E-10	7.53E-04	3.80E-21	7.62E-16	--	2.25E-01	2.43E-05	--	9.21E-02	3.61E+03
Ra-225	5.85E-05	8.93E-04	1.71E-05	1.42E-03	1.35E-01	2.69E-18	5.76E-04	1.53E-14	3.64E-12	1.01E-13	4.05E-02	3.63E-13	5.78E-19	3.10E-02	2.09E-01
Ra-226	2.93E-02	5.35E-03	1.33E+00	1.09E-03	3.42E-01	2.68E-08	1.14E-07	5.25E-12	5.18E-10	--	1.04E+00	8.02E-13	4.16E-12	1.21E-04	2.75E+00
Ra-228	4.84E-06	5.17E-03	2.29E-05	6.46E-02	1.19E-04	1.34E-08	1.94E-06	6.80E-20	1.29E-15	--	2.60E-04	2.42E-05	--	6.88E-04	7.08E-02
Rb-87	1.69E-10	--	--	--	--	--	--	--	--	--	--	--	--	--	1.69E-10
Rh-103m	--	--	--	--	--	--	--	--	--	--	5.41E-01	--	--	--	5.41E-01
Rh-106	6.52E-03	--	--	--	3.90E-05	--	--	3.77E-02	--	--	1.14E+03	--	--	7.81E-07	1.14E+03
Rn-219	1.14E-05	4.70E-07	3.07E-04	7.61E-06	3.61E+00	7.30E-24	1.69E-03	4.00E-14	5.74E-10	--	6.04E+00	5.07E-12	4.36E-11	6.65E-03	9.66E+00
Rn-220	8.01E-05	3.59E+03	4.11E-04	1.05E-01	1.97E+01	1.80E-10	7.53E-04	3.80E-21	7.62E-16	--	2.25E-01	2.43E-05	--	9.21E-02	3.61E+03
Rn-222	2.93E-02	5.35E-03	1.33E+00	1.09E-03	3.41E-01	2.68E-08	9.66E-08	3.91E-12	5.18E-10	--	1.04E+00	8.02E-13	4.16E-12	1.21E-04	2.74E+00
Ru-103	--	--	--	--	--	--	--	--	--	--	5.42E-01	--	--	--	5.42E-01
Ru-106	6.52E-03	--	--	--	3.90E-05	--	--	3.77E-02	--	--	1.14E+03	--	--	7.81E-07	1.14E+03
S-35	3.23E-09	--	--	--	--	--	--	--	--	--	--	--	--	--	3.23E-09
Sb-125	9.71E-05	2.75E-01	--	--	1.40E-05	--	4.49E-06	8.95E-03	--	--	2.47E-01	--	--	1.47E-03	5.32E-01
Sb-126	1.72E-07	1.14E-01	--	--	1.03E-06	--	--	--	--	--	2.62E-07	--	--	--	1.14E-01
Sb-126m	7.50E-06	8.13E-01	--	--	7.39E-06	--	--	--	--	--	--	--	--	--	8.13E-01
Se-79	2.64E-06	--	--	--	--	--	--	--	--	--	--	--	--	--	2.64E-06
Sm-147	1.19E-12	5.34E-10	--	--	--	--	--	--	--	--	5.98E-13	--	--	--	5.35E-10
Sm-148	3.86E-35	1.27E-30	1.10E-37	--	1.05E-36	--	1.67E-37	--	--	--	7.18E-30	1.82E-35	--	8.50E-35	8.45E-30
Sm-151	--	1.97E+00	--	--	2.88E-06	--	--	--	--	--	1.46E+01	--	--	--	1.65E+01
Sn-113	--	--	--	--	--	--	--	--	--	--	--	3.73E-12	--	--	3.73E-12
Sn-121	--	--	--	--	9.29E-05	--	--	--	--	--	--	--	--	--	9.29E-05

Table 3-8. Total CH Radionuclide Activity (Ci) on a Site Basis Decayed through 2016
Continued

Radionuclide	ANL	Hanford (RL)	INL	KAPL-NFS	LANL	LBNL	LLNL	MFC	NNSS	NRD	ORNL	SNL	SPRU	SRS	Grand Total
Sn-121m	--	--	--	--	1.20E-04	--	--	--	--	--	--	--	--	--	1.20E-04
Sn-126	7.50E-06	8.13E-01	--	--	7.39E-06	--	--	--	--	--	--	--	--	--	8.13E-01
Sr-85	1.46E-13	--	--	--	--	--	--	--	--	--	--	5.67E-16	--	--	1.47E-13
Sr-89	--	--	--	--	--	--	--	--	--	--	2.44E-01	--	--	--	2.44E-01
Sr-90	9.35E+00	6.18E+02	7.15E-01	--	1.47E+01	--	4.25E-01	7.81E-01	--	--	3.06E+02	1.56E-02	1.26E-01	8.56E-01	9.50E+02
Tc-99	5.18E-03	1.63E+00	--	3.49E+00	--	--	--	--	--	--	6.21E+01	--	1.46E-04	1.76E-05	6.72E+01
Te-123	--	--	--	--	--	--	--	--	--	--	--	6.98E-22	--	--	6.98E-22
Te-123m	--	--	--	--	--	--	--	--	--	--	--	6.72E-13	--	--	6.72E-13
Te-125m	1.43E-05	6.71E-02	--	--	3.42E-06	--	3.69E-07	7.37E-04	--	--	2.04E-02	--	--	3.59E-04	8.85E-02
Th-227	1.13E-05	4.63E-07	4.34E-04	7.51E-06	5.15E+00	2.09E-23	2.43E-03	9.67E-14	5.66E-10	--	8.16E+00	5.00E-12	4.30E-11	6.56E-03	1.33E+01
Th-228	7.99E-05	3.59E+03	4.53E-04	1.05E-01	2.30E+01	2.38E-10	7.63E-04	4.03E-21	7.62E-16	--	2.26E-01	2.42E-05	--	9.20E-02	3.62E+03
Th-229	7.14E-05	8.93E-04	1.92E-05	1.42E-03	1.35E-01	8.27E-18	7.12E-04	4.69E-14	3.64E-12	1.01E-13	4.40E-02	3.63E-13	5.78E-19	3.10E-02	2.13E-01
Th-230	3.74E-04	6.83E-02	2.57E-05	3.14E-01	2.43E-03	8.69E-16	2.63E-03	2.43E-07	3.95E-07	--	1.16E-03	1.87E-09	1.92E-08	6.42E-03	3.95E-01
Th-231	2.40E-04	5.33E-02	1.50E-01	3.84E-01	5.00E-02	7.15E-14	4.87E-03	8.76E-05	4.98E-05	--	4.71E-03	5.48E-06	1.31E-04	2.77E+00	3.42E+00
Th-232	3.16E-04	1.14E-02	1.25E-03	1.04E-01	1.05E-03	1.12E-06	1.62E-04	1.02E-17	3.65E-15	--	1.11E-03	2.42E-05	--	2.40E-03	1.22E-01
Th-234	5.05E-03	7.31E-01	7.63E+00	4.96E-02	4.10E-01	5.07E-10	8.37E-03	2.51E-04	2.48E-03	--	3.81E-02	1.10E-05	2.26E-03	5.11E-01	9.39E+00
Tl-206	1.81E-08	1.07E-09	3.63E-09	1.64E-10	9.24E-10	7.20E-17	1.16E-16	2.70E-21	4.13E-17	--	5.49E-07	4.10E-12	5.56E-20	9.44E-12	5.73E-07
Tl-207	1.14E-05	4.68E-07	3.06E-04	7.59E-06	3.60E+00	7.28E-24	1.69E-03	3.99E-14	5.73E-10	--	6.03E+00	5.06E-12	4.35E-11	6.64E-03	9.64E+00
Tl-208	2.88E-05	1.29E+03	1.48E-04	3.79E-02	7.10E+00	6.46E-11	2.71E-04	1.37E-21	2.74E-16	--	8.09E-02	8.73E-06	--	3.31E-02	1.30E+03
Tl-209	1.91E-05	1.88E-05	3.37E-07	2.99E-05	2.83E-03	2.11E-20	2.02E-05	1.19E-16	7.64E-14	2.13E-15	7.69E-04	7.63E-15	1.21E-20	6.50E-04	4.34E-03
U-232	3.01E-05	4.22E+03	8.55E-03	--	6.47E+02	--	2.53E-03	--	--	--	4.31E-01	--	--	8.74E-02	4.87E+03
U-233	1.95E-02	2.02E+00	5.69E-01	2.02E+00	4.18E+01	2.63E-12	2.46E+00	1.49E-08	6.91E-09	6.39E-10	4.83E+01	4.63E-09	1.97E-14	7.97E+00	1.05E+02
U-234	3.07E-01	1.49E+03	1.90E+00	2.02E+00	5.88E+01	1.89E-09	1.91E-02	2.64E-01	7.16E-03	--	9.42E-01	1.63E-04	2.09E-03	2.06E+02	1.76E+03
U-235	2.40E-04	5.33E-02	1.50E-01	3.84E-01	5.00E-02	7.15E-14	4.87E-03	8.76E-05	4.98E-05	--	4.71E-03	5.48E-06	1.31E-04	2.77E+00	3.42E+00
U-236	6.48E-06	3.89E-03	1.87E-04	3.84E-01	6.88E-03	5.92E-14	3.51E-06	2.05E-06	1.25E-05	--	6.42E-03	1.04E-07	--	6.26E-03	4.08E-01
U-237	8.95E-04	7.51E+00	6.93E-01	1.37E-02	4.95E+00	8.37E-09	1.20E-01	2.65E-07	4.36E-03	--	2.54E-01	2.37E-04	7.99E-07	3.58E+01	4.94E+01
U-238	7.37E-03	7.31E-01	9.35E+00	4.96E-02	4.34E-01	7.80E-10	1.29E-02	3.87E-04	2.48E-03	--	5.59E-02	1.10E-05	2.26E-03	7.48E-01	1.14E+01
U-240	2.55E-05	2.27E-11	--	--	1.11E-05	1.34E-16	6.37E-12	--	--	--	2.35E-03	--	--	9.05E-14	2.38E-03
Xe-131m	--	--	--	--	--	--	--	--	--	--	7.56E-08	--	--	--	7.56E-08
Y-89m	--	--	--	--	--	--	--	--	--	--	2.27E-05	--	--	--	2.27E-05
Y-90	9.35E+00	6.18E+02	7.16E-01	--	1.62E+01	--	4.25E-01	7.81E-01	--	--	3.06E+02	1.56E-02	1.26E-01	8.56E-01	9.52E+02
Zn-65	--	--	--	--	--	--	--	--	--	--	4.49E-03	--	--	--	4.49E-03
Zr-93	5.21E-06	--	--	--	--	--	--	--	--	--	1.37E-03	--	--	--	1.37E-03
Zr-95	8.05E-15	--	--	--	--	--	--	--	--	--	4.21E-01	--	--	--	4.21E-01
Grand Total	2.84E+02	5.25E+05	1.74E+05	1.89E+03	9.51E+05	2.83E-02	1.20E+04	3.19E+02	4.12E+02	3.32E+01	3.01E+04	5.49E+02	6.77E+00	2.47E+06	4.16E+06

Data Source: CID Data Version D.16.01 (LANL-CO 2017a). Note: This table only contains data for WIPP-bound waste streams at the TRU waste generator sites.

Table 3-9. Total RH Radionuclide Activity (Ci) on a Site Basis Decayed through 2016

Radionuclide	ANL	BAPL	Hanford (RL)	INL	KAPL-S	LANL	MFC	ORNL	SNL	SPRU	SRS	Grand Total
Ac-225	4.85E-03	6.34E-05	4.93E-04	3.64E-03	9.58E-07	1.06E-15	1.71E-08	8.18E-01	9.68E-11	3.16E-18	1.27E-05	8.27E-01
Ac-227	2.44E-01	4.95E-11	8.85E-03	7.42E-07	7.25E-09	1.09E-08	4.32E-06	5.53E-03	7.10E-10	3.62E-10	5.36E-05	2.59E-01
Ac-228	3.01E-02	4.58E-15	3.65E-05	4.38E-05	1.23E-04	6.39E-17	1.19E-13	1.06E-02	3.42E-19	--	2.55E-15	4.10E-02
Ag-108	1.03E-03	--	--	--	--	--	2.30E-06	3.69E-06	--	--	--	1.04E-03
Ag-108m	1.18E-02	--	--	--	--	--	2.65E-05	4.24E-05	--	--	--	1.19E-02
Ag-109m	1.22E+00	--	--	--	--	--	--	3.66E-09	--	--	--	1.22E+00
Ag-110	7.57E-03	--	1.66E-09	--	2.38E-08	--	7.13E-10	3.99E-04	--	--	--	7.97E-03
Ag-110m	5.57E-01	--	1.22E-07	--	1.75E-06	--	5.24E-08	2.93E-02	--	--	--	5.86E-01
Am-241	1.13E+02	4.46E-02	2.15E+03	2.24E+02	5.52E-02	2.87E+00	4.40E+02	5.02E+02	1.37E+01	1.53E-01	1.28E+02	3.58E+03
Am-242	2.30E-01	--	1.20E+00	--	--	--	1.19E-04	3.66E-01	--	--	3.20E-02	1.83E+00
Am-242m	2.31E-01	--	1.20E+00	--	--	--	1.20E-04	3.67E-01	--	--	3.21E-02	1.83E+00
Am-243	2.24E+00	1.78E-04	4.03E+00	--	2.50E-06	--	2.88E-02	4.54E+01	--	--	1.41E+00	5.31E+01
Am-245	1.25E-11	--	--	--	--	--	--	1.51E-03	--	--	6.25E-10	1.51E-03
Am-246	--	--	--	--	--	--	--	1.28E-07	--	--	--	1.28E-07
Ar-37	1.02E-03	--	--	--	--	--	--	--	--	--	--	1.02E-03
Ar-39	8.18E-03	--	--	--	--	--	1.98E-03	--	--	--	--	1.02E-02
Ar-42	2.25E-02	--	--	--	--	--	--	--	--	--	--	2.25E-02
At-217	4.85E-03	6.34E-05	4.93E-04	3.64E-03	9.58E-07	1.06E-15	1.71E-08	8.18E-01	9.68E-11	3.16E-18	1.27E-05	8.27E-01
Ba-133	2.04E+00	--	--	--	--	--	--	1.13E-04	--	--	--	2.04E+00
Ba-137m	1.53E+03	8.24E+01	1.85E+05	3.10E+04	4.72E+01	1.42E+03	1.89E+04	1.94E+04	1.51E+02	1.79E+01	2.31E+01	2.58E+05
Ba-140	--	--	--	--	--	--	--	5.01E+01	--	--	--	5.01E+01
Be-10	--	--	--	--	--	--	--	1.99E-06	--	--	--	1.99E-06
Bi-210	8.52E-01	1.19E-12	2.01E-02	1.43E-08	1.08E-07	2.77E-13	4.97E-11	2.07E+01	1.33E-12	2.32E-13	3.00E-09	2.15E+01
Bi-211	2.46E-01	4.95E-11	8.87E-03	7.42E-07	6.89E-09	1.09E-08	2.23E-06	5.15E-03	7.10E-10	3.62E-10	5.36E-05	2.60E-01
Bi-212	4.75E+00	1.42E-02	6.71E-04	8.96E-05	8.58E-05	1.32E-17	1.81E-04	1.82E+00	2.90E-20	--	1.58E-15	6.58E+00
Bi-213	4.85E-03	6.33E-05	4.93E-04	3.64E-03	9.58E-07	1.06E-15	1.71E-08	8.18E-01	9.67E-11	3.16E-18	1.27E-05	8.27E-01
Bi-214	1.75E-04	2.40E-11	7.53E-02	1.84E-07	1.23E-06	1.37E-11	2.46E-09	3.34E+01	1.32E-10	2.29E-11	2.94E-08	3.35E+01
Bk-249	8.59E-07	--	--	--	--	--	--	1.04E+02	--	--	4.33E-05	1.04E+02
Bk-250	--	--	--	--	--	--	--	7.17E-08	--	--	--	7.17E-08
C-14	--	2.48E-03	4.54E-04	5.13E+01	1.48E-01	--	9.35E-02	3.68E-03	--	2.73E-05	8.03E-04	5.16E+01
Ca-45	9.17E-02	--	--	--	--	--	--	--	--	--	--	9.17E-02
Cd-109	1.22E+00	--	--	--	--	--	--	3.66E-09	--	--	--	1.22E+00
Cd-113	9.17E-21	--	9.76E-19	--	--	--	1.59E-21	1.62E-20	--	--	--	1.00E-18
Cd-113m	8.77E-01	--	1.34E+00	--	--	--	1.52E-01	2.13E-03	--	--	--	2.37E+00
Cd-115m	5.02E-02	--	--	--	--	--	--	--	--	--	--	5.02E-02
Ce-139	9.54E-01	--	--	--	--	--	--	--	--	--	--	9.54E-01
Ce-141	1.67E-01	--	--	1.26E+00	--	--	9.37E-01	2.48E+03	--	--	--	2.49E+03
Ce-144	4.73E+01	--	1.17E-04	1.33E+04	--	6.91E-01	1.29E+03	1.21E+04	--	--	5.42E-06	2.67E+04
Cf-249	6.13E-01	--	--	--	1.88E-13	--	--	1.86E+00	--	--	1.25E-03	2.48E+00
Cf-250	3.31E-02	--	--	--	--	--	--	2.55E+01	--	--	2.04E-05	2.55E+01
Cf-251	7.42E-09	--	--	--	2.37E-15	--	--	3.90E-01	--	--	8.08E-07	3.90E-01
Cf-252	8.53E-04	--	--	--	5.76E-17	--	--	4.47E+01	--	--	1.12E-02	4.47E+01
Cm-242	1.21E-01	--	9.92E-01	--	7.49E-07	--	1.02E-04	1.10E+02	--	--	2.65E-02	1.11E+02
Cm-243	1.82E-01	--	2.60E+01	--	2.46E-03	--	--	5.44E-01	--	--	2.47E-03	2.68E+01
Cm-244	6.02E+01	--	6.51E+02	2.17E+02	7.96E-03	--	7.54E+00	9.71E+03	--	--	1.07E+02	1.08E+04

Table 3-9. Total RH Radionuclide Activity (Ci) on a Site Basis Decayed through 2016
Continued

Radionuclide	ANL	BAPL	Hanford (RL)	INL	KAPL-S	LANL	MFC	ORNL	SNL	SPRU	SRS	Grand Total
Cm-245	1.22E-03	--	8.82E-02	6.60E-02	2.30E-08	--	--	1.41E+00	--	--	1.74E-02	1.58E+00
Cm-246	4.86E-07	--	3.94E-02	--	3.00E-09	--	--	7.39E+01	--	--	2.33E-02	7.39E+01
Cm-247	5.74E-10	--	1.24E-10	--	7.07E-15	--	--	4.29E-05	--	--	4.39E-08	4.29E-05
Cm-248	1.71E-10	--	1.88E-06	--	1.40E-14	--	--	1.18E-01	--	--	8.39E-06	1.18E-01
Cm-250	--	--	--	--	--	--	--	5.12E-07	--	--	--	5.12E-07
Co-58	3.73E-01	--	--	4.08E+03	--	--	--	--	--	--	--	4.08E+03
Co-60	3.09E+01	7.15E-01	7.61E+01	1.59E+03	1.55E+00	2.64E-01	4.41E+02	7.24E+01	--	--	4.57E-11	2.21E+03
Cr-51	2.99E-02	--	--	1.59E+03	--	--	--	--	--	--	--	1.59E+03
Cs-134	2.98E+01	3.31E-02	2.20E+02	4.55E+02	--	--	3.49E+02	6.17E+02	--	--	4.01E-02	1.67E+03
Cs-135	7.70E-08	--	6.32E-04	1.89E-03	1.90E-05	--	5.18E-03	1.24E-02	--	--	--	2.02E-02
Cs-137	1.62E+03	8.72E+01	1.96E+05	3.28E+04	5.00E+01	1.50E+03	2.01E+04	2.06E+04	1.60E+02	1.90E+01	2.45E+01	2.73E+05
Dy-159	1.08E-01	--	--	--	--	--	--	--	--	--	--	1.08E-01
Es-254	--	--	--	--	--	--	--	4.36E-16	--	--	--	4.36E-16
Eu-149	6.82E-02	--	--	--	--	--	--	--	--	--	--	6.82E-02
Eu-152	8.71E-01	7.71E+00	1.92E+00	1.46E-01	--	--	3.37E-02	1.06E+01	--	--	--	2.13E+01
Eu-154	1.17E+03	3.06E+00	5.98E+02	2.02E+01	4.18E-02	6.78E-02	3.06E+02	3.92E+02	--	--	4.61E-01	2.49E+03
Eu-155	4.47E+00	6.44E-02	2.92E+02	5.15E+01	--	4.08E-01	2.05E+02	9.63E+02	--	--	7.23E-03	1.52E+03
Fe-55	5.84E+01	3.26E-02	1.44E-02	3.72E+03	5.00E+00	--	1.43E+02	1.32E+03	--	--	--	5.24E+03
Fe-59	1.65E-02	--	--	2.71E+02	--	--	--	--	--	--	--	2.71E+02
Fr-221	4.85E-03	6.34E-05	4.93E-04	3.64E-03	9.58E-07	1.06E-15	1.71E-08	8.18E-01	9.68E-11	3.16E-18	1.27E-05	8.27E-01
Fr-223	3.37E-03	6.83E-13	1.22E-04	1.02E-08	1.00E-10	1.51E-10	5.96E-08	7.62E-05	9.80E-12	4.99E-12	7.39E-07	3.57E-03
Gd-152	1.57E-16	7.89E-14	2.85E-14	8.47E-16	--	--	6.05E-18	1.44E-12	--	--	--	1.54E-12
Gd-153	2.48E-01	--	1.04E-09	--	--	--	--	1.35E-18	--	--	--	2.48E-01
H-3	1.57E+01	2.04E-01	8.19E+02	1.01E+02	6.87E-02	--	7.41E-01	5.25E-01	--	--	5.66E-02	9.37E+02
Hf-175	3.40E-02	--	--	--	--	--	--	--	--	--	--	3.40E-02
Hf-181	1.12E-03	--	--	--	--	--	--	--	--	--	--	1.12E-03
Ho-166m	--	--	--	--	--	--	--	9.46E-06	--	--	--	9.46E-06
I-125	1.61E-01	--	--	--	--	--	--	--	--	--	--	1.61E-01
I-129	3.70E-08	3.12E-05	2.42E-03	2.41E-05	1.51E-05	--	3.01E-01	7.60E-04	--	--	--	3.04E-01
In-113m	1.43E-01	--	--	--	--	--	--	--	--	--	--	1.43E-01
In-114	1.15E-02	--	--	--	--	--	--	--	--	--	--	1.15E-02
In-114m	1.20E-02	--	--	--	--	--	--	--	--	--	--	1.20E-02
In-115	1.06E-17	--	--	--	--	--	--	--	--	--	--	1.06E-17
In-115m	5.55E-06	--	--	--	--	--	--	--	--	--	--	5.55E-06
Ir-194	1.18E-02	--	--	--	--	--	--	--	--	--	--	1.18E-02
K-42	2.25E-02	--	--	--	--	--	--	--	--	--	--	2.25E-02
Kr-85	4.21E+01	3.47E+00	3.47E+02	1.25E+01	8.22E-01	5.48E+02	9.29E+00	1.01E+01	--	--	7.35E-01	9.74E+02
La-137	--	--	--	--	--	--	--	2.61E-07	--	--	--	2.61E-07
La-140	--	--	--	--	--	--	--	5.77E+01	--	--	--	5.77E+01
Lu-177	3.51E-04	--	--	--	--	--	--	--	--	--	--	3.51E-04
Lu-177m	1.65E-03	--	--	--	--	--	--	--	--	--	--	1.65E-03
Mn-54	8.54E+00	--	8.37E-01	3.71E+03	--	--	2.70E+00	--	--	--	--	3.72E+03
Mo-93	--	--	1.25E-04	1.19E-01	--	--	1.56E-01	--	--	--	--	2.76E-01
Na-22	3.26E-02	--	3.73E-05	--	--	--	--	2.46E-09	--	--	--	3.26E-02
Nb-91	1.33E-02	--	--	--	--	--	--	--	--	--	--	1.33E-02
Nb-93m	4.57E-01	3.72E-03	4.12E-04	4.26E-04	1.60E-05	--	3.64E-02	2.61E-02	--	--	--	5.24E-01
Nb-94	--	--	8.46E-02	2.61E-02	4.62E-02	--	1.11E+00	7.22E-06	--	--	--	1.26E+00

Table 3-9. Total RH Radionuclide Activity (Ci) on a Site Basis Decayed through 2016
Continued

Radionuclide	ANL	BAPL	Hanford (RL)	INL	KAPL-S	LANL	MFC	ORNL	SNL	SPRU	SRS	Grand Total
Nb-95	1.10E+01	--	1.76E-11	6.75E+00	--	--	2.32E-07	2.27E+03	--	--	--	2.29E+03
Nb-95m	6.07E-02	--	9.37E-14	5.66E-06	--	--	1.23E-09	4.33E+01	--	--	--	4.34E+01
Nd-144	1.64E-15	9.81E-45	1.74E-14	1.54E-12	--	1.27E-15	2.11E-13	4.56E-13	--	--	3.65E-16	2.23E-12
Ni-59	1.08E-02	1.62E-01	8.45E-04	5.10E+02	8.91E-02	--	1.11E+00	--	--	--	2.88E-10	5.11E+02
Ni-63	1.47E+00	1.28E+01	2.95E-02	1.19E+02	1.21E+01	--	1.99E+02	1.88E+02	--	--	--	5.32E+02
Np-235	1.23E+00	--	--	--	--	--	--	1.70E-15	--	--	--	1.23E+00
Np-237	1.20E-03	2.55E-04	2.82E-01	3.48E-03	8.72E-05	2.59E-06	3.51E-01	2.40E+00	4.41E-06	4.94E-08	2.48E+00	5.52E+00
Np-238	1.04E-03	--	5.42E-03	--	--	--	5.39E-07	1.65E-03	--	--	1.45E-04	8.26E-03
Np-239	2.24E+00	1.78E-04	4.03E+00	--	2.50E-06	--	2.88E-02	4.54E+01	--	--	1.41E+00	5.31E+01
Np-240	8.17E-23	--	2.79E-09	--	9.71E-17	--	--	1.34E-08	--	--	9.00E-16	1.61E-08
Np-240m	6.81E-20	--	2.32E-06	--	8.09E-14	--	--	1.11E-05	--	--	7.50E-13	1.35E-05
Os-185	1.54E-03	--	--	--	--	--	--	--	--	--	--	1.54E-03
Os-194	1.18E-02	--	--	--	--	--	--	--	--	--	--	1.18E-02
Pa-231	1.57E-08	6.54E-10	2.37E-05	8.52E-06	5.82E-08	3.49E-07	6.25E-07	7.22E-03	4.51E-08	2.30E-08	3.43E-04	7.59E-03
Pa-233	6.54E-03	2.55E-04	2.82E-01	3.42E-03	8.66E-05	2.59E-06	2.23E-01	1.50E+00	4.41E-06	4.94E-08	2.48E+00	4.49E+00
Pa-234	6.68E-05	3.85E-11	1.47E-03	1.71E-03	6.04E-11	5.30E-08	1.96E-05	4.21E-05	9.26E-07	1.67E-05	9.60E-05	3.42E-03
Pa-234m	5.14E-02	2.96E-08	1.13E+00	1.31E+00	4.65E-08	4.07E-05	1.51E-02	3.23E-02	7.12E-04	1.29E-02	7.39E-02	2.63E+00
Pb-209	4.85E-03	6.33E-05	4.93E-04	3.64E-03	9.58E-07	1.06E-15	1.71E-08	8.18E-01	9.67E-11	3.16E-18	1.27E-05	8.27E-01
Pb-210	8.52E-01	1.19E-12	2.01E-02	1.43E-08	1.08E-07	2.77E-13	4.97E-11	2.07E+01	1.33E-12	2.32E-13	3.00E-09	2.15E+01
Pb-211	2.46E-01	4.95E-11	8.87E-03	7.42E-07	6.89E-09	1.09E-08	2.23E-06	5.15E-03	7.10E-10	3.62E-10	5.36E-05	2.60E-01
Pb-212	4.75E+00	1.42E-02	6.71E-04	8.96E-05	8.58E-05	1.32E-17	1.81E-04	1.82E+00	2.90E-20	--	1.58E-15	6.58E+00
Pb-214	1.75E-04	2.40E-11	7.53E-02	1.84E-07	1.23E-06	1.37E-11	2.46E-09	3.34E+01	1.32E-10	2.29E-11	2.94E-08	3.35E+01
Pd-107	2.10E-07	--	8.64E-05	--	7.97E-07	--	1.39E-04	4.46E-03	--	--	--	4.69E-03
Pm-145	5.38E-01	--	--	--	--	--	--	1.60E-05	--	--	--	5.38E-01
Pm-146	7.07E-01	--	--	--	--	--	5.54E-03	2.14E-05	--	--	--	7.13E-01
Pm-147	7.32E+01	3.23E-01	1.34E+01	1.65E+02	4.25E-02	2.39E-04	1.43E+01	1.11E-01	--	--	8.77E-02	2.66E+02
Pm-148	1.83E-04	--	--	--	--	--	--	--	--	--	--	1.83E-04
Pm-148m	3.53E-03	--	--	--	--	--	--	--	--	--	--	3.53E-03
Po-210	1.49E+00	1.19E-12	2.01E-02	1.43E-08	1.08E-07	1.40E-13	2.51E-11	2.07E+01	4.32E-13	7.51E-14	2.99E-09	2.22E+01
Po-211	6.76E-04	1.36E-13	2.44E-05	2.04E-09	1.90E-11	3.01E-11	6.13E-09	1.42E-05	1.95E-12	9.95E-13	1.47E-07	7.15E-04
Po-212	3.04E+00	9.12E-03	4.30E-04	5.74E-05	5.50E-05	8.45E-18	1.16E-04	1.16E+00	1.86E-20	--	1.01E-15	4.21E+00
Po-213	4.75E-03	6.20E-05	4.83E-04	3.56E-03	9.38E-07	1.04E-15	1.68E-08	8.00E-01	9.47E-11	3.09E-18	1.24E-05	8.09E-01
Po-214	1.75E-04	2.40E-11	7.52E-02	1.84E-07	1.23E-06	1.37E-11	2.46E-09	3.34E+01	1.32E-10	2.29E-11	2.94E-08	3.35E+01
Po-215	2.46E-01	4.95E-11	8.87E-03	7.42E-07	6.89E-09	1.09E-08	2.23E-06	5.15E-03	7.10E-10	3.62E-10	5.36E-05	2.60E-01
Po-216	4.75E+00	1.42E-02	6.71E-04	8.96E-05	8.58E-05	1.32E-17	1.81E-04	1.82E+00	2.90E-20	--	1.58E-15	6.58E+00
Po-218	1.75E-04	2.40E-11	7.53E-02	1.84E-07	1.23E-06	1.37E-11	2.46E-09	3.34E+01	1.32E-10	2.29E-11	2.94E-08	3.35E+01
Pr-144	4.73E+01	--	1.17E-04	1.33E+04	--	6.91E-01	1.29E+03	1.21E+04	--	--	5.42E-06	2.67E+04
Pr-144m	6.62E-01	--	1.64E-06	1.87E+02	--	9.67E-03	1.81E+01	1.69E+02	--	--	7.58E-08	3.74E+02
Pu-236	5.27E-01	--	2.81E-06	1.40E-01	--	--	3.33E-06	7.65E-07	--	--	--	6.66E-01
Pu-238	1.27E+02	1.99E+00	6.26E+02	6.45E+02	1.22E+00	1.55E+00	1.03E+02	9.66E+03	7.04E+00	1.43E-02	4.33E+03	1.55E+04
Pu-239	9.91E+01	1.62E-03	1.30E+03	5.53E+02	1.31E-02	9.26E+01	2.18E+02	5.66E+01	1.88E+01	1.10E+00	1.12E+01	2.35E+03
Pu-240	5.88E+01	--	5.74E+02	2.83E+02	1.30E-02	2.51E+00	2.30E+01	1.66E+02	1.20E+01	--	6.17E+00	1.12E+03
Pu-241	8.61E+02	2.84E-01	1.22E+04	2.64E+02	2.51E-01	8.09E+01	3.37E+02	2.37E+03	1.56E+02	1.69E-01	5.27E+03	2.15E+04
Pu-242	4.64E-02	2.93E-05	1.33E+02	7.93E-02	3.94E-06	1.52E-03	4.12E-02	1.92E+00	5.63E-03	7.07E-03	5.21E-01	1.36E+02
Pu-243	5.74E-10	--	1.24E-10	--	7.07E-15	--	--	4.29E-05	--	--	4.39E-08	4.29E-05
Pu-244	6.82E-20	--	2.33E-06	--	8.10E-14	--	--	1.11E-05	--	--	7.51E-13	1.35E-05
Pu-246	--	--	--	--	--	--	--	1.28E-07	--	--	--	1.28E-07

Table 3-9. Total RH Radionuclide Activity (Ci) on a Site Basis Decayed through 2016
Continued

Radionuclide	ANL	BAPL	Hanford (RL)	INL	KAPL-S	LANL	MFC	ORNL	SNL	SPRU	SRS	Grand Total
Ra-223	2.46E-01	4.95E-11	8.87E-03	7.42E-07	6.89E-09	1.09E-08	2.23E-06	5.15E-03	7.10E-10	3.62E-10	5.36E-05	2.60E-01
Ra-224	4.75E+00	1.42E-02	6.71E-04	8.96E-05	8.58E-05	1.32E-17	1.81E-04	1.82E+00	2.90E-20	--	1.58E-15	6.58E+00
Ra-225	4.85E-03	6.34E-05	4.93E-04	3.64E-03	9.58E-07	1.06E-15	1.72E-08	8.18E-01	9.68E-11	3.16E-18	1.27E-05	8.27E-01
Ra-226	1.75E-04	2.40E-11	7.53E-02	1.84E-07	1.23E-06	1.37E-11	2.46E-09	3.34E+01	1.32E-10	2.29E-11	2.94E-08	3.35E+01
Ra-228	3.01E-02	4.58E-15	3.65E-05	4.38E-05	1.23E-04	6.39E-17	1.19E-13	1.06E-02	3.42E-19	--	2.55E-15	4.10E-02
Rb-87	--	--	--	--	--	--	--	3.04E-07	--	--	--	3.04E-07
Re-188	1.92E-03	--	--	--	--	--	--	--	--	--	--	1.92E-03
Rh-102	6.57E-01	--	--	--	--	--	--	1.67E-21	--	--	--	6.57E-01
Rh-103m	6.04E-01	--	--	--	--	--	--	4.51E+03	--	--	--	4.51E+03
Rh-106	5.32E+01	--	4.91E-03	7.68E+00	1.40E-03	4.55E+00	1.99E+02	1.70E+04	--	--	4.51E-05	1.73E+04
Rn-219	2.46E-01	4.95E-11	8.87E-03	7.42E-07	6.89E-09	1.09E-08	2.23E-06	5.15E-03	7.10E-10	3.62E-10	5.36E-05	2.60E-01
Rn-220	4.75E+00	1.42E-02	6.71E-04	8.96E-05	8.58E-05	1.32E-17	1.81E-04	1.82E+00	2.90E-20	--	1.58E-15	6.58E+00
Rn-222	1.75E-04	2.40E-11	7.53E-02	1.84E-07	1.23E-06	1.37E-11	2.46E-09	3.34E+01	1.32E-10	2.29E-11	2.94E-08	3.35E+01
Ru-103	6.05E-01	--	--	--	--	--	--	4.52E+03	--	--	--	4.52E+03
Ru-106	5.32E+01	--	4.91E-03	7.68E+00	1.40E-03	4.55E+00	1.99E+02	1.70E+04	--	--	4.51E-05	1.73E+04
S-35	1.11E-02	--	--	--	--	--	--	--	--	--	--	1.11E-02
Sb-124	1.66E-01	--	--	1.71E+02	--	--	8.61E+00	--	--	--	--	1.80E+02
Sb-125	4.52E+01	6.49E-03	7.30E+01	1.99E+01	1.81E-04	2.96E-01	3.64E+01	8.71E+02	--	--	--	1.05E+03
Sb-126	9.08E-10	--	1.16E-01	--	2.13E-06	7.90E-03	1.34E-04	1.49E-03	--	--	--	1.25E-01
Sb-126m	2.14E-05	--	8.28E-01	--	1.59E-05	5.64E-02	7.38E-03	1.07E-02	--	--	--	9.03E-01
Sc-46	8.17E-02	--	--	--	--	--	--	--	--	--	--	8.17E-02
Se-75	7.63E-02	--	--	6.89E-03	--	--	--	--	--	--	--	8.31E-02
Se-79	4.71E-07	--	1.38E-01	--	4.88E-06	--	1.54E-03	1.44E-03	--	--	1.07E-02	1.52E-01
Sm-145	2.76E-01	--	--	--	--	--	--	1.78E-19	--	--	--	2.76E-01
Sm-146	1.62E-10	--	--	--	--	--	1.27E-12	1.86E-11	--	--	--	1.82E-10
Sm-147	4.85E-11	2.20E-11	2.26E-09	1.52E-09	3.95E-12	4.11E-15	9.47E-12	1.64E-08	--	--	4.94E-11	2.04E-08
Sm-148	4.23E-20	1.80E-29	9.17E-30	1.14E-31	--	--	2.65E-35	2.69E-17	--	--	--	2.69E-17
Sm-151	1.70E+00	2.50E-01	3.33E+01	6.44E+00	5.36E-02	2.27E-02	1.04E+01	6.54E+00	--	--	2.80E-01	5.90E+01
Sn-113	1.43E-01	--	--	--	--	--	--	--	--	--	--	1.43E-01
Sn-119m	9.30E-01	--	1.13E-08	--	--	--	--	3.03E-14	--	--	--	9.30E-01
Sn-121	3.66E-01	--	2.88E-04	--	1.07E-04	7.46E-01	8.13E-04	2.84E-01	--	--	--	1.40E+00
Sn-121m	4.72E-01	--	3.71E-04	--	1.38E-04	9.61E-01	1.05E-03	3.66E-01	--	--	--	1.80E+00
Sn-123	8.69E-01	--	--	--	--	--	--	--	--	--	--	8.69E-01
Sn-126	2.14E-05	--	8.28E-01	--	1.59E-05	5.64E-02	7.38E-03	1.07E-02	--	--	--	9.03E-01
Sr-85	4.60E-02	--	--	--	--	--	--	--	--	--	--	4.60E-02
Sr-89	1.40E+00	--	--	--	--	--	--	2.49E-03	--	--	--	1.40E+00
Sr-90	1.15E+03	8.65E+01	1.20E+05	4.17E+04	4.46E+01	1.06E+03	1.86E+04	1.28E+04	1.20E+02	2.88E+00	1.81E+01	1.96E+05
Ta-182	2.67E+02	--	--	--	--	--	--	--	--	--	--	2.67E+02
Tb-157	3.66E-02	--	--	--	--	--	--	1.99E-07	--	--	--	3.66E-02
Tb-160	2.18E-02	--	--	--	--	--	--	--	--	--	--	2.18E-02
Tc-97	2.92E-09	--	--	--	--	--	--	--	--	--	--	2.92E-09
Tc-97m	9.48E-02	--	--	--	--	--	--	--	--	--	--	9.48E-02
Tc-98	--	--	--	--	--	--	--	6.57E-08	--	--	--	6.57E-08
Tc-99	5.50E-03	2.10E-02	7.23E+00	1.18E-02	1.43E-02	--	3.15E+02	2.87E-01	--	3.51E-03	1.12E-03	3.22E+02
Te-121	1.65E-01	--	--	--	--	--	--	--	--	--	--	1.65E-01
Te-121m	1.66E-01	--	--	--	--	--	--	--	--	--	--	1.66E-01
Te-123	1.20E-15	--	--	--	--	--	--	--	--	--	--	1.20E-15

Table 3-9. Total RH Radionuclide Activity (Ci) on a Site Basis Decayed through 2016
Continued

Radionuclide	ANL	BAPL	Hanford (RL)	INL	KAPL-S	LANL	MFC	ORNL	SNL	SPRU	SRS	Grand Total
Te-123m	1.93E-01	--	--	--	--	--	--	--	--	--	--	1.93E-01
Te-125m	1.11E+01	1.58E-03	1.78E+01	2.18E+00	4.43E-05	7.22E-02	7.09E+00	7.17E+01	--	--	3.28E-11	1.10E+02
Te-127	1.88E+00	--	--	--	--	--	--	--	--	--	--	1.88E+00
Te-127m	1.92E+00	--	--	--	--	--	--	--	--	--	--	1.92E+00
Te-129	1.88E-02	--	--	--	--	--	--	--	--	--	--	1.88E-02
Te-129m	2.93E-02	--	--	--	--	--	--	--	--	--	--	2.93E-02
Th-227	2.42E-01	4.88E-11	8.75E-03	7.32E-07	6.97E-09	1.08E-08	3.17E-06	5.20E-03	7.00E-10	3.57E-10	5.28E-05	2.56E-01
Th-228	4.73E+00	1.42E-02	6.69E-04	1.02E-04	8.58E-05	1.32E-17	1.80E-04	1.82E+00	2.90E-20	--	1.58E-15	6.56E+00
Th-229	4.85E-03	6.34E-05	4.93E-04	3.64E-03	9.58E-07	1.06E-15	1.72E-08	8.18E-01	9.68E-11	3.16E-18	1.27E-05	8.27E-01
Th-230	1.66E-05	2.24E-08	1.34E-04	1.07E-04	4.75E-04	3.17E-08	5.85E-06	1.39E-03	6.08E-07	1.06E-07	1.35E-05	2.14E-03
Th-231	7.41E-03	6.18E-06	5.23E-02	1.40E-01	4.25E-04	8.25E-03	1.55E-02	3.43E-03	2.13E-03	1.09E-03	1.47E+00	1.70E+00
Th-232	1.93E-10	1.84E-14	7.23E-05	1.92E-04	2.39E-04	5.76E-16	1.09E-12	1.30E-02	8.76E-18	--	7.05E-15	1.35E-02
Th-234	5.14E-02	2.96E-08	1.13E+00	1.31E+00	4.65E-08	4.07E-05	1.51E-02	3.23E-02	7.12E-04	1.29E-02	7.39E-02	2.63E+00
Tl-206	1.13E-06	1.57E-18	2.65E-08	1.89E-14	1.42E-13	3.66E-19	6.56E-17	2.73E-05	1.76E-18	3.06E-19	3.95E-15	2.84E-05
Tl-207	2.45E-01	4.93E-11	8.85E-03	7.40E-07	6.88E-09	1.09E-08	2.22E-06	5.14E-03	7.08E-10	3.61E-10	5.34E-05	2.59E-01
Tl-208	1.71E+00	5.11E-03	2.41E-04	3.22E-05	3.08E-05	4.74E-18	6.50E-05	6.53E-01	1.04E-20	--	5.69E-16	2.36E+00
Tl-209	1.02E-04	1.33E-06	1.04E-05	7.64E-05	2.01E-08	2.23E-17	3.60E-10	1.72E-02	2.03E-12	6.63E-20	2.66E-07	1.74E-02
Tm-170	2.91E-02	--	--	--	--	--	--	--	--	--	--	2.91E-02
Tm-171	4.22E-01	--	--	--	--	--	--	2.85E-09	--	--	--	4.22E-01
U-232	1.42E+00	1.39E-02	2.31E-04	2.43E-03	1.58E-06	--	9.75E-07	1.76E+00	--	--	--	3.20E+00
U-233	9.33E-05	1.61E-02	6.40E-01	5.22E+00	1.82E-03	1.47E-11	9.83E-05	4.20E+00	1.10E-06	1.08E-13	1.31E-02	1.01E+01
U-234	2.74E-02	5.02E-04	1.57E+00	1.52E+00	2.41E-03	1.73E-03	5.03E-01	1.17E+00	6.61E-02	1.15E-02	1.90E-01	5.07E+00
U-235	7.41E-03	6.18E-06	5.23E-02	1.40E-01	4.25E-04	8.25E-03	1.55E-02	3.43E-03	2.13E-03	1.09E-03	1.47E+00	1.70E+00
U-236	4.53E-07	7.45E-05	1.73E-01	6.30E-05	5.30E-04	5.91E-06	1.57E-02	2.78E-03	3.55E-07	--	2.75E-05	1.93E-01
U-237	2.01E-02	6.79E-06	2.92E-01	6.32E-03	6.02E-06	1.94E-03	1.23E-02	5.67E-02	3.74E-03	4.04E-06	1.26E-01	5.19E-01
U-238	5.24E-02	2.96E-08	1.13E+00	1.33E+00	4.65E-08	4.07E-05	1.53E-02	3.23E-02	7.12E-04	1.29E-02	7.39E-02	2.66E+00
U-240	6.81E-20	--	2.32E-06	--	8.09E-14	--	--	1.11E-05	--	--	7.50E-13	1.35E-05
V-49	3.46E+00	--	--	--	--	--	--	--	--	--	--	3.46E+00
W-181	8.75E-03	--	--	--	--	--	--	--	--	--	--	8.75E-03
W-185	9.39E-03	--	--	--	--	--	--	--	--	--	--	9.39E-03
W-188	1.90E-03	--	--	--	--	--	--	--	--	--	--	1.90E-03
Xe-127	9.43E-03	--	--	--	--	--	--	--	--	--	--	9.43E-03
Y-89m	1.30E-04	--	--	--	--	--	--	2.32E-07	--	--	--	1.31E-04
Y-90	1.15E+03	8.65E+01	1.20E+05	4.17E+04	4.46E+01	1.06E+03	1.86E+04	1.28E+04	1.20E+02	2.88E+00	1.81E+01	1.96E+05
Y-91	3.11E+00	--	--	--	--	--	--	--	--	--	--	3.11E+00
Zn-65	6.88E-02	--	5.03E-05	--	--	--	--	--	--	--	--	6.89E-02
Zr-93	3.62E-05	4.90E-03	6.78E-04	--	1.22E-04	--	6.46E-03	3.05E-02	--	--	--	4.27E-02
Zr-95	5.15E+00	--	7.97E-12	4.81E-04	--	--	1.04E-07	3.68E+03	--	--	--	3.69E+03
Grand Total	8.83E+03	3.74E+02	6.42E+05	1.93E+05	2.08E+02	5.77E+03	8.24E+04	1.69E+05	7.60E+02	4.42E+01	9.94E+03	1.11E+06

Data Source: CID Data Version D.16.01 (LANL-CO 2017a). Note: This table only contains data for WIPP-bound waste streams at the TRU waste generator sites.

Table 3-10. Total Activity by Site Decayed through 2016

TRU Waste Generator Site	CH Activity (Ci)	RH Activity (Ci)	Total Activity (Ci)
Argonne National Laboratory	2.84E+02	8.83E+03	9.12E+03
Bettis Atomic Power Laboratory	--	3.74E+02	3.74E+02
Hanford (Richland) Site	5.25E+05	6.42E+05	1.17E+06
Idaho National Laboratory	1.74E+05	1.93E+05	3.67E+05
Knolls Atomic Power Laboratory - Nuclear Fuel Services	1.89E+03	--	1.89E+03
Knolls Atomic Power Laboratory - Schenectady	--	2.08E+02	2.08E+02
Lawrence Berkeley National Laboratory	2.83E-02	--	2.83E-02
Lawrence Livermore National Laboratory	1.20E+04	--	1.20E+04
Los Alamos National Laboratory	9.51E+05	5.77E+03	9.57E+05
Material and Fuels Complex	3.19E+02	8.24E+04	8.27E+04
Nevada National Security Site	4.12E+02	--	4.12E+02
Nuclear Radiation Development Site	3.32E+01	--	3.32E+01
Oak Ridge National Laboratory	3.01E+04	1.69E+05	1.99E+05
Sandia National Laboratories	5.49E+02	7.60E+02	1.31E+03
Savannah River Site	2.47E+06	9.94E+03	2.48E+06
Separations Process Research Unit	6.77E+00	4.42E+01	5.09E+01
Grand Total	4.16E+06	1.11E+06	5.28E+06

Data Source: CID Data Version D.16.01 (LANL-CO 2017a). Note: This table only contains data for WIPP-bound waste streams at the TRU waste generator sites.

3.3.2 Radionuclide Changes

Radionuclide activity estimates improve as additional waste is characterized. Table 3-11 presents the changes in the total activity between the ATWIR-2016 and this report. For comparison, the activities reported in this table were decay-corrected to the end of CY 2050.

The net change column includes both increases and decreases as reported by the TRU waste generator sites and the WDS.

As shown in Table 3-11, the total anticipated CH- and RH-TRU waste activity reported by the sites has increased by 64,200 Ci. This is primarily attributed to LANL's LA-MHD01.001 waste stream, which had an increase of 206,000 Ci due to a significant increase in projected waste, as discussed in section 3.1.2. This increase was countered by ORNL's OR-REDC-RH-HOM, which had a decrease of 194,000 Ci due to corrections made to previously reported uranium activities.

Table 3-11. CH/RH Activity Changes Decayed through 2050

TRU Waste Generator Site	ATWIR-2016 Total (Ci)	ATWIR-2017 Total (Ci)	Net Change (Ci)
Hanford (Richland) Site	5.99E+05	5.30E+05	-6.93E+04
Idaho National Laboratory	1.43E+05	2.11E+05	+6.74E+04
Los Alamos National Laboratory	3.37E+05	5.84E+05	+2.46E+05
Oak Ridge National Laboratory	2.45E+05	5.68E+04	-1.88E+05
Savannah River Site	1.27E+06	1.27E+06	-1.78E+02
Small Quantity Sites	4.09E+04	4.88E+04	+7.88E+03
Anticipated Total	2.63E+06	2.70E+06	+6.42E+04
WIPP (Emplaced)	1.43E+06	1.43E+06	--
WCS (Temporary Storage)	7.36E+03	7.36E+03	--
Emplaced/Temporary Storage Total	1.43E+06	1.43E+06	--
Grand Total	4.07E+06	4.13E+06	+6.42E+04

Data Source: CID Data Versions D.15.00 (LANL-CO 2016a) and D.16.01 (LANL-CO 2017a).

4.0 POTENTIAL TRU WASTE

As described in section 2.1, a waste stream is designated either WIPP-bound or potential. Table 4-1 and Table 4-2 collectively represent approximately 19,300 m³, or 20 percent, of the final form TRU waste volume reported by the TRU waste generator sites during this year’s data collection that is identified as potential TRU waste. This is an increase of approximately 11,400 m³ from what was reported last year and primarily due to adding four RL projected D&D waste streams (RLDD-01, RLDD-02, RLDD-08, and RLDD-10). 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.

As shown in Appendix D, the DOE/CBFO has listed the criteria for categorizing waste streams as potential (Patterson 2010). Below are the categories for which TRU waste generator sites would consider a waste stream to be potential TRU waste.

- TRU Determination – Waste that is categorized as “undetermined” will remain potential until the waste stream is officially determined to be TRU. If the waste stream is determined to be non-TRU, it will be removed from the inventory.
- Defense Determination – The WIPP can only accept TRU waste resulting from defense-related activities, as stated in the WIPP LWA (U.S. Congress 1992 and 1996). Waste that has an “unknown” defense determination will remain potential until the waste stream is 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 the 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 hazardous waste, etc. Sites must treat, repackage, or remove any restricted items before such waste can be accepted for disposal at the 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.

Three sites (BL, RP, and WV) reported only potential waste streams and no WIPP-bound waste streams. Actual numerical values in this section are rounded to three significant figures for presentation purposes within this report. Additional detail for all potential waste streams is provided in Appendix B of this report.

Table 4-1 identifies those CH- and RH-TRU waste streams that are categorized as potential because they require additional information or remediation of regulatory restrictions before being re-categorized as WIPP-bound.

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
BL-Parks	CH	9.62E+00	Incomplete Data
BL-Parks-A	RH	6.24E-01	Incomplete Data
IN-BN-538	CH	2.43E+02	Incomplete Data
IN-ID-AMWTP-Hot Silver	RH	6.24E-01	Incomplete Data
IN-ID-AMWTP-U232	RH	6.24E-01	Incomplete Data
IN-RF-005	CH	1.50E+01	Incomplete Data
IN-RF-745	CH	2.50E+00	Incomplete Data
IN-UNDETERMINED	CH	3.29E+02	Incomplete Data
LA-TA-00-04	CH	2.08E-01	Regulatory Restrictions
RL200-10	RH	3.39E-01	Incomplete Data
RL300-11	RH	7.49E+00	Regulatory Restrictions
RLALPHA-08	RH	8.29E+02	Incomplete Data
RLCH2-08	RH	4.75E+00	TRU Waste Determination
RLDD-01	CH	6.00E+03	Incomplete Data
RLDD-02	CH	3.00E+03	Incomplete Data
RLDD-08	RH	6.67E+02	Incomplete Data
RLDD-10	RH	3.33E+02	Incomplete Data

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

Waste Stream ID ¹	Handling	Final Form Anticipated Volume (m ³)	Categories of Potential WIPP CH/RH-TRU Waste
RLPFP-02	CH	1.32E+01	Incomplete Data
RLPRC-01	CH	1.89E+00	Defense Determination
RLPURX-02	CH	3.35E+02	Incomplete Data
Grand Total		1.18E+04	

¹See Figure 1-1 for site designators. Data Source: CID Data Version D.16.01 (LANL-CO 2017a).

Table 4-2 identifies the CH- and RH-TRU waste streams that are categorized as potential at the direction of the DOE. Although these waste streams may have similar unmet requirements as those shown in Table 4-1, in some cases these waste streams are expected to require additional legislative action prior to being re-categorized as WIPP-bound.

Table 4-2. DOE-Directed Potential WIPP CH/RH-TRU Waste Streams

Waste Stream ID ¹	Handling	Final Form Anticipated Volume (m ³)
IN-SBW-01A	RH	9.79E+02
IN-SBW-01B	RH	8.90E+01
RP-TFC001	CH	4.43E+02
RP-W754	CH	3.26E+02
RP-W755	CH	8.01E+02
WV-M010a	CH	9.66E+00
WV-T004a	CH	6.24E-01
WV-T004b	RH	3.12E+00
WV-T006a	CH	2.27E+02
WV-T006b	RH	2.98E+02
WV-T017b	RH	7.49E+00
WV-W024a	CH	8.37E+00
WV-W024b	RH	4.80E+01
WV-W050a	CH	5.82E+00
WV-Z001	CH	4.30E+03
Grand Total		7.55E+03

¹See Figure 1-1 for site designators. Data Source: CID Data Version D.16.01 (LANL-CO 2017a).

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 and WAP). As shown in Table 4-3, three potential waste streams from INL were reassigned to a WIPP-bound waste stream during CY 2016.

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

Waste Stream ID¹	Reason
IN-IC605 (New ID: IN-IC-605)	Added previously missing data
IN-JH826CH (New IDs: IN-JH-826 and IN-JH-827)	Added previously missing data
IN-W139 (New ID: IN-MX-142)	Added previously missing data

¹See Figure 1-1 for site designators; Data Source: CID Data Version D.16.01 (LANL-CO 2017a).

5.0 SUMMARY

This report is an update to the data found in the ATWIR-2016 (DOE 2016) and focuses on data changes resulting from characterization, improved estimations, and continued waste generation at the TRU waste generator sites. This report provides the most current TRU waste inventory information available to DOE/CBFO, the DOE complex, WIPP stakeholders, and regulators, as of December 31, 2016.

Due to the WIPP being in a recovery period throughout CY 2016, no waste was received or emplaced from the cutoff dates for ATWIR-2016 and this report; however, the TRU waste generator sites continue to characterize and certify TRU waste, using the existing certification program, and are building a backlog of waste ready for shipment.

TRU waste generator sites continue to report better inventory estimates using known characterization data for their stored and projected waste. The most significant changes that occurred in volume, radionuclides, waste material parameters, and chemical constituents in this update were primarily caused by: updates in projected volume from RL, LANL, SRS, ORNL, and ANL; changes in final form container types reported for RH waste from RL; corrections made in previously reported uranium activities from ORNL; and updates in characterization data resulting in more accurate data reporting from multiple sites.

6.0 GLOSSARY

Acceptable Knowledge – 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.

Anticipated Inventory – The sum of the total stored and total projected inventory 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 containing only projected waste, the initial projected generation year is used. This “base” year for the waste stream is used for decay and buildup 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 per hour.

Current Form Waste – The chemical and physical state and packaging configuration 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 manufacture 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, thus converting it to active status.

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 in above ground storage or disposed underground at the WIPP.

Final Form Waste – Form of waste in packaging approved for shipment and emplacement at the 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.

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.

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.

Potential Inventory – In accordance with the criteria described in section 4.0, a designation within this report for a waste stream that is considered unsuited to be emplaced in the WIPP as of the cutoff date. This designation is not intended to identify whether the waste stream will ultimately be disposed of at the WIPP. Regardless of its designation in this report, TRU waste

must meet all WIPP requirements before it can be disposed of at the WIPP. Potential inventory will not be included in PA calculations.

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 (only TRU waste projected to be generated through CY 2050 is presented in this report). TRU waste in projected waste streams includes waste from programs that have not come on line as of the cutoff date for this report, 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.

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

Stored Inventory – That part of the TRU waste inventory that currently exists (already generated, but not yet shipped) as of the cutoff date. 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 defines transuranic waste as follows: “Transuranic waste is radioactive waste containing more than 100 nanocuries (3,700 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 Administrator of the Environmental Protection Agency, does not need the degree of isolation required by 40 Code of Federal Regulations (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 United States that generate and store TRU waste. These may be referred to as “sites.”

Waste Acceptance Criteria – The criteria used to determine if waste is acceptable for disposal at WIPP.

Waste Control Specialists, LLC – WCS, located in Andrews County, Texas, is a licensed radioactive waste disposal facility. Currently, transuranic waste is temporarily stored there until it can be shipped to the WIPP.

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 (e.g., CPR materials are monitored as contributors to the generation of gas at the WIPP).

Waste Profile Report – A report presented in tabular format that is intended to provide a summary of the important information about a particular WIPP-bound or potential waste stream.

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

WIPP-bound Inventory – A designation within this report for a waste stream that appears to meet the requirements for emplacement into the WIPP as of the cutoff date. WIPP-bound inventory will be included in PA calculations.

7.0 REFERENCES

French, D. 2009. Analysis of Container Material Masses, INV-SAR-19. Los Alamos National Laboratory – Carlsbad Operations, Carlsbad, NM.

Los Alamos National Laboratory – Carlsbad Operations (LANL-CO) 2016a. Comprehensive Inventory Database, Version 2.03, Schema Version S.2.03, Data Version D.15.00. Los Alamos National Laboratory – Carlsbad Operations, Carlsbad, NM.

Los Alamos National Laboratory – Carlsbad Operations (LANL-CO) 2016b. Data Collection and Entry for the Comprehensive Inventory, INV-SP-01. Los Alamos National Laboratory – Carlsbad Operations, Carlsbad, NM.

Los Alamos National Laboratory – Carlsbad Operations (LANL-CO) 2017a. Comprehensive Inventory Database, Version 2.03, Schema Version S.2.03, Data Version D.16.01. Los Alamos National Laboratory – Carlsbad Operations, Carlsbad, NM.

Los Alamos National Laboratory – Carlsbad Operations (LANL-CO) 2017b. LANL-CO Software Quality Assurance Plan, LCO-QPD-02. Los Alamos National Laboratory – Carlsbad Operations, Carlsbad, NM.

Los Alamos National Laboratory – Carlsbad Operations (LANL-CO) 2017c. Software Quality Assurance, LCO-QP19-1. Los Alamos National Laboratory – Carlsbad Operations, Carlsbad, NM.

Los Alamos National Laboratory – Carlsbad Operations (LANL-CO) 2017d. Analyses, LCO-QP9-1. Los Alamos National Laboratory – Carlsbad Operations, Carlsbad, NM.

Oak Ridge National Laboratory (ORNL) 2009. SCALE: A Modular Code System for Performing Standardized Computer Analyses for Licensing Evaluation, ORNL/TM-2005/39, Version 6, Vols. I–III, January 2009, Oak Ridge National Laboratory, Oak Ridge, TN. Available from Radiation Safety Information Computational Center (RSICC) at Oak Ridge National Laboratory as CCC-750.

Patterson, R. 2010. TRU Waste Inventory Screening Guidance, letter to Mr. [Ned] Elkins, dated March 29, 2010, CBFO:ORC:RLP:MDA:10-0945:UFC 5822.00. Carlsbad Field Office, Carlsbad, NM.

Patterson, R. 2016. 2017 Annual Update to the Transuranic (TRU) Waste Inventory for the Waste Isolation Pilot Plant, Letter to Distribution, December 13, 2016, CBFO: OEP:RP:AC:16-3336:UFC:5486.00. Carlsbad Field Office, Carlsbad, NM.

U.S. Congress 1979. Public Law 96-164, 1980, National Security and Military Applications of Nuclear Energy Authorization Act of 1980, 93 Stat. 1259.

U.S. Congress 1992 and 1996. Waste Isolation Pilot Plant Land Withdrawal Act, Public Law 102-579 (1992), as amended by Public Law 104-201 (1996).

U.S. Department of Energy (DOE) 2016. Annual Transuranic Waste Inventory Report – 2016 (Data Cutoff Date 12/31/2015), DOE/TRU-16-3425, December 2016. Carlsbad Field Office, Carlsbad, NM.

U.S. Department of Energy (DOE) 2017. Quality Assurance Program Document, DOE/CBFO-94-1012. Carlsbad Field Office, Carlsbad, NM.

U.S. Environmental Protection Agency (EPA) 1996. Criteria for the Certification and Recertification of the Waste Isolation Pilot Plant's Compliance With the 40 CFR Part 191 Disposal Regulations, Final Rule, Title 40 CFR, Part 194, Federal Register, February 9, 1996. U.S. Environmental Protection Agency, Washington, D.C.

Van Soest, G. 2012. Memo to the Quality Assurance File QAM-12-17 Addition of NS15, NS30, and CCO Container Types to the CID Reference Table. Los Alamos National Laboratory-Carlsbad Operations, Carlsbad, NM.

Van Soest, G. 2017. WDS Data Transformation for Insertion in the 2016 Inventory CID Import Template, INV-SAR-40. Los Alamos National Laboratory – Carlsbad Operations, Carlsbad, NM.

APPENDIX A WIPP-BOUND TRU WASTE PROFILE REPORTS

The following WPRs contain information on waste streams that are placed in the WIPP-bound category as of the inventory date, December 31, 2016.

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
SP	Separations Process Research Unit
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	12/31/2016	
Stream Name	ANL-E Contact-Handled Mixed Heterogeneous Debris			Activity Concentrations Decayed to CY		2016	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
30-gal Drum	3.2	0.0	3.2
55-gal Drum Dir Ld w/ Liner	0.0	80.5	80.5
55-gal Drum Dir Ld w/o Liner	12.9	0.0	12.9
85-gal Drum	3.2	0.0	3.2
Box - Misc	1.0	0.0	1.0
Current Form Total	20.2	80.5	100.7

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	30.8	80.5	111.3
Final Form Total	30.8	80.5	111.3

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	45.21
Aluminum-based Metal/Alloys	0.80
Other Metal/Alloys	3.63
Other Inorganic Materials	3.80
Cellulose	3.27
Rubber	6.46
Plastic	23.62
Cement	0.00
Solidified Inorganic Material	1.59
Solidified Organic Material	0.09
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	2.21E-01
Am-243	8.06E-02
Cm-244	1.18E+00
Cs-137	1.09E-01
Np-237	3.38E-04
Pu-238	9.51E-03
Pu-239	9.10E-02
Pu-240	4.91E-02
Pu-241	1.82E-01
Pu-242	6.89E-04
Pu-244	2.27E-07
Sr-90	8.26E-02
Th-229	6.41E-07
Th-230	2.79E-06
Th-232	2.83E-06
U-233	1.74E-04
U-234	2.76E-03
U-235	2.11E-06
U-236	2.45E-08
U-238	6.46E-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, 127/227, 133/233

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	12/31/2016	
Stream Name	ANL-E Contact-Handled Solidified Organic and Inorganic Homogenous Solids				Activity Concentrations Decayed to CY	2016	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
30-gal Drum	1.1	0.0	1.1
55-gal Drum Dir Ld w/ Liner	0.0	4.2	4.2
55-gal Drum Dir Ld w/o Liner	2.7	0.0	2.7
85-gal Drum	1.0	0.0	1.0
Box - Misc	0.4	0.0	0.4
Current Form Total	5.2	4.2	9.4

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	12.3	4.2	16.4
Final Form Total	12.3	4.2	16.4

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	0.00
Aluminum-based Metal/Alloys	1.17
Other Metal/Alloys	0.00
Other Inorganic Materials	1.17
Cellulose	0.00
Rubber	0.00
Plastic	0.00
Cement	0.00
Solidified Inorganic Material	103.06
Solidified Organic Material	11.58
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	9.70E-02
Am-243	2.86E-03
Cm-244	5.39E-04
Cs-137	2.00E-02
Np-237	1.83E-04
Pu-238	2.56E-01
Pu-239	1.25E-01
Pu-240	1.12E-01
Pu-241	1.08E+00
Pu-242	2.66E-04
Pu-244	1.95E-08
Sr-90	9.29E-03
Th-229	3.24E-09
Th-230	3.89E-06
Th-232	8.47E-08
U-233	7.16E-06
U-234	7.84E-06
U-235	2.85E-07
U-236	2.28E-07
U-238	1.08E-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, 132/232

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	12/31/2016	
Stream Name	RH TRU				Activity Concentrations Decayed to CY	2016	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
110-gal Drum	0.8	0.0	0.8
30-gal Drum	15.7	5.4	21.1
55-gal Drum Dir Ld w/o Liner	5.6	20.4	26.0
85-gal Drum	1.0	0.0	1.0
Miscellaneous	0.5	0.0	0.5
Current Form Total	23.6	25.8	49.4

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 30-gal w/o Liner	11.9	5.8	17.6
RH Can w/ Remov Lid w/ 3 - 55-gal w/o Liner	16.8	18.1	34.9
RH Lead Shielded Cntr w/ 1 - 30 gal w/o Liner	3.1	0.0	3.1
Final Form Total	31.8	23.9	55.6

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	70.74
Aluminum-based Metal/Alloys	34.10
Other Metal/Alloys	31.57
Other Inorganic Materials	43.41
Cellulose	55.81
Rubber	15.50
Plastic	27.62
Cement	0.00
Solidified Inorganic Material	2.82
Solidified Organic Material	0.28
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	10.63
Packaging Material, Rubber	0.74
Packaging Material, Steel	1295.78
Packaging Material, Lead	209.21

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	2.04E+00
Am-243	4.03E-02
Cm-244	1.08E+00
Cs-137	2.92E+01
Np-237	2.17E-05
Pu-238	2.28E+00
Pu-239	1.78E+00
Pu-240	1.06E+00
Pu-241	1.55E+01
Pu-242	8.34E-04
Pu-244	1.23E-21
Sr-90	2.07E+01
Th-229	8.72E-05
Th-230	2.98E-07
Th-232	3.46E-12
U-233	1.68E-06
U-234	4.92E-04
U-235	1.33E-04
U-236	8.14E-09
U-238	9.41E-04

Haz. Waste No(s).

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

TRUCON Code(s)

125/225, 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	12/31/2016	
Stream Name	RH TRU ATR Complex Legacy from Hot-Cell Cleanup				Activity Concentrations Decayed to CY	2016	

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	7.31E-02
Am-243	3.14E-04
Cm-244	2.45E-06
Cs-137	3.94E-01
Np-237	8.00E-06
Pu-238	3.40E-02
Pu-239	9.63E-03
Pu-240	1.45E-02
Pu-241	4.24E-01
Pu-242	3.93E-05
Sr-90	8.27E-01
Th-229	7.29E-14
Th-230	1.95E-10
Th-232	5.19E-19
U-233	2.38E-10
U-234	3.37E-06
U-235	4.97E-07
U-236	3.00E-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	12/31/2016	
Stream Name	CH TRU ATR Complex				Activity Concentrations Decayed to CY	2016	

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	2.21E-03
Np-237	4.76E-09
Pu-238	3.29E-05
Pu-239	1.48E-02
Pu-240	2.88E-03
Pu-241	5.32E-02
Th-229	1.71E-17
Th-230	2.85E-14
Th-232	1.35E-19
U-233	7.58E-14
U-234	7.67E-10
U-235	1.16E-10
U-236	6.83E-10

No Hazardous Waste Numbers Provided

TRUCON Code(s)
113/213

Waste Stream Description

This waste stream consists of solidified actinide solutions.

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	12/31/2016	
Stream Name	RH TRU INL ATR Complex ARMF Capsules			Activity Concentrations Decayed to CY		2016	

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	1.99E-01
Cs-137	3.15E-01
Np-237	7.81E-07
Sr-90	3.09E-01
Th-229	7.15E-15
Th-230	3.30E-13
U-233	2.03E-11
U-234	5.97E-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	12/31/2016	
Stream Name	MFC CH-MTRU Due to RCRA Metals			Activity Concentrations Decayed to CY		2016	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	0.4	7.1	7.5
Current Form Total	0.4	7.1	7.5

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	0.4	7.1	7.5
Final Form Total	0.4	7.1	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	42.74
Other Inorganic Materials	5.13
Cellulose	15.81
Rubber	0.00
Plastic	12.81
Cement	0.00
Solidified Inorganic Material	28.19
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	8.87E+00
Am-243	3.47E-14
Cs-137	1.34E-06
Np-237	4.40E-04
Pu-239	5.38E-01
Sr-90	1.44E-06
Th-229	2.12E-16
Th-230	9.42E-19
U-233	6.73E-11
U-234	2.84E-12
U-235	3.97E-06
U-238	2.64E-05

Haz. Waste No(s).

D006, D007, D008, F001, F002, F005

TRUCON Code(s)

125/225

Waste Stream Description

This waste stream is debris generated in the Casting Lab, Analytical Laboratory and Fuel Manufacturing Facility gloveboxes, and HFEF WCC HEPA filters. It consists of various combinations of miscellaneous discarded equipment and process material items.

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	12/31/2016	
Stream Name	RH TRU Hot Cell Waste				Activity Concentrations Decayed to CY	2016	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	0.2	84.9	85.1
Canister - (MFC) o/p 45-gal Drums	2.0	0.0	2.0
Canister - (SL-type)	0.9	0.0	0.9
Liner - RSWF	0.2	0.0	0.2
Current Form Total	3.3	84.9	88.1

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/o Liner	3.7	84.9	88.6
Final Form Total	3.7	84.9	88.6

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	58.02
Aluminum-based Metal/Alloys	60.75
Other Metal/Alloys	50.11
Other Inorganic Materials	1.97
Cellulose	16.96
Rubber	0.00
Plastic	24.11
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	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	3.67E+00
Am-243	3.23E-04
Cm-244	8.51E-02
Cs-137	4.98E+01
Np-237	3.71E-03
Pu-238	5.86E-01
Pu-239	9.98E-01
Pu-240	9.57E-02
Pu-241	8.82E-01
Pu-242	3.71E-04
Sr-90	8.09E+01
Th-229	6.97E-14
Th-230	2.02E-09
Th-232	2.73E-16
U-233	8.29E-09
U-234	2.20E-03
U-235	1.74E-05
U-236	5.53E-05
U-238	1.51E-05

No Hazardous Waste Numbers Provided

TRUCON Code(s)
325

Waste Stream Description

This waste stream is remote-handled (RH) transuranic debris waste generated in the hot-cells of the Fuel Conditioning Facility (FCF), Hot Fuel Examination Facility (HFEF), and Analytical Lab (AL).

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	12/31/2016			
Stream Name	MFC CH-TRU Waste	Activity Concentrations Decayed to CY				2016		

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	2.5	42.4	44.9
Current Form Total	2.6	42.4	45.0

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	2.7	42.4	45.1
Final Form Total	2.7	42.4	45.1

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	19.28
Aluminum-based Metal/Alloys	5.97
Other Metal/Alloys	5.41
Other Inorganic Materials	24.99
Cellulose	46.27
Rubber	1.22
Plastic	47.44
Cement	0.00
Solidified Inorganic Material	13.97
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	1.87E+00
Am-243	4.51E-04
Cm-244	4.14E-02
Cs-137	1.77E-02
Np-237	2.09E-03
Pu-238	3.30E+00
Pu-239	2.04E-01
Pu-240	2.86E-03
Pu-242	1.92E-06
Sr-90	1.73E-02
Th-229	1.00E-15
Th-230	5.37E-09
Th-232	2.24E-19
U-233	3.19E-10
U-234	5.84E-03
U-235	1.28E-06
U-236	4.55E-08
U-238	4.18E-06

No Hazardous Waste Numbers Provided

TRUCON Code(s)
125/225

Waste Stream Description

Miscellaneous process material debris waste.

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	12/31/2016	
Stream Name	RH MTRU Hot Cell Waste				Activity Concentrations Decayed to CY	2016	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	0.0	53.0	53.0
Canister - (MFC) o/p 45-gal Drums	1.3	0.0	1.3
Liner - RSWF	0.1	0.0	0.1
Current Form Total	1.4	53.0	54.5

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/o Liner	1.9	53.0	54.9
Final Form Total	1.9	53.0	54.9

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	30.38
Aluminum-based Metal/Alloys	4.10
Other Metal/Alloys	113.93
Other Inorganic Materials	23.65
Cellulose	71.19
Rubber	0.00
Plastic	70.57
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	2.08E+00
Cs-137	2.85E+02
Np-237	4.14E-04
Pu-238	9.28E-01
Pu-239	2.37E+00
Pu-240	2.65E-01
Pu-241	4.71E+00
Pu-242	1.51E-04
Sr-90	2.08E+02
Th-229	3.12E-10
Th-230	1.03E-07
Th-232	1.95E-14
U-233	1.78E-06
U-234	5.61E-03
U-235	2.52E-04
U-236	1.98E-04
U-238	2.53E-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	12/31/2016	
Stream Name	Irradiated TRU material waste			Activity Concentrations Decayed to CY		2016	

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	15.0	15.0
Final Form Total	0.0	15.0	15.0

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	89.61
Other Inorganic Materials	0.00
Cellulose	14.96
Rubber	0.00
Plastic	44.81
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	2.98E-03
Am-243	1.19E-05
Cs-137	5.82E+00
Np-237	1.70E-05
Pu-238	1.33E-01
Pu-239	1.08E-04
Pu-241	1.89E-02
Pu-242	1.96E-06
Sr-90	5.77E+00
Th-229	4.23E-06
Th-230	1.50E-09
Th-232	1.23E-15
U-233	1.08E-03
U-234	3.35E-05
U-235	4.13E-07
U-236	4.97E-06
U-238	1.98E-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-102**

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	12/31/2016	
Stream Name	Absorbed Liquids			Activity Concentrations Decayed to CY		2016	

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
83/85-gal drum	0.6	0.0	0.6
Bin - Misc	87.5	0.0	87.5
Box - Misc	15.9	0.0	15.9
Current Form Total	108.6	0.0	108.6

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	59.9	0.0	59.9
Final Form Total	59.9	0.0	59.9

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	2.91
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	57.09
Cellulose	0.00
Rubber	0.00
Plastic	1.55
Cement	0.00
Solidified Inorganic Material	31.42
Solidified Organic Material	275.87
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	4.58E-01
Am-243	4.06E-13
Cs-137	1.09E-03
Np-237	4.95E-05
Pu-238	9.64E-02
Pu-239	8.82E-01
Pu-240	2.52E-01
Pu-241	2.32E+00
Pu-242	2.77E-05
Sr-90	1.20E-03
Th-229	2.38E-17
Th-230	2.77E-11
Th-232	2.67E-06
U-233	7.56E-12
U-234	3.02E-05
U-235	8.30E-06
U-236	7.45E-10
U-238	6.80E-05

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

Waste Stream ID: **IN-AE-105**

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	12/31/2016	
Stream Name	Empty Bottles and Absorbent				Activity Concentrations Decayed to CY	2016	

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
83/85-gal drum	0.3	0.0	0.3
Bin - Misc	3.5	0.0	3.5
Current Form Total	4.2	0.0	4.2

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	2.30
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	81.14
Cellulose	0.00
Rubber	0.00
Plastic	15.16
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	4.56E-01
Am-243	8.42E-10
Cs-137	1.32E-04
Np-237	3.33E-04
Pu-238	5.77E-02
Pu-239	8.70E-01
Pu-240	3.25E-01
Pu-241	2.84E+00
Pu-242	8.62E-05
Sr-90	1.45E-04
Th-229	6.37E-14
Th-230	7.53E-13
Th-232	2.13E-05
U-233	1.45E-09
U-234	1.64E-07
U-235	8.57E-10
U-236	9.61E-09
U-238	1.34E-14

Haz. Waste No(s).

D005, D006, D007, D008, D009, D010, D011, D019, D027, D028, D029, D030, D037, F002, F004, F005
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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: **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	12/31/2016		
Stream Name	MFC Retrievable ANL-E RH TRU Containers - Stage 2			Activity Concentrations Decayed to CY	2016		

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum	45.6	0.0	45.6
Canister - (ANL-E)	0.7	0.0	0.7
Current Form Total	46.2	0.0	46.2

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/o Liner	88.0	0.0	88.0
Final Form Total	88.0	0.0	88.0

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	92.27
Aluminum-based Metal/Alloys	7.64
Other Metal/Alloys	6.44
Other Inorganic Materials	3.23
Cellulose	4.23
Rubber	1.96
Plastic	9.84
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	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	1.98E-03
Cm-244	1.27E-07
Cs-137	2.30E+02
Np-237	6.40E-11
Pu-238	5.88E-04
Pu-239	4.85E+00
Pu-240	2.54E+00
Pu-241	1.02E-02
Pu-242	5.49E-07
Sr-90	3.61E+02
Th-229	9.87E-16
Th-230	1.23E-11
Th-232	5.96E-08
U-233	1.12E-10
U-234	1.34E-05
U-235	4.60E-04
U-236	7.51E-09
U-238	6.25E-04

Haz. Waste No(s).

D004, D006, D007, D008, D009, D010, D011, D019, D028, D029, F002, F005
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TRUCON Code(s)

321, 322, 325

Waste Stream Description

The 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.

Comprehensive Inventory Database ver. 2.03 Data ver. D.16.01
NOTE: Actual numerical values have been rounded for presentation purposes

Waste Stream ID: **IN-BC-203**

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	12/31/2016			
Stream Name	Paper, Metal, Glass	Activity Concentrations Decayed to CY				2016		

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	5.8	0.0	5.8
Bin - Misc	21.0	0.0	21.0
Current Form Total	26.8	0.0	26.8

Final Form Volumes			
Container Type	Stored	Proj.	Total
100-gal Drum Dir Ld w/o Liner	7.6	0.0	7.6
Final Form Total	7.6	0.0	7.6

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	548.81
Aluminum-based Metal/Alloys	1.36
Other Metal/Alloys	4.82
Other Inorganic Materials	23.21
Cellulose	96.58
Rubber	10.38
Plastic	79.40
Cement	0.00
Solidified Inorganic Material	0.03
Solidified Organic Material	0.10
Soil	0.32
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	8.20E-01
Np-237	1.98E-05
Pu-238	1.81E-01
Pu-240	4.85E-01
Pu-241	3.55E+00
Pu-242	5.91E-05
Th-229	1.49E-14
Th-230	5.71E-09
Th-232	1.42E-18
U-233	1.70E-10
U-234	3.11E-04
U-235	9.01E-05
U-236	2.87E-08
U-238	6.38E-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-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	12/31/2016	
Stream Name	Special Setups Waste					Activity Concentrations Decayed to CY	2016

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
83/85-gal drum	31.9	0.0	31.9
Current Form Total	35.6	0.0	35.6

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	0.02
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	0.14
Rubber	0.00
Plastic	1.88
Cement	12.20
Solidified Inorganic Material	488.91
Solidified Organic Material	0.00
Soil	0.15
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	1.56E+00
Cm-244	6.66E-03
Cs-137	1.15E-08
Np-237	4.87E-05
Pu-238	9.17E-02
Pu-239	2.51E+00
Pu-240	5.61E-01
Pu-241	3.21E+00
Pu-242	5.70E-05
Sr-90	1.26E-08
Th-229	2.34E-17
Th-230	1.78E-11
Th-232	4.10E-21
U-233	7.44E-12
U-234	1.93E-05
U-235	4.43E-06
U-236	1.66E-09
U-238	7.21E-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-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	12/31/2016	
Stream Name	Solidified Plutonium Recovery Incinerator Waste				Activity Concentrations Decayed to CY	2016	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	31.2	0.0	31.2
83/85-gal drum	2.9	0.0	2.9
Current Form Total	34.1	0.0	34.1

Final Form Volumes			
Container Type	Stored	Proj.	Total
SWB w/ 4 - 55-gal Drums w/ Liners	85.1	0.0	85.1
Final Form Total	85.1	0.0	85.1

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	6.85
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.51
Other Inorganic Materials	0.00
Cellulose	0.05
Rubber	0.03
Plastic	9.52
Cement	2.19
Solidified Inorganic Material	140.55
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	1.56E+00
Np-237	4.90E-04
Pu-238	2.49E-01
Pu-239	6.70E+00
Pu-240	1.55E+00
Pu-241	9.12E+00
Pu-242	1.31E-04
Th-229	3.75E-13
Th-230	1.31E-11
Th-232	4.53E-18
U-233	4.26E-09
U-234	1.42E-06
U-235	1.32E-08
U-236	9.18E-08
U-238	4.05E-14

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-BN-501**

Appendix A

Waste Profile Report

Site	Idaho National Laboratory	Summary Category	S4000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Other/Multiple Sources	Waste Matrix Code Group	Contaminated Soil/Debris Waste		Inventory Date	12/31/2016	
Stream Name	AMWTP PCB Soil			Activity Concentrations Decayed to CY		2016	

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
83/85-gal drum	0.3	0.0	0.3
Current Form Total	1.4	0.0	1.4

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld 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	14.50
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	1.12
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	4.46
Soil	357.73
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	1.93E-02
Am-243	5.25E-07
Cs-137	2.98E-06
Np-237	4.75E-07
Pu-238	1.03E-04
Pu-239	3.79E-03
Pu-240	8.41E-04
Pu-241	5.27E-03
Pu-242	1.11E-07
Sr-90	3.28E-06
Th-229	9.02E-17
Th-230	6.15E-12
Th-232	6.14E-22
U-233	2.05E-12
U-234	6.69E-07
U-235	2.16E-07
U-236	2.49E-11
U-238	1.72E-17

Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D022, D028, D029

No TRUCON Codes Provided

Waste Stream Description

Soil generated during retrieval and/or spills/cleanup activities. During the retrieval process soil may be generated from the removal of overburden and/or interstitial soil between containers of waste or as a result of spill cleanup or packaged soil from a breached soil waste container during segregation of soils identified during sorting in the boxlines. Waste may include repackaged or intact containers of historically stored soils with insufficient AK information to assign a legacy IDC. The waste may also contain or be commingled with homogeneous solids or debris waste.

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	12/31/2016	
Stream Name	Supercompacted Debris Waste			Activity Concentrations Decayed to CY		2016	

Waste Volume Detail (m³)

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

Final Form Volumes			
Container Type	Stored	Proj.	Total
100-gal Drum Dir Ld w/o 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	360.27
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	37.73
Rubber	3.73
Plastic	332.57
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	113.72
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	1.67E-01
Np-237	2.48E-06
Pu-238	2.25E-02
Pu-239	6.39E-01
Pu-240	1.49E-01
Pu-241	8.41E-01
Pu-242	1.26E-05
Th-229	1.19E-18
Th-230	2.92E-15
Th-232	1.09E-21
U-233	3.79E-13
U-234	6.34E-09
U-235	6.29E-11
U-236	4.42E-10
U-238	1.96E-16

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 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	12/31/2016		
Stream Name	Supercompacted Debris Waste				Activity Concentrations Decayed to CY	2016	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
100-gal Drum Dir Ld w/o Liner	17.8	0.0	17.8
Current Form Total	17.8	0.0	17.8

Final Form Volumes			
Container Type	Stored	Proj.	Total
100-gal Drum Dir Ld w/o Liner	17.8	0.0	17.8
Final Form Total	17.8	0.0	17.8

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	556.42
Aluminum-based Metal/Alloys	9.61
Other Metal/Alloys	4.55
Other Inorganic Materials	42.72
Cellulose	110.11
Rubber	11.99
Plastic	85.24
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	2.53
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	1.30E+01
Am-243	3.07E-13
Cs-137	5.13E-05
Np-237	1.86E-04
Pu-238	1.88E-01
Pu-239	1.45E+00
Pu-240	3.52E-01
Pu-241	1.88E+00
Pu-242	4.79E-05
Sr-90	5.62E-05
Th-229	3.06E-13
Th-230	2.40E-10
Th-232	2.31E-18
U-233	2.35E-09
U-234	9.51E-06
U-235	1.74E-06
U-236	3.13E-08
U-238	2.64E-05

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 debris waste stream from supercompaction of 55-gallon containers.

Waste Stream ID: **IN-BN510.2**

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	12/31/2016	
Stream Name	Supercompacted Debris Waste			Activity Concentrations Decayed to CY		2016	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
100-gal Drum Dir Ld w/o Liner	12.5	0.0	12.5
Current Form Total	12.5	0.0	12.5

Final Form Volumes			
Container Type	Stored	Proj.	Total
100-gal Drum Dir Ld w/o Liner	12.5	0.0	12.5
Final Form Total	12.5	0.0	12.5

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	437.54
Aluminum-based Metal/Alloys	6.49
Other Metal/Alloys	17.68
Other Inorganic Materials	45.45
Cellulose	121.41
Rubber	3.21
Plastic	144.69
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.62
Soil	0.71
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	9.65E+01
Am-243	8.39E-07
Cs-137	4.10E-04
Np-237	2.86E-04
Pu-238	4.60E-01
Pu-239	2.92E+00
Pu-240	1.27E+00
Pu-241	1.42E+01
Pu-242	2.41E-04
Sr-90	4.49E-04
Th-229	1.87E-13
Th-230	1.45E-09
Th-232	3.71E-18
U-233	2.22E-09
U-234	8.03E-05
U-235	1.36E-04
U-236	7.51E-08
U-238	2.21E-05

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)
121/221

Waste Stream Description

BN510.2 is a 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	12/31/2016	
Stream Name	Supercompacted Debris Waste			Activity Concentrations Decayed to CY			
				2016			

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
100-gal Drum Dir Ld w/o Liner	382.4	0.0	382.4
Current Form Total	382.4	0.0	382.4

Final Form Volumes			
Container Type	Stored	Proj.	Total
100-gal Drum Dir Ld w/o Liner	382.4	0.0	382.4
Final Form Total	382.4	0.0	382.4

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	515.63
Aluminum-based Metal/Alloys	4.12
Other Metal/Alloys	6.32
Other Inorganic Materials	29.66
Cellulose	111.19
Rubber	8.07
Plastic	95.26
Cement	0.00
Solidified Inorganic Material	0.13
Solidified Organic Material	0.01
Soil	0.13
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	3.11E+01
Am-243	6.38E-08
Cm-244	4.89E-03
Cs-137	1.40E-04
Np-237	4.85E-05
Pu-238	7.87E+00
Pu-239	9.55E-01
Pu-240	2.39E-01
Pu-241	1.35E+00
Pu-242	3.74E-05
Sr-90	1.53E-04
Th-229	6.12E-09
Th-230	6.50E-10
Th-232	6.99E-19
U-233	3.48E-05
U-234	5.77E-05
U-235	1.08E-05
U-236	1.42E-08
U-238	1.82E-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
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TRUCON Code(s)

121/221

Waste Stream Description

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

Waste Stream ID: **IN-BN510.4**

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	12/31/2016	
Stream Name	Supercompacted Debris Waste			Activity Concentrations Decayed to CY		2016	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
100-gal Drum Dir Ld w/o Liner	1311.0	0.0	1311.0
110-gal Drum Dir Ld w/o Liner	32.8	0.0	32.8
55-gal Drum Dir Ld w/ Liner	226.7	0.0	226.7
83/85-gal drum	2833.3	0.0	2833.3
Bin - Misc	686.0	0.0	686.0
Box - Misc	2076.4	0.0	2076.4
SWB Dir Ld w/ Liner	7.6	0.0	7.6
Current Form Total	7173.6	0.0	7173.6

Final Form Volumes			
Container Type	Stored	Proj.	Total
100-gal Drum Dir Ld w/o Liner	2646.6	0.0	2646.6
SWB Dir Ld w/ Liner	24.6	0.0	24.6
Final Form Total	2671.1	0.0	2671.1

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	545.63
Aluminum-based Metal/Alloys	1.35
Other Metal/Alloys	4.80
Other Inorganic Materials	23.08
Cellulose	96.02
Rubber	10.32
Plastic	78.94
Cement	0.00
Solidified Inorganic Material	0.03
Solidified Organic Material	0.10
Soil	0.31
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.01
Packaging Material, Rubber	0.31
Packaging Material, Steel	114.09
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	2.48E+01
Am-243	2.07E-06
Cm-244	3.94E-04
Cs-137	1.57E-04
Np-237	2.44E-05
Pu-238	8.85E-01
Pu-239	2.40E+00
Pu-240	5.57E-01
Pu-241	3.08E+00
Pu-242	5.82E-05
Sr-90	1.73E-04
Th-229	3.25E-10
Th-230	2.62E-11
Th-232	3.50E-07
U-233	3.69E-05
U-234	2.86E-05
U-235	1.64E-05
U-236	1.65E-09
U-238	2.66E-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

TRUCON Code(s)

121/221

Waste Stream Description

BN510.4 waste stream is debris waste from multiple debris waste feedstock sources that has been supercompacted into pucks and packaged into 100-gallon drums.

Waste Stream ID: **IN-BN-522**

Appendix A

Waste Profile Report

Site	Idaho National Laboratory	Summary Category	S4000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Other/Multiple Sources	Waste Matrix Code Group	Contaminated Soil/Debris Waste		Inventory Date	12/31/2016	
Stream Name	AMWTP Non-PCB Soil			Activity Concentrations Decayed to CY		2016	

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
83/85-gal drum	14.8	0.0	14.8
Box - Misc	72.9	0.0	72.9
Current Form Total	89.6	0.0	89.6

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	61.2	0.0	61.2
Final Form Total	61.2	0.0	61.2

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	15.88
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	3.19
Cellulose	2.11
Rubber	0.00
Plastic	1.73
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.35
Soil	737.03
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	4.31E-02
Cs-137	8.29E-08
Np-237	4.85E-07
Pu-238	6.01E-03
Pu-239	1.18E-01
Pu-240	2.63E-02
Pu-241	1.72E-01
Pu-242	3.42E-06
Sr-90	9.12E-08
Th-229	2.33E-19
Th-230	2.85E-12
Th-232	1.08E-07
U-233	7.39E-14
U-234	3.11E-06
U-235	4.18E-07
U-236	7.77E-11
U-238	2.91E-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

Soil generated during the retrieval and/or spill/cleanup activities that are not PCB contaminated. During the retrieval process soil may be generated from the removal of overburden and/or interstitial soil between containers of waste or as a result of spill cleanup or packaged soil from a breached soil waste container during segregation of soils identified during sorting in the boxlines. Waste may include repackaged or intact containers of historically stored soils with insufficient AK information to assign a legacy IDC. The waste may also contain or be commingled with homogeneous solids or debris waste.

Waste Stream ID: **IN-BN-523**

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	12/31/2016	
Stream Name	Pad 1 Cells 1 and 2 PCB Debris			Activity Concentrations Decayed to CY		2016	

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
100-gal Drum Dir Ld w/ Liner	1.1	0.0	1.1
Final Form Total	1.1	0.0	1.1

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	548.81
Aluminum-based Metal/Alloys	1.36
Other Metal/Alloys	4.82
Other Inorganic Materials	23.21
Cellulose	96.58
Rubber	10.38
Plastic	79.40
Cement	0.00
Solidified Inorganic Material	0.03
Solidified Organic Material	0.10
Soil	0.32
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	20.34
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	6.07E-02
Np-237	1.22E-06
Pu-238	5.97E-03
Pu-239	2.21E-01
Pu-240	4.92E-02
Pu-241	3.01E-01
Pu-242	6.44E-06
Th-229	2.30E-16
Th-230	7.78E-14
Th-232	3.59E-20
U-233	5.25E-12
U-234	1.69E-08
U-235	2.17E-10
U-236	1.46E-09
U-238	9.99E-16

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

**No TRUCON
Codes Provided**

Waste Stream Description

Waste generated during repackaging of loose or breached containers of debris waste from Cells 1 and 2 of PAD 1 that is PCB contaminated or commingled with PCB waste. Waste includes repackaged containers of debris waste with insufficient AK information to assign a legacy IDC. Waste stored in Cells 1 and 2 of Pad was generated from RF or INL.

Waste Stream ID: **IN-BN-525**

Appendix A

Waste Profile Report

Site	Idaho 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	12/31/2016		
Stream Name	P-/U-listed Lab Non-PCB Debris Waste			Activity Concentrations Decayed to CY	2016		

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
100-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	1.03
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.06
Other Inorganic Materials	51.77
Cellulose	8.27
Rubber	0.00
Plastic	9.34
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	20.34
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	9.44E-02
Cs-137	5.02E-06
Np-237	3.56E-06
Pu-238	4.32E-02
Pu-239	6.70E-01
Pu-240	1.49E-01
Pu-241	1.00E+00
Pu-242	1.04E-05
Sr-90	5.48E-06
Th-229	6.03E-15
Th-230	5.13E-12
Th-232	9.81E-19
U-233	4.59E-11
U-234	3.70E-07
U-235	1.98E-09
U-236	1.33E-08
U-238	4.85E-15

Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D021, D022, D026, D027, D028, D029, D030, D032, D033, D034, D035, D036, D037, D038, D039, D040, D043, F001, F002, F004, F005, F006, F007, F009, U151

**No TRUCON
Codes Provided**

Waste Stream Description

Secondary debris waste from analyzing TRU waste samples that are characterized with P- and/or U listed HWNs that are not contaminated with PCBs. This waste was generated at the ACL when operated by AMWTP from 6/2011 thru 9/2014.

Waste Stream ID: **IN-BN-527**

Appendix A

Waste Profile Report

Site	Idaho 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	12/31/2016		
Stream Name	Lab Non-PCB Debris Waste (not P/U listed)			Activity Concentrations Decayed to CY	2016		

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
83/85-gal drum	0.3	0.0	0.3
Current Form Total	2.8	0.0	2.8

Final Form Volumes			
Container Type	Stored	Proj.	Total
100-gal Drum Dir Ld w/ Liner	1.1	0.0	1.1
Final Form Total	1.1	0.0	1.1

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	4.81
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	45.69
Cellulose	2.72
Rubber	0.00
Plastic	12.19
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	20.34
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	5.90E-01
Cs-137	1.68E-03
Np-237	2.04E-06
Pu-238	2.29E-04
Pu-239	8.37E-03
Pu-240	1.86E-03
Pu-241	1.23E-02
Pu-242	2.44E-07
Sr-90	1.84E-03
Th-229	1.36E-15
Th-230	1.20E-14
Th-232	5.43E-21
U-233	1.61E-11
U-234	1.30E-09
U-235	1.65E-11
U-236	1.10E-10
U-238	7.57E-17

Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D021, D022, D026, D027, D028, D029, D030, D032, D033, D034, D035, D036, D037, D038, D039, D040, D043, F001, F002, F004, F005, F006, F007, F009, U151

**No TRUCON
Codes Provided**

Waste Stream Description

Secondary waste from analyzing TRU waste samples. This waste includes debris waste that is not contaminated with PCBs. The waste may contain <50% by volume homogeneous solids including absorbed/solidified laboratory extraction liquids, sample residues and returned unused samples. This waste was generated at the ACL when operated by AMWTP from 6/2011 thru 9/2014.

Waste Stream ID: **IN-BN-529**

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	12/31/2016	
Stream Name	TRU non-PCB Liquids			Activity Concentrations Decayed to CY		2016	

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	1.18
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	14.80
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	11.49
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	6.28E-06
Np-237	6.07E-12
Pu-238	2.45E-02
Pu-239	3.99E-05
Pu-240	2.73E-05
Pu-241	2.15E-05
Pu-242	3.15E-08
Th-229	3.47E-21
Th-230	2.91E-12
Th-232	1.79E-22
U-233	3.96E-17
U-234	2.10E-07
U-235	1.18E-13
U-236	2.42E-12
U-238	1.47E-17

Haz. Waste No(s).

D009, F001, F002, F004, F005, F006, F007, F009

No TRUCON Codes Provided

Waste Stream Description

TRU liquids segregated or collected from stored waste generated during retrieval, characterization, or treatment operations (e.g., removal of small containers of prohibited liquid or collection of liquids during retrieval) that may contain non-PCB waste.

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	12/31/2016	
Stream Name	AMWTP WMF-676 PCB Contaminated Debris				Activity Concentrations Decayed to CY	2016	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
100-gal Drum Dir Ld w/ Liner	0.4	0.0	0.4
110-gal Drum Dir Ld w/o Liner	0.4	0.0	0.4
55-gal Drum Dir Ld w/ Liner	66.1	0.0	66.1
83/85-gal drum	67.9	0.0	67.9
Box - Misc	149.0	0.0	149.0
Current Form Total	283.9	0.0	283.9

Final Form Volumes			
Container Type	Stored	Proj.	Total
100-gal Drum Dir Ld w/ Liner	121.7	0.0	121.7
Final Form Total	121.7	0.0	121.7

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	212.88
Aluminum-based Metal/Alloys	0.23
Other Metal/Alloys	36.46
Other Inorganic Materials	7.54
Cellulose	19.42
Rubber	1.67
Plastic	26.64
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.96
Soil	0.90
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	20.34
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	8.96E-02
Am-243	1.73E-06
Cs-137	1.16E-04
Np-237	1.24E-06
Pu-238	1.53E-02
Pu-239	2.60E-01
Pu-240	5.94E-02
Pu-241	2.78E-01
Pu-242	5.09E-06
Sr-90	1.28E-04
Th-229	5.96E-19
Th-230	4.85E-13
Th-232	4.34E-22
U-233	1.89E-13
U-234	5.30E-07
U-235	5.76E-08
U-236	1.76E-10
U-238	5.36E-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-BN650**

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	12/31/2016	
Stream Name	AMWTP Sludge Repackaging Project (SRP) Combined Sludge Waste				Activity Concentrations Decayed to CY	2016	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
110-gal Drum Dir Ld w/o Liner	32.3	0.0	32.3
55-gal Drum Dir Ld w/ Liner	1596.6	0.0	1596.6
83/85-gal drum	710.7	0.0	710.7
Bin - Misc	73.5	0.0	73.5
Box - Misc	155.3	0.0	155.3
Current Form Total	2568.4	0.0	2568.4

Final Form Volumes			
Container Type	Stored	Proj.	Total
SWB w/ 4 - 55-gal Drums w/ Liners	7267.1	0.0	7267.1
Final Form Total	7267.1	0.0	7267.1

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	1.95
Aluminum-based Metal/Alloys	0.06
Other Metal/Alloys	1.95
Other Inorganic Materials	8.57
Cellulose	0.06
Rubber	0.06
Plastic	2.72
Cement	0.00
Solidified Inorganic Material	274.57
Solidified Organic Material	77.88
Soil	0.06
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	1.81E+00
Am-243	8.14E-07
Cm-244	9.44E-05
Cs-137	6.11E-06
Np-237	2.49E-05
Pu-238	7.27E-02
Pu-239	3.21E-01
Pu-240	7.58E-02
Pu-241	6.30E-01
Pu-242	1.35E-05
Sr-90	6.71E-06
Th-229	3.88E-10
Th-230	3.20E-11
Th-232	1.09E-08
U-233	4.42E-05
U-234	3.48E-05
U-235	4.06E-06
U-236	2.24E-10
U-238	3.77E-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 wastes at the SRP.

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	12/31/2016	
Stream Name	Solidified Acid/Caustic Waste			Activity Concentrations Decayed to CY		2016	

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
83/85-gal drum	5.8	0.0	5.8
Current Form Total	11.4	0.0	11.4

Final Form Volumes			
Container Type	Stored	Proj.	Total
SWB w/ 4 - 55-gal Drums w/ Liners	22.7	0.0	22.7
Final Form Total	22.7	0.0	22.7

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	0.03
Other Inorganic Materials	0.29
Cellulose	1.43
Rubber	0.13
Plastic	1.18
Cement	0.00
Solidified Inorganic Material	217.02
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	8.05E-02
Cs-137	5.57E-08
Np-237	8.84E-06
Pu-238	7.40E+00
Pu-239	1.18E-02
Pu-240	7.70E-03
Pu-241	3.05E-02
Pu-242	8.67E-06
Sr-90	6.12E-08
Th-229	4.25E-18
Th-230	1.14E-12
Th-232	5.62E-23
U-233	1.35E-12
U-234	2.29E-06
U-235	6.80E-09
U-236	2.28E-11
U-238	2.89E-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	12/31/2016	
Stream Name	Cemented Sludge			Activity Concentrations Decayed to CY		2016	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	11.0	0.0	11.0
83/85-gal drum	31.6	0.0	31.6
Current Form Total	42.6	0.0	42.6

Final Form Volumes			
Container Type	Stored	Proj.	Total
SWB w/ 4 - 55-gal Drums w/ Liners	75.6	0.0	75.6
Final Form Total	75.6	0.0	75.6

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	0.01
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	0.01
Cement	0.00
Solidified Inorganic Material	509.08
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	4.93E-04
Cs-137	8.98E-06
Np-237	7.02E-07
Pu-238	1.03E-01
Pu-239	1.60E-04
Pu-240	1.09E-04
Pu-241	1.20E-04
Pu-242	1.25E-07
Sr-90	9.85E-06
Th-229	1.34E-16
Th-230	2.58E-12
Th-232	7.97E-23
U-233	3.06E-12
U-234	4.27E-07
U-235	1.96E-08
U-236	3.23E-12
U-238	1.94E-17

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-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	12/31/2016	
Stream Name	First/Second Stage Sludge					Activity Concentrations Decayed to CY	2016

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	39.9	0.0	39.9
83/85-gal drum	325.9	0.0	325.9
SWB w/ 4 - 55-gal Drums w/ Liners	7.6	0.0	7.6
Current Form Total	373.4	0.0	373.4

Final Form Volumes			
Container Type	Stored	Proj.	Total
SWB w/ 4 - 55-gal Drums w/ Liners	608.6	0.0	608.6
Final Form Total	608.6	0.0	608.6

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	0.78
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.43
Other Inorganic Materials	0.00
Cellulose	0.07
Rubber	0.03
Plastic	0.62
Cement	5.05
Solidified Inorganic Material	413.80
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	9.82E+00
Am-243	2.94E-08
Cs-137	1.75E-08
Np-237	1.28E-04
Pu-238	5.22E-02
Pu-239	7.64E-01
Pu-240	1.92E-01
Pu-241	2.02E+00
Pu-242	5.66E-05
Sr-90	1.93E-08
Th-229	1.08E-09
Th-230	2.67E-11
Th-232	1.40E-21
U-233	1.23E-04
U-234	2.90E-05
U-235	6.07E-06
U-236	5.67E-10
U-238	1.60E-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	12/31/2016	
Stream Name	Building 374 Sludge			Activity Concentrations Decayed to CY		2016	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	32.9	0.0	32.9
83/85-gal drum	5.5	0.0	5.5
Current Form Total	38.3	0.0	38.3

Final Form Volumes			
Container Type	Stored	Proj.	Total
SWB w/ 4 - 55-gal Drums w/ Liners	88.8	0.0	88.8
Final Form Total	88.8	0.0	88.8

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	0.02
Plastic	1.96
Cement	21.97
Solidified Inorganic Material	376.80
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	6.39E-02
Cs-137	1.17E-09
Np-237	6.28E-07
Pu-238	2.03E-03
Pu-239	4.73E-02
Pu-240	1.02E-02
Pu-241	9.15E-02
Pu-242	1.55E-06
Sr-90	1.29E-09
Th-229	3.01E-19
Th-230	1.13E-09
Th-232	7.46E-23
U-233	9.58E-14
U-234	1.23E-03
U-235	1.15E-04
U-236	3.02E-11
U-238	1.48E-02

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-BW-515**

Appendix A

Waste Profile Report

Site	Idaho National Laboratory	Summary Category	S5000	Defense Determination	Pending Determination	Handling	CH
Source Cat.	Remediation/D&D Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2016	
Stream Name	Compressible and/or Combustible				Activity Concentrations Decayed to CY	2016	

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
Box - Misc	3.2	0.0	3.2
Current Form Total	5.5	0.0	5.5

Final Form Volumes			
Container Type	Stored	Proj.	Total
100-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	548.81
Aluminum-based Metal/Alloys	1.36
Other Metal/Alloys	4.82
Other Inorganic Materials	23.21
Cellulose	96.58
Rubber	10.38
Plastic	79.40
Cement	0.00
Solidified Inorganic Material	0.03
Solidified Organic Material	0.10
Soil	0.32
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	20.34
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	9.09E-01
Cs-137	2.91E-07
Np-237	1.24E-05
Pu-238	1.84E-01
Pu-239	1.16E+00
Pu-240	5.22E-01
Pu-241	5.82E+00
Pu-242	9.25E-05
Sr-90	3.21E-07
Th-229	5.95E-18
Th-230	3.85E-11
Th-232	3.81E-21
U-233	1.89E-12
U-234	4.19E-05
U-235	1.33E-05
U-236	1.54E-09
U-238	7.63E-06

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

Waste Stream Description

This waste consists of organic materials including various plastics, paper products, cloth, strippable latex paint, adhesive tape and small amounts of wood.

Waste Stream ID: **IN-BW-516**

Appendix A

Waste Profile Report

Site	Idaho National Laboratory	Summary Category	S5000	Defense Determination	Pending Determination	Handling	CH
Source Cat.	Remediation/D&D Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2016	
Stream Name	Solid Dry Wastes			Activity Concentrations Decayed to CY		2016	

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
Current Form Total	1.2	0.0	1.2

Final Form Volumes			
Container Type	Stored	Proj.	Total
100-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	548.81
Aluminum-based Metal/Alloys	1.36
Other Metal/Alloys	4.82
Other Inorganic Materials	23.21
Cellulose	96.58
Rubber	10.38
Plastic	79.40
Cement	0.00
Solidified Inorganic Material	0.03
Solidified Organic Material	0.10
Soil	0.32
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	20.34
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	1.92E-01
Cs-137	1.76E-07
Np-237	4.22E-05
Pu-238	2.36E-02
Pu-239	5.95E-01
Pu-240	1.32E-01
Pu-241	9.50E-01
Pu-242	1.64E-05
Sr-90	1.93E-07
Th-229	2.03E-17
Th-230	1.52E-11
Th-232	9.63E-22
U-233	6.44E-12
U-234	1.65E-05
U-235	5.12E-06
U-236	3.90E-10
U-238	1.12E-05

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

Waste Stream Description

This waste is composed of various component items of steel, aluminum, and other nonmetallic materials.

Waste Stream ID: **IN-BW-517**

Appendix A

Waste Profile Report

Site	Idaho National Laboratory	Summary Category	S5000	Defense Determination	Pending Determination	Handling	CH
Source Cat.	Remediation/D&D Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2016	
Stream Name	Heavy Materials				Activity Concentrations Decayed to CY	2016	

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
100-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	548.81
Aluminum-based Metal/Alloys	1.36
Other Metal/Alloys	4.82
Other Inorganic Materials	23.21
Cellulose	96.58
Rubber	10.38
Plastic	79.40
Cement	0.00
Solidified Inorganic Material	0.03
Solidified Organic Material	0.10
Soil	0.32
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	20.34
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	7.00E-02
Np-237	1.29E-06
Pu-238	6.20E-03
Pu-239	1.10E-01
Pu-240	3.33E-02
Pu-241	2.78E-01
Pu-242	4.42E-06
Th-229	6.18E-19
Th-230	5.66E-12
Th-232	2.43E-22
U-233	1.97E-13
U-234	6.15E-06
U-235	1.99E-06
U-236	9.86E-11
U-238	6.85E-17

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

Waste Stream Description

This waste is composed of various component items of steel, aluminum, and other nonmetallic materials. Included are electrical devices, framed motor, transformer and a small lathe.

Waste Stream ID: **IN-IC-605**

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	12/31/2016	
Stream Name	CWI CH Debris from Repackaging AMWTP RH Debris - Non-RPT-TRUW-83 IDCs				Activity Concentrations Decayed to CY	2016	

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	76.39
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	215.54
Cellulose	175.44
Rubber	0.00
Plastic	5.46
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	6.09E-01
Cs-137	1.11E-03
Np-237	4.76E-06
Sr-90	1.21E-03
Th-229	3.44E-15
U-233	3.97E-11

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

Waste Stream Description

This waste stream consists of drums of debris waste that were returned to the AMWTP from the Idaho Nuclear Technology and Engineering Center (INTEC) after characterization. The drums were opened to determine if contents were contact-handled (CH) or remote-handled (RH), remediated WIPP-prohibited items if necessary and finally repackaged in the appropriate configuration for RH or CH waste. The CH portion of this waste was returned to the AMWTP for further characterization and shipment to WIPP.

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	12/31/2016	
Stream Name	RH TRU Debris Waste from ANL-E stored at INL				Activity Concentrations Decayed to CY	2016	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum	2.5	0.0	2.5
Current Form Total	2.5	0.0	2.5

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/o 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	120.19
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	11.15
Other Inorganic Materials	5.25
Cellulose	2.84
Rubber	0.00
Plastic	5.14
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	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	4.81E-01
U-235	1.42E-09

Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D019, D027, D028, D029, D030, D037, F002, F004, F005
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TRUCON Code(s)

321, 325

Waste Stream Description

This waste stream consists of twelve 55 gallon drums generated from repackaging 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	12/31/2016	
Stream Name	RH Laboratory Waste from INL				Activity Concentrations Decayed to CY	2016	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-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	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	59.58
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	5.24
Rubber	0.22
Plastic	15.98
Cement	0.00
Solidified Inorganic Material	11.54
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	5.35E+00
Cs-137	3.52E-01
Np-237	3.47E-06
Pu-238	5.24E-01
Pu-239	2.82E+01
Pu-240	5.93E+00
Pu-242	6.51E-02
Sr-90	9.20E-02
Th-229	1.17E-10
Th-230	1.25E-09
Th-232	1.73E-17
U-233	6.63E-07
U-234	6.96E-05
U-235	1.15E-06
U-236	3.51E-07
U-238	2.23E-08

Haz. Waste No(s).

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

TRUCON Code(s)

327

Waste Stream Description

This waste stream consists of three drums that contains one, one gallon plastic 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	12/31/2016	
Stream Name	Solidified Waste Sludge from Bettis Atomic Power Lab.				Activity Concentrations Decayed to CY	2016	

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	166.67
Aluminum-based Metal/Alloys	25.64
Other Metal/Alloys	0.00
Other Inorganic Materials	0.80
Cellulose	3.54
Rubber	1.50
Plastic	7.34
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	1.22E-02
Cs-137	9.59E+00
Np-237	7.92E-09
Pu-238	2.93E-01
Pu-239	1.59E-01
Pu-240	3.35E-03
Pu-242	5.76E-04
Sr-90	1.57E+01
Th-229	3.28E-07
Th-230	2.98E-08
Th-232	9.80E-21
U-233	1.86E-03
U-234	1.62E-03
U-235	3.66E-05
U-236	1.99E-10
U-238	2.53E-05

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 canisters (6 ft. tall x 12 in dia.). The HFEF-5 canisters were sent to RWMC for interim storage in 1988. The HFEF canisters were 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	12/31/2016		
Stream Name	RH-TRU Debris Waste From Experimental Breeder Reactor			Activity Concentrations Decayed to CY	2016		

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum	4.2	0.0	4.2
Current Form Total	4.2	0.0	4.2

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	114.70
Aluminum-based Metal/Alloys	13.75
Other Metal/Alloys	817.31
Other Inorganic Materials	0.00
Cellulose	0.46
Rubber	0.46
Plastic	10.26
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)
Am-241	1.26E-06
Cs-137	3.00E+01
Np-237	8.14E-13
Pu-238	1.76E-04
Pu-239	3.36E+00
Pu-240	1.22E-03
Pu-241	3.85E-06
Pu-242	5.95E-14
Sr-90	2.77E+00
Th-229	3.23E-12
Th-230	7.88E-10
Th-232	3.57E-21
U-233	1.84E-08
U-234	4.36E-05
U-235	1.33E-02
U-236	7.24E-11
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-S3000-RP**

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 Organics		Inventory Date	12/31/2016	
Stream Name	Sodium contaminated RH TRU Waste from Materials and Fuels Complex at INL.				Activity Concentrations Decayed to CY	2016	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum	7.3	0.0	7.3
Current Form Total	7.3	0.0	7.3

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	50.22
Aluminum-based Metal/Alloys	0.74
Other Metal/Alloys	13.74
Other Inorganic Materials	1.33
Cellulose	0.74
Rubber	0.44
Plastic	0.74
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	79.75
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	4.06E-04
Cs-137	6.22E+01
Np-237	2.83E-06
Pu-238	1.25E-02
Pu-239	9.26E-01
Pu-240	4.85E-01
Sr-90	5.92E+01
Th-229	9.95E-15
Th-230	2.76E-12
Th-232	6.04E-18
U-233	5.23E-11
U-234	1.49E-07
U-235	7.48E-05
U-236	5.93E-08
U-238	5.92E-04

Haz. Waste No(s).

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

TRUCON Code(s)

321

Waste Stream Description

This waste stream consists of 35 drums of treated sodium contaminated waste from Materials and Fuels complex

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	12/31/2016	
Stream Name	Sodium contaminated RH TRU Waste from Materials and Fuels Complex at INL.				Activity Concentrations Decayed to CY	2016	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum	14.8	0.0	14.8
HFEF-5 RH canister	0.1	0.0	0.1
Current Form Total	14.9	0.0	14.9

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/o Liner	19.3	0.0	19.3
Final Form Total	19.3	0.0	19.3

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	207.56
Aluminum-based Metal/Alloys	3.29
Other Metal/Alloys	56.01
Other Inorganic Materials	6.59
Cellulose	3.29
Rubber	3.29
Plastic	3.29
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	49.42
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	3.14E-04
Cs-137	4.95E+01
Np-237	2.19E-06
Pu-238	9.65E-03
Pu-239	2.94E+00
Pu-240	1.48E+00
Sr-90	4.58E+01
Th-229	7.71E-15
Th-230	2.14E-12
Th-232	1.75E-17
U-233	4.05E-11
U-234	1.16E-07
U-235	2.69E-04
U-236	1.76E-07
U-238	4.74E-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 of 1 HFEF canister that contains sodium contaminated waste and, and 71 55-gallon drums of treated waste. .

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	12/31/2016	
Stream Name	RH-TRU Debris Waste From Materials and Fuels Complex Hot Fuel Examination Facility at the INL.				Activity Concentrations Decayed to CY	2016	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum	20.4	0.0	20.4
Current Form Total	20.4	0.0	20.4

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/o Liner	20.6	0.0	20.6
Final Form Total	20.6	0.0	20.6

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	131.44
Aluminum-based Metal/Alloys	0.96
Other Metal/Alloys	2.88
Other Inorganic Materials	11.49
Cellulose	12.46
Rubber	9.60
Plastic	25.01
Cement	0.00
Solidified Inorganic Material	0.40
Solidified Organic Material	0.96
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	8.72E-04
Cm-244	9.91E-03
Cs-137	8.67E+01
Np-237	7.92E-06
Pu-238	6.99E-02
Pu-239	2.44E-01
Pu-240	4.63E-02
Pu-241	1.87E-02
Pu-242	7.53E-07
Sr-90	9.35E+00
Th-229	1.54E-10
Th-230	7.97E-11
Th-232	2.14E-06
U-233	1.75E-05
U-234	8.67E-05
U-235	5.39E-05
U-236	2.67E-06
U-238	8.60E-05

Haz. Waste No(s).

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

TRUCON Code(s)

321, 322, 325

Waste Stream Description

This waste stream consists of 98 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.

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	12/31/2016		
Stream Name	RH-TRU Waste From Materials and Fuels Complex at the INL.			Activity Concentrations Decayed to CY	2016		

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	91.65
Aluminum-based Metal/Alloys	1.07
Other Metal/Alloys	0.21
Other Inorganic Materials	0.21
Cellulose	3.08
Rubber	0.26
Plastic	9.62
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	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	7.81E-02
Cs-137	1.35E+01
Np-237	2.53E-08
Pu-238	2.44E-02
Pu-239	1.38E-01
Pu-240	3.53E-02
Pu-242	6.60E-04
Sr-90	1.50E+01
Th-229	9.90E-10
Th-230	1.29E-07
Th-232	2.58E-20
U-233	1.13E-05
U-234	1.41E-02
U-235	8.16E-04
U-236	1.05E-09
U-238	1.09E-04

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 5 55-gallon drums of repackaged waste from Four 24-inch diameter by 148-inch long carbon steel liners each containing 2 to 3 1-liter 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	12/31/2016		
Stream Name	AMWTP Suspect RH TRU Sources			Activity Concentrations Decayed to CY	2016		

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-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
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	135.42
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	16.03
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	33.81
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	1.14E+00
Cs-137	3.60E-04
Np-237	3.69E-08
Pu-238	4.92E+02
Pu-239	5.18E-01
Pu-240	1.61E+00
Pu-241	3.96E+00
Pu-242	3.11E-04
Sr-90	3.04E-04
Th-229	4.63E-21
Th-230	7.18E-08
Th-232	1.18E-20
U-233	2.02E-15
U-234	7.82E-02
U-235	2.37E-08
U-236	4.78E-09
U-238	2.95E-09

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

Waste Stream Description

This waste stream consists of 2 55 gallon drums.

Waste Stream ID: **IN-ID-MISC-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	12/31/2016		
Stream Name	Analytical Laboratory waste from MFC (formerly know as ANL-W)			Activity Concentrations Decayed to CY	2016		

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	160.26
Aluminum-based Metal/Alloys	48.72
Other Metal/Alloys	0.00
Other Inorganic Materials	6.09
Cellulose	1.41
Rubber	3.04
Plastic	68.59
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	48.72
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	3.37E-01
Cs-137	1.07E+00
Np-237	3.25E-07
Pu-238	2.43E-02
Pu-239	8.85E-01
Pu-240	1.95E-01
Pu-241	1.30E+00
Pu-242	2.58E-05
Sr-90	1.19E+00
Th-229	1.86E-16
Th-230	2.88E-12
Th-232	1.28E-18
U-233	2.12E-12
U-234	2.08E-07
U-235	2.61E-09
U-236	1.74E-08
U-238	1.20E-14

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 one drum that contains sample holder, Nalgene bottles, sample solution absorbed in vermiculite and debris from analytical laboratory.

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	12/31/2016	
Stream Name	Organic Setups					Activity Concentrations Decayed to CY	2016

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	982.2	0.0	982.2
83/85-gal drum	6.1	0.0	6.1
TDOP w/ 10 - 55-gal Drums w/ Liners	81.0	0.0	81.0
Current Form Total	1069.3	0.0	1069.3

Final Form Volumes			
Container Type	Stored	Proj.	Total
SWB w/ 4 - 55-gal Drums w/ Liners	122.9	0.0	122.9
TDOP w/ 10 - 55-gal Drums w/ Liners	2227.5	0.0	2227.5
Final Form Total	2350.4	0.0	2350.4

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	2.00
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	7.40
Cellulose	0.08
Rubber	0.02
Plastic	2.00
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	364.88
Soil	0.02
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	17.09
Packaging Material, Rubber	0.44
Packaging Material, Steel	230.07
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	4.75E-02
Cs-137	6.96E-11
Np-237	5.44E-07
Pu-238	4.62E-04
Pu-239	9.30E-03
Pu-240	2.32E-03
Pu-241	1.62E-02
Pu-242	4.91E-07
Sr-90	7.65E-11
Th-229	2.61E-19
Th-230	3.00E-13
Th-232	1.70E-23
U-233	8.30E-14
U-234	3.26E-07
U-235	7.49E-08
U-236	6.88E-12
U-238	4.16E-06

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. 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	12/31/2016	
Stream Name	Organic and Sludge Immobilization System Waste				Activity Concentrations Decayed to CY	2016	

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	0.01
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.71
Cellulose	0.01
Rubber	0.00
Plastic	0.71
Cement	120.11
Solidified Inorganic Material	0.00
Solidified Organic Material	101.43
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	2.21E-02
Cs-137	9.40E-08
Np-237	8.52E-07
Pu-238	4.64E-03
Pu-239	9.24E-02
Pu-240	3.11E-02
Pu-241	2.75E-01
Pu-242	2.46E-06
Sr-90	1.03E-07
Th-229	4.09E-19
Th-230	6.02E-16
Th-232	2.27E-22
U-233	1.30E-13
U-234	1.31E-09
U-235	9.10E-12
U-236	9.21E-11
U-238	3.81E-17

Haz. Waste No(s).

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

TRUCON Code(s)

112/212

Waste Stream Description

The waste consists of various organic liquids immobilized into a solid monolith by the Organic and Sludge Immobilization System (OASIS) in Building 774.

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	12/31/2016		
Stream Name	Rocky Flats Generated Suspect RH TRU waste received from AMWTP			Activity Concentrations Decayed to CY	2016		

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	95.83
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	22.21
Cellulose	38.96
Rubber	0.35
Plastic	7.72
Cement	117.79
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	8.13E+01
Cs-137	6.72E-02
Np-237	5.28E-05
Pu-238	2.64E-02
Pu-239	1.30E+00
Pu-240	2.85E-01
Pu-242	5.64E-04
Sr-90	4.11E-03
Th-229	4.33E-08
Th-230	2.55E-08
Th-232	8.33E-19
U-233	2.46E-04
U-234	1.38E-03
U-235	4.57E-04
U-236	1.69E-08
U-238	3.39E-04

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-S5100-A**

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	Inorganic Nonmetal Waste	Inventory Date	12/31/2016		
Stream Name	Rocky Flats Raschig Rings Stored at the INL			Activity Concentrations Decayed to CY	2016		

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	0.00
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	223.08
Cellulose	25.96
Rubber	0.00
Plastic	16.83
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	6.23E+02
Cs-137	4.16E-05
Np-237	7.55E-03
Pu-238	7.01E+01
Pu-239	2.39E+03
Pu-240	5.38E+02
Pu-241	2.22E+03
Pu-242	4.49E-02
Sr-90	4.51E-05
Th-229	9.28E-06
Th-230	6.74E-07
Th-232	3.93E-14
U-233	1.06E-02
U-234	8.35E-03
U-235	3.73E-04
U-236	1.59E-04
U-238	1.59E-05

Haz. Waste No(s).

D008, D009, D022, F001, F002, F005

TRUCON Code(s) 118/218

Waste Stream Description

This waste stream consists of Raschig rings (borosilicate glass rings) used to maintain subcritical conditions in fissile solution storage tanks that were not safe by dimension.

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	12/31/2016		
Stream Name	Rocky Flats Transuranic Graphite Debris			Activity Concentrations Decayed to CY	2016		

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
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	2.75
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.03
Other Inorganic Materials	83.24
Cellulose	2.02
Rubber	0.00
Plastic	1.22
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	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	3.09E+00
Np-237	2.77E-04
Pu-238	6.69E-01
Pu-239	2.10E+01
Pu-240	4.73E+00
Pu-241	2.64E+01
Pu-242	4.13E-04
Th-229	4.74E-13
Th-230	7.93E-11
Th-232	3.11E-17
U-233	3.60E-09
U-234	5.73E-06
U-235	6.19E-08
U-236	4.20E-07
U-238	1.92E-13

Haz. Waste No(s).

D008, D029, F001, F002, F005

TRUCON Code(s)

115/215

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	12/31/2016		
Stream Name	Rocky Flats Combustibles and Plastic Stored at INL			Activity Concentrations Decayed to CY	2016		

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	1.86
Aluminum-based Metal/Alloys	0.08
Other Metal/Alloys	0.27
Other Inorganic Materials	4.13
Cellulose	31.62
Rubber	1.78
Plastic	44.82
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	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	1.29E+03
Cm-244	8.47E+00
Cs-137	5.75E-05
Np-237	1.16E-02
Pu-238	2.47E+01
Pu-239	8.55E+02
Pu-240	1.89E+02
Pu-241	1.32E+03
Pu-242	2.45E-02
Sr-90	6.30E-05
Th-229	7.80E-08
Th-230	4.03E-09
Th-232	1.24E-15
U-233	2.96E-04
U-234	2.52E-04
U-235	4.24E-05
U-236	1.68E-05
U-238	2.63E-03

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

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	12/31/2016		
Stream Name	RH TRU Waste from INL.			Activity Concentrations Decayed to CY	2016		

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum	2.5	0.0	2.5
Current Form Total	2.5	0.0	2.5

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/o 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	207.13
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	97.36
Other Inorganic Materials	10.88
Cellulose	0.84
Rubber	0.84
Plastic	14.31
Cement	0.00
Solidified Inorganic Material	38.84
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	8.73E-02
Np-237	1.18E-03
Pu-239	3.48E+00
Pu-240	2.56E+00
Th-229	7.10E-06
Th-230	1.21E-13
Th-232	5.71E-05
U-233	2.69E-02
U-234	8.77E-09
U-235	2.16E-04
U-236	2.27E-07
U-238	1.07E-03

Haz. Waste No(s).

D004, D005, D006, D007, D008, D010, D011, D019
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TRUCON Code(s)

321, 322, 325

Waste Stream Description

This waste consists of 12 containers of debris waste generated at 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	12/31/2016	
Stream Name	ICP Retrieved Debris Waste (Filters/Graphite)				Activity Concentrations Decayed to CY	2016	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	307.6	0.0	307.6
55-gal Drum Equivalent	310.8	0.0	310.8
Current Form Total	618.4	0.0	618.4

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	716.6	0.0	716.6
Final Form Total	716.6	0.0	716.6

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	1.39
Aluminum-based Metal/Alloys	0.21
Other Metal/Alloys	0.20
Other Inorganic Materials	226.17
Cellulose	77.29
Rubber	0.91
Plastic	7.91
Cement	0.98
Solidified Inorganic Material	9.60
Solidified Organic Material	0.88
Soil	19.01
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	7.09E-01
Cs-137	1.38E-06
Np-237	1.12E-05
Pu-238	5.85E-02
Pu-239	1.64E+00
Pu-240	3.66E-01
Pu-241	1.78E+00
Pu-242	3.80E-05
Sr-90	1.52E-06
Th-229	1.65E-09
Th-230	5.96E-09
Th-232	5.24E-13
U-233	9.38E-06
U-234	3.24E-04
U-235	8.32E-06
U-236	2.17E-08
U-238	4.86E-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	12/31/2016	
Stream Name	ICP Retrieved Sludge Waste (Inorganic/Organic Sludge/Roaster Oxide)				Activity Concentrations Decayed to CY	2016	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	1389.0	0.0	1389.0
55-gal Drum Equivalent	957.2	0.0	957.2
Current Form Total	2346.2	0.0	2346.2

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	2737.3	0.0	2737.3
Final Form Total	2737.3	0.0	2737.3

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	0.21
Aluminum-based Metal/Alloys	0.01
Other Metal/Alloys	0.01
Other Inorganic Materials	39.25
Cellulose	0.40
Rubber	0.14
Plastic	0.48
Cement	0.12
Solidified Inorganic Material	177.24
Solidified Organic Material	314.53
Soil	21.43
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	1.54E+00
Cm-244	2.47E-05
Cs-137	1.26E-05
Np-237	2.42E-05
Pu-238	2.09E-02
Pu-239	4.92E-01
Pu-240	1.10E-01
Pu-241	8.45E-01
Pu-242	1.94E-05
Sr-90	1.38E-05
Th-229	3.20E-09
Th-230	6.12E-09
Th-232	3.22E-19
U-233	1.82E-05
U-234	3.33E-04
U-235	8.79E-06
U-236	6.53E-09
U-238	1.28E-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	12/31/2016	
Stream Name	ICP Retrieved Soils			Activity Concentrations Decayed to CY		2016	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	315.3	0.0	315.3
55-gal Drum Equivalent	143.9	0.0	143.9
Current Form Total	459.3	0.0	459.3

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	507.3	0.0	507.3
Final Form Total	507.3	0.0	507.3

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	0.56
Aluminum-based Metal/Alloys	0.02
Other Metal/Alloys	0.10
Other Inorganic Materials	20.16
Cellulose	12.69
Rubber	0.34
Plastic	5.67
Cement	0.36
Solidified Inorganic Material	15.44
Solidified Organic Material	5.89
Soil	524.84
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	8.67E-01
Cs-137	1.49E-05
Np-237	1.34E-05
Pu-238	2.44E-02
Pu-239	6.36E-01
Pu-240	1.41E-01
Pu-241	8.69E-01
Pu-242	2.05E-05
Sr-90	1.64E-05
Th-229	5.04E-10
Th-230	5.45E-09
Th-232	3.73E-10
U-233	2.87E-06
U-234	2.97E-04
U-235	4.26E-05
U-236	8.37E-09
U-238	9.04E-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-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	12/31/2016	
Stream Name	Miscellaneous Source Material			Activity Concentrations Decayed to CY		2016	

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	72.12
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	1.60
Other Inorganic Materials	16.03
Cellulose	0.00
Rubber	0.00
Plastic	8.01
Cement	0.00
Solidified Inorganic Material	30.45
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	2.84E+01
Cs-137	2.65E-04
Np-237	9.19E-07
Pu-238	6.13E-02
Pu-239	1.92E+00
Pu-240	4.92E-01
Pu-241	1.21E+00
Pu-242	4.76E-05
Sr-90	2.29E-04
Th-229	1.15E-19
Th-230	7.55E-12
Th-232	3.59E-21
U-233	5.02E-14
U-234	8.22E-06
U-235	7.60E-08
U-236	1.46E-09
U-238	1.89E-09

No Hazardous Waste Numbers Provided

TRUCON Code(s)
320

Waste Stream Description

This waste stream consists of one 55 gallon drums that was retrieved by AMWTP. This drum was generated at Bendix Plant. It contains 12 miscellaneous sources

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	12/31/2016	
Stream Name	INL Sludge Repackage Project Combined Sludge Waste				Activity Concentrations Decayed to CY	2016	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	1088.0	0.0	1088.0
Current Form Total	1088.0	0.0	1088.0

Final Form Volumes			
Container Type	Stored	Proj.	Total
SWB w/ 4 - 55-gal Drums w/ Liners	2602.5	0.0	2602.5
Final Form Total	2602.5	0.0	2602.5

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	0.55
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.03
Other Inorganic Materials	3.86
Cellulose	0.08
Rubber	0.21
Plastic	2.07
Cement	0.00
Solidified Inorganic Material	159.71
Solidified Organic Material	95.82
Soil	0.05
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	7.69E-02
Cs-137	1.57E-09
Np-237	1.26E-06
Pu-238	9.36E-04
Pu-239	2.24E-02
Pu-240	4.97E-03
Pu-241	3.69E-02
Pu-242	8.59E-07
Sr-90	1.73E-09
Th-229	2.38E-16
Th-230	3.86E-10
Th-232	3.63E-21
U-233	5.43E-12
U-234	4.20E-05
U-235	1.33E-06
U-236	1.47E-10
U-238	3.84E-05

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 wastes at the SRP.

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	12/31/2016		
Stream Name	RH-TRU Debris from TRA at the INL			Activity Concentrations Decayed to CY	2016		

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)
Am-241	1.58E-05
Cm-244	3.47E+02
Np-237	3.53E-12
Pu-240	5.17E+00
Pu-241	9.74E-03
Th-229	2.76E-22
Th-232	1.50E-17
U-233	7.77E-18
U-236	3.04E-07

Haz. Waste No(s).

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

322

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-IT-152**

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	Heterogeneous Debris Waste		Inventory Date	12/31/2016	
Stream Name	Pu Neutron Sources				Activity Concentrations Decayed to CY	2016	

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 - Dir Ld	0.9	0.0	0.9
Final Form Total	0.9	0.0	0.9

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	16.20
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	25.22
Other Inorganic Materials	70.53
Cellulose	0.00
Rubber	0.00
Plastic	1.08
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	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	1.16E+00
Cs-137	2.18E-06
Np-237	7.50E-07
Sr-90	2.39E-06
Th-229	1.92E-16
Th-230	1.59E-09
U-233	3.27E-12
U-234	8.66E-05
U-235	7.13E-06
U-238	1.05E-03

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

Waste Stream Description

Waste includes Pu-Be neutron sources, Pu standards, Pu foil, tools, and non-combustible waste from the Test Area North at the INL.

Waste Stream ID: **IN-JH-826**

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	12/31/2016		
Stream Name	Combustible Equipment Boxes and Floor Sweepings			Activity Concentrations Decayed to CY	2016		

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
100-gal Drum Dir Ld w/ Liner	1.1	0.0	1.1
Final Form Total	1.1	0.0	1.1

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	548.81
Aluminum-based Metal/Alloys	1.36
Other Metal/Alloys	4.82
Other Inorganic Materials	23.21
Cellulose	96.58
Rubber	10.38
Plastic	79.40
Cement	0.00
Solidified Inorganic Material	0.03
Solidified Organic Material	0.10
Soil	0.32
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	20.34
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	8.84E+00
Np-237	9.10E-05
Th-229	5.63E-12
U-233	6.17E-09

Haz. Waste No(s).

D008

No TRUCON Codes Provided

Waste Stream Description

The waste containers consists of combustible equipment boxes and floor sweepings generated during Phase 1 D&D.

Waste Stream ID: **IN-JH-827**

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	12/31/2016		
Stream Name	Solid Trash and Dry Lab Material			Activity Concentrations Decayed to CY	2016		

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
100-gal Drum Dir Ld w/ Liner	1.1	0.0	1.1
Final Form Total	1.1	0.0	1.1

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	548.81
Aluminum-based Metal/Alloys	1.36
Other Metal/Alloys	4.82
Other Inorganic Materials	23.21
Cellulose	96.58
Rubber	10.38
Plastic	79.40
Cement	0.00
Solidified Inorganic Material	0.03
Solidified Organic Material	0.10
Soil	0.32
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	20.34
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	8.84E+00
Np-237	9.10E-05
Th-229	5.63E-12
U-233	6.17E-09

Haz. Waste No(s).

D008

No TRUCON Codes Provided

Waste Stream Description

The waste containers consists of dry laboratory materials generated during repackaging.

Waste Stream ID: **IN-MD-842**

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	12/31/2016			
Stream Name	Contaminated Soil	Activity Concentrations Decayed to CY				2016		

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
Box - Misc	114.1	0.0	114.1
Current Form Total	114.5	0.0	114.5

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	60.7	0.0	60.7
Final Form Total	60.7	0.0	60.7

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	16.50
Cellulose	21.83
Rubber	0.00
Plastic	0.00
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.24
Soil	1082.33
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	4.96E-05
Np-237	9.63E-11
Pu-238	6.15E-02
Pu-239	9.79E-05
Pu-240	6.69E-05
Pu-241	6.07E-05
Pu-242	7.74E-08
Th-229	2.17E-19
Th-230	2.97E-11
Th-232	5.24E-08
U-233	1.24E-15
U-234	1.07E-06
U-235	5.79E-13
U-236	1.19E-11
U-238	7.20E-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-MO-530**

Appendix A

Waste Profile Report

Site	Idaho National Laboratory	Summary Category	S5000	Defense Determination	Pending Determination	Handling	CH
Source Cat.	Remediation/D&D Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2016	
Stream Name	Compacted Waste				Activity Concentrations Decayed to CY	2016	

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
100-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	174.61
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	221.62
Other Inorganic Materials	2.01
Cellulose	154.27
Rubber	263.95
Plastic	10.92
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	20.34
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	2.34E+02
Np-237	3.29E-03
Pu-238	1.23E+03
Pu-239	1.97E+00
Pu-240	1.35E+00
Pu-241	1.17E+00
Pu-242	1.56E-03
Th-229	6.20E-13
Th-230	1.60E-08
Th-232	9.85E-19
U-233	1.42E-08
U-234	3.48E-03
U-235	1.94E-09
U-236	3.99E-08
U-238	2.42E-13

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

Waste Stream Description

This waste stream consists of combustible waste from production/boxline operations. This waste was then sorted and compacted.

Waste Stream ID: **IN-MO-535**

Appendix A

Waste Profile Report

Site	Idaho National Laboratory	Summary Category	S5000	Defense Determination	Pending Determination	Handling	CH
Source Cat.	Remediation/D&D Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2016	
Stream Name	Compacted Waste with Lead			Activity Concentrations Decayed to CY		2016	

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
83/85-gal drum	0.3	0.0	0.3
Current Form Total	3.4	0.0	3.4

Final Form Volumes			
Container Type	Stored	Proj.	Total
100-gal Drum Dir Ld w/ Liner	1.1	0.0	1.1
Final Form Total	1.1	0.0	1.1

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	548.81
Aluminum-based Metal/Alloys	1.36
Other Metal/Alloys	4.82
Other Inorganic Materials	23.21
Cellulose	96.58
Rubber	10.38
Plastic	79.40
Cement	0.00
Solidified Inorganic Material	0.03
Solidified Organic Material	0.10
Soil	0.32
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	20.34
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	2.92E+02
Cs-137	6.43E-04
Np-237	3.87E-03
Pu-238	1.02E+03
Pu-239	1.63E+00
Pu-240	1.12E+00
Pu-241	9.51E-01
Pu-242	1.29E-03
Sr-90	7.05E-04
Th-229	7.28E-13
Th-230	1.32E-08
Th-232	8.15E-19
U-233	1.66E-08
U-234	2.88E-03
U-235	1.61E-09
U-236	3.31E-08
U-238	2.00E-13

Haz. Waste No(s).

D008

No TRUCON Codes Provided

Waste Stream Description

This waste stream consists of combustible waste from production/boxline operations. This waste is from the same waste as IN-MO-530 with the inclusion of lead as a product essential co-contaminant with the waste. The lead was in sheet stock shapes and was used for shielding.

Waste Stream ID: **IN-MO-540**

Appendix A

Waste Profile Report

Site	Idaho National Laboratory	Summary Category	S5000	Defense Determination	Pending Determination	Handling	CH
Source Cat.	Remediation/D&D Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2016	
Stream Name	Non-Compacted Waste			Activity Concentrations Decayed to CY 2016			

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
Box - Misc	12.7	0.0	12.7
Current Form Total	12.7	0.0	12.7

Final Form Volumes			
Container Type	Stored	Proj.	Total
100-gal Drum Dir Ld w/ 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	548.81
Aluminum-based Metal/Alloys	1.36
Other Metal/Alloys	4.82
Other Inorganic Materials	23.21
Cellulose	96.58
Rubber	10.38
Plastic	79.40
Cement	0.00
Solidified Inorganic Material	0.03
Solidified Organic Material	0.10
Soil	0.32
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	20.34
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	6.23E+00
Am-243	4.05E-12
Np-237	6.72E-05
Pu-238	2.33E+00
Pu-239	2.04E-03
Pu-240	1.40E-03
Pu-241	1.31E-03
Pu-242	1.61E-06
Th-229	1.26E-14
Th-230	6.41E-11
Th-232	1.02E-21
U-233	2.88E-10
U-234	1.03E-05
U-235	1.19E-06
U-236	4.14E-11
U-238	2.50E-16

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

Waste Stream Description

This waste consists of dismantled gloveboxes and associated equipment such as hot cell jigs, fixtures, and components.

Waste Stream ID: **IN-MO-545**

Appendix A

Waste Profile Report

Site	Idaho National Laboratory	Summary Category	S5000	Defense Determination	Pending Determination	Handling	CH
Source Cat.	Remediation/D&D Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2016	
Stream Name	Water Extended Polyester (WEP) Shielded Waste				Activity Concentrations Decayed to CY	2016	

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
100-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	548.81
Aluminum-based Metal/Alloys	1.36
Other Metal/Alloys	4.82
Other Inorganic Materials	23.21
Cellulose	96.58
Rubber	10.38
Plastic	79.40
Cement	0.00
Solidified Inorganic Material	0.03
Solidified Organic Material	0.10
Soil	0.32
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	20.34
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	1.86E+02
Np-237	1.41E-03
Pu-238	1.16E+01
Pu-239	1.89E-02
Pu-240	1.29E-02
Pu-241	1.02E-02
Pu-242	1.50E-05
Th-229	2.62E-13
Th-230	1.52E-10
Th-232	9.44E-21
U-233	5.99E-09
U-234	3.30E-05
U-235	1.86E-11
U-236	3.83E-10
U-238	2.32E-15

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

Waste Stream Description

This waste includes alpha, beta-gamma, and neutron sources sealed and/or encapsulated in stainless steel, aluminum, plastic, or other nonferrous metals. The sources were calibration devices or demonstration models.

Waste Stream ID: **IN-MX-142**

Appendix A

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	12/31/2016			
Stream Name	Scrap Processing Equipment	Activity Concentrations Decayed to CY				2016		

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
83/85-gal drum	1.3	0.0	1.3
Box - Misc	19.0	0.0	19.0
Current Form Total	20.3	0.0	20.3

Final Form Volumes			
Container Type	Stored	Proj.	Total
100-gal Drum Dir Ld w/ Liner	6.1	0.0	6.1
Final Form Total	6.1	0.0	6.1

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	548.81
Aluminum-based Metal/Alloys	1.36
Other Metal/Alloys	4.82
Other Inorganic Materials	23.21
Cellulose	96.58
Rubber	10.38
Plastic	79.40
Cement	0.00
Solidified Inorganic Material	0.03
Solidified Organic Material	0.10
Soil	0.32
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	20.34
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	1.82E+00
Am-243	5.40E-06
Cs-137	1.02E-05
Np-237	6.61E-05
Pu-239	9.30E-10
Sr-90	1.12E-05
Th-229	4.32E-13
Th-230	1.78E-10
U-233	1.65E-09
U-234	3.23E-06
U-235	1.04E-06

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

Waste Stream Description

This waste stream consists of Americium contaminated debris that includes equipment and materials for the use of manufacturing smoke detectors and the associate maintenance operations, decontamination and cleanup.

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	12/31/2016		
Stream Name	RH-TRU Debris Waste from the Naval Nuclear Propulsion Program (NNPP)			Activity Concentrations Decayed to CY	2016		

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	137.3	0.0	137.3
Final Form Total	137.3	0.0	137.3

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	67.82
Aluminum-based Metal/Alloys	9.91
Other Metal/Alloys	0.06
Other Inorganic Materials	2.32
Cellulose	1.35
Rubber	0.05
Plastic	1.71
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	7.23E-01
Cs-137	6.72E+01
Np-237	1.85E-06
Pu-238	2.45E+00
Pu-239	8.01E-02
Pu-240	8.08E-02
Pu-241	1.89E+00
Pu-242	2.64E-04
Sr-90	6.10E+01
Th-229	2.64E-05
Th-230	7.74E-07
Th-232	3.78E-18
U-233	3.75E-02
U-234	1.05E-02
U-235	2.32E-04
U-236	1.91E-08
U-238	5.70E-05

Haz. Waste No(s).

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

No TRUCON Codes Provided

Waste Stream Description

This waste stream was generated at NNPP facilities and consists of 108 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-RF-090**

Appendix A

Waste Profile Report

Site	Idaho 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	12/31/2016		
Stream Name	Dirt	Activity Concentrations Decayed to CY				2016	

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
83/85-gal drum	35.7	0.0	35.7
Current Form Total	40.5	0.0	40.5

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	55.7	0.0	55.7
Final Form Total	55.7	0.0	55.7

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	9.42
Aluminum-based Metal/Alloys	0.23
Other Metal/Alloys	0.15
Other Inorganic Materials	7.07
Cellulose	6.85
Rubber	0.00
Plastic	4.28
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	1.57
Soil	1036.89
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	8.52E-02
Cs-137	2.26E-08
Np-237	1.25E-06
Pu-238	2.92E-04
Pu-239	1.83E-02
Pu-240	3.56E-03
Pu-241	1.83E-02
Pu-242	3.52E-07
Sr-90	2.49E-08
Th-229	6.02E-19
Th-230	1.62E-11
Th-232	2.60E-23
U-233	1.91E-13
U-234	1.76E-05
U-235	1.10E-06
U-236	1.05E-11
U-238	2.32E-04

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. and includes evaporator pond sludge.

Waste Stream ID: **IN-RF-311**

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	12/31/2016	
Stream Name	Graphite Heels			Activity Concentrations Decayed to CY		2016	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
110-gal Drum Dir Ld w/o Liner	0.8	0.0	0.8
55-gal Drum Dir Ld w/ Liner	0.6	0.0	0.6
83/85-gal drum	0.6	0.0	0.6
Current Form Total	2.1	0.0	2.1

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	1.12
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	332.43
Cellulose	1.36
Rubber	0.00
Plastic	33.43
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	5.67E+00
Cs-137	5.14E-07
Np-237	6.69E-05
Pu-238	2.19E+00
Pu-239	2.78E+01
Pu-240	6.29E+00
Pu-241	2.33E+01
Pu-242	4.77E-04
Sr-90	5.61E-07
Th-229	2.85E-13
Th-230	7.28E-10
Th-232	1.15E-16
U-233	1.33E-09
U-234	3.15E-05
U-235	1.37E-07
U-236	9.31E-07
U-238	3.70E-13

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

Waste Stream Description

This waste stream generated at Rocky Flats, consists of the remaining insoluble residue generated from leaching graphite scarfings with hot nitric acid.

Waste Stream ID: **IN-RF-361**

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	12/31/2016	
Stream Name	Insulation Heels			Activity Concentrations Decayed to CY		2016	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
83/85-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
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	2.18
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	763.83
Cellulose	0.00
Rubber	0.00
Plastic	76.94
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	1.09E+01
Np-237	1.87E-04
Pu-238	2.12E+00
Pu-239	5.48E+01
Pu-240	1.20E+01
Pu-241	3.02E+01
Pu-242	9.01E-04
Th-229	8.21E-13
Th-230	7.07E-10
Th-232	2.20E-16
U-233	3.80E-09
U-234	3.06E-05
U-235	2.70E-07
U-236	1.78E-06
U-238	6.99E-13

Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D022, D028, F001, F002, F005

No TRUCON Codes Provided

Waste Stream Description

This waste generated at Rocky Flats, consists of insoluble insulation contaminated with above-discard amounts of plutonium.

Waste Stream ID: **IN-RF-393**

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	12/31/2016	
Stream Name	Sand, Slag and Crucible Heels				Activity Concentrations Decayed to CY	2016	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	9.6	0.0	9.6
83/85-gal drum	1.0	0.0	1.0
Current Form Total	10.5	0.0	10.5

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	20.4	0.0	20.4
Final Form Total	20.4	0.0	20.4

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	2.94
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.98
Other Inorganic Materials	219.94
Cellulose	0.00
Rubber	0.98
Plastic	53.64
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)
Am-241	2.24E+00
Cs-137	1.31E-07
Np-237	2.54E-05
Pu-238	6.33E-01
Pu-239	1.27E+01
Pu-240	3.06E+00
Pu-241	1.88E+01
Pu-242	2.60E-04
Sr-90	1.44E-07
Th-229	1.87E-14
Th-230	3.54E-11
Th-232	8.94E-18
U-233	2.15E-10
U-234	3.72E-06
U-235	2.50E-08
U-236	1.81E-07
U-238	8.06E-14

Haz. Waste No(s).

D007, F002

No TRUCON Codes Provided

Waste Stream Description

This waste stream generated at Rocky Flats, consists of undissolved or precipitated calcium fluoride (slag), undissolved magnesium oxide sand and crucible heels remaining after pulverizing and leaching of sand, slag and crucibles.

Waste Stream ID: **IN-RF-409**

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	12/31/2016		
Stream Name	Molten Salt - 30% Unpulverized	Activity Concentrations Decayed to CY			2016		

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	6.0	0.0	6.0
83/85-gal drum	1.0	0.0	1.0
Current Form Total	7.0	0.0	7.0

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	24.20
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	112.83
Other Inorganic Materials	183.26
Cellulose	20.78
Rubber	0.00
Plastic	1.81
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	13.55
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	4.14E+01
Cs-137	3.56E-07
Np-237	3.30E-04
Pu-238	1.54E+00
Pu-239	3.19E+01
Pu-240	7.39E+00
Pu-241	4.77E+01
Pu-242	1.14E-03
Sr-90	3.89E-07
Th-229	6.15E-14
Th-230	2.11E-11
Th-232	5.39E-18
U-233	1.41E-09
U-234	4.47E-06
U-235	5.63E-08
U-236	2.19E-07
U-238	1.77E-13

Haz. Waste No(s).

D007, D008, D009, D028, F001, F002, F005

No TRUCON Codes Provided

Waste Stream Description

This waste stream generated at Rocky Flats, consists of spend salt generated by the MSE process used to extract americium contamination from plutonium metal. It consists of unpulverized fused chunks of salt.

Waste Stream ID: **IN-RF-410**

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	12/31/2016		
Stream Name	Molten Salt - 30%Pulverized	Activity Concentrations Decayed to CY			2016		

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
83/85-gal drum	0.3	0.0	0.3
Current Form Total	4.3	0.0	4.3

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	8.3	0.0	8.3
Final Form Total	8.3	0.0	8.3

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	50.16
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	13.63
Other Inorganic Materials	453.34
Cellulose	0.00
Rubber	0.00
Plastic	25.67
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	1.08E+01
Cs-137	5.56E-07
Np-237	1.38E-04
Pu-238	1.68E-01
Pu-239	2.28E+00
Pu-240	5.39E-01
Pu-241	6.46E+00
Pu-242	1.57E-04
Sr-90	6.08E-07
Th-229	1.02E-13
Th-230	9.65E-12
Th-232	1.57E-18
U-233	1.18E-09
U-234	1.00E-06
U-235	4.50E-09
U-236	3.19E-08
U-238	4.89E-14

Haz. Waste No(s).

D009

No TRUCON Codes Provided

Waste Stream Description

This waste stream generated at Rocky Flats, consists of spend salt generated by the MSE process used to extract americium contamination from plutonium metal. It consists of pulverized fused chunks of salt.

Waste Stream ID: **IN-RF-411**

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	12/31/2016		
Stream Name	Electrorefining Salt	Activity Concentrations Decayed to CY			2016		

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
83/85-gal drum	0.3	0.0	0.3
Current Form Total	4.5	0.0	4.5

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

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	17.55
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	11.02
Other Inorganic Materials	119.78
Cellulose	5.66
Rubber	0.00
Plastic	11.04
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	5.54E+00
Np-237	6.04E-05
Pu-238	6.09E-01
Pu-239	1.62E+01
Pu-240	3.74E+00
Pu-241	1.91E+01
Pu-242	3.79E-04
Th-229	2.90E-17
Th-230	7.91E-14
Th-232	2.73E-20
U-233	9.22E-12
U-234	1.72E-07
U-235	1.59E-09
U-236	1.11E-08
U-238	5.88E-15

Haz. Waste No(s).

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

No TRUCON Codes Provided

Waste Stream Description

This waste stream generated at Rocky Flats, consists of spend salt generated by electrorefining operations used to purify plutonium metal that didn't meet foundry specifications. The salt is a mixture of chunks, granules and fine particles.

Waste Stream ID: **IN-RF-412**

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	12/31/2016		
Stream Name	Gibson Salts	Activity Concentrations Decayed to CY			2016		

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	65.48
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	296.13
Cellulose	0.00
Rubber	0.00
Plastic	16.37
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	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
Np-237	1.63E-04
Pu-238	3.83E-01
Pu-239	4.16E+00
Pu-240	6.91E-01
Pu-241	5.48E+00
Pu-242	3.61E-04
Th-229	3.73E-12
Th-230	7.61E-10
Th-232	7.28E-17
U-233	7.41E-09
U-234	1.36E-05
U-235	4.91E-08
U-236	2.46E-07
U-238	6.71E-13

Haz. Waste No(s).

D007, F001

No TRUCON Codes Provided

Waste Stream Description

This waste stream generated at Rocky Flats, consists of spent salt generated by an experimental pyroreodox process for extraction of impurities from plutonium metal.

Waste Stream ID: **IN-RF-414**

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	12/31/2016		
Stream Name	Direct Oxide Reduction Salt	Activity Concentrations Decayed to CY			2016		

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	2.1	0.0	2.1
Final Form Total	2.1	0.0	2.1

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	21.39
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	43.65
Other Inorganic Materials	172.93
Cellulose	0.00
Rubber	0.00
Plastic	13.64
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)
Am-241	7.37E+00
Np-237	7.05E-05
Pu-238	7.99E-01
Pu-239	2.29E+01
Pu-240	5.03E+00
Pu-241	3.07E+01
Pu-242	5.28E-04
Th-229	2.93E-13
Th-230	2.89E-10
Th-232	9.19E-17
U-233	1.38E-09
U-234	1.20E-05
U-235	2.72E-07
U-236	7.45E-07
U-238	4.10E-13

Haz. Waste No(s).

D007, F001, F002

No TRUCON Codes Provided

Waste Stream Description

This waste stream generated at Rocky Flats, consists of spent salt used to reduce plutonium oxide to metal.

Waste Stream ID: **IN-RF-420**

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	12/31/2016	
Stream Name	Ash, Incinerator (Virgin)				Activity Concentrations Decayed to CY	2016	

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
83/85-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
55-gal Drum Dir Ld w/ 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	76.79
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	140.69
Cellulose	0.00
Rubber	0.00
Plastic	31.04
Cement	0.00
Solidified Inorganic Material	220.23
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	2.21E+00
Np-237	2.73E-05
Pu-238	2.44E-01
Pu-239	1.10E+01
Pu-240	2.31E+00
Pu-241	1.37E+01
Pu-242	1.94E-04
Th-229	1.17E-13
Th-230	7.67E-10
Th-232	4.22E-17
U-233	5.45E-10
U-234	1.84E-05
U-235	4.86E-06
U-236	3.42E-07
U-238	1.51E-13

Haz. Waste No(s).

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

No TRUCON Codes Provided

Waste Stream Description

This waste generated at Rocky Flats, consists of ash from the plutonium recovery incinerator and is a mixture of coarse, granular, fine and very fine particulate.

Waste Stream ID: **IN-RF-421**

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	12/31/2016	
Stream Name	Ash Heels			Activity Concentrations Decayed to CY			
				2016			

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	19.3	0.0	19.3
83/85-gal drum	2.3	0.0	2.3
Current Form Total	21.6	0.0	21.6

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	41.6	0.0	41.6
Final Form Total	41.6	0.0	41.6

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	2.19
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.19
Other Inorganic Materials	105.46
Cellulose	0.04
Rubber	0.00
Plastic	42.98
Cement	0.00
Solidified Inorganic Material	139.16
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	6.11E+00
Cs-137	1.03E-08
Np-237	9.02E-05
Pu-238	8.92E-01
Pu-239	2.43E+01
Pu-240	5.52E+00
Pu-241	2.84E+01
Pu-242	4.95E-04
Sr-90	1.13E-08
Th-229	4.33E-17
Th-230	4.00E-13
Th-232	4.03E-20
U-233	1.38E-11
U-234	5.61E-07
U-235	2.39E-09
U-236	1.63E-08
U-238	5.17E-07

Haz. Waste No(s).

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

No TRUCON Codes Provided

Waste Stream Description

This waste stream generated by Rocky Flats, consists of those insoluble materials from the nitric acid dissolution of plutonium-containing materials in the first step of aqueous recovery processing. The heel is a very fine (less than 100 mesh) particulate and fairly homogeneous due to the mixing action of the dissolution system.

Waste Stream ID: **IN-RF-422**

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	12/31/2016	
Stream Name	Soot				Activity Concentrations Decayed to CY	2016	

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
83/85-gal drum	1.9	0.0	1.9
Current Form Total	5.1	0.0	5.1

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

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	15.15
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.88
Other Inorganic Materials	107.12
Cellulose	0.79
Rubber	0.00
Plastic	40.75
Cement	0.00
Solidified Inorganic Material	87.88
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	1.21E+00
Np-237	1.85E-05
Pu-238	1.55E-01
Pu-239	4.88E+00
Pu-240	1.11E+00
Pu-241	6.03E+00
Pu-242	9.58E-05
Th-229	1.38E-14
Th-230	8.11E-12
Th-232	3.25E-18
U-233	1.58E-10
U-234	8.80E-07
U-235	9.61E-09
U-236	6.58E-08
U-238	2.97E-14

Haz. Waste No(s).

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

No TRUCON Codes Provided

Waste Stream Description

This waste stream generated by Rocky Flats, consists of soot, which is the airborne fly ash material that accumulated in the off-gas system of the plutonium recovery.

Waste Stream ID: **IN-RF-697**

Appendix A

Waste Profile Report

Site	Idaho 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	12/31/2016			
Stream Name	Dirt	Activity Concentrations Decayed to CY				2016		

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
83/85-gal drum	1.3	0.0	1.3
Box - Misc	6.3	0.0	6.3
Current Form Total	9.7	0.0	9.7

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	9.2	0.0	9.2
Final Form Total	9.2	0.0	9.2

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	2.38
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.03
Other Inorganic Materials	191.33
Cellulose	2.19
Rubber	0.08
Plastic	6.33
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	760.90
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	1.53E-03
Cs-137	7.71E-07
Np-237	4.96E-11
Pu-238	3.32E-03
Pu-239	2.92E-04
Pu-240	6.70E-05
Pu-241	6.27E-04
Pu-242	1.22E-08
Sr-90	8.48E-07
Th-229	6.23E-24
Th-230	2.24E-13
Th-232	4.89E-25
U-233	2.71E-18
U-234	2.44E-07
U-235	6.21E-08
U-236	1.98E-13
U-238	1.89E-19

Haz. Waste No(s).

F001, F002

No TRUCON Codes Provided

Waste Stream Description

This waste generated at the Rocky Flats Plant has been assigned by the AMWTP to IDC 697 (374A). Individual containers of IDC 374 that are greater than 50% by volume soil/gravel were changed to address the database issues of two different WMCs associated with one IDC.

Waste Stream ID: **IN-RF-753**

Appendix A

Waste Profile Report

Site	Idaho National Laboratory	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	12/31/2016		
Stream Name	Pits 11 and 12 Evaporator Legacy Dirt			Activity Concentrations Decayed to CY		2016	

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
83/85-gal drum	5.5	0.0	5.5
Current Form Total	7.3	0.0	7.3

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	10.8	0.0	10.8
Final Form Total	10.8	0.0	10.8

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	17.82
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.13
Other Inorganic Materials	3.90
Cellulose	2.25
Rubber	0.00
Plastic	1.61
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	2.92
Soil	475.36
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	1.47E-01
Np-237	2.28E-06
Pu-238	8.89E-03
Pu-239	6.00E-02
Pu-240	1.44E-02
Pu-241	4.96E-02
Pu-242	3.46E-06
Th-229	4.31E-16
Th-230	1.04E-10
Th-232	1.05E-20
U-233	9.83E-12
U-234	1.13E-05
U-235	2.93E-06
U-236	4.27E-10
U-238	3.46E-05

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

Waste Stream Description

Dry dirt or soil generated during operations at Rocky Flats and retrieved during the Early Waste Retrieval Project and the IDR. Waste may have been generated from the cleanup of spills or leaks at Rocky Flats.

Waste Stream ID: **IN-RF-817**

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	12/31/2016	
Stream Name	Cemented Sand, Slag, Crucible Heels				Activity Concentrations Decayed to CY	2016	

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
83/85-gal drum	1.3	0.0	1.3
Current Form Total	6.1	0.0	6.1

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ 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	0.16
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	8.71
Cement	0.03
Solidified Inorganic Material	715.62
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	1.60E-01
Cs-137	8.15E-08
Np-237	3.39E-06
Pu-238	5.30E-02
Pu-239	1.19E+00
Pu-240	2.70E-01
Pu-241	1.53E+00
Pu-242	1.92E-05
Sr-90	8.82E-08
Th-229	8.22E-14
Th-230	1.06E-10
Th-232	2.84E-17
U-233	1.61E-10
U-234	1.88E-06
U-235	1.40E-08
U-236	9.60E-08
U-238	3.58E-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-RF-823**

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	12/31/2016	
Stream Name	Cemented Miscellaneous Sludge			Activity Concentrations Decayed to CY		2016	

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
83/85-gal drum	1.0	0.0	1.0
Current Form Total	4.1	0.0	4.1

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld 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	0.24
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	7.53
Cement	558.24
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	8.63E-03
Np-237	2.13E-06
Pu-238	4.05E-03
Pu-239	7.92E-02
Pu-240	1.82E-02
Pu-241	1.55E-01
Pu-242	2.17E-06
Th-229	1.03E-18
Th-230	5.26E-16
Th-232	1.33E-22
U-233	3.26E-13
U-234	1.14E-09
U-235	7.80E-12
U-236	5.38E-11
U-238	3.36E-17

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-RF-990**

Appendix A

Waste Profile Report

Site	Idaho 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	12/31/2016			
Stream Name	Dirt	Activity Concentrations Decayed to CY				2016		

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
83/85-gal drum	15.5	0.0	15.5
Box - Misc	3.2	0.0	3.2
Current Form Total	27.2	0.0	27.2

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	38.7	0.0	38.7
Final Form Total	38.7	0.0	38.7

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	1.08
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	34.84
Cellulose	3.43
Rubber	0.00
Plastic	1.38
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	4.72
Soil	982.71
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	5.56E-02
Cs-137	1.52E-07
Np-237	4.16E-07
Pu-238	6.33E-04
Pu-239	1.33E-02
Pu-240	3.02E-03
Pu-241	2.16E-02
Pu-242	4.21E-07
Sr-90	1.67E-07
Th-229	1.99E-19
Th-230	8.85E-12
Th-232	2.21E-23
U-233	6.34E-14
U-234	9.63E-06
U-235	2.07E-06
U-236	8.95E-12
U-238	5.17E-05

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

Waste Stream Description

This waste generated at the Rocky Flats Plant was generated from processes and locations similar to those in IN-RF-090.

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.	Remediation/D&D Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2016	
Stream Name	Transuranic Debris			Activity Concentrations Decayed to CY 2016			

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
1-L 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	1.00E-03
Am-243	1.33E-07
Cm-244	4.53E-04
Cs-137	2.11E+00
Np-237	6.86E-06
Pu-238	3.79E-02
Pu-239	6.10E-05
Pu-240	4.94E-05
Pu-241	1.24E-02
Pu-242	3.10E-07
Pu-244	4.34E-15
Sr-90	2.09E+00
Th-229	2.80E-12
Th-230	5.50E-09
Th-232	1.07E-13
U-233	1.12E-09
U-234	4.59E-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.	Remediation/D&D Waste	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2016	
Stream Name	Transuranic Sludge				Activity Concentrations Decayed to CY	2016	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
Other - sump/piping	0.0	0.2	0.2
Current Form Total	0.0	0.2	0.2

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	32.05
Aluminum-based Metal/Alloys	16.03
Other Metal/Alloys	1682.69
Other Inorganic Materials	0.00
Cellulose	16.03
Rubber	16.03
Plastic	16.03
Cement	0.00
Solidified Inorganic Material	32.05
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	6.81E-02
Am-243	5.59E-09
Cm-244	3.53E-03
Cs-137	3.72E+01
Np-237	1.32E-07
Pu-238	1.19E+00
Pu-239	1.98E-02
Pu-240	1.98E-02
Pu-241	1.50E-01
Sr-90	2.89E+01
Th-229	1.54E-06
Th-230	7.60E-04
Th-232	3.84E-04
U-233	2.91E-03
U-234	2.93E-03
U-235	6.62E-04
U-236	6.62E-04

No Hazardous Waste Numbers Provided

TRUCON Code(s)
325

Waste Stream Description

This waste stream consists of organic and inorganic particulate and sludge not yet generated.

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.	Remediation/D&D Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2016	
Stream Name	Transuranic Debris			Activity Concentrations Decayed to CY			
				2016			

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
1-L 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	3.04E-04
Am-243	1.32E-06
Cm-244	1.85E-04
Cs-137	7.99E-01
Np-237	2.32E-06
Pu-238	1.34E-02
Pu-239	2.07E-05
Pu-240	1.67E-05
Pu-241	5.31E-03
Pu-242	1.05E-07
Pu-244	4.30E-14
Sr-90	7.99E-01
Th-229	2.33E-11
Th-230	3.38E-08
Th-232	1.04E-12
U-233	9.67E-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	12/31/2016	
Stream Name	Building 234 TRU Waste			Activity Concentrations Decayed to CY			
				2016			

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	48.5	608.2	656.7
55-gal Drum Dir Ld w/o Liner	0.2	0.0	0.2
Box - Crate	33.6	0.0	33.6
Current Form Total	82.3	608.2	690.5

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	89.6	608.2	697.8
Final Form Total	89.6	608.2	697.8

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	19.97
Aluminum-based Metal/Alloys	2.60
Other Metal/Alloys	0.00
Other Inorganic Materials	33.58
Cellulose	5.10
Rubber	0.30
Plastic	31.46
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	156.17
Soil	1438.96
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-01
Np-237	5.84E-07
Pu-238	2.53E-02
Pu-239	8.10E-01
Pu-240	8.09E-01
Pu-241	8.19E-01
Th-229	2.04E-06
Th-230	4.50E-04
Th-232	1.49E-04
U-233	2.90E-03
U-234	2.90E-03
U-235	5.50E-04
U-236	5.50E-04
U-238	7.11E-05

Haz. Waste No(s).
F002

TRUCON Code(s)
111/211, 127/227

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	12/31/2016	
Stream Name	Cemented TRU Waste					Activity Concentrations Decayed to CY	2016

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
110-gal Drum w/ 1 - 55-gal Drum w/ Liner	18.0	0.0	18.0
55-gal Drum Dir Ld w/ Liner	75.1	363.0	438.0
55-gal POC - 12" w/ Liner	2.1	0.0	2.1
85-gal Drum w/ 1 - 55-gal Drum w/ Liner	229.3	0.0	229.3
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	13.3	0.0	13.3
SWB w/ 4 - 55-gal Drums w/ Liners	13.3	0.0	13.3
Current Form Total	356.2	363.0	719.2

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	244.8	363.0	607.8
55-gal POC - 12" w/ Liner	2.1	0.0	2.1
SWB Dir Ld w/ Liner	13.2	0.0	13.2
SWB w/ 4 - 55-gal Drums w/ Liners	13.2	0.0	13.2
Final Form Total	273.4	363.0	636.3

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	31.89
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	5.67
Cement	892.09
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.44
Packaging Material, Plastic	35.89
Packaging Material, Rubber	0.56
Packaging Material, Steel	134.21
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	6.40E+01
Am-243	2.64E-03
Cs-137	3.19E-06
Np-237	3.48E-04
Pu-238	8.26E+00
Pu-239	1.36E+01
Pu-240	3.64E+00
Pu-241	7.11E+01
Pu-242	4.35E-03
Pu-244	2.64E-09
Sr-90	3.18E-06
Th-229	1.59E-08
Th-230	1.13E-08
Th-232	1.64E-06
U-233	1.80E-04
U-234	1.24E-03
U-235	1.45E-05
U-236	7.33E-06
U-238	5.35E-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	12/31/2016	
Stream Name	Cemented TRU Waste					Activity Concentrations Decayed to CY	2016

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	0.0	12.1
85-gal Drum w/ 1 - 55-gal Drum w/ Liner	7.1	0.0	7.1
SWB Dir Ld w/ Liner	102.6	0.0	102.6
Current Form Total	126.3	0.0	126.3

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	19.3	0.0	19.3
SWB Dir Ld w/ Liner	102.1	0.0	102.1
Final Form Total	121.4	0.0	121.4

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	0.59
Cement	591.36
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	6.92
Packaging Material, Rubber	0.25
Packaging Material, Steel	149.83
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	2.42E+00
Am-243	9.84E-06
Cs-137	3.96E-07
Np-237	1.23E-05
Pu-238	2.34E-01
Pu-239	3.08E+00
Pu-240	1.20E-01
Pu-241	8.79E-01
Pu-242	1.78E-05
Sr-90	3.41E-07
Th-229	9.31E-08
Th-230	4.48E-10
Th-232	3.51E-19
U-233	3.82E-09
U-234	2.50E-05
U-235	6.37E-06
U-236	7.11E-09
U-238	3.99E-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	12/31/2016	
Stream Name	Cemented TRU Waste					Activity Concentrations Decayed to CY	2016

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
110-gal Drum w/ 1 - 55-gal Drum w/ Liner	0.4	0.0	0.4
55-gal Drum Dir Ld w/ Liner	1.9	0.0	1.9
85-gal Drum w/ 1 - 55-gal Drum w/ Liner	1.3	0.0	1.3
Current Form Total	3.6	0.0	3.6

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	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	1.94
Cement	646.02
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	9.98E-03
Am-243	7.55E-06
Cs-137	4.07E-05
Np-237	4.63E-06
Pu-238	4.17E-02
Pu-239	2.09E-01
Pu-240	9.40E-03
Pu-241	6.70E-02
Pu-242	3.55E-07
Sr-90	4.06E-05
Th-229	2.05E-07
Th-230	2.70E-09
Th-232	2.74E-20
U-233	4.03E-11
U-234	1.47E-04
U-235	3.50E-06
U-236	5.56E-10
U-238	1.73E-04

Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D022, D027, D028, D029, D030, D037, D043, F001, F002, F004, F005
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TRUCON Code(s)

114/214, 126/226

Waste Stream Description

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

Waste Stream ID: LA-LA225D

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	12/31/2016	
Stream Name	Cemented TRU Waste					Activity Concentrations Decayed to CY	2016

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	2.9	0.0	2.9
85-gal Drum w/ 1 - 55-gal Drum w/ Liner	2.9	0.0	2.9
Current Form Total	5.8	0.0	5.8

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ 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	3.49
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	0.62
Cement	97.59
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	8.85E-02
Am-243	7.40E-05
Cs-137	7.52E-06
Np-237	7.48E-06
Pu-238	7.93E-02
Pu-239	1.99E-01
Pu-240	3.96E-02
Pu-241	3.19E-01
Pu-242	2.68E-06
Sr-90	7.50E-06
Th-229	3.77E-07
Th-230	3.21E-10
Th-232	1.66E-18
U-233	6.49E-11
U-234	1.77E-05
U-235	1.37E-07
U-236	1.80E-08
U-238	2.07E-07

Haz. Waste No(s).

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

125/225

Waste Stream Description

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

Waste Stream ID: **LA-LA238HONR**

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	12/31/2016	
Stream Name	Heterogeneous Debris				Activity Concentrations Decayed to CY	2016	

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	25.73
Aluminum-based Metal/Alloys	0.10
Other Metal/Alloys	3.08
Other Inorganic Materials	16.69
Cellulose	2.13
Rubber	3.19
Plastic	9.85
Cement	0.00
Solidified Inorganic Material	0.41
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	6.67E-02
Np-237	4.14E-08
Pu-238	8.37E+01
Pu-239	5.07E-02
Pu-240	2.55E-02
Pu-241	1.78E+00
Pu-242	2.10E-05
Th-229	1.03E-17
Th-230	1.80E-07
Th-232	7.45E-20
U-233	1.78E-13
U-234	1.01E-02
U-235	2.66E-09
U-236	1.51E-09
U-238	6.51E-15

No Hazardous Waste Numbers Provided

TRUCON Code(s)
122/222

Waste Stream Description

Mixed heterogeneous debris waste generated in TA-55.

Waste Stream ID: **LA-LA238HOR**

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	12/31/2016	
Stream Name	Heterogeneous Debris				Activity Concentrations Decayed to CY	2016	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
85-gal Drum w/ 1 - 55-gal Drum 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	0.2	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	318.20
Aluminum-based Metal/Alloys	1.29
Other Metal/Alloys	38.14
Other Inorganic Materials	206.36
Cellulose	26.33
Rubber	39.50
Plastic	121.83
Cement	0.00
Solidified Inorganic Material	5.07
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	3.50E-01
Np-237	1.11E-07
Pu-238	4.62E+02
Pu-239	2.78E-01
Pu-240	1.40E-01
Pu-241	1.02E+01
Pu-242	1.15E-04
Th-229	6.99E-18
Th-230	4.88E-07
Th-232	1.02E-19
U-233	2.39E-13
U-234	5.38E-02
U-235	1.43E-08
U-236	4.14E-09
U-238	1.78E-14

Haz. Waste No(s).

D005, D006, D007, D008, D009, D010, D011
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TRUCON Code(s)

122/222

Waste Stream Description

Mixed heterogeneous debris waste generated in TA-55.

Waste Stream ID: **LA-LAMHD02238**

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	12/31/2016	
Stream Name	MIXED COMBUSTIBLE/NONCOMBUSTIBLE WASTE				Activity Concentrations Decayed to CY	2016	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal POC - 12" 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
55-gal POC - 12" w/ Liner	1.7	0.0	1.7
Final Form Total	1.7	0.0	1.7

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	29.23
Aluminum-based Metal/Alloys	0.12
Other Metal/Alloys	3.50
Other Inorganic Materials	18.96
Cellulose	2.42
Rubber	3.63
Plastic	11.19
Cement	0.00
Solidified Inorganic Material	0.47
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	6.44E-03
Np-237	2.04E-09
Pu-238	8.85E+00
Pu-239	5.25E-03
Pu-240	2.60E-03
Pu-241	1.88E-01
Pu-242	2.12E-06
Th-229	1.29E-19
Th-230	9.36E-09
Th-232	1.90E-21
U-233	4.41E-15
U-234	1.03E-03
U-235	2.68E-10
U-236	7.70E-11
U-238	3.30E-16

Haz. Waste No(s).

D005, D006, D007, D008, D009, D010, D011
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TRUCON Code(s)

115/215, 116/216, 117/217, 118/218, 119/219, 122/222, 123/223, 125/225, 133/233, 154
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Waste Stream Description

MIXED HETEROGENEOUS DEBRIS WASTE, PU-238

Waste Stream ID: **LA-LAMIN04S**

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	12/31/2016		
Stream Name	COMBINED COMBUSTIBLE AND NON-COMBUSTIBLE WASTE			Activity Concentrations Decayed to CY	2016		

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal POC - 12" 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 POC - 12" 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	3.37
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.21
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	1.76
Cement	0.00
Solidified Inorganic Material	10.69
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	2.50E+01
Np-237	8.00E-06
Pu-238	3.54E+00
Pu-239	2.98E+01
Pu-240	1.27E+01
Pu-241	3.64E+02
Pu-242	3.80E-03
Th-229	5.08E-16
Th-230	2.63E-09
Th-232	9.29E-18
U-233	1.74E-11
U-234	2.91E-04
U-235	1.11E-06
U-236	3.77E-07
U-238	5.90E-13

Haz. Waste No(s).

D005, D006, D007, D008, D009, D010, D011
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TRUCON Code(s)

124/224

Waste Stream Description

INORGANIC HOMOGENEOUS TRU WASTE FROM TA55-PF4

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	12/31/2016	
Stream Name	TRU METAL WASTE				Activity Concentrations Decayed to CY	2016	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
Other - Sphere	13.9	0.0	13.9
Current Form Total	13.9	0.0	13.9

Final Form Volumes			
Container Type	Stored	Proj.	Total
SWB Dir Ld w/ Liner	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	746.73
Aluminum-based Metal/Alloys	3.02
Other Metal/Alloys	89.50
Other Inorganic Materials	484.27
Cellulose	61.80
Rubber	92.70
Plastic	285.91
Cement	0.00
Solidified Inorganic Material	11.90
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	1.03E-01
Np-237	6.49E-08
Pu-238	1.53E-02
Pu-239	1.58E+00
Pu-240	1.23E-01
Pu-241	1.70E+00
Pu-242	7.14E-06
Th-229	1.64E-17
Th-230	2.16E-11
Th-232	3.60E-19
U-233	2.80E-13
U-234	1.22E-06
U-235	2.27E-08
U-236	7.31E-09
U-238	5.94E-06

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

Waste Stream Description

ALL OTHER NON-COMBUSTIBLE WASTE

Waste Stream ID: **LA-LANHD02238**

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	12/31/2016	
Stream Name	COMBINED COMBUSTIBLE AND NON-COMBUSTIBLE WASTE				Activity Concentrations Decayed to CY	2016	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal POC - 12" w/ Liner	1.2	0.0	1.2
SWB Dir Ld w/ Liner	5.7	0.0	5.7
Current Form Total	6.9	0.0	6.9

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal POC - 12" w/ Liner	1.2	0.0	1.2
SWB Dir Ld w/ Liner	5.7	0.0	5.7
Final Form Total	6.9	0.0	6.9

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	24.28
Aluminum-based Metal/Alloys	0.10
Other Metal/Alloys	2.91
Other Inorganic Materials	15.75
Cellulose	2.01
Rubber	3.01
Plastic	9.30
Cement	0.00
Solidified Inorganic Material	0.39
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	24.37
Packaging Material, Plastic	7.67
Packaging Material, Rubber	0.26
Packaging Material, Steel	221.16
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	7.20E-02
Np-237	2.28E-08
Pu-238	9.51E+01
Pu-239	5.71E-02
Pu-240	2.88E-02
Pu-241	2.10E+00
Pu-242	2.36E-05
Th-229	1.44E-18
Th-230	1.00E-07
Th-232	2.10E-20
U-233	4.93E-14
U-234	1.11E-02
U-235	2.94E-09
U-236	8.51E-10
U-238	3.67E-15

No Hazardous Waste Numbers Provided

TRUCON Code(s)
125/225

Waste Stream Description

PF4 TRU Packaged Waste

Waste Stream ID: **LA-LANIN03NC**

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	12/31/2016	
Stream Name	Homogeneous Inorganic Solids				Activity Concentrations Decayed to CY	2016	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal POC - 12" 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 POC - 12" 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	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	0.14
Cement	0.00
Solidified Inorganic Material	26.46
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	1.25E+02
Np-237	4.04E-05
Pu-238	4.92E+00
Pu-239	2.51E+01
Pu-240	1.61E+01
Pu-241	4.89E+02
Pu-242	5.77E-03
Th-229	2.57E-15
Th-230	5.58E-09
Th-232	1.18E-17
U-233	8.78E-11
U-234	6.14E-04
U-235	9.62E-07
U-236	4.77E-07
U-238	8.96E-13

No Hazardous Waste Numbers Provided

TRUCON Code(s)
124/224

Waste Stream Description

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

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	12/31/2016		
Stream Name	Heterogeneous Debris			Activity Concentrations Decayed to CY	2016		

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	42.0	7662.9	7704.9
55-gal POC - 12" w/ Liner	18.7	0.0	18.7
85-gal Drum w/ 1 - 55-gal Drum w/ Liner	2.6	0.0	2.6
Box - Crate	7.2	0.0	7.2
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 - Sphere	26.7	0.0	26.7
Other - Tritium Torpedo	3.7	0.0	3.7
SWB Dir Ld w/ Liner	53.2	0.0	53.2
SWB w/ 4 - 55-gal Drums w/ Liners	32.3	0.0	32.3
Current Form Total	256.0	7662.9	7918.9

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	196.8	7662.9	7859.7
55-gal POC - 12" w/ Liner	18.7	0.0	18.7
SWB Dir Ld w/ Liner	92.6	0.0	92.6
SWB w/ 4 - 55-gal Drums w/ Liners	32.1	0.0	32.1
Final Form Total	340.2	7662.9	8003.2

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	97.04
Aluminum-based Metal/Alloys	0.39
Other Metal/Alloys	11.63
Other Inorganic Materials	62.93
Cellulose	8.03
Rubber	12.05
Plastic	37.16
Cement	0.00
Solidified Inorganic Material	1.55
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.32
Packaging Material, Plastic	36.57
Packaging Material, Rubber	0.56
Packaging Material, Steel	132.29
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	1.77E+00
Am-243	6.54E-05
Cs-137	3.47E-06
Np-237	1.91E-05
Pu-238	5.08E+01
Pu-239	4.99E+00
Pu-240	1.35E+00
Pu-241	1.83E+01
Pu-242	1.65E-03
Pu-244	1.17E-09
Sr-90	3.51E-06
Th-229	2.57E-10
Th-230	5.32E-09
Th-232	6.01E-19
U-233	2.92E-05
U-234	5.79E-03
U-235	5.83E-07
U-236	1.24E-07
U-238	8.71E-06

Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D021, D022, D028, D035, D038, D039, D040, F001, F002, F003, F005
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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
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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	12/31/2016	
Stream Name	Heterogeneous Debris			Activity Concentrations Decayed to CY		2016	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
30-gal Drum	4.6	0.0	4.6
55-gal Drum Dir Ld w/ Liner	73.4	437.8	511.3
55-gal POC - 12" w/ Liner	0.4	0.0	0.4
85-gal Drum w/ 1 - 55-gal Drum w/ Liner	1.3	0.0	1.3
Cask - Misc w/ 1 - 30-gal Drum	0.8	0.0	0.8
Other - Glovebox	0.0	214.7	214.7
SWB Dir Ld w/ Liner	9.5	0.0	9.5
Current Form Total	90.0	652.5	742.5

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	80.3	437.8	518.1
55-gal POC - 12" w/ Liner	0.4	0.0	0.4
SLB2 Dir Ld	0.0	916.9	916.9
SWB Dir Ld w/ Liner	9.5	0.0	9.5
Final Form Total	90.2	1354.8	1444.9

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	19.25
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	6.30
Other Inorganic Materials	30.54
Cellulose	24.60
Rubber	2.49
Plastic	72.22
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.48
Vitrified	0.00
Packaging Material, Cellulose	0.04
Packaging Material, Plastic	13.31
Packaging Material, Rubber	0.30
Packaging Material, Steel	184.83
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	9.05E-02
Am-243	5.36E-05
Cm-244	1.81E+00
Cs-137	7.19E-03
Np-237	4.46E-05
Pu-238	9.83E-01
Pu-239	2.31E-01
Pu-240	6.08E-02
Pu-241	7.30E-01
Pu-242	1.70E-05
Sr-90	1.00E-02
Th-229	2.15E-17
Th-230	1.07E-10
Th-232	3.52E-20
U-233	6.82E-12
U-234	1.17E-04
U-235	6.13E-07
U-236	7.22E-09
U-238	1.84E-07

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	12/31/2016		
Stream Name	Heterogeneous Debris	Activity Concentrations Decayed to CY				2016	

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	0.8	0.0	0.8
SWB Dir Ld w/ Liner	76.0	0.0	76.0
TDOP Dir Ld	22.5	0.0	22.5
Current Form Total	99.4	0.0	99.4

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	1.0	0.0	1.0
SWB Dir Ld w/ Liner	75.6	0.0	75.6
TDOP Dir Ld	22.5	0.0	22.5
Final Form Total	99.1	0.0	99.1

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	31.71
Aluminum-based Metal/Alloys	12.09
Other Metal/Alloys	24.31
Other Inorganic Materials	6.91
Cellulose	20.60
Rubber	15.92
Plastic	11.84
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	1.30
Packaging Material, Rubber	0.19
Packaging Material, Steel	157.26
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	4.43E-01
Am-243	2.62E-06
Cs-137	1.70E-07
Np-237	7.00E-06
Pu-238	2.20E+00
Pu-239	1.15E+00
Pu-240	3.72E-01
Pu-241	2.08E+00
Pu-242	5.62E-05
Sr-90	1.69E-07
Th-229	4.40E-09
Th-230	6.09E-09
Th-232	1.10E-18
U-233	2.50E-05
U-234	3.38E-04
U-235	2.10E-07
U-236	2.21E-08
U-238	1.64E-09

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	12/31/2016		
Stream Name	Heterogeneous Debris Waste			Activity Concentrations Decayed to CY	2016		

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	2.9	0.0	2.9
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	125.01
Aluminum-based Metal/Alloys	3.86
Other Metal/Alloys	7.50
Other Inorganic Materials	18.64
Cellulose	3.86
Rubber	6.14
Plastic	6.14
Cement	0.00
Solidified Inorganic Material	50.00
Solidified Organic Material	6.14
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	6.67E+00
Am-243	1.40E-05
Cm-244	1.20E+00
Cs-137	1.87E-07
Np-237	4.50E-05
Pu-238	1.25E-02
Pu-239	2.66E-01
Pu-240	5.18E-02
Pu-241	4.61E-01
Pu-242	2.99E-06
Sr-90	1.87E-07
Th-229	1.18E-07
Th-230	6.54E-13
Th-232	1.51E-19
U-233	3.73E-10
U-234	7.09E-08
U-235	5.24E-10
U-236	3.06E-09
U-238	9.29E-16

Haz. Waste No(s).

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

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	12/31/2016	
Stream Name	Heterogeneous Debris Waste				Activity Concentrations Decayed to CY	2016	

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 POC - 12" w/ Liner	0.6	0.0	0.6
Current Form Total	1.2	0.0	1.2

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.6	0.0	0.6
55-gal POC - 12" w/ Liner	0.6	0.0	0.6
Final Form Total	1.2	0.0	1.2

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	13.78
Aluminum-based Metal/Alloys	0.15
Other Metal/Alloys	4.92
Other Inorganic Materials	8.76
Cellulose	9.96
Rubber	3.37
Plastic	24.26
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	67.55
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	329.81
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	6.86E-01
Am-243	2.37E-02
Cs-137	8.18E-05
Np-237	5.31E-05
Pu-238	3.21E-02
Pu-239	2.57E-02
Pu-240	1.40E-02
Pu-241	3.62E-01
Pu-242	4.03E-04
Sr-90	8.15E-05
Th-229	4.04E-14
Th-230	4.72E-11
Th-232	4.08E-20
U-233	4.61E-10
U-234	2.66E-06
U-235	5.07E-11
U-236	8.27E-10
U-238	1.25E-13

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, 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.

Comprehensive Inventory Database ver. 2.03 Data ver. D.16.01
NOTE: Actual numerical values have been rounded for presentation purposes

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	12/31/2016		
Stream Name	Heterogeneous Debris			Activity Concentrations Decayed to CY	2016		

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
Other - Tank	7.6	0.0	7.6
SWB Dir Ld w/ Liner	5.7	0.0	5.7
TDOP Dir Ld	4.5	0.0	4.5
Current Form Total	21.5	0.0	21.5

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	3.5	0.0	3.5
SWB Dir Ld w/ Liner	15.1	0.0	15.1
TDOP Dir Ld	4.5	0.0	4.5
Final Form Total	23.2	0.0	23.2

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	174.41
Aluminum-based Metal/Alloys	63.49
Other Metal/Alloys	64.44
Other Inorganic Materials	7.08
Cellulose	13.04
Rubber	12.02
Plastic	13.18
Cement	0.00
Solidified Inorganic Material	2.91
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	6.44
Packaging Material, Rubber	0.25
Packaging Material, Steel	153.45
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	1.40E-01
Am-243	1.20E-06
Cs-137	2.53E-07
Np-237	3.32E-06
Pu-238	1.56E-01
Pu-239	5.94E-02
Pu-240	2.20E-02
Pu-241	4.06E-01
Pu-242	1.98E-05
Sr-90	2.52E-07
Th-229	2.50E-15
Th-230	4.30E-10
Th-232	6.43E-20
U-233	2.85E-11
U-234	2.38E-05
U-235	1.84E-07
U-236	1.30E-09
U-238	6.15E-15

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
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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	12/31/2016	
Stream Name	Absorbed Waste					Activity Concentrations Decayed to CY	2016

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	10.8	0.0	10.8
55-gal POC - 12" w/ Liner	1.7	0.0	1.7
85-gal Drum w/ 1 - 55-gal Drum w/ Liner	2.3	0.0	2.3
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
55-gal Drum Dir Ld w/ Liner	12.3	0.0	12.3
55-gal POC - 12" w/ Liner	1.7	0.0	1.7
SWB Dir Ld w/ Liner	3.8	0.0	3.8
Final Form Total	17.7	0.0	17.7

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	17.34
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	17.04
Cement	0.00
Solidified Inorganic Material	299.17
Solidified Organic Material	39.38
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	12.69
Packaging Material, Plastic	29.41
Packaging Material, Rubber	0.49
Packaging Material, Steel	173.00
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	2.21E+01
Am-243	2.72E-03
Cs-137	3.76E-06
Np-237	2.71E-04
Pu-238	3.08E+00
Pu-239	7.90E+00
Pu-240	1.82E+00
Pu-241	1.75E+01
Pu-242	1.82E-04
Sr-90	3.79E-06
Th-229	5.10E-14
Th-230	5.56E-09
Th-232	1.33E-18
U-233	1.16E-09
U-234	6.09E-04
U-235	4.73E-06
U-236	5.38E-08
U-238	5.95E-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
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TRUCON Code(s)

112/212, 113/213, 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	12/31/2016	
Stream Name	Homogeneous Inorganic Solids				Activity Concentrations Decayed to CY	2016	

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	15.3	0.0	15.3
85-gal Drum w/ 1 - 55-gal Drum w/ Liner	61.2	0.0	61.2
SWB w/ 4 - 55-gal Drums w/ Liners	3.8	0.0	3.8
Current Form Total	82.3	0.0	82.3

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	56.0	0.0	56.0
SWB w/ 4 - 55-gal Drums w/ Liners	3.8	0.0	3.8
Final Form Total	59.7	0.0	59.7

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	4.22
Cement	0.00
Solidified Inorganic Material	792.13
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	35.75
Packaging Material, Rubber	0.56
Packaging Material, Steel	135.85
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	5.60E-01
Am-243	1.47E-06
Cs-137	1.12E-05
Np-237	1.12E-06
Pu-238	1.22E-01
Pu-239	3.25E-01
Pu-240	4.43E-03
Pu-241	7.15E-02
Pu-242	1.27E-06
Sr-90	1.09E-05
Th-229	9.97E-08
Th-230	1.32E-11
Th-232	3.91E-20
U-233	1.69E-13
U-234	1.44E-05
U-235	1.03E-06
U-236	7.92E-09
U-238	1.69E-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	12/31/2016		
Stream Name	Salt Waste					Activity Concentrations Decayed to CY	2016

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
55-gal POC - 12" w/ Liner	0.8	0.0	0.8
SWB w/ 4 - 55-gal Drums w/ Liners	1.9	0.0	1.9
Current Form Total	4.0	0.0	4.0

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	0.8	0.0	0.8
SWB w/ 4 - 55-gal Drums w/ Liners	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	26.78
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	1.66
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	14.03
Cement	0.00
Solidified Inorganic Material	85.04
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	28.31
Packaging Material, Plastic	27.18
Packaging Material, Rubber	0.51
Packaging Material, Steel	252.44
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	1.39E+01
Am-243	5.89E-03
Cs-137	6.81E-05
Np-237	1.15E-04
Pu-238	5.66E-01
Pu-239	1.62E+01
Pu-240	4.02E+00
Pu-241	3.10E+01
Pu-242	2.67E-03
Sr-90	6.87E-05
Th-229	1.82E-13
Th-230	3.40E-09
Th-232	2.64E-17
U-233	1.41E-09
U-234	1.26E-04
U-235	3.00E-06
U-236	3.57E-07
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

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	12/31/2016	
Stream Name	Absorbed TRU Waste					Activity Concentrations Decayed to CY	2016

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/ Liner	1.9	0.0	1.9
Current Form Total	2.7	0.0	2.7

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.8	0.0	0.8
SWB Dir Ld w/ Liner	1.9	0.0	1.9
Final Form Total	2.7	0.0	2.7

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	22.93
Aluminum-based Metal/Alloys	4.34
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	8.98
Rubber	0.93
Plastic	13.01
Cement	0.00
Solidified Inorganic Material	129.82
Solidified Organic Material	129.82
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	12.16
Packaging Material, Rubber	0.31
Packaging Material, Steel	146.51
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	2.00E-01
Am-243	5.44E-06
Cs-137	1.61E-06
Np-237	2.10E-03
Pu-238	9.21E-02
Pu-239	1.59E+00
Pu-240	3.72E-01
Pu-241	2.89E+00
Pu-242	2.54E-05
Sr-90	1.61E-06
Th-229	1.61E-12
Th-230	3.19E-09
Th-232	1.09E-18
U-233	1.83E-08
U-234	1.74E-04
U-235	4.30E-06
U-236	2.20E-08
U-238	7.89E-15

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	12/31/2016			
Stream Name	Contaminated Soil	Activity Concentrations Decayed to CY				2016		

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	7.9	0.0	7.9
Box - Crate	19.0	0.0	19.0
SWB Dir Ld w/ Liner	34.2	0.0	34.2
Current Form Total	61.1	0.0	61.1

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	7.9	0.0	7.9
SWB Dir Ld w/ Liner	54.8	0.0	54.8
Final Form Total	62.7	0.0	62.7

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	29.58
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	5.11
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	539.63
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	7.93E-03
Am-243	4.13E-07
Cs-137	4.46E-05
Np-237	1.17E-07
Pu-238	1.97E-03
Pu-239	1.00E-01
Pu-240	1.47E-02
Pu-241	1.69E-01
Pu-242	8.57E-07
Sr-90	6.60E-06
Th-229	8.69E-17
Th-230	7.81E-10
Th-232	4.30E-20
U-233	9.95E-13
U-234	4.25E-05
U-235	1.16E-06
U-236	8.71E-10
U-238	1.11E-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	12/31/2016			
Stream Name	Defense Sealed Sources	Activity Concentrations Decayed to CY				2016		

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal POC - 12" w/ Liner	3.7	0.0	3.7
55-gal POC - 6" w/ Liner	7.9	261.5	269.4
Current Form Total	11.6	261.5	273.1

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal POC - 12" w/ Liner	3.7	0.0	3.7
55-gal POC - 6" w/ Liner	7.9	261.5	269.4
Final Form Total	11.6	261.5	273.1

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	36.96
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	6.52
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	213.81
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	323.53
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	3.94E+01
Cs-137	9.49E-02
Np-237	2.56E-05
Pu-238	7.10E+00
Pu-239	9.31E+00
Pu-240	1.53E+00
Pu-241	2.85E+00
Pu-242	1.15E-02
Sr-90	3.82E-06
Th-229	2.42E-12
Th-230	1.64E-08
Th-232	4.46E-18
U-233	1.38E-08
U-234	9.11E-04
U-235	1.87E-08
U-236	9.03E-08
U-238	4.33E-11

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 and contain varying amounts/combinations of Pu, Am, or other TRU nuclides, and may contain Be, Li, or other light elements.

Waste Stream ID: **LA-OS-00-04**

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	12/31/2016			
Stream Name	Mixed Waste Sealed Sources	Activity Concentrations Decayed to CY				2016		

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal POC - 6" 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 POC - 6" 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	29.42
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	5.19
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	214.90
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	320.67
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	1.01E+00
Np-237	9.88E-07
Pu-239	1.39E-04
Pu-240	8.84E-05
Pu-241	1.87E-04
Th-229	2.78E-13
Th-232	5.81E-22
U-233	1.06E-09
U-235	5.56E-12
U-236	7.85E-12

Haz. Waste No(s).

D006, D008

TRUCON Code(s)

120/220

Waste Stream Description

Manufactured sealed sources in metal or Lexan containers which are placed inside 55-gallon metal POC configuration drums.

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	12/31/2016	
Stream Name	TA-39 Heterogeneous Debris			Activity Concentrations Decayed to CY		2016	

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	0.3	0.0	0.3
Box - Crate	68.7	0.0	68.7
Other - Tritium Torpedo	3.0	0.0	3.0
Current Form Total	80.3	0.0	80.3

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	8.5	0.0	8.5
SWB Dir Ld w/ Liner	73.7	0.0	73.7
Final Form Total	82.2	0.0	82.2

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	104.69
Aluminum-based Metal/Alloys	18.72
Other Metal/Alloys	18.72
Other Inorganic Materials	57.80
Cellulose	2.06
Rubber	1.85
Plastic	1.85
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	4.92
Packaging Material, Rubber	0.23
Packaging Material, Steel	151.09
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	9.14E-03
Np-237	2.57E-05
Pu-238	1.80E-02
Pu-239	1.53E-02
Pu-240	5.20E-04
Pu-241	5.13E-03
Pu-242	3.01E-08
Th-229	3.94E-13
Th-230	1.98E-11
Th-232	3.08E-20
U-233	9.95E-10
U-234	4.73E-07
U-235	1.35E-10
U-236	1.39E-10
U-238	4.20E-17

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	12/31/2016	
Stream Name	NON-PN EQUIPMENT			Activity Concentrations Decayed to CY		2016	

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	2.7	0.0	2.7
Final Form Total	2.7	0.0	2.7

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	0.24
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	12.97
Cement	0.00
Solidified Inorganic Material	2433.57
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.00
Packaging Material, Steel	560.67
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Pu-239	4.64E+00
U-235	1.65E-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-03-10**

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	12/31/2016	
Stream Name	Combined Combustible and NonCombustible				Activity Concentrations Decayed to CY	2016	

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
Other	64.0	0.0	64.0
Current Form Total	64.6	0.0	64.6

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/ Liner	64.3	0.0	64.3
Final Form Total	64.9	0.0	64.9

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	0.32
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.11
Other Inorganic Materials	0.51
Cellulose	0.41
Rubber	0.04
Plastic	1.21
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	1.55
Packaging Material, Rubber	0.20
Packaging Material, Steel	153.22
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	1.25E-03
Am-243	1.41E-08
Np-237	1.26E-05
Pu-238	2.01E-04
Pu-239	7.04E-03
Pu-240	1.61E-03
Pu-241	2.21E-02
Pu-242	9.48E-08
Th-229	9.67E-15
Th-230	5.32E-11
Th-232	2.11E-18
U-233	1.10E-10
U-234	2.89E-06
U-235	1.32E-07
U-236	2.15E-08
U-238	1.08E-07

No Hazardous Waste Numbers Provided

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

Waste Stream Description

CMR TRU Inline or Subaccountable Packaged Waste

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	12/31/2016		
Stream Name	Metals and Miscellaneous Equipment Debris			Activity Concentrations Decayed to CY	2016		

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	2.84E-01
Pu-239	6.56E-04
Th-230	7.30E-09
U-234	3.77E-05
U-235	2.59E-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

N/A

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	12/31/2016		
Stream Name	Combined combustible and noncombustible debris waste (RH-TRU) of the CMR facility			Activity Concentrations Decayed to CY	2016		

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	3.70E-02
Cs-137	1.94E+01
Np-237	3.34E-08
Pu-238	2.00E-02
Pu-239	1.04E+00
Pu-240	3.24E-02
Pu-241	1.05E+00
Pu-242	1.97E-05
Sr-90	1.36E+01
Th-229	1.37E-17
Th-230	4.09E-10
Th-232	7.43E-18
U-233	1.89E-13
U-234	2.23E-05
U-235	1.07E-04
U-236	7.63E-08
U-238	5.26E-07

No Hazardous Waste Numbers Provided

TRUCON Code(s)
117/217

Waste Stream Description

N/A

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	12/31/2016	
Stream Name	Cement paste from CMR building (mixed)			Activity Concentrations Decayed to CY		2016	

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	2.45E+00
Th-230	7.02E-08
U-234	3.45E-04

Haz. Waste No(s).

D007, F001, F002

TRUCON Code(s)

114/214, 126/226

Waste Stream Description

Cement paste solidified aqueous waste and cemented sludge generated from facility and equipment operations and maintenance. Sludge is a residue from numerous treatment and filtration operations, involving aqueous liquid radioactive waste, that produces thin alkaline sludge (~25% solids) compatible with Portland cement. Final cemented waste monoliths are produced by mixing waste in 55-GAL 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	12/31/2016	
Stream Name	SILICON-BASED OIL - LIQUID				Activity Concentrations Decayed to CY	2016	

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	2.36E-01
Th-230	6.77E-09
U-234	3.32E-05

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

Waste Stream Description

Absorbed Organics on Vermiculite

Waste Stream ID: **LA-TA-03-CVD**

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	12/31/2016		
Stream Name	Confinement Vessel Disposition				Activity Concentrations Decayed to CY	2016	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal POC - 12" w/ Liner	2.1	0.0	2.1
Current Form Total	2.1	0.0	2.1

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

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	2.92
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.95
Other Inorganic Materials	4.62
Cellulose	3.73
Rubber	0.38
Plastic	10.94
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.07
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	3.03E+00
Np-237	1.89E-06
Pu-238	6.84E-01
Pu-239	2.36E+01
Pu-240	5.52E+00
Pu-241	7.61E+01
Pu-242	3.19E-04
Th-229	4.71E-16
Th-230	9.64E-10
Th-232	1.61E-17
U-233	8.10E-12
U-234	5.44E-05
U-235	9.23E-07
U-236	3.27E-07
U-238	9.91E-14

Haz. Waste No(s).

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

TRUCON Code(s)

125/225

Waste Stream Description

Mixed heterogeneous combustible and non-combustible debris.

Waste Stream ID: **LA-TA-03-CVD-C&NC**

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	12/31/2016	
Stream Name	Confinement Vessel Disposition			Activity Concentrations Decayed to CY		2016	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	3.5	0.0	3.5
55-gal POC - 12" w/ Liner	1.0	0.0	1.0
Current Form Total	4.6	0.0	4.6

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	3.5	0.0	3.5
55-gal POC - 12" w/ Liner	1.0	0.0	1.0
Final Form Total	4.6	0.0	4.6

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	8.71
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	2.85
Other Inorganic Materials	13.82
Cellulose	11.13
Rubber	1.13
Plastic	32.68
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.22
Vitrified	0.00
Packaging Material, Cellulose	30.70
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	221.24
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	3.30E+01
Np-237	1.07E-06
Pu-238	8.19E+00
Pu-239	2.78E+02
Pu-240	6.51E+01
Pu-241	9.84E+02
Pu-242	3.77E-03
Th-229	1.34E-19
Th-230	5.49E-10
Th-232	4.76E-19
U-233	5.83E-14
U-234	5.98E-04
U-235	1.04E-05
U-236	1.93E-07
U-238	5.85E-14

Haz. Waste No(s).

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

TRUCON Code(s)

125/225

Waste Stream Description

Mixed heterogeneous combustible and non-combustible debris.

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	12/31/2016			
Stream Name	Graphite	Activity Concentrations Decayed to CY				2016		

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	5.51E-01
Np-237	6.14E-06
Pu-238	5.74E-02
Pu-239	2.53E+00
Pu-240	6.02E-01
Pu-241	1.37E+00
Pu-242	4.06E-05
Th-229	5.46E-13
Th-230	3.67E-09
Th-232	7.05E-16
U-233	4.91E-10
U-234	1.36E-05
U-235	4.70E-05
U-236	7.14E-07
U-238	2.52E-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

N/A

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	12/31/2016		
Stream Name	Combustible debris waste (mixed)			Activity Concentrations Decayed to CY		2016	

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	2.42E-01
Np-237	2.53E-06
Pu-238	4.12E+01
Pu-239	6.23E-01
Pu-240	1.89E-01
Pu-241	6.96E-01
Pu-242	3.52E-05
Th-229	2.02E-13
Th-230	1.29E-06
Th-232	2.00E-16
U-233	1.92E-10
U-234	6.14E-03
U-235	2.85E-06
U-236	2.13E-07
U-238	2.08E-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 that includes debris, plastic-based waste, cellulose-based waste, and may also contain a smaller fraction of non-combustible solids and a small fraction of homogenous solids, salts, leached solids, ash, hydroxide cakes, crucibles, and 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	12/31/2016			
Stream Name	Metal	Activity Concentrations Decayed to CY				2016		

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	142.3	0.0	142.3
SWB Dir Ld w/ Liner	493.3	0.0	493.3
Final Form Total	635.6	0.0	635.6

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	38.62
Aluminum-based Metal/Alloys	14.73
Other Metal/Alloys	29.60
Other Inorganic Materials	8.41
Cellulose	25.09
Rubber	19.38
Plastic	14.42
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	9.23
Packaging Material, Rubber	0.28
Packaging Material, Steel	148.36
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	5.76E-02
Np-237	5.90E-07
Pu-238	1.63E+01
Pu-239	2.80E-01
Pu-240	5.91E-02
Pu-241	1.69E-01
Pu-242	5.27E-06
Th-229	4.48E-14
Th-230	3.68E-07
Th-232	5.92E-17
U-233	4.36E-11
U-234	2.02E-03
U-235	1.91E-08
U-236	6.48E-08
U-238	3.02E-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

N/A

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	12/31/2016		
Stream Name	Glass					Activity Concentrations Decayed to CY	2016

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	2.12E-01
Np-237	2.34E-06
Pu-238	2.07E+01
Pu-239	6.41E-01
Pu-240	1.80E-01
Pu-241	5.46E-01
Pu-242	2.70E-05
Th-229	2.07E-13
Th-230	5.34E-07
Th-232	2.11E-16
U-233	1.87E-10
U-234	2.76E-03
U-235	4.89E-08
U-236	2.14E-07
U-238	1.68E-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

N/A

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	12/31/2016			
Stream Name	Hepa Filters	Activity Concentrations Decayed to CY				2016		

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	5.29E-03
Np-237	6.21E-08
Pu-238	9.87E+01
Pu-239	2.54E-02
Pu-240	5.92E-03
Pu-241	1.19E-02
Pu-242	3.44E-07
Th-229	6.10E-15
Th-230	2.82E-06
Th-232	7.64E-18
U-233	5.23E-12
U-234	1.39E-02
U-235	1.99E-09
U-236	7.37E-09
U-238	2.24E-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

N/A

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	12/31/2016		
Stream Name	Non-combustible and combustible debris waste			Activity Concentrations Decayed to CY	2016		

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	335.5	0.0	335.5
SWB Dir Ld w/ Liner	7.6	0.0	7.6
Final Form Total	343.1	0.0	343.1

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	25.75
Aluminum-based Metal/Alloys	9.82
Other Metal/Alloys	19.74
Other Inorganic Materials	5.61
Cellulose	16.73
Rubber	12.93
Plastic	9.62
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	36.28
Packaging Material, Rubber	0.56
Packaging Material, Steel	131.27
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	4.31E-01
Np-237	4.41E-06
Pu-238	1.24E+02
Pu-239	7.95E-01
Pu-240	2.68E-01
Pu-241	1.26E+00
Pu-242	7.25E-05
Th-229	3.93E-04
Th-230	4.85E-06
Th-232	2.68E-16
U-233	1.21E-01
U-234	2.14E-02
U-235	5.70E-06
U-236	2.94E-07
U-238	4.16E-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	12/31/2016	
Stream Name	Cemented wastewater treatment sludge (mixed)			Activity Concentrations Decayed to CY		2016	

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	444.2	0.0	444.2
Final Form Total	459.3	0.0	459.3

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	76.68
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	13.64
Cement	2145.28
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	2.26E+01
Cs-137	3.90E-04
Np-237	4.42E-05
Pu-238	6.61E-02
Pu-239	1.36E-01
Pu-240	1.04E-06
Pu-241	9.06E-05
Pu-242	5.98E-11
Sr-90	2.72E-04
Th-229	1.00E-13
Th-230	7.25E-10
Th-232	5.34E-17
U-233	5.68E-10
U-234	1.37E-05
U-235	4.65E-05
U-236	1.80E-07
U-238	2.36E-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	12/31/2016	
Stream Name	Solidified organics				Activity Concentrations Decayed to CY	2016	

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	3.1	0.0	3.1
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	27.86
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	27.38
Cement	0.00
Solidified Inorganic Material	480.70
Solidified Organic Material	63.28
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	2.16E-01
Np-237	2.28E-06
Pu-238	2.28E-02
Pu-239	1.42E+00
Pu-240	2.44E-01
Pu-241	5.92E-01
Pu-242	1.41E-05
Th-229	1.83E-13
Th-230	1.30E-09
Th-232	2.57E-16
U-233	1.73E-10
U-234	5.08E-06
U-235	9.18E-08
U-236	2.74E-07
U-238	8.34E-14

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

Waste Stream Description

N/A

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	12/31/2016	
Stream Name	SOLIDIFIED INORGANIC PROCESS SOLID				Activity Concentrations Decayed to CY	2016	

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	55.1	0.0	55.1
Final Form Total	55.1	0.0	55.1

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	7.64
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	1.36
Cement	213.88
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	1.97E+00
Np-237	5.08E-06
Pu-238	4.52E-01
Pu-239	1.15E+01
Pu-240	2.75E+00
Pu-241	2.92E+01
Pu-242	2.26E-04
Th-229	2.40E-14
Th-230	3.65E-09
Th-232	1.63E-16
U-233	9.36E-11
U-234	4.99E-05
U-235	5.93E-05
U-236	7.32E-07
U-238	3.16E-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	12/31/2016			
Stream Name	Process solids	Activity Concentrations Decayed to CY				2016		

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	8.74E-03
Np-237	1.03E-07
Pu-238	8.87E-04
Pu-239	4.19E-02
Pu-240	9.78E-03
Pu-241	1.96E-02
Pu-242	5.68E-07
Th-229	1.01E-14
Th-230	6.01E-11
Th-232	1.26E-17
U-233	8.64E-12
U-234	2.14E-07
U-235	3.29E-09
U-236	1.22E-08
U-238	3.70E-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	12/31/2016	
Stream Name	Cemented caustic liquid waste (mixed)				Activity Concentrations Decayed to CY	2016	

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	0.4	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	1.03
Cement	1026.98
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	7.10E-01
Np-237	9.99E-06
Pu-239	1.37E-02
Th-229	1.14E-12
U-233	9.22E-10
U-235	5.68E-10

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	12/31/2016	
Stream Name	Homogeneous Inorganic Solids				Activity Concentrations Decayed to CY	2016	

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	3.43E-01
Np-237	4.24E-06
Pu-238	2.30E-02
Pu-239	2.22E-02
Th-229	3.75E-13
Th-230	4.97E-10
U-233	3.44E-10
U-234	2.79E-06
U-235	8.10E-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	12/31/2016			
Stream Name	Combustible debris waste (mixed)	Activity Concentrations Decayed to CY				2016		

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
55-gal POC - 12" w/ Liner	0.2	0.0	0.2
Cask - Misc w/ 1 - 30-gal Drum	0.4	0.0	0.4
Current Form Total	41.2	0.0	41.2

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	41.4	0.0	41.4
55-gal POC - 12" w/ Liner	0.2	0.0	0.2
Final Form Total	41.6	0.0	41.6

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	66.25
Aluminum-based Metal/Alloys	0.27
Other Metal/Alloys	7.94
Other Inorganic Materials	42.96
Cellulose	5.48
Rubber	8.22
Plastic	25.36
Cement	0.00
Solidified Inorganic Material	1.06
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.68
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	132.76
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	3.33E+00
Np-237	3.59E-05
Pu-238	4.23E+00
Pu-239	6.00E+00
Pu-240	2.98E+00
Pu-241	9.80E+01
Pu-242	1.69E-03
Th-229	2.64E-14
Th-230	9.22E-08
Th-232	1.92E-15
U-233	3.04E-10
U-234	5.03E-03
U-235	1.44E-04
U-236	1.96E-05
U-238	3.36E-05

Haz. Waste No(s).

D005, D006, D007, D008, D009, D010, D011
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TRUCON Code(s)

115/215, 116/216, 117/217, 118/218, 119/219, 122/222, 123/223, 125/225, 133/233, 154
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Waste Stream Description

Combustible waste that includes debris, plastic-based waste, cellulose-based waste, and may also contain a smaller fraction of non-combustible solids and a small fraction of homogenous solids, salts, leached solids, ash, hydroxide cakes, crucibles, and 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	12/31/2016		
Stream Name	Metal debris waste (mixed)				Activity Concentrations Decayed to CY	2016	

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	1.42E-01
Np-237	1.44E-06
Pu-238	1.03E+01
Pu-239	2.54E-01
Pu-240	9.06E-02
Pu-241	4.35E-01
Pu-242	2.41E-05
Th-229	1.09E-13
Th-230	7.54E-07
Th-232	9.08E-17
U-233	1.06E-10
U-234	2.81E-03
U-235	1.86E-08
U-236	9.94E-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 metal waste that may also contain some glass, ceramic, porcelain, as well as some small fraction of combustible waste.

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	12/31/2016		
Stream Name	Non-combustible and combustible debris waste (mixed)			Activity Concentrations Decayed to CY	2016		

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	66.1	0.0	66.1
Other	10.8	0.0	10.8
SWB Dir Ld w/ Liner	1.9	0.0	1.9
Current Form Total	78.8	0.0	78.8

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	66.1	0.0	66.1
SWB Dir Ld w/ Liner	13.2	0.0	13.2
Final Form Total	79.4	0.0	79.4

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	76.35
Aluminum-based Metal/Alloys	0.31
Other Metal/Alloys	9.15
Other Inorganic Materials	49.52
Cellulose	6.32
Rubber	9.48
Plastic	29.23
Cement	0.00
Solidified Inorganic Material	1.22
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	31.09
Packaging Material, Rubber	0.50
Packaging Material, Steel	134.55
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	2.01E+00
Np-237	1.25E-06
Pu-238	2.77E+00
Pu-239	2.10E+00
Pu-240	1.30E+00
Pu-241	5.38E+01
Pu-242	1.52E-03
Pu-244	2.51E-10
Th-229	3.12E-16
Th-230	8.61E-09
Th-232	3.36E-17
U-233	5.36E-12
U-234	4.76E-04
U-235	7.29E-06
U-236	3.80E-07
U-238	1.06E-04

Haz. Waste No(s).

D005, D006, D007, D008, D009, D010, D011
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TRUCON Code(s)

115/215, 116/216, 117/217, 118/218, 119/219, 122/222, 123/223, 125/225, 133/233, 154
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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 non-combustible solids and may also contain a smaller fraction of combustible solids and a small fraction of homogeneous solids.

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	12/31/2016	
Stream Name	LEACHED PROCESS RESIDUES				Activity Concentrations Decayed to CY	2016	

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	4.40E-02
Np-237	4.11E-07
Pu-238	2.64E+01
Pu-239	2.06E-02
Pu-240	1.03E-02
Pu-241	1.54E-01
Pu-242	8.53E-06
Th-229	2.62E-14
Th-230	1.69E-06
Th-232	8.74E-18
U-233	2.78E-11
U-234	6.80E-03
U-235	1.73E-09
U-236	1.04E-08
U-238	4.50E-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	12/31/2016	
Stream Name	Empty containers				Activity Concentrations Decayed to CY	2016	

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
SWB Dir Ld w/ Liner	11.4	0.0	11.4
Current Form Total	11.8	0.0	11.8

Final Form Volumes			
Container Type	Stored	Proj.	Total
SWB Dir Ld w/ Liner	13.2	0.0	13.2
Final Form Total	13.2	0.0	13.2

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	68.85
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.30
Plastic	19.51
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	1.63E-02
Am-243	4.30E-07
Cs-137	1.29E-07
Np-237	3.01E-07
Pu-238	1.47E+00
Pu-239	2.74E-02
Pu-240	6.40E-03
Pu-241	7.17E-02
Pu-242	2.70E-08
Sr-90	1.28E-07
Th-229	6.52E-10
Th-230	1.15E-08
Th-232	1.17E-19
U-233	6.13E-12
U-234	2.61E-04
U-235	1.61E-08
U-236	9.48E-10
U-238	2.09E-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	12/31/2016	
Stream Name	Empty containers			Activity Concentrations Decayed to CY 2016			

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
85-gal Drum w/ 1 - 55-gal Drum w/ Liner (LANL)	258.6	0.0	258.6
Current Form Total	258.6	0.0	258.6

Final Form Volumes			
Container Type	Stored	Proj.	Total
SWB Dir Ld w/ Liner	79.4	0.0	79.4
Final Form Total	79.4	0.0	79.4

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	308.96
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	1.15
Plastic	37.27
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	6.88E-01
Am-243	1.11E-04
Cs-137	1.58E-05
Np-237	3.59E-05
Pu-238	2.75E-01
Pu-239	3.90E-01
Pu-240	9.99E-02
Pu-241	9.64E-01
Pu-242	3.37E-06
Pu-244	8.80E-14
Sr-90	1.57E-05
Th-229	3.25E-08
Th-230	8.23E-10
Th-232	6.90E-19
U-233	3.11E-10
U-234	4.56E-05
U-235	4.00E-08
U-236	9.95E-09
U-238	1.85E-07

Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D021, D022, D035, D038, D039, D040, F001, F002, F005

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	12/31/2016			
Stream Name	LBL-Non Mixed Waste	Activity Concentrations Decayed to CY				2016		

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	9.71
Other Inorganic Materials	3.56
Cellulose	5.24
Rubber	0.00
Plastic	3.08
Cement	0.00
Solidified Inorganic Material	0.29
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	2.60E-02
Am-243	4.33E-03
Cm-244	3.90E-03
Cs-137	4.06E-07
Np-237	4.11E-05
Pu-238	1.61E-02
Pu-239	1.48E-03
Pu-240	4.81E-05
Pu-241	6.08E-04
Pu-242	3.56E-19
Pu-244	3.22E-16
Th-229	1.97E-17
Th-230	2.09E-15
Th-232	2.69E-06
U-233	6.28E-12
U-234	4.54E-09
U-235	1.46E-13
U-236	1.42E-13
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	12/31/2016		
Stream Name	LBL - Mixed Waste			Activity Concentrations Decayed to CY	2016		

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	4.25E-05
Am-243	5.77E-08
Np-237	2.79E-07
Pu-239	2.64E-04
Pu-241	2.53E-04
Th-229	1.34E-19
U-233	4.26E-14
U-235	2.60E-14

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	12/31/2016	
Stream Name	R&D Glovebox Waste					Activity Concentrations Decayed to CY	2016

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 Dir Ld w/o Liner	84.0	278.5	362.5
55-gal POC - 12" w/ Liner	16.2	27.0	43.3
SWB Dir Ld w/o Liner	7.6	52.9	60.5
Current Form Total	119.0	358.5	477.5

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	95.3	278.5	373.8
55-gal POC - 12" w/ Liner	16.2	27.0	43.3
SWB Dir Ld w/o Liner	7.6	52.9	60.5
Final Form Total	119.0	358.5	477.5

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	37.31
Aluminum-based Metal/Alloys	9.74
Other Metal/Alloys	19.49
Other Inorganic Materials	3.31
Cellulose	18.08
Rubber	17.20
Plastic	51.51
Cement	7.76
Solidified Inorganic Material	6.43
Solidified Organic Material	0.50
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	12.24
Packaging Material, Plastic	3.36
Packaging Material, Rubber	0.52
Packaging Material, Steel	169.71
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	2.47E+00
Am-243	2.66E-04
Cm-244	8.35E-01
Cs-137	7.39E-04
Np-237	8.74E-05
Pu-238	3.46E+00
Pu-239	4.85E+00
Pu-240	1.39E+00
Pu-241	9.70E+00
Pu-242	6.91E-04
Pu-244	1.34E-14
Sr-90	7.39E-04
Th-229	1.45E-06
Th-230	5.37E-06
Th-232	1.76E-07
U-233	3.86E-04
U-234	3.74E-05
U-235	9.32E-06
U-236	4.13E-09
U-238	2.09E-05

Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D022, D028, D029, D035, D040, F001, F002, F005
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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	12/31/2016		
Stream Name	Pyrochemical salt waste	Activity Concentrations Decayed to CY			2016		

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	1.34E-01
Cm-244	7.23E-03
Np-237	1.18E-06
Pu-238	4.76E-02
Pu-239	2.38E-01
Pu-240	1.15E-01
Pu-241	9.65E-01
Pu-242	3.74E-05
Th-229	9.10E-15
Th-230	3.14E-11
Th-232	4.13E-18
U-233	3.10E-11
U-234	9.66E-07
U-235	1.64E-09
U-236	2.39E-08
U-238	4.06E-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	12/31/2016	
Stream Name	Combined metal scrap & incidental combust			Activity Concentrations Decayed to CY		2016	

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	96.2	96.2
SWB Dir Ld w/o Liner	20.8	117.2	138.0
Current Form Total	141.4	213.4	354.8

Final Form Volumes			
Container Type	Stored	Proj.	Total
SLB2 Dir Ld	118.9	96.2	215.1
SWB Dir Ld w/o Liner	20.8	117.2	138.0
Final Form Total	139.7	213.4	353.1

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	191.28
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	7.61E-02
Cm-244	3.75E-05
Np-237	2.19E-07
Pu-238	5.73E-03
Pu-239	5.12E-02
Pu-240	1.53E-02
Pu-241	2.94E-01
Pu-242	3.31E-06
Th-229	1.14E-15
Th-230	6.31E-12
Th-232	9.08E-19
U-233	4.26E-12
U-234	1.51E-07
U-235	4.54E-10
U-236	4.09E-09
U-238	4.62E-15

Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D022, D028, D029, D035, D040, F001, F002, F005
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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	12/31/2016			
Stream Name	Sealed Sources	Activity Concentrations Decayed to CY				2016		

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	3.3	3.3
Current Form Total	4.2	3.3	7.5

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal POC - 12" w/ Liner	4.2	3.3	7.5
Final Form Total	4.2	3.3	7.5

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	1.88E+01
Am-243	2.50E-06
Cm-244	1.55E-04
Cs-137	3.12E-03
Np-237	5.68E-05
Pu-238	2.94E+00
Pu-239	1.44E-01
Pu-240	4.61E-04
Pu-241	6.78E-02
Pu-244	1.04E-22
Sr-90	9.63E-03
Th-229	3.08E-13
Th-230	3.24E-09
Th-232	2.73E-20
U-233	1.13E-09
U-234	7.73E-05
U-235	1.04E-07
U-236	1.23E-10

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	12/31/2016		
Stream Name	Solidified Waste			Activity Concentrations Decayed to CY				2016

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	9.8	20.4	30.2
Current Form Total	20.4	20.4	40.8

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	20.4	20.4	40.8
Final Form Total	20.4	20.4	40.8

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	11.28
Aluminum-based Metal/Alloys	0.84
Other Metal/Alloys	1.99
Other Inorganic Materials	0.00
Cellulose	2.58
Rubber	3.60
Plastic	35.59
Cement	2.67
Solidified Inorganic Material	201.06
Solidified Organic Material	31.11
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	1.19E+00
Am-243	5.94E-07
Cm-244	9.05E-04
Cs-137	1.81E-06
Np-237	7.95E-05
Pu-238	5.10E+00
Pu-239	2.65E+00
Pu-240	7.41E-01
Pu-241	1.01E+01
Pu-242	1.67E-04
Sr-90	1.81E-06
Th-229	4.91E-07
Th-230	1.53E-06
Th-232	1.90E-06
U-233	5.58E-02
U-234	1.38E-05
U-235	1.03E-05
U-236	2.19E-09
U-238	7.06E-05

Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D022, D028, D029, D035, D040, F001, F002, F005
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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	12/31/2016			
Stream Name	AmO2 Bagout/ Silver Bagout	Activity Concentrations Decayed to CY				2016		

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	7.08E+01
Np-237	1.15E-04
Th-229	1.80E-13
U-233	1.23E-09

Haz. Waste No(s).

D008, D011, F002, F005

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	12/31/2016		
Stream Name	Returned Smoke Detector Sources			Activity Concentrations Decayed to CY	2016		

Waste Volume Detail (m³)

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

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

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	2.25E+00
Np-237	5.12E-06
Th-229	1.58E-14
U-233	7.70E-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	12/31/2016	
Stream Name	Combined metal scrap and incidental combustibles				Activity Concentrations Decayed to CY	2016	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
SWB Dir Ld w/o Liner	60.5	56.7	117.2
Current Form Total	60.5	56.7	117.2

Final Form Volumes			
Container Type	Stored	Proj.	Total
SWB Dir Ld w/o Liner	60.5	56.7	117.2
Final Form Total	60.5	56.7	117.2

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	694.44
Aluminum-based Metal/Alloys	3.54
Other Metal/Alloys	0.00
Other Inorganic Materials	3.54
Cellulose	0.00
Rubber	3.54
Plastic	3.54
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	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	6.81E-02
Np-237	8.28E-07
Pu-238	3.24E-02
Pu-239	1.02E+00
Pu-240	2.31E-01
Pu-241	1.12E+00
Pu-242	1.29E-05
Th-229	2.13E-14
Th-230	7.60E-11
Th-232	2.85E-17
U-233	3.95E-11
U-234	1.25E-06
U-235	1.30E-08
U-236	8.90E-08
U-238	2.61E-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	12/31/2016	
Stream Name	V3XA Spheres					Activity Concentrations Decayed to CY	2016

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	1.41E+00
Np-237	2.65E-06
Pu-238	2.41E-01
Pu-239	9.43E+00
Pu-240	2.17E+00
Pu-241	9.42E+00
Pu-242	1.92E-04
Th-229	2.11E-13
Th-230	7.15E-08
Th-232	5.69E-17
U-233	4.22E-10
U-234	1.30E-03
U-235	8.93E-06
U-236	3.85E-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-feet 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	12/31/2016		
Stream Name	ORNL Analytical Chemistry CH-TRU Debris Waste			Activity Concentrations Decayed to CY	2016		

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	30.0	0.0	30.0
55-gal POC - 6" w/ Liner	0.4	0.0	0.4
79-gal Drum Dir Ld	0.6	0.0	0.6
Current Form Total	31.0	0.0	31.0

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	30.6	0.0	30.6
55-gal POC - 6" w/ Liner	0.4	0.0	0.4
Final Form Total	31.0	0.0	31.0

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	19.42
Aluminum-based Metal/Alloys	2.33
Other Metal/Alloys	3.14
Other Inorganic Materials	4.54
Cellulose	35.71
Rubber	22.80
Plastic	28.15
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.23
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	2.88
Packaging Material, Plastic	0.50
Packaging Material, Rubber	0.57
Packaging Material, Steel	133.32
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	1.58E-01
Am-243	1.20E-03
Cm-244	4.16E-01
Cs-137	1.86E-01
Np-237	2.89E-06
Pu-238	8.69E+00
Pu-239	1.38E-01
Pu-240	3.99E-02
Pu-241	5.35E-01
Pu-242	4.51E-05
Pu-244	1.15E-13
Sr-90	1.61E-01
Th-229	1.10E-06
Th-230	1.09E-09
Th-232	6.58E-08
U-233	7.92E-02
U-234	1.18E-03
U-235	1.14E-05
U-236	1.34E-04
U-238	5.11E-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-CHEM-RH-HET**

Appendix A

Waste Profile Report

Site	Oak Ridge 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	12/31/2016		
Stream Name	ORNL Analytical Chemistry Laboratory Operations RH-TRU Debris Waste			Activity Concentrations Decayed to CY	2016		

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
Cask - Misc	3.3	0.0	3.3
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	0.9	0.0	0.9
Current Form Total	4.2	0.0	4.2

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ 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	293.95
Aluminum-based Metal/Alloys	2.31
Other Metal/Alloys	24.69
Other Inorganic Materials	128.07
Cellulose	43.98
Rubber	14.66
Plastic	263.09
Cement	0.00
Solidified Inorganic Material	0.77
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	2.15E-04
Cm-244	6.90E-02
Cs-137	1.88E-01
Np-237	8.43E-10
Pu-238	1.01E-01
Pu-239	2.67E-02
Pu-240	1.11E-04
Pu-244	7.44E-18
Sr-90	2.73E-01
Th-229	1.35E-04
Th-230	1.61E-07
Th-232	4.34E-21
U-233	1.28E-01
U-234	1.46E-03
U-235	2.06E-05
U-236	2.12E-11
U-238	1.45E-03

Haz. Waste No(s).

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

TRUCON Code(s)

325

Waste Stream Description

Waste consists of RH-TRU debris from analytical chemistry operations at ORNL

Waste Stream ID: **OR-CRF-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	12/31/2016			
Stream Name	Curium Recovery Facility CH-TRU Waste	Activity Concentrations Decayed to CY				2016		

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
110-gal Drum Dir Ld	0.4	0.0	0.4
55-gal Drum Dir Ld w/o Liner	6.2	0.0	6.2
85-gal Drum Dir Ld w/o Liner	0.3	0.0	0.3
Current Form Total	7.0	0.0	7.0

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	7.1	0.0	7.1
Final Form Total	7.1	0.0	7.1

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	151.30
Aluminum-based Metal/Alloys	0.28
Other Metal/Alloys	4.76
Other Inorganic Materials	5.88
Cellulose	28.02
Rubber	5.32
Plastic	10.93
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	73.69
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	1.53E-02
Am-243	1.30E-03
Cm-244	9.41E-01
Cs-137	7.31E-03
Np-237	9.41E-07
Pu-238	4.25E-01
Pu-239	1.11E-03
Pu-240	5.08E-03
Pu-241	2.64E-02
Pu-242	5.39E-05
Pu-244	9.63E-17
Sr-90	5.31E-03
Th-229	1.86E-07
Th-230	1.52E-12
Th-232	6.39E-20
U-233	3.13E-04
U-234	1.71E-06
U-235	1.61E-08
U-236	1.30E-08
U-238	4.37E-09

Haz. Waste No(s).

D006, D008, D009, D011

TRUCON Code(s)
125/225

Waste Stream Description

Waste consists of CH-TRU debris from the Curium Recovery Facility 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	12/31/2016	
Stream Name	ORNL General Research & Development CH-TRU Debris Waste				Activity Concentrations Decayed to CY	2016	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	30.0	0.0	30.0
55-gal POC - 12" w/ Liner	0.2	0.0	0.2
55-gal POC - 6" w/ Liner	0.2	0.0	0.2
Current Form Total	30.4	0.0	30.4

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	30.0	0.0	30.0
55-gal POC - 12" w/ Liner	0.2	0.0	0.2
55-gal POC - 6" w/ Liner	0.2	0.0	0.2
Final Form Total	30.4	0.0	30.4

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	19.47
Aluminum-based Metal/Alloys	4.84
Other Metal/Alloys	4.84
Other Inorganic Materials	19.47
Cellulose	35.87
Rubber	23.60
Plastic	9.79
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.12
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	2.40
Packaging Material, Plastic	0.51
Packaging Material, Rubber	0.57
Packaging Material, Steel	134.80
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	1.31E-01
Am-243	1.83E-02
Cm-244	3.37E-01
Cs-137	6.01E-05
Np-237	4.23E-03
Pu-238	9.56E-02
Pu-239	7.75E-02
Pu-240	9.26E-02
Pu-241	1.03E+00
Pu-242	1.02E-02
Pu-244	3.58E-05
Sr-90	1.07E-04
Th-229	2.95E-07
Th-230	1.33E-11
Th-232	2.29E-07
U-233	1.21E-05
U-234	1.45E-05
U-235	3.61E-06
U-236	3.57E-06
U-238	3.75E-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	12/31/2016	
Stream Name	ORNL General Research & Development RH-TRU Debris Waste				Activity Concentrations Decayed to CY	2016	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o 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	28.05
Aluminum-based Metal/Alloys	6.97
Other Metal/Alloys	6.97
Other Inorganic Materials	28.05
Cellulose	51.68
Rubber	34.00
Plastic	14.11
Cement	0.00
Solidified Inorganic Material	0.17
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	6.37E-03
Am-243	4.76E-02
Cm-244	5.27E-05
Np-237	6.56E-08
Pu-239	3.57E-04
Pu-240	3.14E-04
Pu-241	2.46E-05
Pu-242	1.80E-04
Pu-244	1.87E-15
Th-229	4.06E-15
Th-230	3.59E-21
Th-232	2.21E-19
U-233	4.45E-12
U-234	3.78E-17
U-235	1.03E-11
U-236	2.88E-10
U-238	8.66E-13

Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D019, D022, D028, F002, F005
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TRUCON Code(s)

325

Waste Stream Description

Waste consists of RH-TRU debris from general R&D at ORNL

Waste Stream ID: **OR-IFEL-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	12/31/2016		
Stream Name	Irradiated Fuels Examination Laboratory CH-TRU Waste			Activity Concentrations Decayed to CY	2016		

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	19.1	0.0	19.1
Current Form Total	19.1	0.0	19.1

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o 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	58.17
Aluminum-based Metal/Alloys	10.58
Other Metal/Alloys	26.44
Other Inorganic Materials	5.29
Cellulose	44.95
Rubber	37.02
Plastic	68.75
Cement	0.00
Solidified Inorganic Material	13.22
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	6.73E-02
Cm-244	7.85E-02
Cs-137	9.84E-03
Np-237	1.44E-05
Pu-238	5.69E-02
Pu-239	9.01E-02
Pu-240	1.59E-02
Pu-241	1.18E-01
Pu-242	4.57E-07
Pu-244	3.27E-15
Sr-90	2.03E-03
Th-229	1.76E-05
Th-230	1.57E-07
Th-232	3.54E-06
U-233	6.47E-03
U-234	5.54E-04
U-235	1.07E-05
U-236	2.42E-05
U-238	1.34E-05

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 the Irradiated Fuels Examination Laboratory 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	12/31/2016		
Stream Name	ORNL Isotopes Facilities CH-TRU Debris Waste			Activity Concentrations Decayed to CY	2016		

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	129.4	0.0	129.4
55-gal POC - 12" w/ Liner	0.8	0.0	0.8
55-gal POC - 6" w/ Liner	0.4	0.0	0.4
79-gal Drum Dir Ld	0.3	0.0	0.3
85-gal Drum Dir Ld w/o Liner	1.6	0.0	1.6
Box - Misc	2.6	0.0	2.6
Current Form Total	135.1	0.0	135.1

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	134.2	0.0	134.2
55-gal POC - 12" w/ Liner	0.8	0.0	0.8
55-gal POC - 6" w/ Liner	0.4	0.0	0.4
Final Form Total	135.4	0.0	135.4

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	58.09
Aluminum-based Metal/Alloys	3.05
Other Metal/Alloys	16.67
Other Inorganic Materials	3.59
Cellulose	29.05
Rubber	15.96
Plastic	52.53
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.36
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	1.49
Packaging Material, Plastic	0.34
Packaging Material, Rubber	0.57
Packaging Material, Steel	133.80
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	1.02E+01
Am-243	5.60E-03
Cm-244	1.00E+01
Cs-137	6.17E-04
Np-237	6.93E-04
Pu-238	4.96E+00
Pu-239	5.24E-01
Pu-240	2.32E+00
Pu-241	5.40E+01
Pu-242	1.84E-02
Pu-244	3.24E-07
Sr-90	1.44E-04
Th-229	1.27E-06
Th-230	7.87E-06
Th-232	9.26E-07
U-233	3.08E-03
U-234	7.82E-04
U-235	4.39E-06
U-236	3.53E-06
U-238	4.46E-06

Haz. Waste No(s).

D005, D006, D007, D008, D009, D011, D019, D022, F002, F005
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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	12/31/2016	
Stream Name	ORNL Isotopes Facilities RH-TRU Debris Waste				Activity Concentrations Decayed to CY	2016	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
110-gal Drum Dir Ld	0.4	0.0	0.4
55-gal Drum Dir Ld w/o Liner	5.0	0.0	5.0
79-gal Drum Dir Ld	0.3	0.0	0.3
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	5.6	0.0	5.6
Final Form Total	5.6	0.0	5.6

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	58.47
Aluminum-based Metal/Alloys	3.07
Other Metal/Alloys	16.78
Other Inorganic Materials	3.61
Cellulose	29.23
Rubber	16.06
Plastic	52.87
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	9.51E+00
Cm-244	6.04E+01
Np-237	1.04E-03
Pu-238	1.35E+01
Pu-239	6.66E-01
Pu-240	1.59E+00
Pu-241	3.80E+01
Pu-242	1.42E-03
Pu-244	9.46E-10
Th-229	1.76E-09
Th-230	1.76E-12
Th-232	1.16E-20
U-233	2.01E-04
U-234	3.82E-06
U-235	6.56E-11
U-236	4.72E-09
U-238	2.20E-14

Haz. Waste No(s).

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

325

Waste Stream Description

Waste consists of RH-TRU debris from isotopes production at ORNL

Waste Stream ID: **OR-MRF-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	12/31/2016		
Stream Name	ORNL Metal Recovery Facility CH-TRU Debris Waste			Activity Concentrations Decayed to CY	2016		

Waste Volume Detail (m³)

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

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

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	65.72
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	2.63
Cellulose	73.60
Rubber	26.29
Plastic	36.80
Cement	0.00
Solidified Inorganic Material	5.25
Solidified Organic Material	52.57
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	1.03E-01
Am-243	1.47E-04
Cm-244	1.42E-02
Cs-137	1.85E-04
Np-237	6.02E-06
Pu-238	1.42E-02
Pu-239	1.33E-01
Pu-240	3.94E-02
Pu-241	8.54E-02
Pu-242	1.39E-05
Sr-90	1.85E-04
Th-229	8.79E-09
Th-230	3.10E-11
Th-232	2.87E-20
U-233	9.99E-05
U-234	3.39E-06
U-235	1.12E-07
U-236	1.16E-09
U-238	2.26E-06

Haz. Waste No(s).

D007, D008, D009, D011

TRUCON Code(s)

125/225

Waste Stream Description

Waste consists of CH-TRU debris from ORNL metal recovery facility activities

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	12/31/2016	
Stream Name	New Brunswick Laboratory CH-TRU Debris Waste				Activity Concentrations Decayed to CY	2016	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	12.1	0.0	12.1
79-gal Drum Dir Ld	0.3	0.0	0.3
Current Form Total	12.4	0.0	12.4

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o 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	28.56
Aluminum-based Metal/Alloys	1.87
Other Metal/Alloys	36.95
Other Inorganic Materials	63.09
Cellulose	11.20
Rubber	19.97
Plastic	11.20
Cement	0.00
Solidified Inorganic Material	13.44
Solidified Organic Material	0.37
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	6.74E-02
Am-243	3.99E-05
Cm-244	4.01E-03
Cs-137	1.54E-05
Np-237	2.92E-06
Pu-238	1.21E-02
Pu-239	7.66E-02
Pu-240	3.01E-02
Pu-241	2.17E-01
Pu-242	8.01E-06
Sr-90	1.53E-05
Th-229	4.04E-08
Th-230	1.42E-10
Th-232	1.20E-06
U-233	4.20E-04
U-234	1.55E-05
U-235	1.25E-06
U-236	8.90E-10
U-238	7.57E-06

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	12/31/2016		
Stream Name	Nuclear Fuel Services CH-TRU Waste			Activity Concentrations Decayed to CY	2016		

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	99.2	0.0	99.2
85-gal Drum Dir Ld w/o Liner	6.4	0.0	6.4
Current Form Total	105.7	0.0	105.7

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	105.7	0.0	105.7
Final Form Total	105.7	0.0	105.7

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	58.74
Aluminum-based Metal/Alloys	5.18
Other Metal/Alloys	4.75
Other Inorganic Materials	314.89
Cellulose	12.09
Rubber	2.59
Plastic	33.26
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.43
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	4.17E-01
Am-243	2.59E-06
Cm-244	4.55E-03
Cs-137	3.77E-06
Np-237	6.07E-06
Pu-238	1.51E-01
Pu-239	1.21E+00
Pu-240	4.00E-01
Pu-241	3.22E+00
Pu-242	8.22E-05
Sr-90	3.77E-06
Th-229	2.19E-06
Th-230	9.10E-12
Th-232	2.73E-06
U-233	1.87E-03
U-234	9.91E-06
U-235	6.97E-07
U-236	1.18E-09
U-238	2.80E-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	12/31/2016	
Stream Name	Nuclear Fuel Services CH-TRU Homogeneous Waste				Activity Concentrations Decayed to CY	2016	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	8.3	0.0	8.3
55-gal POC - 12" w/ Liner	0.4	0.0	0.4
Current Form Total	8.7	0.0	8.7

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	8.3	0.0	8.3
55-gal POC - 12" w/ Liner	0.4	0.0	0.4
Final Form Total	8.7	0.0	8.7

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	5.41
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	10.81
Cement	8.86
Solidified Inorganic Material	54.87
Solidified Organic Material	8.69
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	6.43
Packaging Material, Plastic	1.77
Packaging Material, Rubber	0.57
Packaging Material, Steel	149.73
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	7.23E+00
Am-243	6.02E-04
Cs-137	2.03E-05
Np-237	5.86E-05
Pu-238	1.46E+00
Pu-239	1.15E+01
Pu-240	3.88E+00
Pu-241	3.00E+01
Pu-242	7.25E-04
Sr-90	2.03E-05
Th-229	1.13E-05
Th-230	2.22E-11
Th-232	1.08E-05
U-233	6.26E-04
U-234	4.48E-06
U-235	6.87E-08
U-236	1.15E-07
U-238	2.47E-05

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	12/31/2016		
Stream Name	Nuclear Fuel Services CH-TRU Soil Waste			Activity Concentrations Decayed to CY	2016		

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	142.1	0.0	142.1
Current Form Total	142.1	0.0	142.1

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	142.1	0.0	142.1
Final Form Total	142.1	0.0	142.1

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	0.00
Cellulose	0.00
Rubber	0.00
Plastic	2.10
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	14.02
Soil	684.75
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	9.82E-02
Am-243	8.56E-08
Cs-137	3.03E-06
Np-237	1.80E-07
Pu-238	1.64E-02
Pu-239	1.95E-01
Pu-240	6.54E-02
Pu-241	2.50E-01
Pu-242	2.86E-06
Sr-90	1.27E-07
Th-229	5.77E-09
Th-230	1.12E-11
Th-232	7.41E-07
U-233	2.42E-04
U-234	1.22E-05
U-235	5.82E-07
U-236	1.94E-10
U-238	1.01E-05

Haz. Waste No(s).

F002

TRUCON Code(s)

111/211

Waste Stream Description

Waste consists of soils from NFS

Waste Stream ID: **OR-OXIDE-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	12/31/2016	
Stream Name	ORNL Oxide CH-TRU Debris Waste				Activity Concentrations Decayed to CY	2016	

Waste Volume Detail (m³)

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

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal POC - 6" w/ Liner	6.7	0.0	6.7
Final Form Total	6.7	0.0	6.7

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	34.97
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	69.95
Cellulose	11.66
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	214.90
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	320.67
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	1.26E+02
Np-237	1.23E-03
Pu-238	3.05E+01
Pu-239	2.28E+01
Pu-240	3.79E+01
Pu-241	1.55E+02
Pu-242	1.38E-01
Th-229	8.55E-04
Th-230	1.64E-06
Th-232	8.16E-14
U-233	3.14E-01
U-234	7.22E-03
U-235	9.46E-06
U-236	7.08E-05
U-238	1.67E-04

No Hazardous Waste Numbers Provided

TRUCON Code(s)
125/225

Waste Stream Description

Waste consists of CH-TRU debris from ORNL oxide handling, packaging, and production activities

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	12/31/2016		
Stream Name	Paducah Gaseous Diffusion Plant CH-TRU Debris Waste			Activity Concentrations Decayed to CY	2016		

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	6.9	0.0	6.9
Current Form Total	6.9	0.0	6.9

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o 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	279.32
Aluminum-based Metal/Alloys	7.89
Other Metal/Alloys	66.81
Other Inorganic Materials	37.58
Cellulose	11.14
Rubber	8.35
Plastic	38.97
Cement	0.00
Solidified Inorganic Material	2.78
Solidified Organic Material	11.14
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	4.15E-02
Am-243	3.67E-06
Cs-137	2.61E-05
Np-237	2.45E-02
Pu-238	2.97E-02
Pu-239	2.13E-01
Pu-240	4.96E-02
Pu-241	5.66E-01
Pu-242	5.17E-06
Sr-90	2.61E-05
Th-229	9.83E-07
Th-230	6.07E-10
Th-232	4.69E-07
U-233	9.46E-04
U-234	6.60E-04
U-235	1.13E-04
U-236	1.47E-10
U-238	2.74E-03

Haz. Waste No(s).

D005, D007, D008, D011

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	12/31/2016	
Stream Name	ORNL Radiochemical Processing Research & Development CH-TRU Debris Waste				Activity Concentrations Decayed to CY	2016	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	36.0	0.0	36.0
55-gal POC - 6" w/ Liner	0.2	0.0	0.2
Current Form Total	36.2	0.0	36.2

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	36.0	0.0	36.0
55-gal POC - 6" w/ Liner	0.2	0.0	0.2
Final Form Total	36.2	0.0	36.2

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	55.17
Aluminum-based Metal/Alloys	2.06
Other Metal/Alloys	7.65
Other Inorganic Materials	6.33
Cellulose	31.78
Rubber	7.80
Plastic	35.16
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	1.18
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	1.24
Packaging Material, Plastic	0.21
Packaging Material, Rubber	0.57
Packaging Material, Steel	131.86
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	4.04E-01
Am-243	2.21E-02
Cm-244	7.75E-01
Cs-137	5.60E-03
Np-237	5.82E-04
Pu-238	2.01E-01
Pu-239	4.69E-01
Pu-240	1.71E-01
Pu-241	9.49E-01
Pu-242	4.64E-05
Pu-244	1.60E-05
Sr-90	1.50E-03
Th-229	2.37E-06
Th-230	4.93E-09
Th-232	6.41E-07
U-233	1.64E-02
U-234	7.32E-05
U-235	2.06E-06
U-236	3.50E-08
U-238	6.94E-06

Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D028, F002, F005
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TRUCON Code(s)

125/225

Waste Stream Description

Waste consists of CH-TRU debris from radiochemical processing R&D at ORNL

Comprehensive Inventory Database ver. 2.03 Data ver. D.16.01
NOTE: Actual numerical values have been rounded for presentation purposes

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	12/31/2016	
Stream Name	ORNL Radiochemical Processing Research & Development RH-TRU Debris Waste				Activity Concentrations Decayed to CY	2016	

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
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	66.11
Aluminum-based Metal/Alloys	2.47
Other Metal/Alloys	9.17
Other Inorganic Materials	7.58
Cellulose	38.08
Rubber	9.34
Plastic	42.13
Cement	0.00
Solidified Inorganic Material	1.41
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)
Pu-239	9.61E-02
U-235	2.93E-09

Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D028, F002, F005
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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	12/31/2016	
Stream Name	Radiochemical Engineering Development Center CH-TRU Waste				Activity Concentrations Decayed to CY	2016	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
110-gal Drum Dir Ld	0.4	0.0	0.4
55-gal Drum Dir Ld w/o Liner	590.7	359.6	950.4
55-gal POC - 12" w/ Liner	1.2	0.0	1.2
55-gal POC - 6" w/ Liner	0.6	0.0	0.6
Box - Misc	2.6	252.5	255.0
Current Form Total	595.6	612.1	1207.6

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	594.0	613.6	1207.6
55-gal POC - 12" w/ Liner	1.2	0.0	1.2
55-gal POC - 6" w/ Liner	0.6	0.0	0.6
Final Form Total	595.9	613.6	1209.5

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	48.05
Aluminum-based Metal/Alloys	2.33
Other Metal/Alloys	1.46
Other Inorganic Materials	18.64
Cellulose	6.99
Rubber	1.89
Plastic	66.24
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.25
Packaging Material, Plastic	0.06
Packaging Material, Rubber	0.57
Packaging Material, Steel	131.28
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	2.81E-01
Am-243	7.14E-03
Cm-244	5.15E+00
Cs-137	2.05E-02
Np-237	1.18E-03
Pu-238	1.78E-01
Pu-239	3.89E-02
Pu-240	8.64E-02
Pu-241	9.98E-01
Pu-242	9.20E-04
Pu-244	1.46E-07
Sr-90	2.46E-01
Th-229	5.46E-06
Th-230	2.70E-10
Th-232	1.58E-08
U-233	1.50E-03
U-234	2.94E-04
U-235	1.83E-07
U-236	2.96E-07
U-238	4.02E-06

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-CH-HOM**

Appendix A

Waste Profile Report

Site	Oak Ridge National Laboratory	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Materials Production/Recovery Effluents	Waste Matrix Code Group	Solidified Organics		Inventory Date	12/31/2016	
Stream Name	Radiochemical Engineering Development Center CH-TRU Homogeneous Waste				Activity Concentrations Decayed to CY	2016	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.0	74.9	74.9
Current Form Total	0.0	74.9	74.9

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.0	74.9	74.9
Final Form Total	0.0	74.9	74.9

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	14.42
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	72.12
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	153.85
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	3.07E-03
Np-237	1.54E-03
Pu-238	3.10E+01
Pu-239	1.62E-02
Pu-240	8.51E-03
Pu-241	5.74E-01
Pu-242	3.05E-06
Th-229	7.40E-16
Th-230	4.02E-12
Th-232	6.21E-23
U-233	2.35E-10
U-234	8.74E-06
U-235	1.60E-12
U-236	2.52E-11
U-238	4.74E-17

No Hazardous Waste Numbers Provided

TRUCON Code(s)
112/212

Waste Stream Description

Waste consists of solidified CH-TRU liquids 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	12/31/2016	
Stream Name	Radiochemical Engineering Development Center RH-TRU Waste				Activity Concentrations Decayed to CY	2016	

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
Cask - Misc	27.2	13.3	40.5
RH Can NS30 w/ Liner	0.0	29.4	29.4
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	40.1	235.0	275.0
Current Form Total	68.3	277.6	345.9

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can NS15 w/ Liner	1.8	0.0	1.8
RH Can NS30 w/ Liner	6.8	13.9	20.7
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	47.4	175.3	222.8
Final Form Total	56.0	189.2	245.3

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	157.75
Aluminum-based Metal/Alloys	0.03
Other Metal/Alloys	15.77
Other Inorganic Materials	44.77
Cellulose	17.82
Rubber	4.43
Plastic	23.00
Cement	0.00
Solidified Inorganic Material	3.23
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	123.21
Packaging Material, Rubber	0.52
Packaging Material, Steel	1003.34
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	1.09E+00
Am-243	1.79E-01
Cm-244	3.55E+01
Cs-137	1.02E+00
Np-237	3.56E-04
Pu-238	8.26E-01
Pu-239	1.02E-01
Pu-240	5.07E-01
Pu-241	4.36E+00
Pu-242	7.39E-03
Pu-244	1.94E-09
Sr-90	1.49E+01
Th-229	2.88E-13
Th-230	1.09E-09
Th-232	3.87E-19
U-233	4.05E-09
U-234	1.19E-04
U-235	1.86E-06
U-236	1.53E-08
U-238	3.88E-05

Haz. Waste No(s).

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

325

Waste Stream Description

Waste consists of RH-TRU debris from REDC at ORNL

Waste Stream ID: **OR-REDC-RH-HOM**

Appendix A

Waste Profile Report

Site	Oak Ridge 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	12/31/2016	
Stream Name	Radiochemical Engineering Development Center RH-TRU Homogeneous Waste				Activity Concentrations Decayed to CY	2016	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
RH Can NS30 w/ Liner	0.0	16.0	16.0
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	0.0	256.3	256.3
Current Form Total	0.0	272.3	272.3

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can NS30 w/ Liner	0.0	6.1	6.1
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	0.0	179.7	179.7
Final Form Total	0.0	185.8	185.8

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	59.29
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	395.23
Solidified Inorganic Material	533.57
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	68.97
Packaging Material, Rubber	0.55
Packaging Material, Steel	953.60
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	5.52E-02
Am-243	5.27E-04
Cm-244	3.26E+00
Cs-137	7.64E+01
Np-237	1.24E-02
Pu-238	4.94E+01
Pu-239	2.63E-02
Pu-240	1.88E-02
Pu-241	1.08E+00
Pu-242	9.44E-05
Pu-244	2.23E-09
Sr-90	3.04E+01
Th-229	3.02E-09
Th-230	4.96E-09
Th-232	2.44E-19
U-233	3.43E-04
U-234	5.40E-03
U-235	1.89E-08
U-236	4.95E-08
U-238	3.09E-10

No Hazardous Waste Numbers Provided

TRUCON Code(s)
311

Waste Stream Description

Waste consists of solidified RH-TRU liquids 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	12/31/2016		
Stream Name	ORNL Reactor Fuels Research & Development CH-TRU Debris Waste			Activity Concentrations Decayed to CY	2016		

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	77.0	0.0	77.0
55-gal POC - 12" w/ Liner	0.2	0.0	0.2
55-gal POC - 6" w/ Liner	0.4	0.0	0.4
79-gal Drum Dir Ld	0.6	0.0	0.6
Current Form Total	78.2	0.0	78.2

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	77.6	0.0	77.6
55-gal POC - 12" w/ Liner	0.2	0.0	0.2
55-gal POC - 6" w/ Liner	0.4	0.0	0.4
Final Form Total	78.2	0.0	78.2

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	34.01
Aluminum-based Metal/Alloys	6.18
Other Metal/Alloys	15.46
Other Inorganic Materials	3.09
Cellulose	26.28
Rubber	21.64
Plastic	40.20
Cement	0.00
Solidified Inorganic Material	7.73
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	1.50
Packaging Material, Plastic	0.30
Packaging Material, Rubber	0.57
Packaging Material, Steel	132.84
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	6.00E-01
Am-243	1.37E-04
Cm-244	6.51E-02
Cs-137	1.74E-01
Np-237	1.20E-05
Pu-238	5.45E-01
Pu-239	9.15E-01
Pu-240	4.13E-01
Pu-241	4.44E+00
Pu-242	1.36E-04
Pu-244	2.61E-21
Sr-90	4.46E-03
Th-229	1.46E-04
Th-230	3.59E-09
Th-232	3.24E-06
U-233	4.28E-01
U-234	3.90E-03
U-235	9.88E-06
U-236	4.32E-07
U-238	6.96E-05

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	12/31/2016	
Stream Name	ORNL Reactor Fuels Research & Development CH-TRU Homogeneous Waste				Activity Concentrations Decayed to CY	2016	

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
55-gal Drum Dir Ld 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	7.21
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	14.42
Cement	12.02
Solidified Inorganic Material	73.32
Solidified Organic Material	12.02
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	5.22E-02
Cs-137	1.34E-03
Np-237	5.37E-07
Pu-238	3.99E-04
Pu-239	1.00E-03
Sr-90	2.29E-02
Th-229	3.32E-14
Th-230	5.86E-12
U-233	3.64E-11
U-234	3.95E-08
U-235	3.07E-11

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	12/31/2016	
Stream Name	ORNL Reactor Fuels Research & Development RH-TRU Debris Waste				Activity Concentrations Decayed to CY	2016	

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
79-gal Drum Dir Ld	0.3	0.0	0.3
Cask - Misc	19.9	3.3	23.2
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	8.0	28.5	36.5
Current Form Total	30.9	31.8	62.7

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	23.7	22.5	46.2
Final Form Total	23.7	22.5	46.2

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	128.16
Aluminum-based Metal/Alloys	29.13
Other Metal/Alloys	26.22
Other Inorganic Materials	26.22
Cellulose	40.78
Rubber	8.74
Plastic	23.30
Cement	0.00
Solidified Inorganic Material	5.83
Solidified Organic Material	2.91
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	3.62E+00
Am-243	2.77E-02
Cm-244	1.22E+00
Cs-137	2.36E+01
Np-237	1.20E-04
Pu-238	1.34E+00
Pu-239	4.51E-01
Pu-240	6.33E-01
Pu-241	1.90E+01
Pu-242	1.86E-03
Pu-244	2.57E-15
Sr-90	9.14E+00
Th-229	1.06E-04
Th-230	1.17E-07
Th-232	1.28E-06
U-233	3.90E-02
U-234	4.14E-04
U-235	1.19E-05
U-236	3.94E-05
U-238	1.08E-04

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	12/31/2016	
Stream Name	ORNL Solid Waste Storage Area 5 North 7802N Trench Area Debris Waste				Activity Concentrations Decayed to CY	2016	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o 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/o 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	7.34
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	181.83
Cellulose	0.97
Rubber	0.00
Plastic	0.97
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	1.93
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	2.31E-01
Am-243	2.29E-04
Cm-244	3.51E-01
Cs-137	1.55E-04
Np-237	9.47E-05
Pu-238	8.60E-03
Pu-239	2.39E-03
Pu-240	6.02E-04
Pu-241	3.50E-03
Pu-242	5.55E-08
Sr-90	1.55E-04
Th-229	1.51E-06
Th-230	1.53E-10
Th-232	4.38E-24
U-233	2.06E-02
U-234	1.66E-04
U-235	2.36E-13
U-236	1.78E-12
U-238	8.61E-19

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	12/31/2016		
Stream Name	ORNL Solid Waste Storage Area 5 North 7802N Trench Area Soil Waste			Activity Concentrations Decayed to CY	2016		

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
55-gal Drum Dir Ld w/ Liner	2.7	0.0	2.7
Final Form Total	2.7	0.0	2.7

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	2.95
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	1.48
Other Inorganic Materials	6.64
Cellulose	2.95
Rubber	0.00
Plastic	16.24
Cement	0.00
Solidified Inorganic Material	119.59
Solidified Organic Material	2.95
Soil	585.42
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	6.29E-02
Am-243	6.05E-05
Cm-244	9.38E+00
Cs-137	5.92E-06
Np-237	2.78E-06
Pu-238	4.39E-02
Pu-239	2.61E-02
Pu-240	8.80E-03
Pu-241	8.09E-02
Pu-242	4.21E-06
Sr-90	5.91E-06
Th-229	4.54E-07
Th-230	4.09E-12
Th-232	3.73E-07
U-233	4.25E-13
U-234	4.45E-06
U-235	9.58E-08
U-236	2.59E-11
U-238	6.52E-17

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	12/31/2016	
Stream Name	TBD CH-TRU Debris Waste			Activity Concentrations Decayed to CY			
				2016			

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
Box - Misc	5.1	0.0	5.1
Current Form Total	27.0	0.0	27.0

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	27.0	0.0	27.0
Final Form Total	27.0	0.0	27.0

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	31.88
Aluminum-based Metal/Alloys	5.80
Other Metal/Alloys	14.49
Other Inorganic Materials	2.90
Cellulose	24.64
Rubber	20.29
Plastic	37.68
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	7.25
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	3.75E+00
Am-243	5.89E-02
Cm-244	5.18E-03
Cs-137	9.27E-02
Np-237	1.29E-03
Pu-238	7.59E+00
Pu-239	1.56E+00
Pu-240	1.09E+00
Pu-241	1.00E+00
Pu-242	3.60E-04
Pu-244	1.71E-05
Sr-90	8.15E-02
Th-229	7.14E-04
Th-230	5.76E-07
Th-232	1.68E-14
U-233	2.62E-01
U-234	2.38E-03
U-235	4.60E-05
U-236	1.15E-05
U-238	7.84E-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	12/31/2016	
Stream Name	TBD RH-TRU Debris Waste				Activity Concentrations Decayed to CY	2016	

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
Box - Misc	5.1	0.0	5.1
Cask - Misc	8.0	0.0	8.0
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	0.0	42.7	42.7
Current Form Total	14.1	42.7	56.8

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	14.4	30.0	44.3
Final Form Total	14.4	30.0	44.3

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	167.37
Aluminum-based Metal/Alloys	38.04
Other Metal/Alloys	34.23
Other Inorganic Materials	38.04
Cellulose	53.25
Rubber	11.41
Plastic	30.43
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	7.61
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	4.69E-02
Am-243	2.08E-10
Cm-244	1.02E-01
Cs-137	1.13E+02
Np-237	2.95E-06
Pu-238	3.23E+00
Pu-239	3.42E-02
Pu-240	7.04E-04
Pu-241	2.70E-01
Pu-242	1.01E-06
Pu-244	2.31E-07
Sr-90	6.92E+01
Th-229	5.09E-05
Th-230	3.59E-07
Th-232	6.60E-17
U-233	1.63E-02
U-234	1.28E-03
U-235	3.25E-05
U-236	8.00E-09
U-238	4.87E-06

Haz. Waste No(s).

D005, D006, D007, D008, D009, D011

TRUCON Code(s)

325

Waste Stream Description

RH-TRU Debris Waste Needing Further Evaluation

Waste Stream ID: **OR-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	12/31/2016	
Stream Name	ER RH TRU Soils			Activity Concentrations Decayed to CY		2016	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
Box - Misc	34.6	0.0	34.6
Current Form Total	34.6	0.0	34.6

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	12.64
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	25.27
Soil	1225.68
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	2.27E-04
Cs-137	8.92E-01
Np-237	1.09E-04
Pu-238	1.84E-02
Pu-239	5.18E-02
Pu-240	4.93E-04
Pu-241	1.52E-01
Pu-242	2.86E-05
Sr-90	7.28E-03
Th-229	7.64E-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	12/31/2016		
Stream Name	ORNL-Liquid Waste Treatment CH-TRU Debris Waste			Activity Concentrations Decayed to CY	2016		

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	8.1	0.0	8.1
85-gal Drum Dir Ld w/o Liner	0.3	0.0	0.3
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	8.5	0.0	8.5
Final Form Total	8.5	0.0	8.5

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	30.51
Aluminum-based Metal/Alloys	5.55
Other Metal/Alloys	13.87
Other Inorganic Materials	2.77
Cellulose	23.58
Rubber	19.42
Plastic	36.06
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	6.93
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	2.17E-02
Am-243	3.62E-05
Cm-244	7.22E-04
Cs-137	7.18E-02
Np-237	4.57E-06
Pu-238	1.35E-02
Pu-239	9.98E-01
Pu-240	1.21E-03
Pu-241	7.93E-03
Pu-242	2.64E-06
Sr-90	2.42E-03
Th-229	5.32E-09
Th-230	7.17E-06
Th-232	1.26E-05
U-233	6.04E-04
U-234	3.90E-04
U-235	5.81E-06
U-236	4.85E-06
U-238	1.08E-05

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	12/31/2016		
Stream Name	Oak Ridge Y-12 CH-TRU Debris Waste			Activity Concentrations Decayed to CY	2016		

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	22.14
Aluminum-based Metal/Alloys	4.03
Other Metal/Alloys	10.06
Other Inorganic Materials	2.01
Cellulose	17.11
Rubber	14.09
Plastic	26.17
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	5.03
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	4.24E-04
Pu-239	4.97E-02
Pu-240	2.08E-05
Th-229	4.88E-15
Th-230	8.09E-10
Th-232	1.52E-25
U-233	1.55E-09
U-234	8.80E-04
U-235	1.20E-04
U-236	6.17E-14
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	12/31/2016		
Stream Name	RH-TRU Non Mixed Debris Waste from 100-D			Activity Concentrations Decayed to CY	2016		

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
85-gal Drum w/1-55-gal drum with or without 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 Lead Shielded Cntr w/ 1 - 30 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	1893.81
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	84.25
Packaging Material, Rubber	1.04
Packaging Material, Steel	3619.47
Packaging Material, Lead	3814.16

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	5.80E-02
Am-243	2.37E-05
Cs-137	7.34E-01
Np-237	4.05E-06
Pu-238	1.04E-02
Pu-239	1.48E-02
Pu-240	1.91E-02
Pu-241	1.22E+00
Pu-242	7.45E-06
Sr-90	5.24E-01
Th-229	1.19E-14
Th-230	2.20E-12
Th-232	2.23E-19
U-233	6.81E-11
U-234	1.19E-07
U-235	3.88E-06
U-236	2.26E-09
U-238	2.87E-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	12/31/2016		
Stream Name	105-C, 105KE, and 105-N Bldg. TRU CH Mixed Debris			Activity Concentrations Decayed to CY	2016		

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	2.12E-01
Am-243	5.20E-04
Cm-244	7.56E-03
Cs-137	1.12E+00
Np-237	2.29E-04
Pu-238	4.26E-02
Pu-239	1.44E-01
Pu-240	5.80E-02
Pu-241	4.32E+00
Pu-242	1.72E-05
Sr-90	3.96E-01
Th-229	2.11E-12
Th-230	2.37E-09
Th-232	2.50E-15
U-233	6.87E-09
U-234	3.72E-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
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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	12/31/2016	
Stream Name	NLOP sludge			Activity Concentrations Decayed to CY		2016	

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	5.70E-01
Cs-137	1.44E+00
Np-237	9.88E-06
Pu-238	6.49E-02
Pu-239	3.38E-01
Pu-240	1.86E-01
Pu-241	6.04E+00
Pu-242	8.86E-05
Sr-90	7.15E+00
Th-229	1.08E-13
Th-230	4.40E-08
Th-232	8.69E-18
U-233	3.15E-10
U-234	5.99E-04
U-235	2.25E-05
U-236	4.40E-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	12/31/2016		
Stream Name	105-C, 105KE, and 105-N Bldg RH-TRU Mixed Debris			Activity Concentrations Decayed to CY	2016		

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	249.7	0.0	249.7
SWB Dir Ld w/ Liner	3.8	0.0	3.8
Current Form Total	257.2	0.0	257.2

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	312.6	0.0	312.6
RH Lead Shielded Cntr w/ 1 - 30 gal w/ Liner	9.3	0.0	9.3
Final Form Total	321.9	0.0	321.9

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	53.49
Aluminum-based Metal/Alloys	2.73
Other Metal/Alloys	0.00
Other Inorganic Materials	17.72
Cellulose	10.90
Rubber	9.54
Plastic	19.08
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	46.78
Packaging Material, Rubber	0.58
Packaging Material, Steel	1008.48
Packaging Material, Lead	109.80

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	4.98E-02
Am-243	1.90E-08
Cm-244	4.13E-04
Cs-137	7.35E-01
Np-237	5.63E-07
Pu-238	1.19E-02
Pu-239	3.88E-02
Pu-240	2.11E-02
Pu-241	4.00E-01
Pu-242	8.65E-07
Sr-90	3.35E-01
Th-229	3.16E-14
Th-230	1.63E-09
Th-232	2.47E-08
U-233	4.46E-11
U-234	1.63E-05
U-235	8.07E-07
U-236	2.82E-06
U-238	1.95E-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
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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 waste stream includes 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	12/31/2016	
Stream Name	105KE TRU RH Non-mixed solidified inorganics				Activity Concentrations Decayed to CY	2016	

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	50.7	0.0	50.7
Current Form Total	51.4	0.0	51.4

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	624.6	0.0	624.6
Final Form Total	624.6	0.0	624.6

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	4.25
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.16
Cellulose	0.00
Rubber	0.00
Plastic	0.00
Cement	1.15
Solidified Inorganic Material	10.39
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	1.16E+00
Cs-137	5.24E+00
Np-237	9.67E-05
Pu-238	1.30E-01
Pu-239	6.52E-01
Pu-240	3.78E-01
Pu-241	4.66E+00
Pu-242	1.58E-04
Sr-90	7.28E+00
Th-229	1.78E-12
Th-230	1.78E-07
Th-232	1.22E-13
U-233	4.08E-09
U-234	1.94E-03
U-235	7.86E-05
U-236	2.48E-04
U-238	1.71E-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 K Basin 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	12/31/2016	
Stream Name	Misc 200 Area TRU Mixed Debris			Activity Concentrations Decayed to CY		2016	

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	5.37E-01
Cs-137	3.01E-03
Np-237	1.75E-06
Pu-238	8.92E-04
Pu-239	6.36E-03
Pu-240	2.28E-03
Pu-241	2.71E-02
Pu-242	2.21E-07
Sr-90	2.23E-04
Th-229	1.11E-14
Th-230	1.22E-12
Th-232	1.66E-19
U-233	3.78E-11
U-234	2.62E-08
U-235	6.26E-11
U-236	6.74E-10
U-238	3.42E-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	12/31/2016	
Stream Name	Soil from Groundwater projects and contaminated soil from PFP operable units PW-1, PW-3, PW-6, CW-5				Activity Concentrations Decayed to CY	2016	

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	6624.9	6624.9
Current Form Total	10.5	6624.9	6635.4

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	11.9	5883.5	5895.3
SLB2 Dir Ld	0.0	741.5	741.5
Final Form Total	11.9	6624.9	6636.8

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	3.15
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	450.46
Cellulose	4.15
Rubber	1.92
Plastic	8.11
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	476.91
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	32.93
Packaging Material, Rubber	0.52
Packaging Material, Steel	140.24
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	4.30E-01
Cs-137	2.47E-04
Np-237	1.12E-05
Pu-238	6.45E-02
Pu-239	1.46E+00
Pu-240	3.84E-01
Pu-241	2.03E+00
Pu-242	2.90E-05
Sr-90	2.23E-04
Th-229	7.18E-14
Th-230	3.11E-11
Th-232	1.01E-17
U-233	2.76E-10
U-234	1.12E-06
U-235	8.63E-09
U-236	6.82E-08
U-238	2.70E-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	12/31/2016	
Stream Name	201C TRU Mixed Solid Inorganic			Activity Concentrations Decayed to CY		2016	

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	2.08E+00
Cs-137	1.78E-01
Np-237	3.39E-06
Pu-238	6.61E-05
Pu-239	1.39E-01
Pu-240	3.43E-02
Pu-241	2.74E-03
Pu-242	5.00E-08
Sr-90	4.57E+00
Th-229	5.30E-15
Th-230	1.87E-13
Th-232	6.26E-19
U-233	3.62E-11
U-234	8.12E-09
U-235	6.86E-10
U-236	5.08E-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	12/31/2016	
Stream Name	202S TRU Mixed Debris			Activity Concentrations Decayed to CY		2016	

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	4.77E-02
Cs-137	9.88E-08
Np-237	1.93E-06
Pu-238	1.04E-02
Pu-239	6.29E-02
Pu-240	2.35E-02
Pu-241	1.20E-01
Pu-242	2.70E-06
Sr-90	8.88E-08
Th-229	1.26E-14
Th-230	5.02E-12
Th-232	6.19E-19
U-233	4.83E-11
U-234	1.80E-07
U-235	3.72E-10
U-236	4.18E-09
U-238	2.52E-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	12/31/2016	
Stream Name	209E TRU Mixed Debris			Activity Concentrations Decayed to CY		2016	

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	7.60E+00
Cs-137	1.38E-08
Np-237	7.33E-05
Pu-238	1.49E+00
Pu-239	1.09E+01
Pu-240	3.99E+00
Pu-241	3.65E+01
Pu-242	5.85E-04
Sr-90	1.24E-08
Th-229	3.06E-13
Th-230	1.07E-08
Th-232	7.29E-17
U-233	1.43E-09
U-234	2.42E-04
U-235	8.14E-06
U-236	5.91E-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, cleanup, 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	12/31/2016	
Stream Name	209E TRU RH Mixed Debris			Activity Concentrations Decayed to CY		2016	

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 Lead Shielded Cntr w/ 1 - 30 gal w/ Liner	0.3	0.0	0.3
Final Form Total	0.3	0.0	0.3

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	4.42
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	1.47
Cellulose	44.25
Rubber	5.90
Plastic	42.48
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	84.25
Packaging Material, Rubber	1.04
Packaging Material, Steel	3619.47
Packaging Material, Lead	3814.16

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	7.81E+00
Np-237	7.57E-05
Pu-238	1.49E+00
Pu-239	1.03E+01
Pu-240	3.60E+00
Pu-241	2.87E+01
Pu-242	4.49E-04
Th-229	9.31E-13
Th-230	1.64E-09
Th-232	2.13E-16
U-233	2.50E-09
U-234	3.91E-05
U-235	9.13E-08
U-236	9.61E-07
U-238	6.27E-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	12/31/2016			
Stream Name	216-Z-9 TRU Mixed Soil	Activity Concentrations Decayed to CY				2016		

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	159.7	0.0	159.7
85-gal Drum Dir Ld w/ Liner	65.4	0.0	65.4
Box - Misc	25.5	0.0	25.5
SWB Dir Ld w/ Liner	1.9	0.0	1.9
Current Form Total	252.5	0.0	252.5

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	340.1	0.0	340.1
SWB Dir Ld w/ Liner	35.9	0.0	35.9
Final Form Total	376.0	0.0	376.0

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	0.00
Other Inorganic Materials	14.13
Cellulose	0.29
Rubber	0.00
Plastic	0.87
Cement	0.00
Solidified Inorganic Material	15.49
Solidified Organic Material	0.00
Soil	15.50
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	33.64
Packaging Material, Rubber	0.53
Packaging Material, Steel	132.93
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	3.73E+00
Np-237	7.02E-06
Pu-238	9.67E-01
Pu-239	1.20E+01
Pu-240	2.82E+00
Pu-241	3.49E+01
Pu-242	1.68E-04
Th-229	1.45E-14
Th-230	3.22E-10
Th-232	5.14E-17
U-233	8.66E-11
U-234	1.39E-05
U-235	5.90E-08
U-236	4.17E-07
U-238	1.31E-13

Haz. Waste No(s).

D005, D006, D007, D008, D009, D011, D039, F001, F002, F003, F005
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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	12/31/2016	
Stream Name	221U Solidified sludge			Activity Concentrations Decayed to CY		2016	

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	5.82E-04
Cs-137	1.34E-03
Np-237	9.20E-10
Pu-238	7.44E-05
Pu-239	3.26E-03
Pu-240	7.45E-04
Pu-241	3.66E-03
Pu-242	6.35E-08
Sr-90	1.21E-03
Th-229	1.42E-18
Th-230	2.48E-14
Th-232	1.36E-20
U-233	9.72E-15
U-234	1.07E-09
U-235	1.61E-11
U-236	1.10E-10
U-238	4.92E-17

Haz. Waste No(s).

D006, D007, D008, D009, D011, D027, D030, D032, D033, D034, D036, D037, F001, F002
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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	12/31/2016	
Stream Name	U Plant Tank 10 Waste				Activity Concentrations Decayed to CY	2016	

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	34.9	0.0	34.9
Final Form Total	34.9	0.0	34.9

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	0.00
Cellulose	0.00
Rubber	0.00
Plastic	0.00
Cement	0.00
Solidified Inorganic Material	197.46
Solidified Organic Material	1.99
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	5.74E-01
Am-243	3.28E-08
Cm-244	1.73E-02
Cs-137	1.33E+01
Np-237	1.80E-03
Pu-238	1.81E-01
Pu-239	1.39E+00
Pu-240	3.95E-01
Pu-241	1.51E+01
Pu-242	3.99E-05
Sr-90	1.02E+01
Th-229	3.06E-11
Th-230	4.64E-07
Th-232	2.71E-07
U-233	7.68E-08
U-234	7.20E-03
U-235	7.56E-06
U-236	8.19E-08
U-238	1.41E-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	12/31/2016	
Stream Name	222S TRU Mixed Debris			Activity Concentrations Decayed to CY		2016	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	55.3	0.0	55.3
85-gal Drum Dir Ld w/ Liner	1.6	0.0	1.6
Box - Misc	43.5	0.0	43.5
Current Form Total	100.4	0.0	100.4

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	67.4	0.0	67.4
SWB Dir Ld w/ Liner	54.8	0.0	54.8
Final Form Total	122.2	0.0	122.2

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	525.93
Aluminum-based Metal/Alloys	104.34
Other Metal/Alloys	0.01
Other Inorganic Materials	35.01
Cellulose	53.20
Rubber	21.01
Plastic	59.03
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	8.78
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	20.98
Packaging Material, Rubber	0.40
Packaging Material, Steel	140.94
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	1.73E-01
Am-243	3.43E-07
Cs-137	1.21E-03
Np-237	2.54E-05
Pu-238	1.08E-02
Pu-239	6.10E-02
Pu-240	2.75E-02
Pu-241	5.57E-01
Pu-242	1.99E-06
Sr-90	1.08E-03
Th-229	1.37E-07
Th-230	1.24E-11
Th-232	7.24E-19
U-233	2.60E-04
U-234	3.18E-07
U-235	4.93E-09
U-236	4.89E-09
U-238	1.13E-04

Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D022, D030, D039, F001, F002, F003, F005
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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	12/31/2016	
Stream Name	222S TRU RH Mixed Debris			Activity Concentrations Decayed to CY		2016	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
30-gal Drum Dir Ld w/ Liner	0.1	0.0	0.1
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	1.4	0.0	1.4

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Lead Shielded Cntr w/ 1 - 30 gal w/ Liner	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	524.16
Aluminum-based Metal/Alloys	82.76
Other Metal/Alloys	0.00
Other Inorganic Materials	40.47
Cellulose	99.44
Rubber	42.44
Plastic	101.83
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	14.57
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	84.25
Packaging Material, Rubber	1.04
Packaging Material, Steel	3619.47
Packaging Material, Lead	3814.16

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	2.14E-01
Am-243	1.40E-02
Cs-137	1.33E-01
Np-237	1.54E-03
Pu-238	3.08E-02
Pu-239	3.48E+00
Pu-240	8.90E-02
Pu-241	6.67E+00
Pu-242	3.10E-04
Pu-244	1.29E-06
Sr-90	2.18E-01
Th-229	2.13E-04
Th-230	4.24E-11
Th-232	6.50E-18
U-233	2.42E-01
U-234	9.10E-07
U-235	5.89E-06
U-236	2.63E-08
U-238	2.17E-04

Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D039, F001, F002, F003, F004, F005
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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	12/31/2016	
Stream Name	231-Z TRU Mixed Debris			Activity Concentrations Decayed to CY		2016	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	147.5	0.0	147.5
85-gal Drum Dir Ld w/ Liner	13.5	0.0	13.5
Box - Misc	837.7	0.0	837.7
SWB Dir Ld w/ Liner	77.5	0.0	77.5
Current Form Total	1076.2	0.0	1076.2

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	193.2	0.0	193.2
SWB Dir Ld w/ Liner	1026.3	0.0	1026.3
Final Form Total	1219.5	0.0	1219.5

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	129.22
Aluminum-based Metal/Alloys	0.56
Other Metal/Alloys	2.08
Other Inorganic Materials	19.57
Cellulose	25.33
Rubber	4.64
Plastic	33.26
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	6.88
Packaging Material, Rubber	0.25
Packaging Material, Steel	149.85
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	2.26E-01
Am-243	4.04E-06
Cs-137	4.35E-05
Np-237	1.88E-05
Pu-238	5.51E-02
Pu-239	4.90E-01
Pu-240	1.30E-01
Pu-241	1.25E+00
Pu-242	1.56E-05
Sr-90	3.92E-05
Th-229	1.26E-13
Th-230	3.86E-09
Th-232	3.43E-18
U-233	4.78E-10
U-234	7.04E-05
U-235	1.85E-06
U-236	2.32E-08
U-238	1.15E-05

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	12/31/2016	
Stream Name	231Z TRU Mixed Solid Inorganic			Activity Concentrations Decayed to CY		2016	

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	2.16E-06
Pu-238	1.28E-04
Pu-239	4.95E-01
Pu-240	1.71E-01
Pu-241	1.64E-01
Pu-242	1.53E-05
Th-229	1.84E-13
Th-230	2.77E-12
Th-232	1.71E-16
U-233	1.71E-10
U-234	1.55E-08
U-235	1.80E-08
U-236	1.87E-07
U-238	8.76E-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	12/31/2016	
Stream Name	233S TRU Mixed Debris			Activity Concentrations Decayed to CY		2016	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	6.2	0.0	6.2
85-gal Drum Dir Ld w/ Liner	4.5	0.0	4.5
SWB Dir Ld w/ Liner	28.4	0.0	28.4
Current Form Total	39.1	0.0	39.1

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	10.2	0.0	10.2
SWB Dir Ld w/ Liner	34.0	0.0	34.0
Final Form Total	44.2	0.0	44.2

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	196.24
Aluminum-based Metal/Alloys	0.82
Other Metal/Alloys	1.79
Other Inorganic Materials	4.47
Cellulose	13.42
Rubber	2.90
Plastic	15.93
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	9.47
Packaging Material, Rubber	0.28
Packaging Material, Steel	148.21
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	4.25E-01
Cs-137	3.41E-05
Np-237	1.76E-04
Pu-238	8.12E-02
Pu-239	6.28E-01
Pu-240	2.05E-01
Pu-241	1.58E+00
Pu-242	6.17E-05
Sr-90	3.08E-05
Th-229	1.19E-12
Th-230	2.21E-10
Th-232	5.38E-18
U-233	4.52E-09
U-234	4.70E-06
U-235	1.14E-07
U-236	3.63E-08
U-238	1.65E-06

Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, F002, F003
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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	12/31/2016	
Stream Name	233S solidified inorganic waste			Activity Concentrations Decayed to CY		2016	

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	7.43E-02
Cs-137	1.03E-06
Np-237	6.01E-05
Pu-238	1.70E-02
Pu-239	7.02E-02
Pu-240	2.83E-02
Pu-241	1.22E-01
Pu-242	1.79E-05
Sr-90	8.54E-07
Th-229	5.54E-13
Th-230	1.12E-11
Th-232	1.01E-18
U-233	1.80E-09
U-234	3.46E-07
U-235	4.84E-10
U-236	5.86E-09
U-238	1.95E-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	12/31/2016	
Stream Name	300 Area TRU Mixed Debris			Activity Concentrations Decayed to CY		2016	

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	10.6	0.0	10.6
Box - Misc	89.5	0.0	89.5
SWB Dir Ld w/ Liner	35.9	0.0	35.9
Current Form Total	153.1	0.0	153.1

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	30.0	0.0	30.0
SWB Dir Ld w/ Liner	151.2	0.0	151.2
Final Form Total	181.2	0.0	181.2

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	59.92
Aluminum-based Metal/Alloys	0.08
Other Metal/Alloys	6.52
Other Inorganic Materials	26.73
Cellulose	9.74
Rubber	2.03
Plastic	17.29
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	7.13
Packaging Material, Rubber	0.25
Packaging Material, Steel	149.69
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	1.58E+00
Am-243	2.79E-05
Cs-137	1.30E-04
Np-237	3.70E-05
Pu-238	4.17E-01
Pu-239	2.14E+00
Pu-240	9.87E-01
Pu-241	1.21E+01
Pu-242	1.91E-04
Sr-90	1.17E-04
Th-229	1.66E-13
Th-230	2.12E-08
Th-232	1.87E-06
U-233	7.62E-10
U-234	4.65E-04
U-235	2.07E-05
U-236	1.46E-07
U-238	4.83E-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
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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	12/31/2016	
Stream Name	300 Area Mixed Solidified Inorganics			Activity Concentrations Decayed to CY		2016	

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
85-gal Drum Dir Ld w/ Liner	1.3	0.0	1.3
Current Form Total	5.4	0.0	5.4

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

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	1.93
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	20.37
Cement	378.21
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	2.25E+00
Cs-137	3.44E-04
Np-237	1.64E-05
Pu-238	4.89E-01
Pu-239	2.67E+00
Pu-240	1.37E+00
Pu-241	1.71E+01
Pu-242	2.27E-04
Sr-90	4.25E-04
Th-229	6.55E-14
Th-230	1.64E-09
Th-232	2.49E-17
U-233	3.10E-10
U-234	3.91E-05
U-235	1.13E-06
U-236	2.02E-07
U-238	1.94E-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
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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	12/31/2016			
Stream Name	300 Area TRU RH Mixed Debris	Activity Concentrations Decayed to CY				2016		

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	180.5	0.0	180.5
SWB Dir Ld w/ Liner	3.8	0.0	3.8
Current Form Total	214.0	0.0	214.0

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	225.9	0.0	225.9
RH Lead Shielded Cntr w/ 1 - 30 gal w/ Liner	41.8	0.0	41.8
Final Form Total	267.7	0.0	267.7

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	87.73
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	671.70
Cellulose	21.93
Rubber	0.00
Plastic	5.48
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	51.70
Packaging Material, Rubber	0.64
Packaging Material, Steel	1350.97
Packaging Material, Lead	595.71

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	4.13E+00
Am-243	1.42E-02
Cm-244	2.25E+00
Cs-137	7.14E+02
Np-237	1.04E-04
Pu-238	1.08E+00
Pu-239	2.81E-01
Pu-240	3.23E-01
Pu-241	2.22E+01
Pu-242	1.10E-03
Pu-244	1.23E-13
Sr-90	4.20E+02
Th-229	3.88E-07
Th-230	1.66E-08
Th-232	1.93E-14
U-233	7.36E-04
U-234	3.10E-04
U-235	5.96E-06
U-236	6.52E-05
U-238	1.86E-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	12/31/2016	
Stream Name	308 TRU Mixed Debris			Activity Concentrations Decayed to CY		2016	

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	3.46E+01
Am-243	3.15E-06
Cs-137	2.88E-04
Np-237	6.08E-05
Pu-238	9.78E+00
Pu-239	1.61E+01
Pu-240	1.04E+01
Pu-241	1.78E+02
Pu-242	9.85E-03
Sr-90	2.59E-04
Th-229	5.58E-08
Th-230	1.43E-08
Th-232	8.99E-07
U-233	1.27E-04
U-234	3.81E-04
U-235	2.39E-05
U-236	1.54E-06
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	12/31/2016	
Stream Name	308 Building TRU Solid Inorganics			Activity Concentrations Decayed to CY		2016	

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	0.4	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	6.11E-01
Np-237	5.42E-06
Pu-238	1.11E-01
Pu-239	8.03E-01
Pu-240	3.05E-01
Pu-241	1.24E+00
Pu-242	3.69E-05
Th-229	2.77E-13
Th-230	1.41E-09
Th-232	1.88E-16
U-233	3.31E-10
U-234	1.02E-05
U-235	2.29E-08
U-236	2.62E-07
U-238	1.66E-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	12/31/2016	
Stream Name	308 Building TRU RH Non-Mixed Debris			Activity Concentrations Decayed to CY		2016	

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 Lead Shielded Cntr w/ 1 - 30 gal w/ Liner	0.3	0.0	0.3
Final Form Total	0.3	0.0	0.3

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	30.12
Aluminum-based Metal/Alloys	0.07
Other Metal/Alloys	4.61
Other Inorganic Materials	4.14
Cellulose	5.31
Rubber	1.69
Plastic	11.53
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	84.25
Packaging Material, Rubber	1.04
Packaging Material, Steel	3619.47
Packaging Material, Lead	3814.16

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	4.23E-03
Cs-137	3.24E-01
Np-237	9.64E-09
Pu-238	5.33E-03
Pu-239	7.87E-04
Pu-240	1.33E-03
Sr-90	1.68E+01
Th-229	2.98E-17
Th-230	3.52E-12
Th-232	4.75E-20
U-233	1.45E-13
U-234	1.08E-07
U-235	5.43E-12
U-236	2.75E-10

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	12/31/2016	
Stream Name	325 TRU Mixed Debris			Activity Concentrations Decayed to CY		2016	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	534.1	0.0	534.1
85-gal Drum Dir Ld w/ Liner	37.7	0.0	37.7
Box - Misc	301.5	0.0	301.5
SWB Dir Ld w/ Liner	45.4	0.0	45.4
Uncontained	0.0	154.0	154.0
Current Form Total	918.7	154.0	1072.7

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	687.9	99.2	787.1
SWB Dir Ld w/ Liner	446.0	54.8	500.9
Final Form Total	1133.9	154.0	1287.9

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	71.47
Aluminum-based Metal/Alloys	0.28
Other Metal/Alloys	3.18
Other Inorganic Materials	22.79
Cellulose	12.62
Rubber	3.27
Plastic	21.95
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.25
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	23.12
Packaging Material, Rubber	0.42
Packaging Material, Steel	139.59
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	1.54E+00
Am-243	3.84E-04
Cm-244	5.49E-03
Cs-137	7.43E-04
Np-237	1.73E-04
Pu-238	7.03E-01
Pu-239	1.44E+00
Pu-240	5.80E-01
Pu-241	8.19E+00
Pu-242	1.72E-04
Sr-90	7.36E-04
Th-229	2.02E-08
Th-230	1.24E-08
Th-232	1.57E-06
U-233	4.59E-05
U-234	2.76E-04
U-235	9.23E-06
U-236	8.58E-08
U-238	9.10E-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
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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	12/31/2016	
Stream Name	325 TRU Mixed Solid Inorganic			Activity Concentrations Decayed to CY			
				2016			

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
85-gal Drum Dir Ld w/ Liner	1.3	0.0	1.3
Current Form Total	8.8	0.0	8.8

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	10.0	0.0	10.0
Final Form Total	10.0	0.0	10.0

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	112.11
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.02
Other Inorganic Materials	682.35
Cellulose	2.86
Rubber	2.84
Plastic	26.36
Cement	58.44
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	123.88
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	4.95E+00
Am-243	1.21E-02
Cm-244	5.14E+00
Cs-137	8.49E-03
Np-237	4.34E-04
Pu-238	1.40E+00
Pu-239	5.20E+00
Pu-240	2.42E+00
Pu-241	4.95E+01
Pu-242	4.49E-04
Sr-90	3.29E-02
Th-229	2.01E-12
Th-230	4.44E-09
Th-232	4.41E-17
U-233	9.16E-09
U-234	1.07E-04
U-235	3.45E-06
U-236	3.58E-07
U-238	5.22E-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	12/31/2016	
Stream Name	325 TRU RH Mixed Debris			Activity Concentrations Decayed to CY		2016	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
110-gal Drum Dir Ld w/ Liner	0.4	0.0	0.4
55-gal Drum Dir Ld w/ Liner	46.4	0.0	46.4
85-gal Drum Dir Ld w/ Liner	3.2	0.0	3.2
Box - Misc	149.7	0.0	149.7
SWB Dir Ld w/ Liner	32.1	0.0	32.1
Uncontained	0.0	76.1	76.1
Current Form Total	231.8	76.1	308.0

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	47.4	76.1	123.6
RH Lead Shielded Cntr w/ 1 - 30 gal w/ Liner	265.2	0.0	265.2
Final Form Total	312.6	76.1	388.8

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	96.12
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	815.89
Cellulose	0.00
Rubber	0.00
Plastic	20.51
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	71.99
Packaging Material, Rubber	0.89
Packaging Material, Steel	2765.08
Packaging Material, Lead	2601.99

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	3.76E-01
Am-243	4.63E-04
Cm-244	8.79E-02
Cs-137	8.51E-01
Np-237	3.25E-04
Pu-238	5.24E-01
Pu-239	8.08E-02
Pu-240	8.13E-02
Pu-241	5.25E+00
Pu-242	1.05E-04
Sr-90	5.85E+00
Th-229	6.02E-11
Th-230	2.13E-09
Th-232	1.41E-07
U-233	3.61E-08
U-234	5.02E-05
U-235	2.61E-06
U-236	1.27E-08
U-238	4.05E-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
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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: **RL325-09**

Appendix A

Waste Profile Report

Site	Hanford (Richland) Site	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	12/31/2016	
Stream Name	B325 Solidified sludges			Activity Concentrations Decayed to CY		2016	

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
Current Form Total	1.2	0.0	1.2

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Lead Shielded Cntr w/ 1 - 30 gal w/ Liner	5.3	0.0	5.3
Final Form Total	5.3	0.0	5.3

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	210.75
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.04
Other Inorganic Materials	1282.74
Cellulose	5.38
Rubber	5.33
Plastic	49.55
Cement	109.86
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	232.88
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	84.25
Packaging Material, Rubber	1.04
Packaging Material, Steel	3619.47
Packaging Material, Lead	3814.16

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	2.89E-02
Cs-137	2.99E+00
Np-237	1.87E-08
Pu-238	7.84E-04
Pu-239	2.33E-03
Sr-90	3.15E+01
Th-229	4.79E-18
Th-230	4.11E-14
U-233	8.17E-14
U-234	4.46E-09
U-235	4.58E-12

Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D028, D029, D030, D033, D034, D036, D038, D039, D040, D043, F001, F002, F004, F005

TRUCON Code(s)
311

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: **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	12/31/2016		
Stream Name	618 - 10&11 Burial Grounds TRU Mixed Debris			Activity Concentrations Decayed to CY	2016		

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
Uncontained	0.0	2.1	2.1
Current Form Total	0.0	2.1	2.1

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

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	1.93
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	3.48
Other Inorganic Materials	3.35
Cellulose	0.26
Rubber	0.51
Plastic	0.51
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	1.29
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	5.52E-01
Cs-137	2.91E+00
Np-237	1.78E-06
Pu-238	2.66E-01
Pu-239	1.19E-01
Pu-240	1.13E+00
Pu-241	6.20E-01
Pu-242	1.44E+00
Sr-90	2.50E+00
Th-229	1.12E-14
Th-230	3.63E-10
Th-232	8.28E-17
U-233	3.84E-11
U-234	7.80E-06
U-235	1.17E-09
U-236	3.36E-07
U-238	2.23E-09

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	12/31/2016		
Stream Name	618 - 10&11 Burial Grounds TRU RH Mixed Debris			Activity Concentrations Decayed to CY	2016		

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
Box - Misc	1.2	0.0	1.2
Uncontained	0.0	2.1	2.1
Current Form Total	1.2	2.1	3.3

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 30-gal w/ Liner	0.0	2.0	2.0
RH Lead Shielded Cntr w/ 1 - 30 gal w/ Liner	1.4	0.0	1.4
Final Form Total	1.4	2.0	3.4

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	1010.32
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	1821.53
Other Inorganic Materials	1946.90
Cellulose	134.22
Rubber	269.17
Plastic	269.17
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	672.57
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	84.14
Packaging Material, Rubber	1.04
Packaging Material, Steel	2417.70
Packaging Material, Lead	1525.66

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	1.47E+01
Cs-137	7.43E+01
Np-237	4.75E-05
Pu-238	7.09E+00
Pu-239	3.18E+00
Pu-240	3.03E+01
Pu-241	1.66E+01
Pu-242	3.84E+01
Sr-90	6.69E+01
Th-229	2.99E-13
Th-230	9.69E-09
Th-232	2.21E-15
U-233	1.02E-09
U-234	2.08E-04
U-235	3.14E-08
U-236	8.97E-06
U-238	5.96E-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	12/31/2016	
Stream Name	TRU Soils/Absorbents from the Arid Lands Ecology Reserve				Activity Concentrations Decayed to CY	2016	

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	2.85E-04
Cs-137	4.94E-07
Np-237	4.15E-10
Pu-238	4.05E-05
Pu-239	8.49E-02
Pu-240	2.75E-03
Pu-241	6.87E-03
Pu-242	2.69E-07
Pu-244	3.64E-11
Sr-90	4.46E-07
Th-229	6.09E-19
Th-230	1.35E-14
Th-232	5.02E-20
U-233	4.24E-15
U-234	5.83E-10
U-235	4.18E-10
U-236	4.07E-10
U-238	2.09E-16

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	12/31/2016	
Stream Name	Argonne Nat Lab TRU Mixed Debris			Activity Concentrations Decayed to CY		2016	

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	4.47E+00
Np-237	4.03E-05
Pu-238	1.66E+01
Pu-239	3.29E+00
Pu-240	1.67E+00
Pu-241	1.29E+01
Pu-242	5.78E-05
Th-229	2.26E-12
Th-230	2.44E-07
Th-232	1.09E-06
U-233	2.57E-09
U-234	1.65E-03
U-235	1.01E-07
U-236	1.53E-06
U-238	2.78E-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	12/31/2016		
Stream Name	Bartlesville RH-TRU Mixed Debris			Activity Concentrations Decayed to CY	2016		

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	7.09E-01
Np-237	8.28E-06
Pu-238	6.59E-07
Pu-239	5.41E-06
Pu-240	2.62E-06
Pu-241	5.55E-06
Pu-242	7.57E-10
Th-229	6.55E-13
Th-230	1.26E-14
Th-232	2.35E-21
U-233	6.35E-10
U-234	7.50E-11
U-235	1.87E-13
U-236	2.72E-12
U-238	4.11E-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	12/31/2016		
Stream Name	Battelle Columbus TRU Mixed Debris	Activity Concentrations Decayed to CY				2016	

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	1.83E-01
Np-237	3.11E-05
Pu-238	2.49E+00
Pu-239	2.43E-01
Pu-240	9.22E-02
Pu-241	1.64E+00
Pu-242	5.22E-06
Th-229	2.09E-13
Th-230	2.25E-08
Th-232	1.16E-07
U-233	7.94E-10
U-234	4.29E-04
U-235	1.46E-05
U-236	1.64E-08
U-238	1.24E-05

Haz. Waste No(s).

D005, D006, D007, D008, D009, D011, F001, F002, F003, F005
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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	12/31/2016		
Stream Name	BATCO TRU RH Mixed Debris			Activity Concentrations Decayed to CY	2016		

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 - 30-gal w/ Liner	1.7	0.0	1.7
RH Lead Shielded Cntr w/ 1 - 30 gal w/ Liner	4.5	0.0	4.5
Final Form Total	6.2	0.0	6.2

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	1648.49
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	14.72
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	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	84.20
Packaging Material, Rubber	1.04
Packaging Material, Steel	3073.21
Packaging Material, Lead	2773.93

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	7.73E-01
Am-243	4.61E-03
Cm-244	2.94E-01
Cs-137	9.00E+00
Np-237	3.21E-06
Pu-238	5.38E-01
Pu-239	7.71E-02
Pu-240	1.26E-01
Pu-241	5.14E+00
Pu-242	3.36E-04
Sr-90	5.78E+00
Th-229	2.56E-12
Th-230	9.93E-09
Th-232	8.80E-15
U-233	2.14E-09
U-234	8.81E-05
U-235	3.04E-06
U-236	1.28E-05
U-238	5.90E-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	12/31/2016	
Stream Name	Bettis TRU Non-Mixed Debris			Activity Concentrations Decayed to CY		2016	

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 Lead Shielded Cntr w/ 1 - 30 gal w/ Liner	0.3	0.0	0.3
Final Form Total	0.3	0.0	0.3

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	199.52
Aluminum-based Metal/Alloys	31.45
Other Metal/Alloys	0.00
Other Inorganic Materials	15.54
Cellulose	37.95
Rubber	16.27
Plastic	38.67
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	5.42
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	84.25
Packaging Material, Rubber	1.04
Packaging Material, Steel	3619.47
Packaging Material, Lead	3814.16

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	1.68E-02
Cs-137	2.50E-04
Np-237	2.64E-08
Pu-238	5.90E-03
Pu-239	2.90E-02
Pu-240	1.63E-02
Pu-241	1.37E-01
Pu-242	6.49E-07
Sr-90	2.26E-04
Th-229	4.05E-17
Th-230	2.18E-08
Th-232	2.98E-19
U-233	2.78E-13
U-234	4.75E-04
U-235	1.74E-05
U-236	2.42E-09
U-238	1.84E-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	12/31/2016	
Stream Name	Babcock and Wilcox TRU Mixed Debris			Activity Concentrations Decayed to CY		2016	

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	42.2	0.0	42.2
SWB Dir Ld w/ Liner	160.7	0.0	160.7
Final Form Total	202.9	0.0	202.9

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	48.43
Aluminum-based Metal/Alloys	0.21
Other Metal/Alloys	4.88
Other Inorganic Materials	32.15
Cellulose	23.41
Rubber	5.01
Plastic	25.48
Cement	0.00
Solidified Inorganic Material	0.83
Solidified Organic Material	0.14
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	8.67
Packaging Material, Rubber	0.27
Packaging Material, Steel	148.72
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	1.60E+00
Am-243	8.89E-08
Cs-137	3.26E-04
Np-237	1.15E-05
Pu-238	3.49E-01
Pu-239	2.03E+00
Pu-240	9.67E-01
Pu-241	1.12E+01
Pu-242	1.73E-04
Sr-90	2.94E-04
Th-229	6.97E-08
Th-230	2.07E-09
Th-232	1.77E-17
U-233	1.58E-04
U-234	4.76E-05
U-235	1.14E-06
U-236	1.43E-07
U-238	2.45E-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	12/31/2016	
Stream Name	Babcock & Wilcox solidified inorganics				Activity Concentrations Decayed to CY	2016	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	4.4	0.0	4.4
Current Form Total	4.4	0.0	4.4

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ 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	3.03
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	432.59
Cellulose	0.00
Rubber	0.00
Plastic	12.13
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	2.83E+00
Cs-137	1.46E-07
Np-237	1.69E-05
Pu-238	5.65E-01
Pu-239	3.08E+00
Pu-240	1.57E+00
Pu-241	1.90E+01
Pu-242	2.52E-04
Sr-90	1.35E-07
Th-229	9.05E-14
Th-230	4.32E-09
Th-232	4.12E-17
U-233	3.66E-10
U-234	8.32E-05
U-235	2.31E-06
U-236	2.78E-07
U-238	3.74E-05

Haz. Waste No(s).

D005, D006, D007, D008, D009, D011, D035, F001, F002, F003, F005
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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	12/31/2016	
Stream Name	Babcock and Wilcox TRU RH Mixed Debris				Activity Concentrations Decayed to CY	2016	

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 Lead Shielded Cntr w/ 1 - 30 gal 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	6.44
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.32
Other Inorganic Materials	3.22
Cellulose	43.15
Rubber	0.48
Plastic	28.98
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	84.25
Packaging Material, Rubber	1.04
Packaging Material, Steel	3619.47
Packaging Material, Lead	3814.16

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	1.33E+00
Np-237	3.58E-06
Pu-238	2.35E-01
Pu-239	9.60E-01
Pu-240	5.42E-01
Pu-241	1.35E+01
Pu-242	2.19E-05
Th-229	1.75E-14
Th-230	2.59E-10
Th-232	3.21E-17
U-233	6.73E-11
U-234	6.19E-06
U-235	8.51E-09
U-236	1.45E-07
U-238	3.05E-14

Haz. Waste No(s).

D005, D006, D007, D008, D009, D011, F001, F002, F003, F005
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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	12/31/2016		
Stream Name	Kerr McGee TRU Mixed Debris			Activity Concentrations Decayed to CY	2016		

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	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	347.79
Aluminum-based Metal/Alloys	1.62
Other Metal/Alloys	0.34
Other Inorganic Materials	34.95
Cellulose	39.11
Rubber	8.47
Plastic	55.40
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.08
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	1.40E+00
Cs-137	5.76E-08
Np-237	2.92E-06
Pu-238	2.57E-01
Pu-239	1.62E+00
Pu-240	8.22E-01
Pu-241	8.95E+00
Pu-242	1.34E-04
Sr-90	5.19E-08
Th-229	7.75E-15
Th-230	7.03E-10
Th-232	3.53E-09
U-233	4.07E-11
U-234	1.50E-05
U-235	3.76E-07
U-236	1.46E-07
U-238	9.80E-06

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	12/31/2016	
Stream Name	Kerr McGee TRU Mixed Solid Inorganic			Activity Concentrations Decayed to CY		2016	

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	1.20E+00
Np-237	2.27E-06
Pu-238	3.44E+00
Pu-239	1.44E+00
Pu-240	7.05E-01
Pu-241	7.54E+00
Pu-242	8.91E-05
Th-229	5.04E-15
Th-230	2.23E-09
Th-232	1.85E-17
U-233	2.88E-11
U-234	7.00E-05
U-235	4.66E-07
U-236	1.25E-07
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	12/31/2016	
Stream Name	Tank Farms TRU Mixed Debris			Activity Concentrations Decayed to CY		2016	

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	6.2	6.2
Current Form Total	2.1	6.2	8.3

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.2	6.2	6.4
SWB Dir Ld w/ Liner	1.9	0.0	1.9
Final Form Total	2.1	6.2	8.3

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	28.94
Packaging Material, Rubber	0.48
Packaging Material, Steel	135.91
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	1.38E-02
Cs-137	1.75E-01
Np-237	2.67E-08
Pu-238	1.25E-03
Pu-239	9.63E-03
Pu-240	2.47E-03
Pu-241	1.83E-02
Sr-90	7.73E-01
Th-229	3.97E-07
Th-230	6.13E-13
Th-232	6.50E-20
U-233	7.53E-04
U-234	2.20E-08
U-235	9.77E-07
U-236	4.39E-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	12/31/2016	
Stream Name	Tank Farms Absorbed Oils					Activity Concentrations Decayed to CY	2016

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 Lead Shielded Cntr w/ 1 - 30 gal w/ Liner	0.3	0.0	0.3
Final Form Total	0.3	0.0	0.3

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	1.33
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	66.90
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	84.25
Packaging Material, Rubber	1.04
Packaging Material, Steel	3619.47
Packaging Material, Lead	3814.16

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	4.55E-03
Cs-137	3.03E-01
Np-237	4.43E-09
Pu-238	6.54E-05
Pu-239	2.12E-03
Pu-240	4.54E-04
Sr-90	2.85E+00
Th-229	2.55E-18
Th-230	7.76E-15
Th-232	2.98E-21
U-233	2.90E-14
U-234	5.60E-10
U-235	6.27E-12
U-236	4.03E-11

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	12/31/2016	
Stream Name	Energy Systems Group TRU Mixed Debris			Activity Concentrations Decayed to CY		2016	

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	7.50E-01
Cs-137	2.93E-03
Np-237	7.24E-06
Pu-238	1.05E-01
Pu-239	6.57E-01
Pu-240	2.99E-01
Pu-241	3.86E+00
Pu-242	5.57E-05
Sr-90	2.38E-03
Th-229	3.02E-14
Th-230	4.77E-08
Th-232	2.51E-07
U-233	1.41E-10
U-234	1.04E-03
U-235	2.65E-05
U-236	4.43E-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, plexiglas 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	12/31/2016	
Stream Name	Energy Systems Group TRU Solid Inorganics				Activity Concentrations Decayed to CY	2016	

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	1.29E-02
Cs-137	3.32E-03
Np-237	1.77E-08
Pu-238	5.22E-03
Pu-239	1.58E-01
Pu-240	3.88E-02
Pu-241	4.53E-01
Pu-242	2.54E-06
Sr-90	3.00E-03
Th-229	2.51E-17
Th-230	1.74E-12
Th-232	7.09E-19
U-233	1.77E-13
U-234	7.52E-08
U-235	7.78E-10
U-236	5.75E-09
U-238	1.97E-15

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	12/31/2016		
Stream Name	Energy Systems Group RH TRU Mixed Debris			Activity Concentrations Decayed to CY	2016		

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 Lead Shielded Cntr w/ 1 - 30 gal w/ Liner	27.5	0.0	27.5
Final Form Total	27.5	0.0	27.5

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	6.02
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	28.65
Other Inorganic Materials	2.71
Cellulose	71.72
Rubber	8.50
Plastic	38.64
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	84.25
Packaging Material, Rubber	1.04
Packaging Material, Steel	3619.47
Packaging Material, Lead	3814.16

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	1.88E-01
Cs-137	6.32E-02
Np-237	2.92E-07
Pu-238	3.16E-02
Pu-239	1.40E-01
Pu-240	7.58E-02
Pu-241	1.94E+00
Pu-242	2.92E-06
Sr-90	1.93E-02
Th-229	4.46E-16
Th-230	1.05E-11
Th-232	1.38E-18
U-233	3.07E-12
U-234	4.55E-07
U-235	6.88E-10
U-236	1.12E-08
U-238	2.26E-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	12/31/2016		
Stream Name	Exxon TRU Mixed Debris				Activity Concentrations Decayed to CY	2016	

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	2.33E+00
Np-237	1.04E-05
Pu-238	9.12E-01
Pu-239	5.93E-01
Pu-240	5.06E-01
Pu-241	1.23E+01
Pu-242	6.16E-04
Th-229	3.69E-14
Th-230	2.96E-09
Th-232	9.24E-18
U-233	1.81E-10
U-234	7.08E-05
U-235	7.62E-07
U-236	7.49E-08
U-238	3.04E-05

Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011
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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	12/31/2016	
Stream Name	FFTF TRU Non-Mixed Debris			Activity Concentrations Decayed to CY		2016	

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	1.20E-02
Cs-137	9.94E-03
Np-237	1.91E-08
Pu-238	3.35E-03
Pu-239	1.06E-02
Pu-240	9.15E-03
Pu-241	7.35E-02
Sr-90	6.69E-03
Th-229	2.94E-17
Th-230	1.12E-12
Th-232	1.67E-19
U-233	2.01E-13
U-234	4.82E-08
U-235	5.23E-11
U-236	1.35E-09

No Hazardous Waste Numbers Provided

TRUCON Code(s)
125/225

Waste Stream Description

Combustible and noncombustible debris from Fast Flux Test Reactor operations, maintenance, and clean out. Combustible waste may include wood, plastics, paper, and rags. Noncombustible waste may include metals, glass, concrete, and absorbed liquids.

Waste Stream ID: **RLFFTF-08**

Appendix A

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	12/31/2016	
Stream Name	FFTF RH-TRU Non-Mixed Debris				Activity Concentrations Decayed to CY	2016	

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 Lead Shielded Cntr w/ 1 - 30 gal w/ Liner	0.5	0.0	0.5
Final Form Total	0.5	0.0	0.5

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	3.64
Aluminum-based Metal/Alloys	0.01
Other Metal/Alloys	0.72
Other Inorganic Materials	2.36
Cellulose	0.43
Rubber	0.10
Plastic	0.46
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	84.25
Packaging Material, Rubber	1.04
Packaging Material, Steel	3619.47
Packaging Material, Lead	3814.16

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	6.33E-03
Am-243	4.24E-11
Cs-137	1.05E+00
Np-237	1.35E-08
Pu-238	1.66E-03
Pu-239	5.20E-03
Pu-240	4.47E-03
Pu-241	6.52E-02
Sr-90	1.12E-03
Th-229	4.02E-17
Th-230	1.09E-12
Th-232	1.60E-19
U-233	1.98E-13
U-234	3.36E-08
U-235	3.58E-11
U-236	9.26E-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	12/31/2016	
Stream Name	GE San Jose and Vallecitos TRU Mixed Debris				Activity Concentrations Decayed to CY	2016	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	16.8	0.0	16.8
85-gal Drum Dir Ld w/ Liner	8.4	0.0	8.4
Box - Misc	147.2	0.0	147.2
SWB Dir Ld w/ Liner	15.1	0.0	15.1
Current Form Total	187.5	0.0	187.5

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	5.08E-01
Cs-137	1.22E-07
Np-237	2.82E-06
Pu-238	1.15E-01
Pu-239	6.31E-01
Pu-240	2.75E-01
Pu-241	3.67E+00
Pu-242	4.35E-05
Sr-90	1.10E-07
Th-229	1.07E-14
Th-230	1.37E-08
Th-232	5.02E-18
U-233	5.15E-11
U-234	2.99E-04
U-235	6.33E-06
U-236	4.07E-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	12/31/2016	
Stream Name	GE Vallecitos TRU Homogeneous Solids			Activity Concentrations Decayed to CY		2016	

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	4.90E+00
Cs-137	3.52E-08
Np-237	9.01E-06
Pu-238	9.31E-01
Pu-239	3.71E+00
Pu-240	2.09E+00
Pu-241	6.03E+01
Pu-242	8.45E-05
Sr-90	3.25E-08
Th-229	1.99E-14
Th-230	5.19E-10
Th-232	5.51E-17
U-233	1.14E-10
U-234	1.74E-05
U-235	6.48E-08
U-236	3.72E-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	12/31/2016	
Stream Name	GE San Jose and Vallecitos TRU RH Non-Mixed Debris				Activity Concentrations Decayed to CY	2016	

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 Lead Shielded Cntr w/ 1 - 30 gal w/ Liner	6.7	0.0	6.7
Final Form Total	6.7	0.0	6.7

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	1093.68
Aluminum-based Metal/Alloys	172.69
Other Metal/Alloys	0.00
Other Inorganic Materials	84.43
Cellulose	207.49
Rubber	88.55
Plastic	212.48
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	30.40
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	84.25
Packaging Material, Rubber	1.04
Packaging Material, Steel	3619.47
Packaging Material, Lead	3814.16

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	1.77E+00
Cs-137	1.26E+00
Np-237	1.93E-05
Pu-238	7.15E-02
Pu-239	9.44E+01
Pu-240	9.82E+00
Pu-241	1.63E-01
Pu-242	3.98E-01
Sr-90	9.38E-01
Th-229	1.35E-12
Th-230	1.20E-09
Th-232	7.82E-15
U-233	1.39E-09
U-234	7.60E-06
U-235	3.07E-06
U-236	9.61E-06
U-238	2.04E-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	12/31/2016	
Stream Name	Trench Designation waste stream				Activity Concentrations Decayed to CY	2016	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
110-gal Drum Dir Ld w/ Liner	0.4	0.0	0.4
55-gal Drum Dir Ld w/ Liner	76.3	0.0	76.3
85-gal Drum Dir Ld w/ Liner	106.9	0.0	106.9
Box - Misc	208.2	0.0	208.2
SWB Dir Ld w/ Liner	39.7	0.0	39.7
SWB w/ 4 - 55-gal Drums w/ Liners	172.0	0.0	172.0
Current Form Total	603.5	0.0	603.5

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	210.7	0.0	210.7
SWB Dir Ld w/ Liner	395.0	0.0	395.0
Final Form Total	605.7	0.0	605.7

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	25.21
Aluminum-based Metal/Alloys	0.09
Other Metal/Alloys	5.96
Other Inorganic Materials	8.31
Cellulose	21.77
Rubber	7.50
Plastic	26.13
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	13.68
Packaging Material, Rubber	0.32
Packaging Material, Steel	145.55
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	4.81E-01
Cs-137	8.13E-08
Np-237	1.81E-06
Pu-238	7.02E-02
Pu-239	7.53E-01
Pu-240	2.63E-01
Pu-241	2.09E+00
Pu-242	3.95E-05
Sr-90	7.32E-08
Th-229	8.12E-15
Th-230	3.38E-11
Th-232	6.91E-18
U-233	3.47E-11
U-234	1.22E-06
U-235	4.45E-09
U-236	4.67E-08
U-238	3.68E-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	12/31/2016	
Stream Name	Trench Designation waste stream			Activity Concentrations Decayed to CY			
				2016			

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	1.59E-01
Np-237	2.51E-07
Pu-238	1.83E-02
Pu-239	7.21E-02
Pu-240	4.07E-02
Pu-241	1.22E+00
Th-229	3.85E-16
Th-230	6.08E-12
Th-232	7.43E-19
U-233	2.64E-12
U-234	2.63E-07
U-235	3.55E-10
U-236	6.02E-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	12/31/2016	
Stream Name	Trench Designation waste stream			Activity Concentrations Decayed to CY		2016	

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
Box - Misc	18.2	0.0	18.2
SWB Dir Ld w/ Liner	3.8	0.0	3.8
Current Form Total	22.5	0.0	22.5

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Lead Shielded Cntr w/ 1 - 30 gal w/ Liner	28.1	0.0	28.1
Final Form Total	28.1	0.0	28.1

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	26.96
Aluminum-based Metal/Alloys	0.09
Other Metal/Alloys	6.28
Other Inorganic Materials	8.89
Cellulose	23.46
Rubber	7.94
Plastic	28.33
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	84.25
Packaging Material, Rubber	1.04
Packaging Material, Steel	3619.47
Packaging Material, Lead	3814.16

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	2.52E-01
Am-243	2.24E-06
Cs-137	4.94E-02
Np-237	2.85E-06
Pu-238	1.42E-02
Pu-239	1.49E-01
Pu-240	2.41E-02
Pu-241	7.23E-01
Pu-242	9.64E-07
Sr-90	3.74E-02
Th-229	3.13E-08
Th-230	4.74E-12
Th-232	4.40E-19
U-233	7.11E-05
U-234	2.05E-07
U-235	7.35E-10
U-236	3.56E-09
U-238	7.48E-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
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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.

Comprehensive Inventory Database ver. 2.03 Data ver. D.16.01
NOTE: Actual numerical values have been rounded for presentation purposes

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	12/31/2016	
Stream Name	International Atomic Energy Agency TRU Non-Mixed Debris				Activity Concentrations Decayed to CY	2016	

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	1.90E+00
Cs-137	3.77E-05
Np-237	3.67E-06
Pu-238	9.77E-01
Pu-239	5.31E-01
Pu-240	6.82E-01
Pu-241	3.35E+00
Pu-242	1.01E-03
Sr-90	3.40E-05
Th-229	8.27E-15
Th-230	4.71E-10
Th-232	1.79E-17
U-233	4.71E-11
U-234	1.69E-05
U-235	3.14E-09
U-236	1.21E-07
U-238	9.38E-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	12/31/2016	
Stream Name	Lawrence Berkeley Nat Lab TRU Mixed Debris				Activity Concentrations Decayed to CY	2016	

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 Lead Shielded Cntr w/ 1 - 30 gal w/ Liner	0.3	0.0	0.3
Final Form Total	0.3	0.0	0.3

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	738.54
Aluminum-based Metal/Alloys	116.40
Other Metal/Alloys	0.00
Other Inorganic Materials	57.53
Cellulose	140.48
Rubber	60.21
Plastic	143.16
Cement	0.00
Solidified Inorganic Material	20.07
Solidified Organic Material	0.00
Soil	24.08
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	84.25
Packaging Material, Rubber	1.04
Packaging Material, Steel	3619.47
Packaging Material, Lead	3814.16

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	2.54E-01
Cm-244	3.22E+01
Np-237	2.51E-06
Pu-238	3.09E-02
Pu-239	1.53E-01
Pu-240	3.24E-01
Pu-241	6.47E-01
Pu-242	3.50E-06
Th-229	1.68E-13
Th-230	5.55E-10
Th-232	1.62E-16
U-233	1.75E-10
U-234	3.40E-06
U-235	5.14E-09
U-236	2.32E-07
U-238	1.85E-14

Haz. Waste No(s).

D005, D007, D008, D009, D011, D019, F002, F003, F005
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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	12/31/2016	
Stream Name	Lawrence Livermore TRU Mixed Debris			Activity Concentrations Decayed to CY		2016	

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	8.40E-02
Np-237	1.06E-06
Pu-238	9.38E-03
Pu-239	5.00E-02
Pu-240	2.82E-02
Pu-241	1.36E-01
Pu-242	1.14E-06
Th-229	1.14E-13
Th-230	2.83E-10
Th-232	3.81E-17
U-233	9.38E-11
U-234	1.35E-06
U-235	2.12E-09
U-236	3.59E-08
U-238	7.61E-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	12/31/2016	
Stream Name	P11 Criticality Facility TRU Mixed Debris			Activity Concentrations Decayed to CY		2016	

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	4.93E-02
Np-237	9.00E-08
Pu-238	9.35E-03
Pu-239	3.73E-02
Pu-240	2.11E-02
Pu-241	6.07E-01
Pu-242	8.49E-07
Th-229	1.96E-16
Th-230	4.51E-12
Th-232	5.54E-19
U-233	1.13E-12
U-234	1.62E-07
U-235	2.20E-10
U-236	3.74E-09
U-238	7.91E-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	12/31/2016		
Stream Name	2345Z TRU Mixed Debris	Activity Concentrations Decayed to CY				2016	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	1777.6	0.0	1777.6
85-gal Drum Dir Ld w/ Liner	173.6	0.0	173.6
Box - Misc	3916.7	0.0	3916.7
SLB2 Dir Ld	113.2	0.0	113.2
SWB Dir Ld w/ Liner	1521.5	0.0	1521.5
Uncontained	0.0	658.9	658.9
Current Form Total	7502.5	658.9	8161.4

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	2381.6	62.4	2444.0
SLB2 Dir Ld	113.2	407.5	520.7
SWB Dir Ld w/ Liner	6189.8	189.0	6378.8
Final Form Total	8684.6	658.9	9343.5

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	56.45
Aluminum-based Metal/Alloys	0.28
Other Metal/Alloys	1.22
Other Inorganic Materials	8.97
Cellulose	14.06
Rubber	7.96
Plastic	22.16
Cement	0.00
Solidified Inorganic Material	0.02
Solidified Organic Material	0.02
Soil	0.16
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	10.52
Packaging Material, Rubber	0.29
Packaging Material, Steel	150.97
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	1.03E+00
Am-243	1.32E-05
Cs-137	8.64E-01
Np-237	1.03E-05
Pu-238	4.38E-01
Pu-239	1.05E+00
Pu-240	4.74E-01
Pu-241	7.87E+00
Pu-242	1.85E-04
Sr-90	1.08E-04
Th-229	7.49E-09
Th-230	7.31E-06
Th-232	9.07E-07
U-233	1.70E-05
U-234	1.59E-01
U-235	8.88E-07
U-236	7.02E-08
U-238	1.44E-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	12/31/2016	
Stream Name	PFP Absorbed Plutonium Nitrate Solutions			Activity Concentrations Decayed to CY		2016	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	14.6	0.0	14.6
85-gal Drum Dir Ld w/ Liner	0.6	0.0	0.6
Current Form Total	15.2	0.0	15.2

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	21.2	0.0	21.2
Final Form Total	21.2	0.0	21.2

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	2.39
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.17
Cellulose	2.82
Rubber	0.03
Plastic	7.96
Cement	0.00
Solidified Inorganic Material	283.86
Solidified Organic Material	13.55
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	5.36E+00
Cs-137	2.54E-06
Np-237	3.44E-05
Pu-238	1.30E+00
Pu-239	1.03E+01
Pu-240	3.21E+00
Pu-241	3.61E+01
Pu-242	5.94E-04
Sr-90	2.29E-06
Th-229	1.34E-13
Th-230	3.58E-08
Th-232	5.86E-17
U-233	6.42E-10
U-234	7.89E-04
U-235	3.89E-06
U-236	4.75E-07
U-238	3.14E-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	12/31/2016	
Stream Name	PFP Comprehensive Homogenous Solids				Activity Concentrations Decayed to CY	2016	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	20.8	0.0	20.8
85-gal Drum Dir Ld w/ Liner	2.3	0.0	2.3
Current Form Total	23.1	0.0	23.1

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	25.0	0.0	25.0
Final Form Total	25.0	0.0	25.0

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	14.08
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.39
Other Inorganic Materials	0.00
Cellulose	9.18
Rubber	0.18
Plastic	13.05
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	70.79
Soil	0.32
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	2.98E+00
Cs-137	9.07E-05
Np-237	2.91E-05
Pu-238	6.32E-01
Pu-239	7.46E+00
Pu-240	2.11E+00
Pu-241	2.47E+01
Pu-242	2.49E-04
Sr-90	8.19E-05
Th-229	1.21E-13
Th-230	6.96E-09
Th-232	3.85E-17
U-233	5.69E-10
U-234	1.56E-04
U-235	4.93E-06
U-236	3.12E-07
U-238	7.33E-05

Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D019, D022, D030, D032, D033, F001, F002, F003, F005
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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-SZ, 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	12/31/2016	
Stream Name	2345Z RH-TRU Mixed Debris			Activity Concentrations Decayed to CY		2016	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	22.0	0.0	22.0
85-gal Drum Dir Ld w/ Liner	7.7	0.0	7.7
SWB Dir Ld w/ Liner	3.6	0.0	3.6
Current Form Total	33.4	0.0	33.4

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Lead Shielded Cntr w/ 1 - 30 gal w/ Liner	42.7	0.0	42.7
Final Form Total	42.7	0.0	42.7

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	23.35
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	14.29
Other Inorganic Materials	12.04
Cellulose	3.30
Rubber	6.45
Plastic	18.00
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	84.25
Packaging Material, Rubber	1.04
Packaging Material, Steel	3619.47
Packaging Material, Lead	3814.16

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	1.21E+00
Cs-137	3.35E-06
Np-237	8.12E-06
Pu-238	2.81E-01
Pu-239	1.62E+00
Pu-240	5.93E-01
Pu-241	1.01E+01
Pu-242	1.12E-04
Sr-90	3.02E-06
Th-229	3.21E-14
Th-230	3.73E-10
Th-232	1.10E-17
U-233	1.53E-10
U-234	1.01E-05
U-235	2.11E-07
U-236	8.83E-08
U-238	4.01E-07

Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D019, D022, D030, F001, F002, F003, F004, F005
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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	12/31/2016		
Stream Name	202A and 202AL TRU Mixed Debris	Activity Concentrations Decayed to CY				2016	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	306.6	0.0	306.6
85-gal Drum Dir Ld w/ Liner	2.9	0.0	2.9
Box - Misc	255.4	0.0	255.4
SWB Dir Ld w/ Liner	7.6	0.0	7.6
Current Form Total	572.5	0.0	572.5

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	385.6	0.0	385.6
SWB Dir Ld w/ Liner	327.0	0.0	327.0
Final Form Total	712.6	0.0	712.6

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	37.86
Aluminum-based Metal/Alloys	0.14
Other Metal/Alloys	0.44
Other Inorganic Materials	11.76
Cellulose	15.16
Rubber	14.47
Plastic	25.62
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	20.61
Packaging Material, Rubber	0.40
Packaging Material, Steel	141.17
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	4.63E+00
Am-243	6.32E-07
Cs-137	1.39E-02
Np-237	1.58E-05
Pu-238	1.83E+00
Pu-239	9.83E+00
Pu-240	3.74E+00
Pu-241	9.66E+01
Pu-242	8.80E-04
Sr-90	1.25E-02
Th-229	1.02E-06
Th-230	8.60E-10
Th-232	6.84E-17
U-233	2.33E-03
U-234	3.18E-05
U-235	2.28E-07
U-236	5.54E-07
U-238	2.94E-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	12/31/2016		
Stream Name	202A & 202AL TRU RH Mixed Debris			Activity Concentrations Decayed to CY	2016		

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
30-gal Drum Dir Ld w/ Liner	0.2	0.0	0.2
55-gal Drum Dir Ld w/ Liner	12.9	0.0	12.9
Box - Misc	11.3	0.0	11.3
Current Form Total	24.4	0.0	24.4

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Lead Shielded Cntr w/ 1 - 30 gal w/ Liner	30.7	0.0	30.7
Final Form Total	30.7	0.0	30.7

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	21.85
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.55
Other Inorganic Materials	16.39
Cellulose	10.93
Rubber	37.15
Plastic	27.31
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	84.25
Packaging Material, Rubber	1.04
Packaging Material, Steel	3619.47
Packaging Material, Lead	3814.16

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	7.17E-02
Np-237	5.79E-07
Pu-238	2.85E-03
Pu-239	9.44E-03
Pu-240	2.25E-03
Pu-241	4.26E-01
Pu-242	1.23E-07
Th-229	3.28E-14
Th-230	6.54E-11
Th-232	2.38E-18
U-233	3.63E-11
U-234	3.56E-07
U-235	3.53E-10
U-236	2.54E-09
U-238	7.23E-16

Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011
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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	12/31/2016		
Stream Name	Rocky Flats TRU Mixed Debris	Activity Concentrations Decayed to CY				2016	

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	3.11E-01
Np-237	3.27E-06
Pu-238	3.30E-03
Pu-239	1.61E-02
Pu-240	9.10E-03
Pu-241	7.49E-02
Pu-242	3.68E-07
Th-229	2.14E-13
Th-230	5.20E-11
Th-232	6.82E-18
U-233	2.28E-10
U-234	3.39E-07
U-235	5.09E-10
U-236	8.63E-09
U-238	1.83E-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	12/31/2016	
Stream Name	GE San Jose TRU Mixed Debris				Activity Concentrations Decayed to CY	2016	

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	1.31E+01
Np-237	1.25E-04
Pu-238	1.61E+00
Pu-239	7.93E+00
Pu-240	4.47E+00
Pu-241	3.51E+01
Pu-242	1.79E-04
Th-229	7.93E-12
Th-230	2.71E-08
Th-232	3.56E-15
U-233	8.49E-09
U-234	1.71E-04
U-235	2.58E-07
U-236	4.37E-06
U-238	9.18E-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	12/31/2016	
Stream Name	SWOC TRU Mixed Debris			Activity Concentrations Decayed to CY		2016	

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	13.5	0.0	13.5
Box - Misc	175.6	0.0	175.6
SWB Dir Ld w/ Liner	73.7	0.0	73.7
Uncontained	0.0	41.9	41.9
Current Form Total	298.4	41.9	340.3

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	48.9	30.6	79.5
SWB Dir Ld w/ Liner	311.9	11.3	323.2
Final Form Total	360.7	41.9	402.6

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	18.04
Aluminum-based Metal/Alloys	0.30
Other Metal/Alloys	0.53
Other Inorganic Materials	3.72
Cellulose	11.04
Rubber	39.51
Plastic	41.82
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.09
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	8.28
Packaging Material, Rubber	0.27
Packaging Material, Steel	148.97
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	3.58E-01
Am-243	5.34E-08
Cs-137	2.57E-05
Np-237	4.65E-06
Pu-238	9.64E-02
Pu-239	7.51E-01
Pu-240	2.48E-01
Pu-241	2.99E+00
Pu-242	3.78E-05
Sr-90	2.32E-05
Th-229	2.00E-14
Th-230	2.96E-10
Th-232	4.53E-18
U-233	9.30E-11
U-234	7.12E-06
U-235	2.14E-07
U-236	3.67E-08
U-238	1.54E-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
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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	12/31/2016	
Stream Name	Ward TRU Mixed Debris			Activity Concentrations Decayed to CY		2016	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	28.1	0.0	28.1
85-gal Drum Dir Ld w/ Liner	8.4	0.0	8.4
Box - Misc	294.8	0.0	294.8
SWB Dir Ld w/ Liner	11.3	0.0	11.3
Current Form Total	342.6	0.0	342.6

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	41.0	0.0	41.0
SWB Dir Ld w/ Liner	376.1	0.0	376.1
Final Form Total	417.1	0.0	417.1

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	95.26
Aluminum-based Metal/Alloys	0.43
Other Metal/Alloys	2.08
Other Inorganic Materials	15.50
Cellulose	20.14
Rubber	5.28
Plastic	29.77
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	4.72
Packaging Material, Rubber	0.23
Packaging Material, Steel	151.21
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	7.99E-01
Am-243	4.97E-15
Cs-137	4.05E-08
Np-237	5.29E-06
Pu-238	2.74E-01
Pu-239	3.53E-01
Pu-240	2.24E-01
Pu-241	4.76E+00
Pu-242	1.75E-04
Sr-90	3.65E-08
Th-229	2.08E-14
Th-230	7.55E-09
Th-232	1.41E-08
U-233	9.90E-11
U-234	1.66E-04
U-235	6.08E-06
U-236	3.32E-08
U-238	3.36E-05

Haz. Waste No(s).

D007, D008, D009, D035, F001, F002, F003, F005
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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	12/31/2016	
Stream Name	WARD solidified inorganics			Activity Concentrations Decayed to CY		2016	

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	6.56E-01
Cs-137	9.25E-08
Np-237	3.19E-06
Pu-238	1.58E-01
Pu-239	5.44E-01
Pu-240	2.64E-01
Pu-241	4.21E+00
Pu-242	1.04E-04
Th-229	2.53E-14
Th-230	7.97E-09
Th-232	1.23E-17
U-233	8.13E-11
U-234	1.10E-04
U-235	5.22E-06
U-236	6.26E-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	12/31/2016		
Stream Name	Waste Treatment Plant TRU RH Mixed Debris			Activity Concentrations Decayed to CY	2016		

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
Uncontained	0.0	49.3	49.3
Current Form Total	0.0	49.3	49.3

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	0.0	49.3	49.3
Final Form Total	0.0	49.3	49.3

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	68.26
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	18.10
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	6.41E-03
Cs-137	1.80E+00
Np-237	6.82E-06
Pu-238	4.47E-03
Pu-239	2.27E-03
Pu-240	4.83E-04
Pu-241	9.32E-04
Sr-90	2.01E+00
Th-229	5.58E-08
Th-230	9.93E-10
Th-232	1.04E-16
U-233	6.35E-05
U-234	1.09E-05
U-235	4.23E-07
U-236	2.12E-07
U-238	9.52E-06

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**

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	12/31/2016		
Stream Name	CH TRU Project Generated Waste (PGW)			Activity Concentrations Decayed to CY	2016		

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
Box - 744 metal	3.2	0.0	3.2
Current Form Total	4.4	0.0	4.4

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o 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	142.86
Aluminum-based Metal/Alloys	32.35
Other Metal/Alloys	6.46
Other Inorganic Materials	7.07
Cellulose	5.08
Rubber	1.72
Plastic	9.00
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	1.88E-02
Cs-137	2.40E-01
Np-237	6.04E-09
Pu-238	8.24E-03
Pu-239	4.00E-02
Pu-240	2.25E-02
Pu-241	2.09E-01
Pu-242	5.80E-06
Sr-90	1.07E-02
Th-229	1.88E-13
Th-230	9.47E-10
Th-232	1.66E-05
U-233	2.14E-09
U-234	1.03E-04
U-235	3.47E-06
U-236	6.67E-10
U-238	1.26E-06

Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D011, D019, D022, D028, F002, F005

TRUCON Code(s)

125/225

Waste Stream Description

CH PGW TRU waste from repackaging RH

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	12/31/2016	
Stream Name	TRU Waste from SNL/NM - Remote Handled				Activity Concentrations Decayed to CY	2016	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	5.2	0.0	5.2
Current Form Total	5.2	0.0	5.2

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/o Liner	5.6	0.0	5.6
Final Form Total	5.6	0.0	5.6

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	127.01
Aluminum-based Metal/Alloys	18.07
Other Metal/Alloys	7.69
Other Inorganic Materials	8.40
Cellulose	6.09
Rubber	1.60
Plastic	9.12
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	2.45E+00
Cs-137	2.85E+01
Np-237	7.86E-07
Pu-238	1.25E+00
Pu-239	3.35E+00
Pu-240	2.14E+00
Pu-241	2.78E+01
Pu-242	1.00E-03
Sr-90	2.14E+01
Th-229	1.72E-11
Th-230	1.08E-07
Th-232	1.56E-18
U-233	1.96E-07
U-234	1.18E-02
U-235	3.79E-04
U-236	6.32E-08
U-238	1.27E-04

Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D011, D019, D022, D028, F002, F005
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TRUCON Code(s)

321

Waste Stream Description

Heterogeneous RH fuel pieces from accident scenarios R&D and experimental vessels, includes Project Generated Waste (PGW) from repackaging

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	12/31/2016		
Stream Name	CH TRU Debris waste from Z-machine			Activity Concentrations Decayed to CY	2016		

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
Box - 544 metal	2.3	0.0	2.3
SWB Dir Ld w/o Liner	9.5	37.8	47.3
Current Form Total	11.7	37.8	49.5

Final Form Volumes			
Container Type	Stored	Proj.	Total
SWB Dir Ld w/o Liner	11.3	37.8	49.1
Final Form Total	11.3	37.8	49.1

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	233.69
Aluminum-based Metal/Alloys	2.08
Other Metal/Alloys	1.95
Other Inorganic Materials	0.01
Cellulose	0.00
Rubber	0.34
Plastic	0.21
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.54
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	1.08E+01
Np-237	7.02E-06
Pu-238	2.87E-03
Pu-239	9.26E-02
Pu-240	2.45E-02
Pu-241	1.63E-01
Pu-242	2.96E-06
Th-229	1.79E-15
Th-230	1.51E-13
Th-232	7.16E-20
U-233	3.06E-11
U-234	1.63E-08
U-235	1.82E-10
U-236	1.45E-09
U-238	9.19E-16

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	12/31/2016	
Stream Name	CH TRU solidified waste				Activity Concentrations Decayed to CY	2016	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
0.5-gal Pail	0.0	0.0	0.0
2.5-gal Pail	0.0	0.0	0.0
20-gal Pail	0.1	0.0	0.1
30-gal Drum	0.3	0.0	0.3
5-gal Pail	0.0	0.0	0.0
doubled bagged	0.0	0.0	0.0
Current Form Total	0.5	0.0	0.5

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o 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	12.62
Other Inorganic Materials	15.02
Cellulose	0.00
Rubber	0.00
Plastic	0.00
Cement	0.01
Solidified Inorganic Material	6.97
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	3.82E-01
Cs-137	7.96E-03
Np-237	6.08E-07
Pu-238	2.10E-01
Pu-239	5.90E-01
Pu-240	2.61E-01
Pu-241	1.95E+00
Pu-242	2.43E-04
Th-229	9.40E-16
Th-230	5.80E-10
Th-232	4.76E-18
U-233	6.44E-12
U-234	1.41E-05
U-235	5.11E-07
U-236	3.86E-08
U-238	1.09E-05

No Hazardous Waste Numbers Provided

TRUCON Code(s)
125/225

Waste Stream Description

Solidified PuNO₃ sample used for instrumental analysis, Pu sources, and Am-241 salt standards.

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	12/31/2016		
Stream Name	CH TRU sealed source	Activity Concentrations Decayed to CY				2016	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
1-gal Pail	0.0	0.0	0.0
20-gal Pail	0.1	0.0	0.1
5-gal Pail	0.1	0.0	0.1
doubled bagged	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	1.20
Other Metal/Alloys	4.95
Other Inorganic Materials	79.33
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	6.72E-03
Cs-137	8.57E-07
Np-237	1.17E-08
Pu-238	3.98E-07
Pu-239	7.61E-05
Th-229	2.09E-17
Th-230	1.32E-16
U-233	1.34E-13
U-234	5.73E-12
U-235	3.75E-13

Haz. Waste No(s).

D006, D007, D008, D009, D011

TRUCON Code(s)

125/225

Waste Stream Description

Sealed sources from instrumentation and on circuit boards.

Waste Stream ID: **SP-CHHD**

Appendix A

Waste Profile Report

Site	Separations Process Research Unit	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Remediation/D&D Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2016	
Stream Name	D&D Debris			Activity Concentrations Decayed to CY		2016	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum	0.2	0.0	0.2
85-gal Drum w/ 1 - 55-gal Drum	0.6	0.0	0.6
Box - B-25	5.1	0.0	5.1
Current Form Total	6.0	0.0	6.0

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/ Liner	5.7	0.0	5.7
Final Form Total	6.3	0.0	6.3

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	3.65
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	139.34
Other Inorganic Materials	25.23
Cellulose	48.46
Rubber	0.00
Plastic	24.55
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	4.76
Packaging Material, Rubber	0.23
Packaging Material, Steel	151.19
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	4.44E-03
Cs-137	5.05E-01
Np-237	1.44E-09
Pu-238	4.48E-04
Pu-239	4.11E-02
Pu-241	5.31E-03
Pu-242	7.15E-06
Sr-90	2.01E-02
Th-229	9.18E-20
Th-230	3.05E-09
U-233	3.13E-15
U-234	3.32E-04
U-235	2.08E-05
U-238	3.58E-04

Haz. Waste No(s).

D007, D008, D011

TRUCON Code(s)

111/211

Waste Stream Description

Process components, inorganic solids, Wastelock, piping, asbestos insulation, PPE, herculite and poly sheets, absorbent pads, and miscellaneous debris.

Waste Stream ID: **SP-RHHD**

Appendix A

Waste Profile Report

Site	Separations Process Research Unit	Summary Category	S5000	Defense Determination	Defense-Related	Handling	RH
Source Cat.	Remediation/D&D Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2016	
Stream Name	D&D Debris			Activity Concentrations Decayed to CY		2016	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum	0.6	0.0	0.6
85-gal Drum	1.6	0.0	1.6
Box - B-25	5.1	0.0	5.1
Current Form Total	7.3	0.0	7.3

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	53.42
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	912.77
Other Inorganic Materials	154.17
Cellulose	36.32
Rubber	0.00
Plastic	1.18
Cement	302.35
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	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	5.74E-02
Cs-137	3.31E+00
Np-237	1.86E-08
Pu-238	4.22E-03
Pu-239	2.93E-01
Pu-241	2.61E-02
Pu-242	1.50E-03
Sr-90	1.39E+00
Th-229	1.19E-18
Th-230	3.65E-08
U-233	4.05E-14
U-234	3.97E-03
U-235	4.13E-04
U-238	4.37E-03

Haz. Waste No(s).

D007, D008, D011

TRUCON Code(s)

317

Waste Stream Description

Process components, inorganic solids, piping, miscellaneous debris, lead, PPE, herculite and poly sheets, plastic bags, Wastelock, absorbent pads, and paper towels.

Waste Stream ID: **SP-RHIN**

Appendix A

Waste Profile Report

Site	Separations Process Research Unit	Summary Category	S3000	Defense Determination	Defense-Related	Handling	RH
Source Cat.	Remediation/D&D Waste	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2016	
Stream Name	Process cell and sump cleanout sludge				Activity Concentrations Decayed to CY	2016	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum	1.5	0.0	1.5
85-gal Drum	0.3	0.0	0.3
Current Form Total	1.8	0.0	1.8

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	0.00
Other Inorganic Materials	192.63
Cellulose	0.00
Rubber	0.00
Plastic	10.42
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	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	7.24E-02
Cs-137	2.05E+01
Np-237	2.34E-08
Pu-238	1.02E-02
Pu-239	8.88E-01
Pu-241	1.92E-01
Pu-242	6.84E-03
Sr-90	4.57E-01
Th-229	1.49E-18
Th-230	5.98E-08
U-233	5.10E-14
U-234	6.50E-03
U-235	5.00E-04
U-238	7.50E-03

Haz. Waste No(s).

D007, D008, D011

TRUCON Code(s)

311

Waste Stream Description

Inorganic solids with Aquaset IIG added to absorb free water

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	12/31/2016		
Stream Name	221H U Oxide CH TRU Debris			Activity Concentrations Decayed to CY	2016		

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	98.08
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	367.79
Cellulose	0.00
Rubber	0.00
Plastic	24.52
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	1.23E-03
Am-243	2.02E-10
Cm-244	2.76E-04
Cs-137	2.89E-04
Np-237	3.09E-04
Pu-238	1.21E-03
Pu-239	8.11E-02
Pu-240	9.26E-08
Pu-242	3.09E-04
Sr-90	2.87E-04
Th-229	4.95E-03
Th-230	9.75E-04
Th-232	3.09E-04
U-233	1.16E+00
U-234	1.69E+00
U-235	1.36E-01
U-236	4.19E-15
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	12/31/2016	
Stream Name	221H Pu Oxide CH TRU Debris			Activity Concentrations Decayed to CY		2016	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal POC - 12" w/ Liner	54.8	0.0	54.8
Current Form Total	54.8	0.0	54.8

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal POC - 12" w/ Liner	54.3	0.0	54.3
Final Form Total	54.3	0.0	54.3

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	128.68
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	34.60
Other Inorganic Materials	300.75
Cellulose	0.00
Rubber	0.00
Plastic	26.35
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	2.00E+01
Np-237	1.41E-04
Pu-238	7.16E+00
Pu-239	3.27E+01
Pu-240	9.48E+00
Pu-241	1.25E+02
Pu-242	4.77E-03
Th-229	1.02E-13
Th-230	3.76E-10
Th-232	2.77E-17
U-233	1.18E-09
U-234	4.07E-05
U-235	4.89E-05
U-236	5.61E-07
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	12/31/2016	
Stream Name	SR-AGNS-HOM					Activity Concentrations Decayed to CY	2016

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	66.23
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	878.97
Solidified Inorganic Material	0.95
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	2.51E-01
Np-237	2.91E-04
Pu-238	3.37E-01
Pu-239	5.82E-01
Pu-240	1.38E-01
Pu-241	5.19E+00
Pu-242	2.39E-05
Th-229	8.68E-13
Th-230	1.46E-09
Th-232	1.61E-18
U-233	4.94E-09
U-234	4.16E-05
U-235	1.88E-06
U-236	1.63E-08
U-238	4.02E-05

Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D011, F005
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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	12/31/2016	
Stream Name	BCL JN-1 CH TRU Homogeneous Sludge				Activity Concentrations Decayed to CY	2016	

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	1.34E-01
Am-243	1.10E-04
Cm-244	8.60E-03
Cs-137	3.75E-02
Np-237	1.47E-06
Pu-238	1.17E-01
Pu-239	1.56E-02
Pu-240	2.55E-02
Pu-241	1.77E+00
Pu-242	7.60E-05
Sr-90	3.73E-02
Th-229	4.48E-14
Th-230	6.04E-10
Th-232	1.47E-16
U-233	1.79E-10
U-234	2.24E-05
U-235	3.72E-07
U-236	9.96E-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	12/31/2016		
Stream Name	CH Mixed TRU Cartridge Water Filters(S5000)			Activity Concentrations Decayed to CY	2016		

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	4.85E-02
Am-243	1.32E-04
Cs-137	4.91E-03
Np-237	1.89E-05
Pu-238	2.29E-01
Pu-239	3.96E-03
Pu-240	6.52E-03
Pu-242	7.74E-08
Sr-90	4.82E-03
Th-229	2.53E-12
Th-230	5.96E-09
Th-232	8.05E-19
U-233	2.74E-09
U-234	5.42E-05
U-235	8.11E-07
U-236	2.51E-09
U-238	1.57E-05

Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D011, D019, F002, F005
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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	12/31/2016	
Stream Name	BCL JN-4 CH TRU Heterogeneous Debris				Activity Concentrations Decayed to CY	2016	

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	2.57E-02
Np-237	2.45E-08
Pu-238	7.66E+00
Pu-239	2.65E-02
Pu-240	1.23E-02
Pu-241	2.45E-01
Pu-242	3.79E-06
Th-229	1.39E-17
Th-230	9.08E-10
Th-232	8.06E-20
U-233	1.59E-13
U-234	6.56E-05
U-235	7.82E-11
U-236	1.09E-09
U-238	1.76E-15

Haz. Waste No(s).

D005, D006, D007, D008, D009, D011, F002, F005
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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	12/31/2016	
Stream Name	CH TRU - Heterogeneous debris from the DWPF laboratory				Activity Concentrations Decayed to CY	2016	

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	1.32E-02
Np-237	5.01E-06
Pu-238	9.24E-02
Pu-239	1.49E-02
Pu-240	2.35E-01
Pu-241	3.11E-01
Sr-90	1.30E-02
Th-229	1.25E-05
Th-230	1.26E-10
Th-232	1.72E-17
U-233	1.42E-02
U-234	2.71E-06
U-235	1.97E-06
U-236	6.95E-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	12/31/2016	
Stream Name	Commingled waste from HBL and 235F.			Activity Concentrations Decayed to CY			
				2016			

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)
Am-241	5.02E-05
Np-237	6.85E-05
Pu-238	5.29E-01
Pu-239	3.75E-04
Pu-240	2.05E-04
Pu-241	9.72E-03
Pu-242	2.44E-07
Th-229	1.18E-13
Th-230	6.28E-11
Th-232	1.35E-21
U-233	8.95E-10
U-234	4.53E-06
U-235	1.11E-12
U-236	1.82E-11
U-238	1.14E-16

Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D022, D029, D043, F002, F005, U133
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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	12/31/2016		
Stream Name	CH TRU Heterogeneous debris from the K Area Plutonium surveillance program			Activity Concentrations Decayed to CY	2016		

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	1.9	6.7	8.6
Current Form Total	1.9	6.7	8.6

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	1.9	6.7	8.5
Final Form Total	1.9	6.7	8.5

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	7.53E-01
Np-237	5.55E-06
Pu-238	2.39E-01
Pu-239	2.02E+00
Pu-240	5.24E-01
Pu-241	4.85E+00
Pu-242	1.73E-04
Th-229	8.73E-15
Th-230	2.84E-11
Th-232	3.45E-18
U-233	6.78E-11
U-234	2.05E-06
U-235	3.85E-06
U-236	4.66E-08
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-KAC-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	12/31/2016	
Stream Name	K-Area Pu Oxide CH TRU Debris			Activity Concentrations Decayed to CY		2016	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal CCO w/ Liner	0.0	4160.0	4160.0
Current Form Total	0.0	4160.0	4160.0

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal CCO w/ Liner	0.0	4160.0	4160.0
Final Form Total	0.0	4160.0	4160.0

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	8.08
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	2.02
Other Inorganic Materials	9.29
Cellulose	0.00
Rubber	0.00
Plastic	0.61
Cement	0.20
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	111.06
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	389.42
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	6.44E+01
Np-237	1.08E-03
Pu-238	1.64E+01
Pu-239	6.42E+01
Pu-240	3.12E+01
Pu-241	3.22E+02
Pu-242	1.45E-02
Th-229	5.31E-10
Th-230	4.05E-08
Th-232	2.28E-19
U-233	6.03E-05
U-234	4.40E-02
U-235	4.12E-04
U-236	9.24E-08
U-238	1.63E-04

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-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	12/31/2016		
Stream Name	CH TRU Heterogeneous debris from the Los Alamos Scientific Laboratory (LASL)			Activity Concentrations Decayed to CY	2016		

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	9.11E-01
Am-243	3.79E-07
Cs-137	2.51E-06
Np-237	4.69E-05
Pu-238	4.08E+02
Pu-239	4.73E-01
Pu-240	7.48E-01
Pu-241	6.88E+00
Pu-242	9.49E-04
Sr-90	2.99E-06
Th-229	3.84E-08
Th-230	2.08E-06
Th-232	6.50E-08
U-233	1.45E-04
U-234	7.73E-02
U-235	1.13E-06
U-236	6.64E-08
U-238	4.42E-13

Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D022, F001, F002, F005
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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	12/31/2016	
Stream Name	CH Mixed TRU/F listed solvents - Heterogeneous debris from Mound Laboratories				Activity Concentrations Decayed to CY	2016	

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
SWB Dir Ld w/o Liner	12.6	0.0	12.6
Current Form Total	14.1	0.0	14.1

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
SWB Dir Ld w/o Liner	13.2	0.0	13.2
Final Form Total	14.7	0.0	14.7

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	80.57
Aluminum-based Metal/Alloys	0.27
Other Metal/Alloys	1.52
Other Inorganic Materials	14.02
Cellulose	28.11
Rubber	4.17
Plastic	20.28
Cement	0.00
Solidified Inorganic Material	0.53
Solidified Organic Material	0.00
Soil	4.77
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	3.15
Packaging Material, Rubber	0.23
Packaging Material, Steel	151.19
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	3.29E-02
Am-243	8.16E-08
Cm-244	3.75E-06
Cs-137	6.27E-06
Np-237	6.84E-06
Pu-238	5.81E+00
Pu-239	8.30E-02
Pu-240	1.28E-02
Pu-241	3.19E-01
Pu-242	8.07E-06
Sr-90	6.25E-06
Th-229	3.05E-07
Th-230	2.37E-06
Th-232	2.48E-07
U-233	1.73E-03
U-234	1.04E-03
U-235	4.63E-07
U-236	7.57E-10
U-238	8.31E-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	12/31/2016		
Stream Name	CH TRU Heterogeneous debris from the Mound Plant			Activity Concentrations Decayed to CY	2016		

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	13.3	0.0	13.3
SWB Dir Ld w/o Liner	30.6	0.0	30.6
Current Form Total	59.2	0.0	59.2

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	15.2	0.0	15.2
SLB2 Dir Ld	11.3	0.0	11.3
SWB Dir Ld w/o Liner	32.1	0.0	32.1
Final Form Total	58.6	0.0	58.6

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	60.25
Aluminum-based Metal/Alloys	0.12
Other Metal/Alloys	0.75
Other Inorganic Materials	6.93
Cellulose	19.48
Rubber	2.55
Plastic	11.31
Cement	0.00
Solidified Inorganic Material	0.60
Solidified Organic Material	0.28
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	9.60
Packaging Material, Rubber	0.28
Packaging Material, Steel	159.56
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	5.71E-01
Am-243	2.01E-06
Cm-244	1.15E-03
Cs-137	2.78E-03
Np-237	5.90E-05
Pu-238	2.90E+02
Pu-239	3.50E-01
Pu-240	4.76E-01
Pu-241	4.54E+00
Pu-242	5.81E-04
Sr-90	2.77E-03
Th-229	4.50E-14
Th-230	9.81E-07
Th-232	1.71E-06
U-233	5.12E-10
U-234	5.42E-02
U-235	1.10E-06
U-236	2.82E-08
U-238	4.04E-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
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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	12/31/2016	
Stream Name	CH Mixed TRU Soil / Gravel (S4000)			Activity Concentrations Decayed to CY		2016	

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	7.53E-03
Cs-137	2.14E-06
Np-237	1.04E-06
Pu-238	5.12E-01
Pu-239	1.25E-02
Pu-240	1.81E-03
Pu-241	2.09E-02
Pu-242	2.41E-06
Sr-90	2.13E-06
Th-229	1.78E-15
Th-230	2.51E-09
Th-232	1.19E-20
U-233	1.35E-11
U-234	9.30E-05
U-235	3.70E-11
U-236	1.61E-10
U-238	1.12E-15

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	12/31/2016	
Stream Name	Heterogeneous Debris Waste from the NIST				Activity Concentrations Decayed to CY	2016	

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	3.06E+01
Np-237	3.93E-05
Pu-238	3.91E+01
Pu-239	1.24E+01
Pu-240	2.93E+00
Pu-241	1.11E+02
Pu-242	5.23E-04
Th-229	3.88E-14
Th-230	8.46E-08
Th-232	7.47E-14
U-233	3.32E-10
U-234	2.52E-03
U-235	3.02E-05
U-236	3.78E-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/VO 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	12/31/2016		
Stream Name	RH TRU Heterogeneous debris from the HB-Line			Activity Concentrations Decayed to CY	2016		

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
RH Can w/ Remov Lid w/ 3 - 55-gal w/ 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	137.88
Aluminum-based Metal/Alloys	7.97
Other Metal/Alloys	10.36
Other Inorganic Materials	55.79
Cellulose	47.02
Rubber	117.95
Plastic	416.81
Cement	0.00
Solidified Inorganic Material	2.39
Solidified Organic Material	0.80
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	3.65E-02
Np-237	5.58E-01
Pu-238	3.42E+02
Pu-239	2.73E-01
Pu-240	1.41E-01
Pu-241	6.81E+00
Pu-242	1.63E-04
Th-229	4.28E-10
Th-230	9.04E-08
Th-232	3.79E-16
U-233	4.86E-06
U-234	5.88E-03
U-235	1.39E-05
U-236	3.84E-06
U-238	1.22E-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 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	12/31/2016		
Stream Name	RH TRU spent Berl saddles from H-Canyon dissolver off-gas system.			Activity Concentrations Decayed to CY	2016		

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	6.97E-01
Pu-239	6.15E-03
Pu-240	4.20E-03
Pu-242	7.24E-05
Th-229	4.99E-13
Th-230	2.08E-09
Th-232	2.76E-20
U-233	3.78E-09
U-234	7.84E-05
U-235	1.82E-11
U-236	3.73E-10
U-238	3.37E-14

Haz. Waste No(s).

D007, D009, D011

TRUCON Code(s)

321

Waste Stream Description

This waste stream 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	12/31/2016		
Stream Name	RH TRU Heterogeneous debris from the 235F facility.			Activity Concentrations Decayed to CY	2016		

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	9.10E+01
Np-237	2.84E-02
Pu-238	3.08E+02
Pu-239	2.40E+00
Pu-240	6.35E-01
Pu-241	4.12E+03
Pu-242	2.31E-04
Th-229	4.88E-11
Th-230	3.65E-08
Th-232	4.17E-18
U-233	3.70E-07
U-234	2.64E-03
U-235	7.09E-09
U-236	5.64E-08
U-238	1.08E-13

Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D035, F002

TRUCON Code(s)

322, 325

Waste Stream Description

This waste stream is 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	12/31/2016	
Stream Name	RH TRU Heterogeneous debris from the 772F and 772-1F laboratories.				Activity Concentrations Decayed to CY	2016	

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	1.43E-02
Cs-137	1.03E+00
Np-237	6.38E-06
Pu-238	5.27E-02
Pu-239	4.29E-02
Pu-240	1.31E-02
Pu-241	7.12E-02
Pu-242	2.14E-06
Sr-90	1.01E+00
Th-229	2.36E-13
Th-230	5.81E-10
Th-232	1.82E-16
U-233	3.84E-10
U-234	5.59E-06
U-235	2.97E-08
U-236	2.66E-07
U-238	4.64E-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 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	12/31/2016	
Stream Name	RH TRU Heterogeneous debris from the SRNL				Activity Concentrations Decayed to CY	2016	

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	10.1	10.5
Current Form Total	16.6	10.1	26.7

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	10.0	10.6
Final Form Total	16.8	10.0	26.8

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	31.06
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	1.55E-01
Am-243	5.19E-02
Cm-244	3.94E+00
Cs-137	8.89E-01
Np-237	3.96E-06
Pu-238	2.68E+00
Pu-239	7.35E-02
Pu-240	4.24E-02
Pu-241	4.93E-01
Pu-242	2.06E-05
Pu-244	2.80E-14
Sr-90	6.51E-01
Th-229	9.75E-14
Th-230	5.34E-09
Th-232	4.04E-18
U-233	1.90E-10
U-234	9.53E-05
U-235	8.69E-10
U-236	1.40E-08
U-238	3.83E-14

Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D019, D022, D027, D028, D029, D043, F002, F004, F005
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TRUCON Code(s)

321, 322, 325

Waste Stream Description

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	12/31/2016		
Stream Name	RH TRU Heterogeneous debris from the FB-Line			Activity Concentrations Decayed to CY	2016		

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	3.30E+00
Cs-137	4.49E-06
Np-237	1.14E-05
Pu-238	1.45E+00
Pu-239	1.47E+00
Pu-240	1.45E+00
Pu-241	1.22E+01
Pu-242	7.18E-05
Sr-90	4.42E-06
Th-229	1.02E-05
Th-230	1.77E-08
Th-232	1.28E-16
U-233	1.05E-02
U-234	1.99E-04
U-235	2.99E-06
U-236	4.72E-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	12/31/2016		
Stream Name	RH TRU Heterogeneous debris from the F-Canyon dissolver off-gas system.			Activity Concentrations Decayed to CY	2016		

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	1.05E-03
Np-237	3.31E-05
Pu-238	2.66E-05
Pu-239	1.01E-03
Pu-240	7.35E-04
Pu-241	5.47E-03
Pu-242	2.76E-01
Th-229	7.60E-13
Th-230	6.25E-06
Th-232	2.63E-15
U-233	1.57E-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
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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	12/31/2016	
Stream Name	RH Debris from Mound Laboratories			Activity Concentrations Decayed to CY		2016	

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	1.32E-01
Np-237	1.36E-07
Pu-238	7.32E+02
Pu-239	5.31E-01
Pu-240	2.90E-01
Pu-241	1.19E+01
Pu-242	3.45E-04
Th-229	1.60E-16
Th-230	3.53E-07
Th-232	7.63E-18
U-233	1.19E-12
U-234	1.27E-02
U-235	3.14E-09
U-236	5.16E-08
U-238	3.22E-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	12/31/2016		
Stream Name	Remote Handled PuBe Sources			Activity Concentrations Decayed to CY	2016		

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	9.57E+00
Np-237	2.68E-05
Pu-238	1.42E+02
Pu-239	2.28E+00
Pu-240	1.37E+00
Pu-241	5.11E+01
Pu-242	2.29E-03
Th-229	1.34E-13
Th-230	1.56E-07
Th-232	8.13E-17
U-233	5.12E-10
U-234	3.74E-03
U-235	2.02E-08
U-236	3.66E-07
U-238	3.20E-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	12/31/2016	
Stream Name	Remote Handled (RH) Mixed TRU Debris (S5000)				Activity Concentrations Decayed to CY	2016	

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	3.06E-02
Am-243	2.96E-02
Cm-244	2.63E+00
Cs-137	8.05E-03
Np-237	2.15E-04
Pu-238	1.19E-01
Pu-239	1.38E-01
Pu-240	4.36E-02
Pu-241	1.31E+00
Pu-242	1.50E-05
Pu-244	2.15E-16
Sr-90	5.68E-03
Th-229	3.70E-13
Th-230	1.41E-11
Th-232	2.83E-19
U-233	2.80E-09
U-234	1.02E-06
U-235	4.08E-10
U-236	3.84E-09
U-238	7.00E-15

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	12/31/2016	
Stream Name	CH TRU - Heterogeneous debris from the D&D of the 211-F-Area				Activity Concentrations Decayed to CY	2016	

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	3.6	0.0	3.6
Current Form Total	5.5	0.0	5.5

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	3.8	0.0	3.8
Final Form Total	5.7	0.0	5.7

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	51.02
Aluminum-based Metal/Alloys	0.50
Other Metal/Alloys	0.04
Other Inorganic Materials	0.48
Cellulose	2.26
Rubber	0.00
Plastic	22.45
Cement	1.07
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	12.28
Packaging Material, Rubber	0.32
Packaging Material, Steel	145.93
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	1.68E-03
Am-243	5.33E-07
Cm-244	5.11E-05
Cs-137	2.30E-05
Np-237	7.50E-06
Pu-238	6.08E-01
Pu-239	3.39E-02
Pu-240	4.74E-03
Pu-241	8.30E-02
Pu-242	4.20E-06
Sr-90	5.63E-03
Th-229	9.31E-11
Th-230	1.03E-10
Th-232	5.82E-18
U-233	5.29E-07
U-234	7.32E-06
U-235	7.99E-09
U-236	5.91E-08
U-238	1.69E-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 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	12/31/2016	
Stream Name	Organic Sludge from D&D of the SRS F-Area 800 Series Underground Tanks				Activity Concentrations Decayed to CY	2016	

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
Current Form Total	4.0	0.0	4.0

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
Final Form Total	4.0	0.0	4.0

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	7.93
Cement	530.09
Solidified Inorganic Material	3.98
Solidified Organic Material	27.90
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	3.90
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	2.74E-02
Am-243	1.44E-04
Np-237	2.05E-02
Pu-238	2.44E+00
Pu-239	2.20E-01
Pu-240	4.18E-02
Pu-241	5.71E-01
Pu-242	9.55E-02
Th-229	1.64E-05
Th-230	3.87E-06
Th-232	6.18E-14
U-233	9.34E-02
U-234	2.11E-01
U-235	1.67E-04
U-236	6.26E-04
U-238	1.01E-02

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	12/31/2016	
Stream Name	Sludge from D&D of the SRS F-Area 800 Series Underground Tanks				Activity Concentrations Decayed to CY	2016	

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	1.33E-01
Am-243	5.84E-05
Cm-244	2.83E-03
Cs-137	4.49E-04
Np-237	5.87E-04
Pu-238	4.72E+01
Pu-239	2.65E+00
Pu-240	3.70E-01
Pu-241	6.04E+00
Pu-242	1.28E-03
Sr-90	1.94E-04
Th-229	1.01E-12
Th-230	1.42E-08
Th-232	7.08E-16
U-233	7.67E-09
U-234	7.15E-04
U-235	2.57E-06
U-236	4.80E-06
U-238	7.56E-05

Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011
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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	12/31/2016			
Stream Name	CH Mixed TRU Debris (S5000)	Activity Concentrations Decayed to CY				2016		

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	10.1	14.9
SWB Dir Ld w/o Liner	61.2	0.0	61.2
Current Form Total	66.9	10.1	77.0

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	10.0	14.8
SWB Dir Ld w/o Liner	64.3	0.0	64.3
Final Form Total	69.9	10.0	79.9

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	0.39
Packaging Material, Rubber	0.27
Packaging Material, Steel	149.01
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	6.78E-02
Am-243	5.30E-06
Cm-244	1.77E-03
Cs-137	5.88E-05
Np-237	6.64E-05
Pu-238	7.20E+00
Pu-239	1.45E-01
Pu-240	4.11E-02
Pu-241	5.62E-01
Pu-242	1.06E-04
Sr-90	5.85E-05
Th-229	1.52E-09
Th-230	2.53E-08
Th-232	1.68E-09
U-233	5.77E-06
U-234	9.47E-04
U-235	1.36E-07
U-236	3.65E-09
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	12/31/2016		
Stream Name	Spill cleanup debris.			Activity Concentrations Decayed to CY	2016		

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	3.79E+01
Cs-137	5.49E-06
Np-237	3.36E-07
Pu-238	6.73E-01
Pu-239	9.02E-04
Pu-240	1.59E-01
Pu-241	2.55E-01
Pu-242	1.35E-04
Pu-244	3.59E-15
Sr-90	5.47E-06
Th-229	1.93E-16
Th-230	7.98E-11
Th-232	9.92E-19
U-233	2.20E-12
U-234	5.76E-06
U-235	2.61E-12
U-236	1.36E-08
U-238	6.27E-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)

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	12/31/2016	
Stream Name	N/A			Activity Concentrations Decayed to CY 2016			

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	0.0	4556.2	4556.2
Current Form Total	0.0	4556.2	4556.2

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	0.0	4512.8	4512.8
Final Form Total	0.0	4512.8	4512.8

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	2.52E+01
Np-237	8.18E-07
Pu-238	6.76E-03
Pu-239	4.44E-02
Pu-240	1.69E-02
Pu-241	8.13E+00
Th-229	1.03E-19
Th-230	1.21E-09
Th-232	3.37E-18
U-233	4.47E-14
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	12/31/2016			
Stream Name	CH Mixed TRU HEPA Filters (S5000)	Activity Concentrations Decayed to CY				2016		

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	2.68E-01
Am-243	6.93E-15
Cs-137	2.10E-07
Np-237	1.80E-06
Pu-238	7.36E-02
Pu-239	9.42E-01
Pu-240	2.53E-01
Pu-241	2.75E+00
Pu-242	3.19E-05
Sr-90	2.09E-07
Th-229	6.25E-08
Th-230	9.06E-10
Th-232	1.67E-18
U-233	2.37E-04
U-234	3.31E-05
U-235	7.07E-07
U-236	2.25E-08
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	12/31/2016		
Stream Name	CH Mixed TRU/Thirds Heterogeneous debris from 221F			Activity Concentrations Decayed to CY	2016		

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	5.4	0.0	5.4
Current Form Total	6.2	0.0	6.2

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	5.7	0.0	5.7
Final Form Total	6.5	0.0	6.5

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	42.38
Aluminum-based Metal/Alloys	0.44
Other Metal/Alloys	0.52
Other Inorganic Materials	6.76
Cellulose	29.50
Rubber	7.04
Plastic	31.29
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.02
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	4.74
Packaging Material, Rubber	0.24
Packaging Material, Steel	150.54
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	3.51E-01
Am-243	7.70E-07
Cm-244	4.90E-03
Cs-137	8.54E-05
Np-237	4.60E-06
Pu-238	3.88E-01
Pu-239	1.52E+00
Pu-240	4.18E-01
Pu-241	6.29E+00
Pu-242	2.58E-04
Sr-90	8.52E-05
Th-229	3.41E-15
Th-230	3.08E-09
Th-232	4.76E-08
U-233	3.91E-11
U-234	1.68E-04
U-235	2.22E-06
U-236	2.47E-08
U-238	1.48E-05

Haz. Waste No(s).

D006, D007, D008, D009, D022, D028, D029, F001, F002, F003, F005
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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	12/31/2016	
Stream Name	CH Mixed TRU/Thirds Heterogeneous debris from 221F				Activity Concentrations Decayed to CY	2016	

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	9.91E-02
Cm-244	2.70E-03
Cs-137	7.73E-02
Np-237	9.38E-07
Pu-238	1.32E-02
Pu-239	2.37E-01
Pu-240	5.96E-02
Pu-241	1.66E+00
Pu-242	1.03E-05
Sr-90	2.16E-02
Th-229	8.15E-10
Th-230	2.07E-09
Th-232	5.08E-17
U-233	3.09E-06
U-234	7.53E-05
U-235	2.38E-06
U-236	3.46E-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	12/31/2016	
Stream Name	CH Mixed TRU Solids (S3000)				Activity Concentrations Decayed to CY	2016	

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	4.57E-01
Am-243	1.17E-07
Cs-137	2.34E-02
Np-237	1.48E-05
Pu-238	3.59E-01
Pu-239	1.85E+00
Pu-240	4.15E-01
Pu-241	4.03E+00
Pu-242	5.87E-05
Sr-90	1.22E-05
Th-229	4.31E-14
Th-230	1.16E-09
Th-232	4.85E-18
U-233	2.47E-10
U-234	3.37E-05
U-235	2.86E-08
U-236	4.92E-08
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	12/31/2016		
Stream Name	CH Mixed TRU/Thirds Heterogeneous debris from 772F			Activity Concentrations Decayed to CY	2016		

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	5.0	42.0	47.0
55-gal Drum Dir Ld w/o Liner	1.9	0.0	1.9
SWB Dir Ld w/o Liner	3.6	19.8	23.4
Current Form Total	10.5	61.8	72.3

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	5.0	41.6	46.6
55-gal Drum Dir Ld w/o Liner	1.9	0.0	1.9
SWB Dir Ld w/o Liner	3.8	20.8	24.6
Final Form Total	10.6	62.4	73.0

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	11.01
Aluminum-based Metal/Alloys	0.65
Other Metal/Alloys	0.86
Other Inorganic Materials	18.33
Cellulose	6.43
Rubber	4.13
Plastic	44.11
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	23.65
Packaging Material, Rubber	0.44
Packaging Material, Steel	138.40
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	2.28E-01
Am-243	2.10E-06
Cm-244	2.99E-03
Cs-137	8.98E-04
Np-237	2.38E-04
Pu-238	8.70E+00
Pu-239	3.89E-01
Pu-240	9.69E-02
Pu-241	1.88E+00
Pu-242	4.45E-05
Sr-90	8.90E-04
Th-229	1.83E-08
Th-230	2.75E-08
Th-232	5.08E-07
U-233	7.55E-05
U-234	1.52E-03
U-235	1.54E-06
U-236	5.73E-09
U-238	1.29E-06

Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D019, D022, D028, D029, F002, F003, F005
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TRUCON Code(s)

125/225, 154

Waste Stream Description

This waste stream 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	12/31/2016		
Stream Name	UNKNOWN	Activity Concentrations Decayed to CY				2016	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	0.0	2999.0	2999.0
Current Form Total	0.0	2999.0	2999.0

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	0.0	2970.4	2970.4
Final Form Total	0.0	2970.4	2970.4

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)
Am-241	7.99E-03
Np-237	1.58E-10
Pu-238	4.16E-01
Pu-239	2.81E+00
Pu-240	6.47E-01
Pu-241	4.98E+01
Pu-242	1.91E-04
Th-229	8.92E-24
Th-230	6.36E-14
Th-232	7.94E-20
U-233	4.82E-18
U-234	1.28E-07
U-235	9.45E-07
U-236	1.71E-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	12/31/2016		
Stream Name	N/A					Activity Concentrations Decayed to CY	2016

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	0.0	557.6	557.6
Current Form Total	0.0	557.6	557.6

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	0.0	552.2	552.2
Final Form Total	0.0	552.2	552.2

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
Np-237	2.31E-06
Pu-238	1.77E-03
Pu-239	1.23E-02
Pu-240	4.24E-03
Pu-241	2.10E-01
Pu-242	8.04E-06
Th-229	2.89E-19
Th-230	1.03E-13
Th-232	8.21E-19
U-233	1.26E-13
U-234	1.13E-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 which 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	12/31/2016	
Stream Name	CH Mixed TRU/F listed solvents - Heterogeneous debris from 221F				Activity Concentrations Decayed to CY	2016	

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	1.91E-01
Am-243	1.97E-07
Cm-244	2.73E-05
Cs-137	4.70E-07
Np-237	1.75E-06
Pu-238	5.30E-02
Pu-239	6.38E-01
Pu-240	1.61E-01
Pu-241	1.78E+00
Pu-242	1.52E-05
Sr-90	4.68E-07
Th-229	2.43E-09
Th-230	7.11E-10
Th-232	1.06E-18
U-233	9.22E-06
U-234	2.60E-05
U-235	1.05E-07
U-236	1.43E-08
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	12/31/2016	
Stream Name	CH TRU HEPA filters				Activity Concentrations Decayed to CY	2016	

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	1.39E-02
Am-243	1.21E-07
Cs-137	1.45E-03
Np-237	4.04E-05
Pu-238	9.40E+00
Pu-239	3.62E-02
Pu-240	1.02E-02
Pu-241	2.02E-01
Pu-242	1.83E-05
Sr-90	1.44E-03
Th-229	6.95E-14
Th-230	4.74E-08
Th-232	6.69E-20
U-233	5.27E-10
U-234	1.76E-03
U-235	1.12E-07
U-236	9.03E-10
U-238	8.50E-15

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 mixed TRU 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	12/31/2016	
Stream Name	CH Mixed TRU/F listed solvents - Heterogeneous debris from 221H				Activity Concentrations Decayed to CY	2016	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	3.6	0.0	3.6
55-gal Drum Dir Ld w/o Liner	0.2	0.0	0.2
SWB Dir Ld w/o Liner	72.0	0.0	72.0
Current Form Total	75.8	0.0	75.8

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	3.5	0.0	3.5
55-gal Drum Dir Ld w/o Liner	0.2	0.0	0.2
SWB Dir Ld w/o Liner	75.6	0.0	75.6
Final Form Total	79.3	0.0	79.3

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	1.65
Packaging Material, Rubber	0.21
Packaging Material, Steel	152.37
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	1.29E-01
Am-243	1.77E-06
Cm-244	2.71E-03
Cs-137	1.42E-05
Np-237	1.47E-03
Pu-238	7.68E+01
Pu-239	2.48E-01
Pu-240	6.98E-02
Pu-241	5.64E+00
Pu-242	1.58E-04
Sr-90	1.42E-05
Th-229	6.16E-08
Th-230	2.56E-07
Th-232	2.23E-06
U-233	3.50E-04
U-234	1.41E-02
U-235	2.26E-06
U-236	4.13E-09
U-238	2.36E-06

Haz. Waste No(s).

D006, D008, D009, D019, D022, D029, D039, D040, D043, F001, F002, F003, F005, U133
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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	12/31/2016		
Stream Name	CH Mixed TRU - Heterogeneous debris from 221H			Activity Concentrations Decayed to CY	2016		

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	18.9	47.0	65.9
SWB Dir Ld w/o Liner	16.2	21.6	37.8
Current Form Total	36.4	68.6	105.0

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	18.7	46.6	65.3
SWB Dir Ld w/o Liner	17.0	22.7	39.7
Final Form Total	37.0	69.3	106.3

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	46.02
Aluminum-based Metal/Alloys	7.00
Other Metal/Alloys	0.30
Other Inorganic Materials	15.69
Cellulose	4.28
Rubber	25.65
Plastic	52.92
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	0.44
Packaging Material, Rubber	0.43
Packaging Material, Steel	139.24
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	2.32E-01
Am-243	7.05E-06
Cs-137	3.07E-05
Np-237	2.33E-03
Pu-238	1.77E+00
Pu-239	8.52E-01
Pu-240	2.05E-01
Pu-241	1.59E+00
Pu-242	1.16E-04
Sr-90	3.06E-05
Th-229	3.05E-09
Th-230	8.42E-09
Th-232	5.98E-19
U-233	1.74E-05
U-234	4.63E-04
U-235	7.11E-06
U-236	1.21E-08
U-238	4.34E-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	12/31/2016	
Stream Name	CH Mixed TRU Absorbed / Stabilized Liquids				Activity Concentrations Decayed to CY	2016	

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	3.34E-01
Am-243	1.16E-07
Cs-137	5.33E-03
Np-237	1.40E-04
Pu-238	7.66E-01
Pu-239	8.05E-01
Pu-240	2.19E-01
Pu-241	2.39E+00
Pu-242	7.83E-05
Sr-90	5.30E-03
Th-229	1.48E-09
Th-230	4.19E-08
Th-232	9.43E-16
U-233	5.62E-06
U-234	1.52E-03
U-235	2.91E-05
U-236	6.38E-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	12/31/2016		
Stream Name	CH Mixed TRU consisting of HEPA Filters from the 235-F.			Activity Concentrations Decayed to CY	2016		

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 Dir Ld w/o Liner	9.0	0.0	9.0
Current Form Total	9.4	0.0	9.4

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.4	0.0	0.4
SWB Dir Ld w/o Liner	9.5	0.0	9.5
Final Form Total	9.9	0.0	9.9

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	2.75
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.67
Cellulose	27.02
Rubber	0.00
Plastic	16.87
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	1.56
Packaging Material, Rubber	0.21
Packaging Material, Steel	152.48
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	1.08E-02
Am-243	1.10E-14
Cs-137	6.89E-08
Np-237	1.70E-04
Pu-238	9.68E-01
Pu-239	6.47E-03
Pu-240	2.80E-03
Pu-241	4.41E-02
Pu-242	4.95E-06
Sr-90	6.87E-08
Th-229	1.30E-13
Th-230	5.30E-09
Th-232	8.19E-21
U-233	1.48E-09
U-234	2.91E-04
U-235	2.49E-06
U-236	1.66E-10
U-238	1.54E-15

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 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	12/31/2016		
Stream Name	CH Mixed TRU/F listed solvents - Heterogeneous debris from 235F			Activity Concentrations Decayed to CY	2016		

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	3.4	0.0	3.4
SWB Dir Ld w/o Liner	3.6	0.0	3.6
Current Form Total	7.0	0.0	7.0

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	3.3	0.0	3.3
SWB Dir Ld w/o Liner	3.8	0.0	3.8
Final Form Total	7.1	0.0	7.1

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	55.37
Aluminum-based Metal/Alloys	1.56
Other Metal/Alloys	2.76
Other Inorganic Materials	7.76
Cellulose	9.56
Rubber	26.09
Plastic	47.11
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	0.37
Packaging Material, Steel	142.82
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	2.26E-01
Am-243	1.48E-06
Cm-244	3.26E-04
Cs-137	2.46E-06
Np-237	4.28E-03
Pu-238	1.22E+02
Pu-239	1.62E-01
Pu-240	7.00E-02
Pu-241	5.42E+00
Pu-242	1.34E-04
Sr-90	2.45E-06
Th-229	3.90E-08
Th-230	5.72E-07
Th-232	1.51E-06
U-233	2.21E-04
U-234	3.14E-02
U-235	3.18E-06
U-236	4.14E-09
U-238	1.45E-06

Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D035, F002, F003
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TRUCON Code(s)

125/225, 154

Waste Stream Description

This mixed waste stream is primarily solids consisting of booties, lab coats, floor sweeping, labware, rags, and other job control waste, small HEPAs, liquids, sludges and resins may also be found in this stream.

Waste Stream ID: **SR-W027-235F-HOM**

Appendix A

Waste Profile Report

Site	Savannah River 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	12/31/2016	
Stream Name	CH mixed TRU S3000 solids from 235F				Activity Concentrations Decayed to CY	2016	

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	2.80
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	2.80
Cellulose	2.80
Rubber	2.80
Plastic	8.41
Cement	0.00
Solidified Inorganic Material	260.70
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	1.31E-01
Np-237	1.51E-07
Pu-238	2.47E+02
Pu-239	1.76E-01
Pu-240	9.63E-02
Pu-241	4.35E+00
Pu-242	1.15E-04
Th-229	1.40E-16
Th-230	5.23E-08
Th-232	1.13E-18
U-233	1.22E-12
U-234	2.83E-03
U-235	6.94E-10
U-236	1.14E-08
U-238	7.12E-14

Haz. Waste No(s).

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

TRUCON Code(s)

127/227

Waste Stream Description

This waste consists of sludge from tank cleanout.

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	12/31/2016		
Stream Name	CH Mixed TRU Debris (S5000)	Activity Concentrations Decayed to CY				2016	

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	1.32E+00
Np-237	5.01E-04
Pu-238	2.46E-02
Pu-239	4.21E-02
Pu-240	9.96E-03
Pu-241	1.31E+02
Pu-242	1.73E-06
Th-229	8.62E-13
Th-230	2.92E-12
Th-232	6.54E-20
U-233	6.54E-09
U-234	2.11E-07
U-235	1.25E-10
U-236	8.84E-10
U-238	8.07E-16

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	12/31/2016	
Stream Name	CH Mixed TRU/F listed solvents - Heterogeneous debris from 773A				Activity Concentrations Decayed to CY	2016	

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	9.0	95.1	104.2
SLB2 Dir Ld	6.6	0.0	6.6
SWB Dir Ld w/o Liner	72.0	61.2	133.2
Current Form Total	100.1	156.3	256.4

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	8.9	94.2	103.2
SLB2 Dir Ld	5.7	0.0	5.7
SWB Dir Ld w/o Liner	75.6	64.3	139.9
Final Form Total	102.5	158.5	261.0

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	35.29
Aluminum-based Metal/Alloys	0.67
Other Metal/Alloys	1.22
Other Inorganic Materials	13.83
Cellulose	11.15
Rubber	6.77
Plastic	30.80
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	1.74
Packaging Material, Rubber	0.36
Packaging Material, Steel	144.76
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	1.61E-01
Am-243	1.05E-03
Cm-244	9.24E-02
Cs-137	7.80E-04
Np-237	2.36E-04
Pu-238	1.00E+01
Pu-239	4.22E-01
Pu-240	9.71E-02
Pu-241	1.69E+00
Pu-242	2.09E-05
Pu-244	3.33E-16
Sr-90	7.78E-04
Th-229	7.98E-09
Th-230	3.36E-08
Th-232	5.25E-07
U-233	4.54E-05
U-234	1.86E-03
U-235	1.09E-06
U-236	5.74E-09
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 mixed 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	12/31/2016	
Stream Name	CH Mixed TRU Homogeneous Solids (S3000)				Activity Concentrations Decayed to CY	2016	

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	6.01E-04
Cs-137	6.75E-03
Np-237	1.36E-05
Pu-238	6.61E+01
Pu-239	4.20E-05
Pu-240	2.14E-05
Pu-241	4.21E-04
Pu-242	2.06E-05
Sr-90	6.72E-03
Th-229	2.34E-14
Th-230	3.37E-07
Th-232	1.41E-22
U-233	1.77E-10
U-234	1.25E-02
U-235	1.24E-13
U-236	1.90E-12
U-238	9.58E-15

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	12/31/2016		
Stream Name	CH Mixed TRU - Heterogeneous debris from FB-Line			Activity Concentrations Decayed to CY	2016		

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	31.7	0.0	31.7
SWB Dir Ld w/o Liner	34.2	0.0	34.2
Current Form Total	65.9	0.0	65.9

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	31.4	0.0	31.4
SWB Dir Ld w/o Liner	35.9	0.0	35.9
Final Form Total	67.3	0.0	67.3

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	25.55
Aluminum-based Metal/Alloys	0.26
Other Metal/Alloys	0.32
Other Inorganic Materials	8.62
Cellulose	9.18
Rubber	8.32
Plastic	58.32
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	17.29
Packaging Material, Rubber	0.37
Packaging Material, Steel	142.86
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	8.28E-01
Am-243	1.29E-06
Cm-244	3.02E-03
Cs-137	4.65E-06
Np-237	4.82E-05
Pu-238	3.69E-01
Pu-239	2.52E+00
Pu-240	7.23E-01
Pu-241	9.36E+00
Pu-242	1.33E-04
Sr-90	4.64E-06
Th-229	3.15E-09
Th-230	1.66E-09
Th-232	7.06E-08
U-233	1.19E-05
U-234	6.16E-05
U-235	1.81E-07
U-236	6.42E-08
U-238	7.65E-07

Haz. Waste No(s).

D005, D006, D007, D008, D009, D011, D018, D019, D022, D029, D039, D040, D043, F001, F002, F003, F005, U002, U151
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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	12/31/2016	
Stream Name	CH mixed TRU from 221H				Activity Concentrations Decayed to CY	2016	

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	13.3	0.0	13.3
SWB Dir Ld w/o Liner	64.8	0.0	64.8
Current Form Total	82.3	0.0	82.3

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	11.3	0.0	11.3
SWB Dir Ld w/o Liner	68.0	0.0	68.0
Final Form Total	83.5	0.0	83.5

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	32.74
Aluminum-based Metal/Alloys	0.01
Other Metal/Alloys	0.03
Other Inorganic Materials	2.71
Cellulose	38.13
Rubber	1.34
Plastic	22.38
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	0.20
Packaging Material, Steel	160.73
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	4.47E-03
Am-243	3.93E-10
Cm-244	4.81E-05
Cs-137	1.72E-05
Np-237	3.36E-05
Pu-238	2.09E+00
Pu-239	1.09E-02
Pu-240	3.25E-03
Pu-241	5.63E-02
Pu-242	6.31E-06
Sr-90	1.71E-05
Th-229	2.57E-14
Th-230	6.68E-09
Th-232	9.48E-21
U-233	2.92E-10
U-234	3.69E-04
U-235	3.51E-09
U-236	1.92E-10
U-238	1.96E-15

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 WPRs contain information on potential TRU waste streams as of the inventory date, December 31, 2016. These waste streams were placed in the potential category for various reasons as stated in section 4.0 of this report.

The TRU waste generator sites that have reported potential TRU waste streams are:

BL	Babcock and Wilcox Nuclear Energy Services
IN	Idaho National Laboratory
LA	Los Alamos National Laboratory
RL	Hanford (Richland) Site
RP	Hanford Site – Office of River Protection
WV	West Valley Demonstration Project

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	12/31/2016		
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.

Comprehensive Inventory Database ver. 2.03 Data ver. D.16.01
NOTE: Actual numerical values have been rounded for presentation purposes

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	12/31/2016		
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	8.01E-02
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

Comprehensive Inventory Database ver. 2.03 Data ver. D.16.01
NOTE: Actual numerical values have been rounded for presentation purposes

Waste Stream ID: **IN-BN-538**

Appendix B
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	12/31/2016		
Stream Name	Oversized Debris Items from Supercompactor Facility			Activity Concentrations as of CY 2016			

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
Box - Misc	136.3	0.0	136.3
Current Form Total	136.3	0.0	136.3

Final Form Volumes			
Container Type	Stored	Proj.	Total
SLB2 Dir Ld	243.4	0.0	243.4
Final Form Total	243.4	0.0	243.4

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	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	0.14
Packaging Material, Steel	215.55
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	1.62E-02
Cs-137	4.52E-07
Np-237	1.65E-07
Pu-238	2.88E-03
Pu-239	9.49E-02
Pu-240	2.11E-02
Pu-241	1.50E-01
Pu-242	2.77E-06
Sr-90	4.97E-07
Th-232	1.74E-09
U-234	1.16E-07
U-235	3.76E-08

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, U108, U134, U151

No TRUCON Codes Provided

Waste Stream Description

This waste contains oversized waste items that are too large to be treated with the existing equipment in the WMF-676 box lines. Oversized debris waste items may originate from only those IDCs identified in RPT-TRUW-83 that are authorized as feed to the Supercompactor.

Waste Stream ID: **IN-ID-AMWTP-Hot Silver**

Appendix B
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	12/31/2016		
Stream Name	RH-TRU Waste from AMWTP generated at ANLE and RFP.			Activity Concentrations as of CY 2016			

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	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	5.38E-04
Cs-137	1.18E-01
Pu-238	7.23E-04
Pu-239	2.68E-02
Pu-240	5.96E-02
Pu-241	3.62E-02
Pu-242	7.82E-07
Sr-90	1.34E-01

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

**No TRUCON
Codes Provided**

Waste Stream Description

This waste stream consists of one silver drum overpacked into 85 gallon drum. It was generated during repackaging of box waste from ANL-E and RFP in AMWTP box line process.

Waste Stream ID: **IN-ID-AMWTP-U232**

Appendix B
Waste Profile Report

Site	Idaho National Laboratory	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	12/31/2016	
Stream Name	RH-TRU Waste from AMWTP generated at RFP.				Activity Concentrations as of CY	2016	

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	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	6.15E-01
Np-237	8.46E-05
Pu-238	2.32E-02
Pu-239	8.62E-01
Pu-240	1.92E-01
Pu-241	1.15E+00
Pu-242	2.52E-05

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

**No TRUCON
Codes Provided**

Waste Stream Description

This waste stream consists of one 55 gallon that was generated at sludge repackaging station during repackaging of RF-004 sludge drum. It also contains some RF-003 sludge that was left over in the tray from previous repackaging operations.

Waste Stream ID: **IN-RF-005**

Appendix B
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	12/31/2016		
Stream Name	Evaporator Salts					Activity Concentrations as of CY	2016

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
83/85-gal drum	10.9	0.0	10.9
Current Form Total	11.4	0.0	11.4

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	15.0	0.0	15.0
Final Form Total	15.0	0.0	15.0

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	0.00
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	1.24E-01
Cs-137	2.44E-07
Np-237	2.01E-06
Pu-238	6.01E-04
Pu-239	2.09E-02
Pu-240	5.96E-03
Pu-241	5.82E-02
Pu-242	2.94E-06
Sr-90	2.69E-07
U-234	1.91E-06
U-235	4.48E-07
U-238	6.79E-06

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

Waste Stream Description

This waste stream generated at Rocky Flats, consists of salt residues generated by the Building 774 evaporator system from concentrating and drying liquid waste from the solar evaporation ponds.

Comprehensive Inventory Database ver. 2.03 Data ver. D.16.01
NOTE: Actual numerical values have been rounded for presentation purposes

Waste Stream ID: **IN-RF-745**

Appendix B
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	12/31/2016		
Stream Name	Pits 11 and 12 Evaporator Salts			Activity Concentrations as of CY 2016			

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
83/85-gal drum	1.9	0.0	1.9
Current Form Total	1.9	0.0	1.9

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld 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	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	7.92E-03
Np-237	1.21E-07
Pu-238	1.33E-05
Pu-239	4.97E-04
Pu-240	1.10E-04
Pu-241	6.56E-04
Pu-242	1.45E-08
U-234	4.16E-05
U-235	8.69E-06
U-238	6.71E-04

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

Waste Stream Description

This waste consists of salt residues generated from the same process as IN-RF-005 that were shipped to INL prior to October 1972 and placed into Pits 11 and 12. The waste was subsequently retrieved from the Pits and placed into the TSA-RE prior to 1979. IDC 745 was assigned by AMWTP because the majority of the waste was generated prior to the use of IDCs at RF.

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	12/31/2016	
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	979.0	0.0	979.0
Final Form Total	979.0	0.0	979.0

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	1333.96
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	3.22E-01
Am-243	1.74E-04
Cm-244	1.24E-03
Cs-137	1.77E+02
Np-237	2.47E-03
Pu-238	3.81E+00
Pu-239	4.13E-01
Pu-240	1.53E-01
Pu-241	1.55E+00
Pu-242	7.89E-05
Sr-90	1.16E+02
U-233	3.45E-05
U-234	5.49E-03
U-235	1.35E-04
U-238	1.32E-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 3-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 96% 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 1100 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	12/31/2016		
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-UNDETERMINED**

Appendix B
Waste Profile Report

Site	Idaho National Laboratory	Summary Category	S9000	Defense Determination	Unknown	Handling	CH
Source Cat.	Source Unknown	Waste Matrix Code Group	Unknown	Inventory Date	12/31/2016		
Stream Name	UNDETERMINED					Activity Concentrations as of CY	N/A

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
110-gal Drum Dir Ld w/o Liner	47.0	0.0	47.0
55-gal Drum Dir Ld w/ Liner	9.8	0.0	9.8
83/85-gal drum	370.3	0.0	370.3
Box - Misc	475.5	0.0	475.5
Current Form Total	902.6	0.0	902.6

Final Form Volumes			
Container Type	Stored	Proj.	Total
100-gal Drum Dir Ld w/ Liner	193.3	0.0	193.3
55-gal Drum Dir Ld w/ Liner	135.6	0.0	135.6
Final Form Total	328.9	0.0	328.9

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	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	27.24
Packaging Material, Rubber	0.42
Packaging Material, Steel	120.75
Packaging Material, Lead	0.00

No Final Form Radionuclides Provided

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

Waste Stream Description

This waste stream consists of waste that has no identification/labeling on the exterior of the container to determine what waste stream should be assigned.

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 Inorganics		Inventory Date	12/31/2016	
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

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: **RL200-10**

Appendix B
Waste Profile Report

Site	Hanford (Richland) Site	Summary Category	S4000	Defense Determination	Defense-Related	Handling	RH
Source Cat.	Other/Multiple Sources	Waste Matrix Code Group	Contaminated Soil/Debris Waste	Inventory Date	12/31/2016		
Stream Name	Groundwater TRU RH Soils			Activity Concentrations as of CY		N/A	

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 Lead Shielded Cntr w/ 1 - 30 gal w/ Liner	0.3	0.0	0.3
Final Form Total	0.3	0.0	0.3

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	84.25
Packaging Material, Rubber	1.04
Packaging Material, Steel	3619.47
Packaging Material, Lead	3814.16

No Final Form Radionuclides Provided

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

Waste Stream Description

RH soils from Groundwater projects.

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	12/31/2016		
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

High Cs-137 content, vitrified waste form in heavily shielded casks.

Comprehensive Inventory Database ver. 2.03 Data ver. D.16.01
NOTE: Actual numerical values have been rounded for presentation purposes

Waste Stream ID: **RLALPHA-08**

Appendix B
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	12/31/2016		
Stream Name	Alpha Caissons TRU RH Debris			Activity Concentrations as of CY		N/A	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
1-5 gal steel cans	22.1	0.0	22.1
Current Form Total	22.1	0.0	22.1

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 30-gal w/ Liner	276.3	0.0	276.3
RH Lead Shielded Cntr w/ 1 - 30 gal w/ Liner	552.5	0.0	552.5
Final Form Total	828.7	0.0	828.7

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	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	84.19
Packaging Material, Rubber	1.04
Packaging Material, Steel	2951.73
Packaging Material, Lead	2542.60

No Final Form Radionuclides Provided

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

Waste Stream Description

Debris waste generated from operations within the 300 area hot cells.

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	12/31/2016		
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	3.8	0.0	3.8
Current Form Total	3.8	0.0	3.8

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Lead Shielded Cntr w/ 1 - 30 gal w/ Liner	4.7	0.0	4.7
Final Form Total	4.7	0.0	4.7

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	1.62
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	197.10
Other Inorganic Materials	3.89
Cellulose	0.00
Rubber	24.21
Plastic	6.73
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	84.25
Packaging Material, Rubber	1.04
Packaging Material, Steel	3619.47
Packaging Material, Lead	3814.16

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	2.61E-02
Cs-137	2.34E+00
Pu-238	4.07E-04
Pu-239	2.34E-02
Pu-240	4.53E-03
Sr-90	1.07E+02
U-235	9.14E-06
U-238	2.13E-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: **RLDD-01**

Appendix B
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	12/31/2016		
Stream Name	Future D&D and CERCLA waste projects TRU Debris			Activity Concentrations as of CY		N/A	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
Uncontained	0.0	6000.0	6000.0
Current Form Total	0.0	6000.0	6000.0

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.0	1500.1	1500.1
SWB Dir Ld w/ Liner	0.0	4500.1	4500.1
Final Form Total	0.0	6000.2	6000.2

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	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	10.17
Packaging Material, Rubber	0.29
Packaging Material, Steel	147.77
Packaging Material, Lead	0.00

No Final Form
Radionuclides Provided

No Hazardous
Waste Numbers
Provided

No TRUCON
Codes Provided

Waste Stream Description

CH Debris to be generated from future D&D and CERCLA waste projects. Includes PUREX facility, PUREX tunnels, REDOX, Liquid Waste Sites, Plutonium Concentration and Isolation facilities, 200-WA-1, 325 facility, and 618-11 burial grounds. Additional waste volume from 200-SW-2 not included as part of volume [10,000 m3].

Waste Stream ID: **RLDD-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	12/31/2016		
Stream Name	Future D&D and CERCLA waste projects TRU Soils			Activity Concentrations as of CY		N/A	

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
Uncontained	0.0	3000.0	3000.0
Current Form Total	0.0	3000.0	3000.0

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.0	3000.0	3000.0
Final Form Total	0.0	3000.0	3000.0

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	0.00
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

No Final Form Radionuclides Provided

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

Waste Stream Description

CH Soils to be generated from future D&D and CERCLA waste projects. Includes PUREX facility, PUREX tunnels, REDOX, Liquid Waste Sites, Plutonium Concentration and Isolation facilities, 200-WA-1, 325 facility, and 618-11 burial grounds. Additional waste volume from 200-SW-2 not included as part of volume [10,000 m³].

Waste Stream ID: **RLDD-08**

Appendix B
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	12/31/2016		
Stream Name	Future D&D and CERCLA waste projects TRU RH Debris			Activity Concentrations as of CY	N/A		

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
Uncontained	0.0	667.0	667.0
Current Form Total	0.0	667.0	667.0

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Lead Shielded Cntr w/ 1 - 30 gal w/ Liner	0.0	667.0	667.0
Final Form Total	0.0	667.0	667.0

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	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	84.25
Packaging Material, Rubber	1.04
Packaging Material, Steel	3619.47
Packaging Material, Lead	3814.16

No Final Form Radionuclides Provided

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

Waste Stream Description

RH Debris to be generated from future D&D and CERCLA waste projects. Includes PUREX facility, PUREX tunnels, REDOX, Liquid Waste Sites, Plutonium Concentration and Isolation facilities, 200-WA-1, 325 facility, and 618-11 burial grounds. Additional waste volume from 200-SW-2 not included as part of volume [10,000 m3].

Waste Stream ID: **RLDD-10**

Appendix B
Waste Profile Report

Site	Hanford (Richland) Site	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	12/31/2016		
Stream Name	Future D&D and CERCLA waste projects TRU RH Soils			Activity Concentrations as of CY	N/A		

Waste Volume Detail (m³)

Current Form Volumes			
Container Type	Stored	Proj.	Total
Uncontained	0.0	333.0	333.0
Current Form Total	0.0	333.0	333.0

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Lead Shielded Cntr w/ 1 - 30 gal w/ Liner	0.0	333.0	333.0
Final Form Total	0.0	333.0	333.0

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	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	84.25
Packaging Material, Rubber	1.04
Packaging Material, Steel	3619.47
Packaging Material, Lead	3814.16

No Final Form Radionuclides Provided

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

Waste Stream Description

RH Soil to be generated from future D&D and CERCLA waste projects. Includes PUREX facility, PUREX tunnels, REDOX, Liquid Waste Sites, Plutonium Concentration and Isolation facilities, 200-WA-1, 325 facility, and 618-11 burial grounds. Additional waste volume from 200-SW-2 not included as part of volume [10,000 m3].

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	12/31/2016		
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	13.2	13.2
Current Form Total	0.0	13.2	13.2

Final Form Volumes			
Container Type	Stored	Proj.	Total
SWB Dir Ld w/ Liner	0.0	13.2	13.2
Final Form Total	0.0	13.2	13.2

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	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 Provided

No 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	12/31/2016	
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	12/31/2016		
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	334.5	334.5
Current Form Total	0.0	334.5	334.5

Final Form Volumes			
Container Type	Stored	Proj.	Total
SWB Dir Ld w/ Liner	0.0	334.5	334.5
Final Form Total	0.0	334.5	334.5

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	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 Provided

No 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	12/31/2016	
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	442.6	0.0	442.6
Final Form Total	442.6	0.0	442.6

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	1091.22
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	7.30E-02
Cs-137	6.06E-01
Np-237	1.21E-05
Pu-238	6.54E-03
Pu-239	5.11E-01
Pu-240	6.17E-02
Pu-241	1.87E-01
Pu-242	3.05E-06
Sr-90	7.91E+00
U-233	1.09E-09
U-234	1.67E-03
U-235	5.37E-05
U-236	1.61E-05
U-238	1.23E-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	12/31/2016	
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	326.1	0.0	326.1
Final Form Total	326.1	0.0	326.1

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	0.00
Cellulose	0.00
Rubber	0.00
Plastic	0.00
Cement	0.00
Solidified Inorganic Material	1063.95
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	1.19E-01
Cs-137	1.65E-01
Np-237	1.61E-06
Pu-238	1.10E-02
Pu-239	1.54E+00
Pu-240	1.28E-01
Pu-241	2.14E-01
Pu-242	4.87E-06
Sr-90	3.33E+00
U-233	1.23E-10
U-234	1.77E-04
U-235	7.19E-06
U-236	1.73E-06
U-238	1.63E-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	12/31/2016	
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	801.4	0.0	801.4
Final Form Total	801.4	0.0	801.4

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	0.00
Solidified Inorganic Material	1095.55
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	1.40E-01
Cs-137	3.29E-01
Np-237	7.96E-05
Pu-238	2.94E-03
Pu-239	5.35E-01
Pu-240	4.34E-02
Pu-241	6.75E-02
Pu-242	5.46E-07
Sr-90	1.19E+01
U-233	3.08E-09
U-234	3.57E-03
U-235	1.58E-04
U-236	2.87E-05
U-238	3.63E-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: **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	12/31/2016	
Stream Name	TRU Spent Absorbents CH				Activity Concentrations as of CY 2008		

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	17.5	0.0	17.5
Current Form Total	17.7	0.0	17.7

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	0.2	0.0	0.2
SWB Dir Ld w/o Liner	9.5	0.0	9.5
Final Form Total	9.7	0.0	9.7

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	493.89
Cellulose	0.00
Rubber	0.00
Plastic	0.00
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	164.63
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.20
Packaging Material, Steel	152.95
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	1.09E-01
Am-243	9.16E-03
Cs-137	1.86E-02
Np-237	5.96E-05
Pu-238	4.50E-02
Pu-239	5.45E-02
Pu-240	4.17E-02
Pu-241	5.22E-01
Pu-242	2.48E-03
Sr-90	5.08E-01
U-233	1.99E-03
U-234	9.49E-04
U-235	2.15E-05
U-238	1.26E-03

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.

Comprehensive Inventory Database ver. 2.03 Data ver. D.16.01
NOTE: Actual numerical values have been rounded for presentation purposes

Waste Stream ID: **WV-T004a**

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	12/31/2016	
Stream Name	CH 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	0.6	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	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	423.08
Solidified Inorganic Material	211.54
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	1.16E-01
Am-243	3.51E-03
Cm-244	7.15E-05
Cs-137	1.15E-01
Np-237	3.29E-05
Pu-238	5.51E-02
Pu-239	3.72E-02
Pu-240	2.58E-02
Pu-241	5.87E-01
Pu-242	1.30E-03
Sr-90	2.05E-01
U-233	6.41E-05
U-234	2.61E-05
U-235	7.02E-07
U-238	2.42E-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-T004b**

Appendix B
Waste Profile Report

Site	West Valley Demonstration Project	Summary Category	S3000	Defense Determination	Pending Determination	Handling	RH
Source Cat.	Remediation/D&D Waste	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2016	
Stream Name	RH TRU Liquids			Activity Concentrations as of CY 2015			

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/o 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	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	685.90
Solidified Inorganic Material	342.95
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	3.81E-01
Am-243	8.69E-03
Cm-244	2.07E-03
Cs-137	9.17E-01
Np-237	8.72E-05
Pu-238	1.73E-01
Pu-239	1.19E-01
Pu-240	8.40E-02
Pu-241	1.79E+00
Pu-242	3.21E-03
Sr-90	2.48E+00
U-233	1.08E-03
U-234	5.03E-04
U-235	3.33E-06
U-238	7.28E-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	12/31/2016	
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	104.2	0.0	104.2
Box - Misc	25.2	0.0	25.2
SWB Dir Ld w/o Liner	105.8	0.0	105.8
Current Form Total	235.3	0.0	235.3

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	104.6	0.0	104.6
SWB Dir Ld w/o Liner	122.9	0.0	122.9
Final Form Total	227.5	0.0	227.5

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	54.95
Other Inorganic Materials	57.15
Cellulose	52.75
Rubber	21.94
Plastic	32.93
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	143.01
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m ³)
Am-241	5.23E-01
Am-243	5.38E-03
Cm-244	1.38E-03
Cs-137	6.60E-03
Np-237	4.25E-06
Pu-238	2.82E-01
Pu-239	1.30E-01
Pu-240	1.05E-01
Pu-241	1.88E+00
Pu-242	3.00E-03
Sr-90	1.83E-02
U-233	1.79E-04
U-234	1.04E-04
U-235	2.47E-06
U-238	2.19E-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	12/31/2016	
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	128.5	0.0	128.5
Box - Misc	228.4	0.0	228.4
Uncontained	0.0	37.5	37.5
Current Form Total	356.9	37.5	394.4

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/o Liner	260.8	37.4	298.3
Final Form Total	260.8	37.4	298.3

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	121.53
Other Inorganic Materials	121.15
Cellulose	121.15
Rubber	48.69
Plastic	72.84
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	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	1.33E+00
Am-243	5.81E-03
Cm-244	2.65E-02
Cs-137	1.37E+01
Np-237	4.16E-04
Pu-238	5.08E-01
Pu-239	3.18E-01
Pu-240	2.40E-01
Pu-241	3.67E+00
Pu-242	8.16E-04
Sr-90	1.50E+01
U-233	3.72E-03
U-234	1.74E-03
U-235	4.90E-05
U-238	3.33E-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.

Comprehensive Inventory Database ver. 2.03 Data ver. D.16.01
NOTE: Actual numerical values have been rounded for presentation purposes

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	12/31/2016	
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	3.80E-02
Cs-137	1.80E+01
Np-237	7.45E-05
Pu-238	1.70E-02
Pu-239	4.10E-02
Pu-240	3.14E-02
Pu-241	3.07E-01
Sr-90	5.93E-01
U-235	9.24E-05
U-238	1.45E-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	12/31/2016		
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	101.62
Cellulose	101.62
Rubber	40.72
Plastic	61.02
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	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	3.42E-01
Am-243	8.05E-03
Cm-244	2.20E-04
Cs-137	2.34E-02
Np-237	2.44E-06
Pu-238	2.05E-01
Pu-239	7.90E-02
Pu-240	7.15E-02
Pu-241	1.31E+00
Pu-242	2.26E-02
Sr-90	7.89E-02
U-233	4.44E-04
U-234	1.78E-04
U-235	1.82E-05
U-238	1.41E-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	12/31/2016		
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	29.3	0.0	29.3
Box - Misc	33.8	0.0	33.8
Current Form Total	63.1	0.0	63.1

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/o Liner	48.0	0.0	48.0
Final Form Total	48.0	0.0	48.0

Waste Material Parameters

Material Parameter	Average Density (kg/m ³)
Iron-based Metal/Alloys	165.04
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	206.46
Cellulose	0.00
Rubber	41.21
Plastic	62.02
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	9.12E+00
Am-243	2.84E-02
Cm-244	1.55E-01
Cs-137	2.25E+02
Np-237	2.39E-03
Pu-238	3.28E+00
Pu-239	2.80E+00
Pu-240	2.13E+00
Pu-241	3.31E+01
Pu-242	1.36E-02
Sr-90	1.13E+02
U-233	2.02E-02
U-234	9.62E-03
U-235	1.55E-03
U-238	6.13E-03

Haz. Waste No(s).

D006, D007, D008, D009, D010, D011

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-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	12/31/2016	
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	5.8	0.0	5.8
Current Form Total	5.8	0.0	5.8

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	5.8	0.0	5.8
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	0.00
Cement	370.88
Solidified Inorganic Material	185.44
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	1.24E+00
Am-243	3.33E-04
Cm-244	3.04E-03
Cs-137	3.96E-03
Np-237	5.47E-07
Pu-238	2.37E+00
Pu-239	9.41E-01
Pu-240	7.19E-01
Pu-241	1.06E+01
Pu-242	7.74E-06
Sr-90	1.55E-02
U-233	7.82E-04
U-234	4.15E-04
U-235	1.19E-05
U-238	1.55E-04

Haz. Waste No(s).

D002, D006, D007, D008, D009, D010

**No 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	12/31/2016		
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 the WIPP or reclassified as low-level waste [LLW]). This appendix contains a crosswalk that maps current ATWIR-2017 TRU waste generator site waste streams to the ATWIR-2016 TRU waste generator site waste streams. This appendix does not include emplaced waste at the WIPP or waste temporarily stored at WCS.

Table C-1 displays the association of each ATWIR-2017 waste stream to its respective ATWIR-2016 waste stream(s). Waste streams that are newly reported in the ATWIR-2017 and that do not map to a previous waste stream from ATWIR-2016 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-2016 waste stream to its respective ATWIR-2017 waste stream(s). Waste streams that were previously reported in the ATWIR-2016 and that do not map to a current ATWIR-2017 waste stream are indicated as *Depleted Waste Stream*, along with a reason.

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
ND	Nuclear Radiation Development Site
NT	Nevada National Security Site
OR	Oak Ridge National Laboratory
RL	Hanford (Richland) Site
RP	Hanford Site – Office of River Protection
SA	Sandia National Laboratories
SP	Separations Process Research Unit
SR	Savannah River Site
WV	West Valley Demonstration Project

Table C-1. Crosswalk of ATWIR-2017 to ATWIR-2016 Waste Streams

Site Code	ATWIR-2017 Waste Streams	ATWIR-2016 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-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-102	IN-W347
IN	IN-AE-105	IN-W351
IN	IN-AE-AGHC-02	IN-AE-AGHC-02
IN	IN-BC-203	IN-BN203
IN	IN-BN-501	IN-BN501
IN	IN-BN-522	IN-BN522
IN	IN-BN-523	<i>New Waste Stream</i>
IN	IN-BN-525	IN-BN525
IN	IN-BN-527	IN-BN527
IN	IN-BN-529	IN-BN529
IN	IN-BN-538	IN-BN538
IN	IN-BN004	IN-BN004
IN	IN-BN222	IN-BN222
IN	IN-BN510	IN-BN510
IN	IN-BN510.1	IN-BN510.1
IN	IN-BN510.2	IN-BN510.2
IN	IN-BN510.3	IN-BN510.3
IN	IN-BN510.4	IN-BN510, IN-BN510.4
IN	IN-BN600	IN-BN520, IN-BN600, IN-BN604
IN	IN-BN650	IN-BN004, IN-BN204, IN-BN222, IN-BN290, IN-BN375, IN-BN432, IN-BN505, IN-BN507, IN-BN511, IN-BN513, IN-BN514, IN-BN516, IN-BN517, IN-BN518, IN-BN599, IN-BN602, IN-BN650, IN-BN806, IN-BN811, IN-BN835, IN-BN836, IN-BN976, IN-BN978, IN-BNINW216, IN-BNINW218, IN-ID-RF-S3114, IN-ID-RF-S3150-A
IN	IN-BN835	IN-BN835
IN	IN-BN836	IN-BN836
IN	IN-BNINW216	IN-BNINW216
IN	IN-BNINW218	IN-BNINW218
IN	IN-BW-515	<i>New Waste Stream</i>
IN	IN-BW-516	<i>New Waste Stream</i>
IN	IN-BW-517	<i>New Waste Stream</i>

Table C-1. Crosswalk of ATWIR-2017 to ATWIR-2016 Waste Streams
Continued

Site Code	ATWIR-2017 Waste Streams	ATWIR-2016 Waste Streams
IN	IN-IC-605	IN-IC605
IN	IN-ID-AMWTP-Hot Silver	IN-BN510.4
IN	IN-ID-AMWTP-U232	IN-BN004
IN	IN-ID-ANLE-BIN	IN-ID-ANLE-BIN
IN	IN-ID-ANLW-W269-RH	IN-ID-ANLW-W269-RH
IN	IN-ID-BTO-030	IN-ID-BTO-030
IN	IN-ID-EBR-S5000	IN-ID-EBR-S5000
IN	IN-ID-HFEF-S3000-RP	IN-ID-HFEF-S5000-RP
IN	IN-ID-HFEF-S5000-RP	IN-ID-HFEF-S5000-RP
IN	IN-ID-INL-152M	IN-ID-INL-152M
IN	IN-ID-MFC-SOLID	IN-ID-MFC-SOLID
IN	IN-ID-MISC-RH	IN-ID-MISC-RH
IN	IN-ID-Miscellaneous	IN-ID-Miscellaneous
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-S5100-A	<i>New Waste Stream</i>
IN	IN-ID-RF-S5126	<i>New Waste Stream</i>
IN	IN-ID-RF-S5300-A	<i>New Waste Stream</i>
IN	IN-ID-Sample Fuel	IN-ID-Sample Fuel
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-Source Material	IN-ID-Source Material
IN	IN-ID-SRP-S3000	IN-ID-SRP-S3000
IN	IN-ID-TRA-W345-RH	IN-ID-TRA-W345-RH
IN	IN-IT-152	<i>New Waste Stream</i>
IN	IN-JH-826	IN-JH826CH
IN	IN-JH-827	IN-JH826CH
IN	IN-MD-842	IN-BN842
IN	IN-MO-530	<i>New Waste Stream</i>
IN	IN-MO-535	<i>New Waste Stream</i>
IN	IN-MO-540	<i>New Waste Stream</i>
IN	IN-MO-545	<i>New Waste Stream</i>
IN	IN-MX-142	IN-W139
IN	IN-NRF-SPC-103	IN-NRF-SPC-103
IN	IN-RF-005	<i>New Waste Stream</i>
IN	IN-RF-090	IN-BN090
IN	IN-RF-311	IN-BN311
IN	IN-RF-361	IN-BN311
IN	IN-RF-393	IN-BN311
IN	IN-RF-409	IN-BN409
IN	IN-RF-410	IN-BN409
IN	IN-RF-411	IN-BN409
IN	IN-RF-412	IN-BN409

Table C-1. Crosswalk of ATWIR-2017 to ATWIR-2016 Waste Streams
Continued

Site Code	ATWIR-2017 Waste Streams	ATWIR-2016 Waste Streams
IN	IN-RF-414	IN-BN409
IN	IN-RF-420	IN-BN421
IN	IN-RF-421	IN-BN421
IN	IN-RF-422	IN-BN421
IN	IN-RF-697	IN-BN090
IN	IN-RF-745	<i>New Waste Stream</i>
IN	IN-RF-753	<i>New Waste Stream</i>
IN	IN-RF-817	IN-BN817
IN	IN-RF-823	IN-BN823
IN	IN-RF-990	IN-BN090
IN	IN-SBW-01A	IN-SBW-01A
IN	IN-SBW-01B	IN-SBW-01B
IN	IN-UNDETERMINED	<i>New Waste Stream</i>
KA	KA-T001	KA-T001
KA	KA-T002	KA-T002
KA	KA-W016	KA-W016
KN	KN-B234TRU	KN-B234TRU
LA	LA-CIN01.001	LA-CIN01.001
LA	LA-CIN02.001	LA-CIN02.001
LA	LA-CIN03.001	LA-CIN03.001
LA	LA-LA225D	LA-LA225D
LA	LA-LA238HONR	LA-LA238HONR
LA	LA-LA238HOR	LA-LA238HOR
LA	LA-LAMHD02238	LA-LAMHD02238
LA	LA-LAMIN04S	LA-LAMIN04S
LA	LA-LANHD01	LA-LANHD01
LA	LA-LANHD02238	LA-LANHD02238
LA	LA-LANIN03NC	LA-LANIN03NC
LA	LA-MHD01.001	LA-LA238HOR, LA-LANHD02238, LA-MHD01.001
LA	LA-MHD03.001	LA-MHD03.001
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	LA-MIN02-V.001	LA-MIN02-V.001
LA	LA-MIN03-NC.001	LA-MIN03-NC.001
LA	LA-MIN04-S.001	LA-MIN04-S.001
LA	LA-MIN05-V.001	LA-MIN05-V.001
LA	LA-MSG04.001	LA-MSG04.001
LA	LA-OS-00-01.001	LA-OS-00-01.001
LA	LA-OS-00-04	LA-OS-00-04
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-03-10	LA-TA-03-10

Table C-1. Crosswalk of ATWIR-2017 to ATWIR-2016 Waste Streams
Continued

Site Code	ATWIR-2017 Waste Streams	ATWIR-2016 Waste Streams
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-CVD	LA-TA-03-CVD
LA	LA-TA-03-CVD-C&NC	<i>New Waste Stream</i>
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
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-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-CHEM-RH-HET	OR-TBD-RH-HET
OR	OR-CRF-CH-HET	OR-RF-CH-HET
OR	OR-GENR-CH-HET	OR-GENR-CH-HET
OR	OR-GENR-RH-HET	OR-GENR-RH-HET
OR	OR-IFEL-CH-HET	OR-RF-CH-HET
OR	OR-ISTP-CH-HET	OR-ISTP-CH-HET
OR	OR-ISTP-RH-HET	OR-ISTP-RH-HET
OR	OR-MRF-CH-HET	OR-MRF-CH-HET
OR	OR-NBL-CH-HET	OR-NBL-CH-HET

Table C-1. Crosswalk of ATWIR-2017 to ATWIR-2016 Waste Streams
Continued

Site Code	ATWIR-2017 Waste Streams	ATWIR-2016 Waste Streams
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-OXIDE-CH-HET	OR-OXIDE-CH-HET
OR	OR-PGDP-CH-HET	OR-PGDP-CH-HET
OR	OR-RADP-CH-HET	OR-RADP-CH-HET
OR	OR-RADP-RH-HET	OR-RADP-RH-HET
OR	OR-REDC-CH-HET	OR-REDC-CH-HET
OR	OR-REDC-CH-HOM	OR-REDC-CH-HOM
OR	OR-REDC-RH-HET	OR-REDC-RH-HET
OR	OR-REDC-RH-HOM	OR-REDC-RH-HOM
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-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	RL200-10	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

Table C-1. Crosswalk of ATWIR-2017 to ATWIR-2016 Waste Streams
Continued

Site Code	ATWIR-2017 Waste Streams	ATWIR-2016 Waste Streams
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	RL325-09	RL325-09
RL	RL618-01	RL618-01
RL	RL618-08	RL618-08
RL	RLALE-02	RLALE-02
RL	RLALPHA-08	<i>New Waste Stream</i>
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	RLCH2-09	RLCH2-09
RL	RLDD-01	<i>New Waste Stream</i>
RL	RLDD-02	<i>New Waste Stream</i>
RL	RLDD-08	<i>New Waste Stream</i>
RL	RLDD-10	<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

Table C-1. Crosswalk of ATWIR-2017 to ATWIR-2016 Waste Streams
Continued

Site Code	ATWIR-2017 Waste Streams	ATWIR-2016 Waste Streams
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	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	SA-W134
SA	SA-W135	SA-W135
SA	SA-W136	SA-W136
SA	SA-W137	SA-W137
SA	SA-W138M	SA-W138M
SP	SP-CHHD	SP-CHHD
SP	SP-RHHD	SP-RHHD
SP	SP-RHIN	SP-RHIN
SR	SR-221H-EUOx	SR-221H-EUOx
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-KAC-PuOx	SR-KAC-PuOx
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

Table C-1. Crosswalk of ATWIR-2017 to ATWIR-2016 Waste Streams
Continued

Site Code	ATWIR-2017 Waste Streams	ATWIR-2016 Waste Streams
SR	SR-RH-773A.01	SR-RH-773A.01
SR	SR-RH-FBL.01	SR-RH-FBL.01
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	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-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-W026-221F-HET-A
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-W027-235F-HOM	SR-W027-235F-HOM
SR	SR-W027-321-322M-HET	SR-W027-321-322M-HET
SR	SR-W027-773A-HET	SR-W027-773A-HET
SR	SR-W027-773A-HOM	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-T004a	WV-T004a
WV	WV-T004b	WV-T004b
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.16.01 (LANL-CO 2017a). Note: This table contains data for WIPP-bound and potential waste streams only.

Table C-2. Crosswalk of ATWIR-2016 to ATWIR-2017 Waste Streams

Site Code	ATWIR-2016 Waste Streams	ATWIR-2017 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-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-BN004	IN-BN004, IN-BN650, IN-ID-AMWTP-U232
IN	IN-BN050	<i>Depleted Waste Stream - U₂₃₃ drums can't be shipped to WIPP</i>
IN	IN-BN090	IN-RF-090, IN-RF-697, IN-RF-990
IN	IN-BN203	IN-BC-203
IN	IN-BN204	IN-BN650
IN	IN-BN222	IN-BN222, IN-BN650
IN	IN-BN290	IN-BN650
IN	IN-BN311	IN-RF-311, IN-RF-361, IN-RF-393
IN	IN-BN375	IN-BN650
IN	IN-BN409	IN-RF-409, IN-RF-410, IN-RF-411, IN-RF-412, IN-RF-414
IN	IN-BN421	IN-RF-420, IN-RF-421, IN-RF-422
IN	IN-BN425	<i>Depleted Waste Stream - Determined to be LLW</i>
IN	IN-BN432	IN-BN650
IN	IN-BN501	IN-BN-501
IN	IN-BN505	IN-BN650
IN	IN-BN507	IN-BN650
IN	IN-BN510	IN-BN510, IN-BN510.4
IN	IN-BN510.1	IN-BN510.1
IN	IN-BN510.2	IN-BN510.2
IN	IN-BN510.3	IN-BN510.3
IN	IN-BN510.4	IN-BN510.4, IN-ID-AMWTP-Hot Silver
IN	IN-BN511	IN-BN650
IN	IN-BN513	IN-BN650
IN	IN-BN514	IN-BN650
IN	IN-BN516	IN-BN650
IN	IN-BN517	IN-BN650
IN	IN-BN518	IN-BN650
IN	IN-BN520	IN-BN600
IN	IN-BN522	IN-BN-522
IN	IN-BN525	IN-BN-525

Table C-2. Crosswalk of ATWIR-2016 to ATWIR-2017 Waste Streams
Continued

Site Code	ATWIR-2016 Waste Streams	ATWIR-2017 Waste Streams
IN	IN-BN527	IN-BN-527
IN	IN-BN529	IN-BN-529
IN	IN-BN534	<i>Depleted Waste Stream - Determined to be LLW</i>
IN	IN-BN538	IN-BN-538
IN	IN-BN539	<i>Depleted Waste Stream - Determined to be LLW</i>
IN	IN-BN599	IN-BN650
IN	IN-BN600	IN-BN600
IN	IN-BN602	IN-BN650
IN	IN-BN604	IN-BN600
IN	IN-BN650	IN-BN650
IN	IN-BN806	IN-BN650
IN	IN-BN811	IN-BN650
IN	IN-BN817	IN-RF-817
IN	IN-BN823	IN-RF-823
IN	IN-BN835	IN-BN650, IN-BN835
IN	IN-BN836	IN-BN650, IN-BN836
IN	IN-BN842	IN-MD-842
IN	IN-BN976	IN-BN650
IN	IN-BN978	IN-BN650
IN	IN-BNINW216	IN-BN650, IN-BNINW216
IN	IN-BNINW218	IN-BN650, IN-BNINW218
IN	IN-IC605	IN-IC-605
IN	IN-ID-ANLE-BIN	IN-ID-ANLE-BIN
IN	IN-ID-ANLW-W269-RH	IN-ID-ANLW-W269-RH
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-S3000-RP, IN-ID-HFEF-S5000-RP
IN	IN-ID-INL-152M	IN-ID-INL-152M
IN	IN-ID-MFC-SOLID	IN-ID-MFC-SOLID
IN	IN-ID-MISC-RH	IN-ID-MISC-RH
IN	IN-ID-Miscellaneous	IN-ID-Miscellaneous
IN	IN-ID-RF-S3114	IN-BN650, IN-ID-RF-S3114
IN	IN-ID-RF-S3150-A	IN-BN650, IN-ID-RF-S3150-A
IN	IN-ID-RF-S5000-RH	IN-ID-RF-S5000-RH
IN	IN-ID-Sample Fuel	IN-ID-Sample Fuel
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-Source Material	IN-ID-Source Material
IN	IN-ID-SRP-S3000	IN-ID-SRP-S3000
IN	IN-ID-TRA-W345-RH	IN-ID-TRA-W345-RH
IN	IN-JH826CH	IN-JH-826, IN-JH-827
IN	IN-NRF-SPC-103	IN-NRF-SPC-103
IN	IN-SBW-01A	IN-SBW-01A
IN	IN-SBW-01B	IN-SBW-01B

Table C-2. Crosswalk of ATWIR-2016 to ATWIR-2017 Waste Streams
Continued

Site Code	ATWIR-2016 Waste Streams	ATWIR-2017 Waste Streams
IN	IN-W139	IN-MX-142
IN	IN-W347	IN-AE-102
IN	IN-W351	IN-AE-105
KA	KA-T001	KA-T001
KA	KA-T002	KA-T002
KA	KA-W016	KA-W016
KN	KN-B234TRU	KN-B234TRU
LA	LA-CIN01.001	LA-CIN01.001
LA	LA-CIN02.001	LA-CIN02.001
LA	LA-CIN03.001	LA-CIN03.001
LA	LA-LA225D	LA-LA225D
LA	LA-LA238HONR	LA-LA238HONR
LA	LA-LA238HOR	LA-LA238HOR, LA-MHD01.001
LA	LA-LAMHD02238	LA-LAMHD02238
LA	LA-LAMIN04S	LA-LAMIN04S
LA	LA-LANHD01	LA-LANHD01
LA	LA-LANHD02238	LA-LANHD02238, LA-MHD01.001
LA	LA-LANIN03NC	LA-LANIN03NC
LA	LA-MHD01.001	LA-MHD01.001
LA	LA-MHD03.001	LA-MHD03.001
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	LA-MIN02-V.001	LA-MIN02-V.001
LA	LA-MIN03-NC.001	LA-MIN03-NC.001
LA	LA-MIN04-S.001	LA-MIN04-S.001
LA	LA-MIN05-V.001	LA-MIN05-V.001
LA	LA-MSG04.001	LA-MSG04.001
LA	LA-OS-00-01.001	LA-OS-00-01.001
LA	LA-OS-00-04	LA-OS-00-04
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-03-10	LA-TA-03-10
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-CVD	LA-TA-03-CVD
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

Table C-2. Crosswalk of ATWIR-2016 to ATWIR-2017 Waste Streams
Continued

Site Code	ATWIR-2016 Waste Streams	ATWIR-2017 Waste Streams
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
LA	LA-TA-55-30	LA-TA-55-30
LA	LA-TA-55-38	LA-TA-55-38
LA	LA-TRU-Empty-110	<i>Depleted Waste Stream - Determined to be LLW</i>
LA	LA-TRU-Empty-55	LA-TRU-Empty-55
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-MRF-CH-HET	OR-MRF-CH-HET
OR	OR-NBL-CH-HET	OR-NBL-CH-HET
OR	OR-NFS-CH-HET	OR-NFS-CH-HET
OR	OR-NFS-CH-HOM	OR-NFS-CH-HOM
OR	OR-NFS-CH-SOIL	OR-NFS-CH-SOIL
OR	OR-OXIDE-CH-HET	OR-OXIDE-CH-HET
OR	OR-PGDP-CH-HET	OR-PGDP-CH-HET
OR	OR-RADP-CH-HET	OR-RADP-CH-HET
OR	OR-RADP-RH-HET	OR-RADP-RH-HET
OR	OR-REDC-CH-HET	OR-REDC-CH-HET
OR	OR-REDC-CH-HOM	OR-REDC-CH-HOM
OR	OR-REDC-RH-HET	OR-REDC-RH-HET
OR	OR-REDC-RH-HOM	OR-REDC-RH-HOM
OR	OR-RF-CH-HET	OR-CRF-CH-HET, OR-IFEL-CH-HET, OR-RF-CH-HET
OR	OR-RF-CH-HOM	OR-RF-CH-HOM

Table C-2. Crosswalk of ATWIR-2016 to ATWIR-2017 Waste Streams
Continued

Site Code	ATWIR-2016 Waste Streams	ATWIR-2017 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-CHEM-RH-HET, OR-TBD-RH-HET
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, RL200-10
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	RL325-09	RL325-09
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

Table C-2. Crosswalk of ATWIR-2016 to ATWIR-2017 Waste Streams
Continued

Site Code	ATWIR-2016 Waste Streams	ATWIR-2017 Waste Streams
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	RLCH2-09	RLCH2-09
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	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	SA-W134

Table C-2. Crosswalk of ATWIR-2016 to ATWIR-2017 Waste Streams
Continued

Site Code	ATWIR-2016 Waste Streams	ATWIR-2017 Waste Streams
SA	SA-W135	SA-W135
SA	SA-W136	SA-W136
SA	SA-W137	SA-W137
SA	SA-W138M	SA-W138M
SP	SP-CHHD	SP-CHHD
SP	SP-RHHD	SP-RHHD
SP	SP-RHIN	SP-RHIN
SR	SR-221H-EUOx	SR-221H-EUOx
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-KAC-PuOx	SR-KAC-PuOx
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	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	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-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-W026-221F-HET-A
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

Table C-2. Crosswalk of ATWIR-2016 to ATWIR-2017 Waste Streams
Continued

Site Code	ATWIR-2016 Waste Streams	ATWIR-2017 Waste Streams
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-W027-235F-HOM	SR-W027-235F-HOM
SR	SR-W027-321-322M-HET	SR-W027-321-322M-HET
SR	SR-W027-773A-HET	SR-W027-773A-HET
SR	SR-W027-773A-HOM	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-T004a	WV-T004a
WV	WV-T004b	WV-T004b
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.16.01 (LANL-CO 2017a). Note: This table contains data for WIPP-bound and potential waste streams only.

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,

A handwritten signature in black ink, appearing to read "Russ Patterson".

Russ Patterson
Compliance Certification Manager

Enclosure

cc: w/enclosure
C. Fesmire, CBFO *ED
S. McCauslin, CBFO ED
G. Basabilvazo, CBFO ED
R. Nelson, CBFO ED
D. Kessel, SNL ED
S. Kouba, WRES ED
B. Crawford, LANL-CO ED
B. McInroy, LANL-CO ED
*ED denotes electronic distribution

INV - 1004-01-01-01

CBFO:ORC:RLP:MDA:10-0945:UFC 5822.00

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**Screening Memorandum
March 17, 2010**

This screening memo describes criteria that will be used to screen transuranic (TRU) waste streams for exclusion from the Waste Isolation Pilot Plant (WIPP)-bound inventory. This WIPP-bound waste is used in future performance assessments (PAs) for the Compliance Recertification Application (CRA). This memo does not address high level, low level or commercial waste since they are prohibited for disposal in WIPP. The table below contains screening criteria that will be used to designate Potential waste streams. The table in no way indicates that waste identified as Potential will be excluded from emplacement in WIPP in the future.


All waste streams collected for each Annual TRU Waste Inventory Report (ATWIR) are categorized within the TRU waste inventory database as WIPP-Bound unless one or more of the screening criteria listed in the table below are encountered. All shipments to WIPP will be subject to the conditions delineated in the WIPP Hazardous Waste Facility Permit Waste Analysis Plan (WAP), WIPP Waste Acceptance Criteria (WAC) and the Transuranic Authorized Methods for Payload Control (TRAMPAC). The table below is intended to be treated as a guide for delineating Potential waste streams that will be reported in the ATWIR in Appendix C and excluded from being reported in Performance Assessment Inventory Report (PAIR) that will be used for future PAs.

Criteria for Categorizing Waste Streams as Potential

Screening Criteria	Comment
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

03/29/10

Date