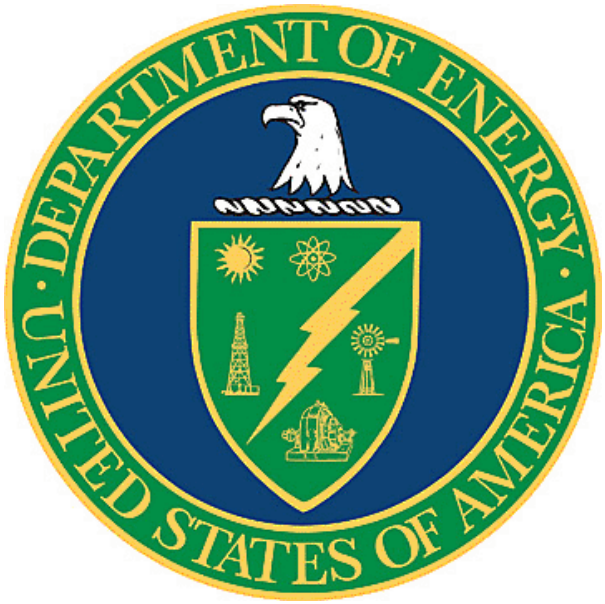
ANNUAL TRANSURANIC WASTE INVENTORY REPORT – 2019
(Data Cutoff Date 12/31/2018)

DOE/TRU-19-3425

Revision 0

December 2019



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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, 2018.

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ACRONYMS AND ABBREVIATIONS

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

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
CH	contact-handled
Ci	curie(s)
CID	Comprehensive Inventory Database
CIT	CID Import Template
CY	calendar year
D&D	decontamination and decommissioning
DOE	U.S. Department of Energy
DSA	Documented Safety Analysis
DT	data template
EDTA	ethylenediaminetetraacetic acid
HWFP	Hazardous Waste Facility Permit
INL	Idaho National Laboratory
KAPL-NFS	Knolls Atomic Power Laboratory – Nuclear Fuel Services
KAPL-S	Knolls Atomic Power Laboratory – Schenectady
kg	kilogram(s)
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.

NEPA	National Environmental Policy Act
NNSA	National Nuclear Security Administration
NNSS	Nevada National Security Site
NRD	Nuclear Radiation Development
ORIGEN-S	Oak Ridge Isotope Generation and Depletion Code
ORNL	Oak Ridge National Laboratory
PA	performance assessment
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
WCS	Waste Control Specialists, LLC
WDS	Waste Data System
WIPP	Waste Isolation Pilot Plant
WPR	Waste Profile Report
WV	West Valley Demonstration Project

EXECUTIVE SUMMARY

The purpose of this *Annual Transuranic Waste Inventory Report* (ATWIR) – *2019* is to document the inventory estimate of transuranic (TRU) waste reported by the TRU waste generator sites as of December 31, 2018. This report also notes major changes to the inventory used for the ATWIR-2018 that had a data cutoff date of December 31, 2017. This updated inventory information is available to the U.S. Department of Energy (DOE) TRU waste complex, Waste Isolation Pilot Plant (WIPP) stakeholders, and regulators. The TRU waste inventory information is used for strategic planning, and supports the DOE Carlsbad Field Office (CBFO) input into documents (e.g., WIPP Documented Safety Analysis and National Environmental Policy Act analyses), planned changes, and other design changes as needed for the WIPP project.

The TRU waste generator sites were asked to report the most comprehensive TRU waste inventory estimate available, including decontamination and decommissioning waste and all other defense-related TRU waste information projected through calendar year (CY) 2050, and additional estimates beyond CY 2050, if available. At the direction of the DOE/CBFO, this ATWIR-2019 focuses on all TRU waste stored or projected to be generated through CY 2033 at the TRU waste generator sites.

In January 2019, the DOE/CBFO clarified the methodology of calculating TRU waste volume for reporting purposes as the gross internal volume of the disposal container for direct-loaded containers and the innermost disposal container for overpacked containers. The inventory estimates of all defense-related TRU waste are presented in Table ES-1 and throughout this report using this clarified methodology. As such, the inventory from the ATWIR-2018 was adjusted to provide comparable totals and is referred to as “Adjusted ATWIR-2018.”

Waste streams are designated as either WIPP-bound (appear to meet the requirements for emplacement in the WIPP repository) or potential (have uncertainties regarding eligibility for emplacement in the WIPP repository, as of the data cutoff date for this report). Regardless of its designation or status within this report, all TRU waste must meet the WIPP requirements (e.g., WIPP Waste Acceptance Criteria and the WIPP Hazardous Waste Facility Permit) before it can be disposed of in the WIPP repository.

This ATWIR-2019 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 data cutoff date of the ATWIR-2018. This inventory report includes estimates for TRU waste volume, waste and packaging material mass, chemical component mass, and radionuclide activity (decayed to common years 2018 and 2033). Table ES-1 presents an overview of the changes in the data from the ATWIR-2018. Specific details of these changes are discussed in section 3.0 of this report.

Table ES-1. Summary of Parameter Changes

Parameter	Adjusted ATWIR-2018 Total	ATWIR-2019 Total	Net Change	Percent Change
Volume (m^3) [1]	1.21E+05	1.13E+05	-8.12E+03	-6.73%
Waste and Packaging Material Mass (kg) [1]	9.96E+07	9.59E+07	-3.68E+06	-3.69%
Radionuclide Activity (Ci) [1, 2]	4.78E+06	4.31E+06	-4.68E+05	-9.79%
Complexing Agents Mass (kg) [3]	1.89E+04	1.66E+04	-2.27E+03	-12.03%
Oxyanions Mass (kg) [3]	7.21E+05	6.74E+05	-4.72E+04	-6.54%

Data Source: CID Data Versions D.17.02.33.LWA (LANL-CO 2019a) and D.18.00.33 (LANL-CO 2019b) are used for the Adjusted ATWIR-2018 and for the ATWIR-2019, respectively.
Note: Actual numerical values in this table are rounded to three significant figures for presentation purposes.
[1] Data include stored and projected values from WIPP-bound waste streams at the TRU waste generator sites, waste emplaced at WIPP, and waste in temporary storage at Waste Control Specialists.
[2] Data decay-corrected through CY 2033.
[3] Since these components are not tracked in the WIPP Waste Data System, data only include stored and projected values from 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 made available to the U.S. Department of Energy (DOE) complex, Waste Isolation Pilot Plant (WIPP) stakeholders, and regulators. This *Annual Transuranic Waste Inventory Report* (ATWIR) – *2019*, with a data cutoff date of December 31, 2018, provides the Carlsbad Field Office (CBFO) with the TRU waste generator sites' best estimate of their 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 (NEPA) activities, design changes, identifying waste containing oxyanions and complexing agents, and various analyses such as the WIPP Documented Safety Analysis (DSA).

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 annual TRU waste inventory updates, the generator sites, waste in temporary storage, and the sources and 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 WIPP-bound TRU waste inventory estimates and the changes in the data since the ATWIR-2018 (U.S. DOE 2018) with a data cutoff date of December 31, 2017. At the time of the data collection cutoff date, WIPP-bound waste streams appear to meet the requirements for emplacement in the WIPP repository. Potential waste streams have meaningful uncertainties regarding their eligibility, due to technical or legal considerations, for emplacement in the WIPP repository, as of the data cutoff date for this report. Section 4.0 discusses potential TRU waste streams as well as waste projected to be generated beyond calendar year (CY) 2033. Section 5.0 presents a summary of this report, section 6.0 provides a glossary, and section 7.0 lists the references cited in this report. This report contains three appendices. Appendix A presents the WIPP-bound TRU Waste Profile Reports (WPRs), Appendix B presents the WPRs for potential waste streams, and Appendix C presents a crosswalk of waste streams between ATWIR-2018 and ATWIR-2019.

This ATWIR-2019 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 in accordance with the requirements of DOE/CBFO-94-1012, *Quality Assurance Program Document* (QAPD) (U.S. 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 2017a), and LCO-QP19-1, *Software Quality Assurance* (LANL-CO 2017b).

In January 2019, the DOE/CBFO issued a memorandum (Shrader 2019) establishing a policy for the methodology of calculating TRU waste volume for reporting purposes. In this policy, the DOE established the TRU waste volume to be the gross internal volume of the disposal container for direct-loaded containers and the innermost disposal container for overpacked containers. The inventory estimates of all defense-related TRU waste are presented within this report using this methodology for reporting TRU waste volume.

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, 2018.

Since the ATWIR-2018, a number of changes and improvements have occurred that affected the volume and the non-radiological and radiological characteristics of TRU waste streams. These changes were largely based on:

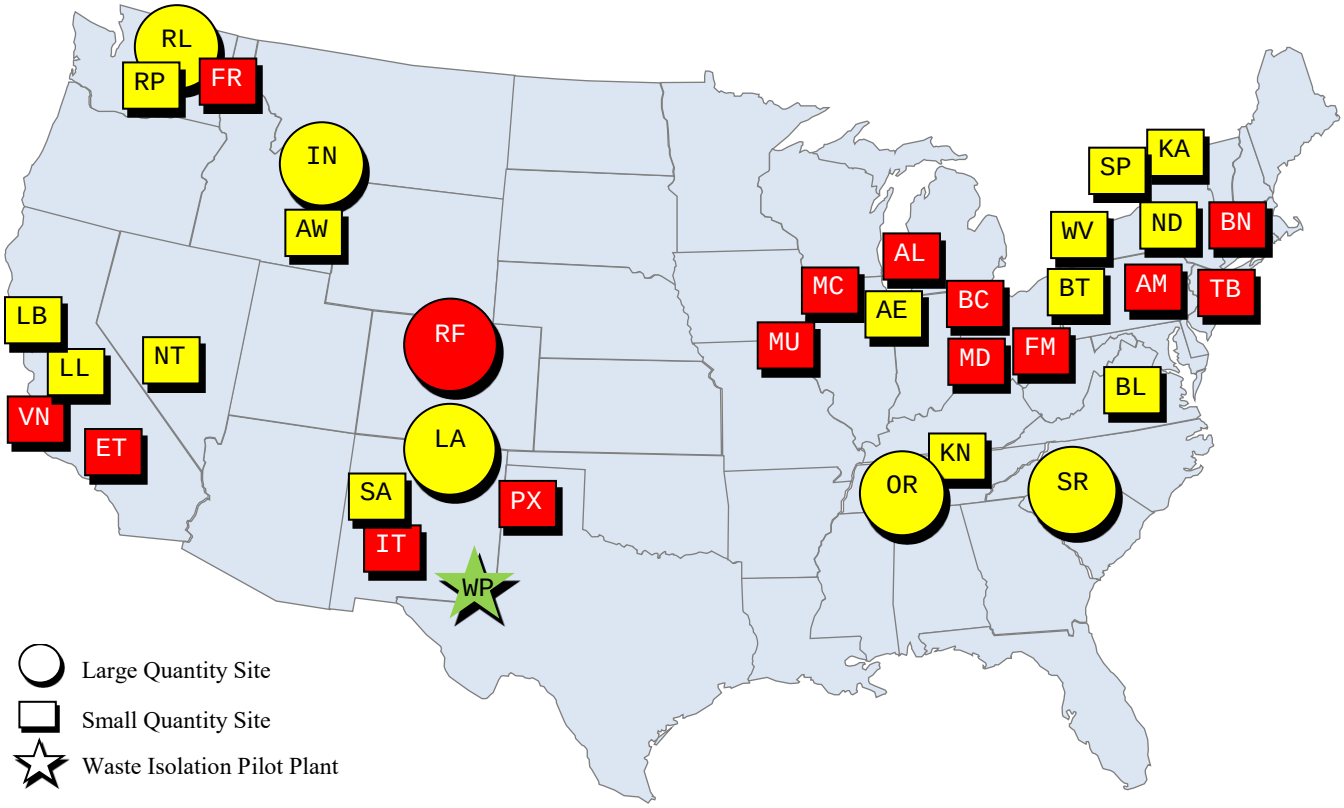
- Savannah River Site (SRS) removed three waste streams that were projected to be generated from the canceled Mixed Oxide Fuel Fabrication Facility Project;
- Hanford (Richland) Site (RL) revised estimates of activity and volume of waste projected to be generated based on updated and more comprehensive information;
- Los Alamos National Laboratory (LANL) reported TRU waste projected to be generated as a result of the National Nuclear Security Administration (NNSA) Plutonium Pit Production Mission;
- Multiple sites acquired new characterization data, processing information, and repackaging experience resulting in more accurate data and better estimates;
- DOE/CBFO clarified the methodology used for calculating waste volume for reporting purposes.

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, 2018, which are divided into two categories: active TRU waste generator sites (yellow) and sites de-inventoried of all TRU waste (red).

There are three TRU waste generator sites shown in Figure 1-1 that currently 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 4.1 of this report.

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



Yellow – Active TRU Waste Generator Sites

AE	Argonne National Laboratory
AW	Materials and Fuels Complex
BL	Babcock and Wilcox Nuclear Energy Services (Potential)
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 (Potential)
SA	Sandia National Laboratories
SP	Separations Process Research Unit
SR	Savannah River Site
WV	West Valley Demonstration Project (Potential)

Red – De-inventoried of all TRU Waste

AL	Ames Laboratory
AM	ARCO Medical Products
BC	Battelle Columbus Laboratories
BN	Brookhaven National Laboratory
ET	Energy Technology Engineering Center
FM	Fernald Environmental Management Project
FR	Framatome
IT	Lovelace Respiratory Research Institute
MC	U.S. Army Materiel Command
MD	Mound Plant
MU	University of Missouri Research Reactor
PX	Pantex Plant
RF	Rocky Flats Environmental Technology Site
TB	Teledyne Brown Engineering
VN	General Electric Vallecitos Nuclear Center

1.3 Temporary Storage of TRU Waste

Approximately 13.3 cubic meters (m^3) of TRU waste from Idaho National Laboratory (INL), and ~37.4 m^3 of TRU waste from LANL that was in temporary storage at Waste Control Specialists, LLC (WCS) near Andrews, Texas, was shipped to the WIPP in CY 2018. As of December 31, 2018, ~59 m^3 of TRU waste from LANL remained at WCS in temporary storage. The changes in the WCS inventory are accounted for in Table 3-3, Table 3-5, and Table 3-11. The WCS values in these tables are based on a query of the WIPP Waste Data System (WDS).

1.4 Sources of Transuranic Waste Inventory Information

The sources of TRU waste inventory information are: 1) the inventory used for the previous ATWIR, 2) updated information provided by the TRU waste generator sites, and 3) WDS, the official database of record for waste emplaced in the WIPP repository. For ATWIR-2019, the TRU waste generator sites began with the inventory data used for the ATWIR-2018, and updated the information using data obtained from their site-specific databases and acceptable knowledge reports which provide comprehensive information pertaining to waste streams being characterized.

1.5 Uses of Transuranic Waste Inventory Information

The DOE uses TRU waste inventory information to support strategic decisions related to waste retrieval, treatment, repackaging, characterization, shipment, and disposal initiatives. As requested, sites develop and update site-specific project plans and schedules, which detail approaches for moving TRU waste to the WIPP based on current TRU waste inventory information. TRU waste volumes projected to be generated beyond CY 2033 are provided separately in section 4.2 for the DOE to use as a planning basis for future TRU waste storage and disposal needs.

The inventory data used to develop this report support numerous tasks, such as planned changes, NEPA activities, design changes, and various analyses, such as the WIPP DSA. The DOE/CBFO tracks radiological and non-radiological (waste and packaging materials, and chemical components) information about the TRU waste destined for the WIPP. When these inventory data are needed for performance assessment (PA) modeling, the DOE/CBFO will request a Performance Assessment Inventory Report that provides a scaled inventory to model the WIPP repository at its legislated capacity, based on the latest inventory data.

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:

1. Collected current TRU waste stream information from the TRU waste generator sites, with projected estimates extending beyond CY 2033.

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 validation of the updated CID information from the DOE TRU waste generator site representatives.

5. Performed analyses to adjust inventory data to CY 2033 and to transform WDS data for input into the CID using the clarified methodology of calculating TRU waste volume for reporting purposes (see section 2.3).

6. Configured the CID to report TRU waste generator site data consistent with the clarified methodology of calculating reported TRU waste volume.

7. 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 2019c). In November 2018, in accordance with the procedure, a letter was sent from DOE/CBFO (Shrader 2018) to the active TRU waste generator sites requesting the annual TRU waste inventory update. The Inventory Team then sent each site an electronic notification of the update with an attached Microsoft® Excel data template (DT) workbook file containing the previous 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 waste streams. The sites designate 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. The data for WIPP-bound waste streams are used for PA compliance calculations, whereas the data for potential waste streams are not. 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 [HWFP]) before it can be disposed of at the WIPP.

The Inventory Team worked with personnel from the active TRU waste generator sites to assist in the updating process. After the DTs were updated, the team performed reviews for accuracy and consistency. During these reviews, the Inventory Team verified that the inventory updates included all of the available data required for the DT. The sites were contacted if any completeness, accuracy, consistency, or other issues were identified. The reviews included, but were not limited to:

- Verification that all required information for WIPP-bound waste streams is entered, and potential waste streams meet the screening memo criteria as discussed in section 4.1;

- 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 remote-handled (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 [Ci] per liter averaged over the volume of the RH-TRU canister) (U.S. Congress 1992 and 1996);

- Verification that waste does not exceed mass limits for reported final form container types;

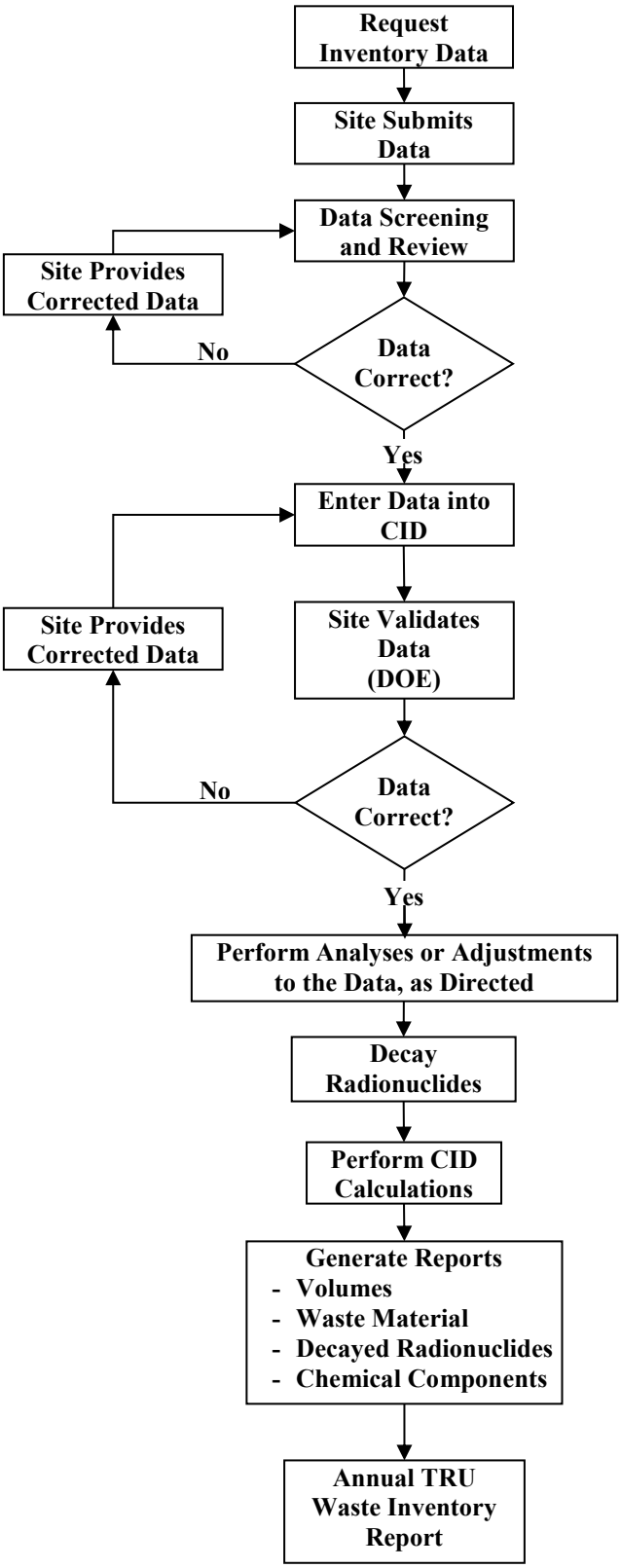
- Verification that complexing agents and oxyanions are reported;

- Verification that the waste matrix code group is consistent with the waste materials reported;

- Comparison of the current waste stream data to that of the previous year to identify and understand any significant differences.

Once all issues were resolved, the TRU waste inventory information was uploaded from the 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. After an analysis was performed to adjust the inventory to CY 2033, the CID data were then labeled as data version D.18.00.33 (LANL-CO 2019b). 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 requirements of the DOE/CBFO QAPD. The LANL-CO software QA Program is documented in LCO-QPD-02, *LANL-CO Software Quality Assurance Plan* (LANL-CO 2017a), and LCO-QP19-1, *Software Quality Assurance* (LANL-CO 2017b). 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 stored and projected volume and to provide data that reflected the total composition of each waste stream's waste materials, radionuclides, and chemical components. For the waste materials 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). 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 were asked to report their estimates of the projected data for that waste stream. The anticipated data were calculated by summing the stored and projected data. The stored, projected, and anticipated values for volumes, waste materials, 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 emplaced waste (disposed in the repository or in above-ground storage at the WIPP) and waste in temporary storage at a designated storage location (WCS) was obtained from the DOE/CBFO WDS administrator (see section 2.3.1). After this information was transformed for use in the CID (Van Soest 2019a; Van Soest 2019b), the WIPP and WCS data were then imported into the CID.

2.2.1 Volume Reporting

The waste stream container information collected from the TRU waste generator sites include stored and projected estimates in both current form and final form configurations. Current form represents the waste in its current packaging configuration. Final form represents estimates of the WIPP-compliant container type(s) that will ultimately be used to ship the waste to the WIPP. For stored waste not already packaged in WIPP-compliant containers, final form container types and counts reported are determined by 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. The volume for waste emplaced at the WIPP and in temporary storage at WCS is directly reported as provided from the WDS.

In January 2019, the DOE/CBFO issued a memorandum (Shrader 2019) establishing a policy for the implementation of the WIPP WDS method of tracking and reporting the volume of TRU waste disposed at the WIPP facility. In June 2019, the DOE/CBFO issued an amendment (Lachman 2019) to Attachment 1 of the memorandum, which specifies the WIPP-approved

container types and their associated volumes. In the policy, the DOE/CBFO established the LWA TRU Waste Volume to be the gross internal volume of the disposal container for direct-loaded containers and the innermost disposal container for overpacked containers. As directed by the DOE/CBFO, this ATWIR-2019 reports CH- and RH-TRU waste volume consistent with the LWA TRU Waste Volume methodology described in the policy.

2.2.2 Waste and Packaging Materials Reporting

Waste materials are non-radiological materials present in TRU waste. The TRU waste generator sites reported the total estimated mass of each waste stream's waste materials 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 are non-radiological materials (steel, plastic, cellulose, rubber, and lead) used as components of the WIPP-approved containers that hold TRU waste, and are defined in INV-SAR-19, *Analysis of Container Material Masses* (French 2009), and in memos to the Quality Assurance File QAM-12-17 and QAM-19-06 (Van Soest 2012; Toothman 2019). The packaging material masses for all WIPP-approved containers are standardized for each WIPP-approved container type in the CID, which uses these values to generate each waste stream's overall packaging material makeup based upon the respective final form containers reported by the TRU waste generator sites.

Appendix A and Appendix B present a list of average waste and packaging material 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 estimated 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").

Since dates of assay vary among waste streams, radionuclide activity data were decay-corrected to common dates for reporting purposes (see section 3.3). Radionuclides are decayed through CY 2018 to bring all sites' radionuclides to the common collection year. Radionuclides from both the current and previous year inventories have also been decayed through CY 2033, which allows the activities from the inventories to be compared using a common year. 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 the decay-corrected radionuclide tables generated for this report.

Appendix A and Appendix 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 A are decay-corrected through CY 2018. The radionuclides in Appendix B are not decay-corrected.

2.2.4 Complexing Agent and Oxyanion 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]) and oxyanions (nitrates, phosphates, and sulfates).

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, the analyses described in the sections below were performed and documented in accordance with LANL-CO QA procedure LCO-QP9-1, *Analyses* (LANL-CO 2017c), as applicable, to support the preparation of this report.

2.3.1 WDS Data Transformation 2018

To update the TRU waste inventory data within the CID for waste emplaced and in temporary storage, a request was submitted to the DOE/CBFO WDS administrator to supply data as of December 31, 2018, reporting volume consistent with the methodology described in section 2.2.1. The WDS data were migrated into a standardized CID Import Template (CIT) file. This data migration required that the original WDS data undergo various transformations including, but not limited to, calculations, aggregations, and data mapping. These activities and calculations are documented in INV-SAR-52, *WDS Data Transformation for Insertion in the 2018 Inventory CID Import Template* (Van Soest 2019a). Transformations were 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 unique waste stream identification prefixes, these waste streams were separately transformed and tracked in the CIT file for each location reported. The CIT file was subsequently imported into the CID to update the information for TRU waste that is emplaced and in temporary storage.

2.3.2 Conversion of ATWIR-2018 Inventory to the Clarified Methodology of Calculating Waste Volume for Reporting Purposes

The ATWIR-2018 reported TRU waste volume based on the methodology of counting the overpack container volume for CH-TRU waste and the internal container volume for RH-TRU waste. Since the ATWIR-2019 provides comparison tables to the corresponding ATWIR-2018 inventory, it became necessary to have the ATWIR-2018 inventory totals reflect the same methodology of counting TRU waste volume used for this report. To accommodate this, using the ATWIR-2018 inventory (data version D.17.02.33), the appropriate container volume was reconfigured within the CID in order to provide comparable totals for site reported waste.

For the emplaced and temporary storage portions of the inventory reported in the ATWIR-2018, it was necessary for the WDS data to go through a new migration into a standardized CIT file using the same methodology of calculating TRU waste volume used for this report. This activity is documented in INV-SAR-53, *WDS Data Transformation 2017 for Internal Volume* (Van Soest

2019b). The updated data were imported into the CID, and the resulting data version was then labeled D.17.02.33.LWA (LANL-CO 2019a). This data version provides comparable totals from the ATWIR-2018 inventory throughout this report (hereafter referred to as "Adjusted ATWIR-2018").

The conversion of the ATWIR-2018 inventory using the clarified methodology of calculating TRU waste volume for reporting purposes has also had the effect of slightly altering the anticipated waste material mass and radionuclide activity from those reported in the ATWIR-2018. The change in volume caused a shift in the projected-to-stored volume ratios, which are subsequently used by the CID to derive the projected waste material mass and the radionuclide activity as described in section 2.2. As such, there are slight differences in the projected (and thus the anticipated) waste material mass and radionuclide activity of the Adjusted ATWIR-2018 inventory when compared to the corresponding totals found in the ATWIR-2018.

2.3.3 Adjustment of 2018 Projected Inventory to CY 2033

Since the inventory data collection campaign that was used for this report directed the TRU waste generator sites to report all projected generation estimates through CY 2050, an analysis was performed to adjust the ATWIR-2019 inventory to CY 2033. As such, INV-SAR-54, *Adjustment of 2018 Projected Inventory to 2033 Closure Year* (Van Soest 2019c), documents the adjustment of the inventory to CY 2033 and supplies comparable totals between the ATWIR-2018 and ATWIR-2019 inventories. After the modifications described within INV-SAR-54 were performed against the CID data version containing the ATWIR-2019 inventory, the radionuclide activities underwent decay calculations. The data version was then labeled D.18.00.33 (LANL-CO 2019b) and is used for the ATWIR-2019 inventory throughout this report.

3.0 TRANSURANIC WASTE INVENTORY ESTIMATES AND CHANGES

This section presents the TRU waste inventory data that were collected and reported using the methodology discussed in section 2.0. Actual numerical values in this section are rounded to three significant figures for presentation purposes.

Inventory data reported from the sites are included in the tables presented throughout this section. 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, waste and packaging materials, and radionuclides in this report to the respective Adjusted ATWIR-2018 values. 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 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-2018.

3.1.1 TRU Waste Inventory Total Volume by Site

The tables in this section present only final form data. Section 2.2.1 describes how volume is reported.

Table 3-1 shows the total CH-TRU stored, projected, and anticipated waste volume. An estimated anticipated final form total of ~42,600 m^3 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 96 percent of the anticipated CH-TRU waste is stored or will be generated at the LQSs (RL, INL, LANL, Oak Ridge National Laboratory [ORNL], and SRS).

Table 3-2 shows the total RH-TRU stored, projected, and anticipated waste volume. An estimated anticipated final form total of ~2,580 m^3 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 95 percent of the anticipated RH-TRU waste is stored or will be generated at the LQSs.

Table 3-1. CH Waste Inventory Total Volume

TRU Waste Generator Site	Stored Volume (m^3)	Projected Volume (m^3)	Anticipated Volume (m^3)
Argonne National Laboratory	4.20E+01	9.07E+01	1.33E+02
Hanford (Richland) Site	1.17E+04	4.75E+03	1.65E+04
Idaho National Laboratory	1.25E+04	--	1.25E+04
Knolls Atomic Power Laboratory - Nuclear Fuel Services	8.72E+01	7.94E+01	1.67E+02
Lawrence Berkeley National Laboratory	4.20E-01	4.20E-01	8.40E-01
Lawrence Livermore National Laboratory	3.33E+02	6.12E+02	9.45E+02
Los Alamos National Laboratory	3.91E+03	5.43E+03	9.34E+03
Material and Fuels Complex	4.41E+00	2.21E+01	2.65E+01
Nevada National Security Site	6.94E+01	1.24E+02	1.93E+02
Nuclear Radiation Development Site	2.10E+00	--	2.10E+00

Table 3-1. CH Waste Inventory Total Volume
Continued

TRU Waste Generator Site	Stored Volume (m^3)	Projected Volume (m^3)	Anticipated Volume (m^3)
Oak Ridge National Laboratory	8.98E+02	2.50E+02	1.15E+03
Sandia National Laboratories	1.76E+01	2.82E+01	4.58E+01
Savannah River Site	7.13E+02	9.16E+02	1.63E+03
Separations Process Research Unit	6.27E+00	--	6.27E+00
Grand Total	**3.03E+04**	**1.23E+04**	**4.26E+04**

Data Source: CID Data Version D.18.00.33 (LANL-CO 2019b). Note: This table only contains data for WIPP-bound waste streams at the TRU waste generator sites.

Table 3-2. RH Waste Inventory Total Volume

TRU Waste Generator Site	Stored Volume (m^3)	Projected Volume (m^3)	Anticipated Volume (m^3)
Argonne National Laboratory	3.62E+01	3.08E+01	6.70E+01
Bettis Atomic Power Laboratory	7.56E+00	--	7.56E+00
Hanford (Richland) Site	1.73E+03	1.38E+02	1.87E+03
Idaho National Laboratory	2.51E+02	--	2.51E+02
Knolls Atomic Power Laboratory - Schenectady	--	1.39E+01	1.39E+01
Los Alamos National Laboratory	8.01E+01	--	8.01E+01
Material and Fuels Complex	8.19E+00	2.46E+01	3.28E+01
Oak Ridge National Laboratory	1.05E+02	1.00E+02	2.06E+02
Sandia National Laboratories	4.36E+00	6.60E-01	5.02E+00
Savannah River Site	3.16E+01	1.40E+01	4.56E+01
Separations Process Research Unit	2.52E+00	--	2.52E+00
Grand Total	**2.26E+03**	**3.22E+02**	**2.58E+03**

Data Source: CID Data Version D.18.00.33 (LANL-CO 2019b). Note: This table only contains data for WIPP-bound waste streams at the TRU waste generator sites.

3.1.2 Changes to TRU Waste Volume

Table 3-3 shows the net changes for final form total volume of the combined CH- and RH-TRU waste between the Adjusted ATWIR-2018 and this report. The net change column includes both increases and decreases in volume of waste as reported by the sites, as well as waste emplaced and in temporary storage as reported in the WDS. The net anticipated volume reported by the sites show a decrease of ~9,560 m^3. This decrease, when combined with the net increase of ~1,490 m^3 of waste that was emplaced at the WIPP during CY 2018, results in an overall decrease of ~8,120 m^3.

The site reporting the largest waste volume decrease (~7,020 m^3) is SRS. This volume decrease is primarily due to the removal of three CH-TRU waste streams (SR-T001-WSB-1, SR-W026-MFFF-1, and SR-W026-WSB-2) that were projected to be generated from the canceled Mixed Oxide Fuel Fabrication Facility Project. The RL waste stream, RLPFP-01, was also a significant factor in the overall volume decrease, due to the removal of ~2,310 m^3 of projected TRU waste volume, now assumed to be low-level waste (LLW). The net increase in waste volume from LANL is mainly due to the addition of TRU waste projected to be generated from the NNSA Plutonium Pit Production Mission as reported in the LA-MHD01.001 waste stream. The increase in waste volume that was emplaced in the WIPP during CY 2018 was primarily attributed to ~1,110 m^3 from INL and ~323 m^3 from ORNL.

Table 3-3. CH/RH Waste Volume Changes

TRU Waste Generator Site	Adjusted ATWIR-2018 Total (m^3)	ATWIR-2019 Total (m^3)	Net Change (m^3)
Hanford (Richland) Site	2.05E+04	1.84E+04	-2.09E+03
Idaho National Laboratory	1.38E+04	1.27E+04	-1.12E+03
Los Alamos National Laboratory	8.42E+03	9.42E+03	+9.98E+02
Oak Ridge National Laboratory	1.67E+03	1.35E+03	-3.13E+02
Savannah River Site	8.69E+03	1.68E+03	-7.02E+03
Small Quantity Sites	1.67E+03	1.65E+03	-1.73E+01
Anticipated Total	**5.47E+04**	**4.52E+04**	**-9.56E+03**
WIPP (Emplaced)	6.58E+04	6.73E+04	+1.49E+03
WCS (Temporary Storage)	1.10E+02	5.90E+01	-5.07E+01
Emplaced/Temporary Storage Total	**6.59E+04**	**6.74E+04**	**+1.44E+03**
Grand Total	**1.21E+05**	**1.13E+05**	**-8.12E+03**

Data Source: CID Data Versions D.17.02.33.LWA (LANL-CO 2019a) and D.18.00.33 (LANL-CO 2019b).

3.2 Non-Radiological Material Estimates

This section presents the non-radiological properties (waste and packaging materials, 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-2018.

3.2.1 Waste and Packaging Materials

Waste and packaging materials for CH- and RH-TRU waste are reported as final form anticipated mass, and are presented in Table 3-4. Section 2.2.2 provides information on how waste and packaging materials are derived.

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

Waste Material	CH Mass (kg)	RH Mass (kg)	Total Mass (kg)
Aluminum-based Metal/Alloys	1.18E+05	1.06E+04	1.28E+05
Cellulose	9.49E+05	5.31E+04	1.00E+06
Cement	1.62E+06	2.08E+03	1.62E+06
Iron-based Metal/Alloys	4.93E+06	2.26E+05	5.16E+06
Other Inorganic Materials	2.69E+06	8.01E+05	3.49E+06
Other Metal/Alloys	2.21E+05	2.86E+04	2.50E+05
Plastic	1.07E+06	1.16E+05	1.19E+06
Rubber	2.76E+05	1.50E+04	2.91E+05
Soil	2.49E+06	1.26E+04	2.50E+06
Solidified Inorganic Material	3.52E+06	2.12E+04	3.54E+06
Solidified Organic Material	1.55E+06	2.16E+03	1.55E+06
Vitrified	--	--	--
Packaging Material, Cellulose	4.91E+05	--	4.91E+05
Packaging Material, Lead	--	6.57E+06	6.57E+06
Packaging Material, Plastic	1.08E+06	1.84E+05	1.26E+06
Packaging Material, Rubber	2.24E+04	2.26E+03	2.46E+04
Packaging Material, Steel	8.98E+06	7.06E+06	1.60E+07
Grand Total	**3.00E+07**	**1.51E+07**	**4.51E+07**

Data Source: CID Data Version D.18.00.33 (LANL-CO 2019b). Note: This table only contains data for WIPP-bound waste streams at the TRU waste generator sites.

3.2.2 Waste and Packaging Material Inventory Changes

The changes in waste and packaging material data between the Adjusted ATWIR-2018 and this report are presented in Table 3-5. Data for the waste and packaging materials improve as additional waste is characterized and the sites apply the information to estimate the waste materials remaining in that waste stream at the site. The net change column includes both increases and decreases in waste stream mass as reported by the TRU waste generator sites.

As shown in Table 3-5, the total anticipated waste material mass decreased by ~3.34 million kg and anticipated packaging material mass decreased by ~1.65 million kg. For the waste emplaced at the WIPP, the mass of waste materials increased by ~756,000 kg and packaging materials increased by ~594,000 kg. The overall net decrease of waste and packaging material masses is ~3.68 million kg.

The decrease in anticipated waste and packaging material masses can be attributed primarily to the removal of the three SRS waste streams as discussed in section 3.1.2. These SRS waste streams collectively account for an anticipated waste material mass decrease of ~1.93 million kg and a packaging material mass decrease of ~945,000 kg.

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

Waste Material	Adjusted ATWIR-2018 Total (kg)	ATWIR-2019 Total (kg)	Net Change (kg)
Aluminum-based Metal/Alloys	3.30E+05	1.28E+05	-2.01E+05
Cellulose	1.22E+06	1.00E+06	-2.16E+05
Cement	1.63E+06	1.62E+06	-6.49E+03
Iron-based Metal/Alloys	5.11E+06	5.16E+06	+5.44E+04
Other Inorganic Materials	3.79E+06	3.49E+06	-2.97E+05
Other Metal/Alloys	3.82E+05	2.50E+05	-1.32E+05
Plastic	2.01E+06	1.19E+06	-8.19E+05
Rubber	5.50E+05	2.91E+05	-2.59E+05
Soil	2.99E+06	2.50E+06	-4.92E+05
Solidified Inorganic Material	3.83E+06	3.54E+06	-2.94E+05
Solidified Organic Material	2.23E+06	1.55E+06	-6.79E+05
Vitrified	--	--	--
Anticipated Waste Total	**2.41E+07**	**2.07E+07**	**-3.34E+06**
WIPP (Emplaced) Waste Total	2.87E+07	2.95E+07	+7.56E+05
WCS (Temporary Storage) Waste Total	5.31E+04	3.04E+04	-2.27E+04
Emplaced/Temporary Storage Waste Total	**2.88E+07**	**2.95E+07**	**+7.33E+05**
Packaging Material			
Packaging Material, Cellulose	4.67E+05	4.91E+05	+2.40E+04
Packaging Material, Lead	6.59E+06	6.57E+06	-1.64E+04
Packaging Material, Plastic	1.29E+06	1.26E+06	-2.67E+04
Packaging Material, Rubber	2.97E+04	2.46E+04	-5.12E+03
Packaging Material, Steel	1.77E+07	1.60E+07	-1.63E+06
Anticipated Packaging Total	**2.60E+07**	**2.44E+07**	**-1.65E+06**
WIPP (Emplaced) Packaging Total	2.07E+07	2.13E+07	+5.94E+05
WCS (Temporary Storage) Packaging Total	4.80E+04	3.24E+04	-1.56E+04
Emplaced/Temporary Storage Packaging Total	**2.08E+07**	**2.14E+07**	**+5.78E+05**
Grand Total	**9.96E+07**	**9.59E+07**	**-3.68E+06**

Data Source: CID Data Versions D.17.02.33.LWA (LANL-CO 2019a) and D.18.00.33 (LANL-CO 2019b).

3.2.3 Chemical Components

This report is the mechanism the 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

The DOE tracks the mass of complexing agents and oxyanions destined for emplacement in the WIPP repository because of their potential impact on PA modeling. Table 3-6 presents the anticipated mass of complexing agents and oxyanions estimated for the CH- and RH-TRU waste by site, as well as the grand total of each chemical component.

The anticipated mass of each chemical component is estimated based on the available information for each waste stream as of the data cutoff date. When limited information is available, a site may use a qualitative method to estimate the mass of its chemical components, which can result in an identical mass for multiple components. As more information becomes available, the estimated mass of each complexing agent and oxyanion will improve.

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	--	5.97E+03	8.00E-02	--	--	--	1.24E+01	--	**5.99E+03**
Acetic Acid	5.06E-01	2.75E+03	2.25E+03	9.39E-01	--	5.04E+00	1.24E+01	2.00E-09	**5.02E+03**
Citrate	--	2.61E+02	2.66E-02	--	--	--	1.24E+01	--	**2.73E+02**
Citric Acid	5.06E-01	1.04E+03	4.54E+00	1.03E+02	--	5.04E+00	1.24E+01	2.00E-09	**1.17E+03**
EDTA	5.06E-01	3.34E+01	2.27E+00	--	--	1.62E+00	1.24E+01	--	**5.02E+01**
Oxalate	5.06E-01	3.95E+02	2.16E-03	--	--	--	1.24E+01	--	**4.08E+02**
Oxalic Acid	5.06E-01	3.46E+03	4.46E+01	1.73E+02	--	5.04E+00	1.24E+01	--	**3.70E+03**
Oxyanions									
Nitrate	8.56E+02	1.17E+05	6.92E+04	2.13E+05	1.20E-01	5.04E+00	1.24E+01	1.00E-06	**3.99E+05**
Phosphate	5.63E+02	1.08E+05	2.19E+04	--	--	5.04E+00	1.24E+01	--	**1.31E+05**
Sulfate	5.63E+02	1.93E+04	8.88E+04	3.51E+04	--	5.04E+00	1.24E+01	--	**1.44E+05**

Data Source: CID Data Version D.18.00.33 (LANL-CO 2019b). 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 Adjusted ATWIR-2018 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 in the WIPP or in temporary storage since they are not tracked in the WDS.

As shown in Table 3-7, the total change in anticipated complexing agent mass was a decrease of ~2,270 kg and the total change in anticipated oxyanion mass was a decrease of ~47,200 kg.

The changes in mass can be mainly attributed to RL with a site total decrease of ~1,970 kg of complexing agents and ~48,700 kg of oxyanions. The complexing agents and oxyanions totals were driven primarily by RL's significant reduction of anticipated waste estimates for the RLPFP-01 waste stream, which was countered by an increase in anticipated waste estimates for the RLPFP-05 waste stream.

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

Chemical Component	Adjusted ATWIR-2018 Total (kg)	ATWIR-2019 Total (kg)	Net Change (kg)
Complexing Agents			
Acetate	7.39E+03	5.99E+03	-1.40E+03
Acetic Acid	5.81E+03	5.02E+03	-7.91E+02
Citrate	3.08E+02	2.73E+02	-3.51E+01
Citric Acid	1.18E+03	1.17E+03	-1.13E+01
EDTA	5.65E+01	5.02E+01	-6.26E+00
Oxalate	4.18E+02	4.08E+02	-9.99E+00
Oxalic Acid	3.71E+03	3.70E+03	-1.60E+01
Grand Total	**1.89E+04**	**1.66E+04**	**-2.27E+03**
Oxyanions			
Nitrate	4.38E+05	3.99E+05	-3.89E+04
Phosphate	1.56E+05	1.31E+05	-2.49E+04
Sulfate	1.27E+05	1.44E+05	+1.67E+04
Grand Total	**7.21E+05**	**6.74E+05**	**-4.72E+04**

Data Source: CID Data Versions D.17.02.33.LWA (LANL-CO 2019a) and D.18.00.33 (LANL-CO 2019b). 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 are decay-corrected as described in section 2.2.3. The values in Table 3-8, Table 3-9, and Table 3-10, are decayed through the end of CY 2018, and the values in Table 3-11, which shows a comparison between the Adjusted ATWIR-2018 and ATWIR-2019 activity totals, are decayed through the end of CY 2033.

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-TRU waste activity totals to produce a total anticipated activity by site.

Table 3-8. Total CH Radionuclide Activity (Ci) on a Site Basis Decayed through 2018

Radionuclide	ANL	Hanford (RL)	INL	KAPL-NFS	LANL	LBNL	LLNL	MFC	NNSS	NRD	ORNL	SNL	SPRU	SRS	Grand Total
Ac-225	7.59E-05	2.14E-03	4.84E-05	1.47E-04	1.42E-01	1.00E-18	4.02E-04	1.28E-11	6.87E-12	2.63E-13	2.79E+00	1.28E-12	1.56E-17	3.23E-02	**2.97E+00**
Ac-227	1.17E-05	6.65E-05	1.86E-02	9.63E-07	2.88E+00	8.02E-23	7.98E+00	1.89E-11	1.02E-09	--	7.78E+00	2.14E-11	3.85E-10	9.18E-03	**1.87E+01**
Ac-228	1.33E-04	8.36E-03	2.25E-05	6.05E-03	5.99E-06	1.34E-08	3.43E-06	7.13E-18	3.00E-15	--	1.39E-03	2.42E-05	--	1.10E-03	**1.71E-02**
Ag-108	4.23E-05	1.53E-07	--	--	4.66E-07	--	--	--	--	--	2.79E-04	--	--	--	**3.21E-04**
Ag-108m	4.86E-04	1.76E-06	--	--	5.36E-06	--	--	--	--	--	3.20E-03	--	--	--	**3.70E-03**
Ag-109m	7.93E-07	1.27E-05	--	--	--	--	8.74E-05	--	--	--	2.65E-05	5.53E-07	--	--	**1.28E-04**
Ag-110	--	6.02E-21	--	--	--	--	--	--	--	--	9.30E-03	--	--	--	**9.30E-03**
Ag-110m	--	4.42E-19	--	--	--	--	--	--	--	--	6.84E-01	--	--	--	**6.84E-01**
Am-241	8.09E+00	4.33E+04	3.35E+04	1.33E+01	6.03E+04	1.08E-02	1.88E+03	7.84E+01	2.10E+01	3.31E+01	2.85E+03	3.52E+02	2.80E-02	2.23E+05	**3.65E+05**
Am-242	1.81E-03	1.78E-03	--	--	--	--	3.48E+00	--	--	--	2.41E-04	--	--	1.05E-02	**3.49E+00**
Am-242m	1.82E-03	1.78E-03	--	--	--	--	3.50E+00	--	--	--	2.42E-04	--	--	1.06E-02	**3.51E+00**
Am-243	1.00E+00	4.41E-01	2.91E-01	--	1.64E+00	1.80E-03	1.22E-01	9.33E-03	--	--	9.78E+00	--	--	8.48E-01	**1.41E+01**
Am-245	5.71E-09	--	--	--	1.34E-04	--	--	--	--	--	1.19E-04	--	--	--	**2.53E-04**
Am-246	1.75E-09	--	--	--	--	--	--	--	--	--	1.15E-07	--	--	--	**1.17E-07**
At-217	7.59E-05	2.14E-03	4.84E-05	1.47E-04	1.42E-01	1.00E-18	4.02E-04	1.28E-11	6.87E-12	2.63E-13	2.79E+00	1.28E-12	1.56E-17	3.23E-02	**2.97E+00**
Ba-133	1.90E-05	2.63E-05	--	--	1.04E-05	--	--	--	--	--	4.74E-04	--	--	1.11E-05	**5.40E-04**
Ba-137m	1.15E+01	2.83E+02	1.61E+00	--	8.84E+00	1.53E-07	3.40E-01	1.26E+00	--	--	4.80E+02	3.21E-01	2.87E+00	1.43E+00	**7.91E+02**
Ba-140	--	--	--	--	--	--	--	--	--	--	3.13E-08	--	--	--	**3.13E-08**
Bi-210	1.60E-02	5.27E-03	6.56E-05	1.57E-05	2.91E-04	5.45E-11	8.48E-11	2.44E-14	7.80E-11	--	4.49E-01	2.92E-06	1.13E-12	1.93E-05	**4.71E-01**
Bi-211	1.17E-05	6.66E-05	9.57E-03	9.63E-07	1.48E+00	7.30E-24	4.09E+00	1.89E-11	1.02E-09	--	4.36E+00	2.14E-11	3.85E-10	9.20E-03	**9.94E+00**
Bi-212	1.16E-04	2.76E-01	2.52E-03	7.19E-03	8.22E+00	1.80E-10	7.15E-04	7.95E-19	1.89E-15	--	4.02E+00	2.42E-05	--	9.85E-02	**1.26E+01**
Bi-213	7.59E-05	2.14E-03	4.84E-05	1.47E-04	1.42E-01	1.00E-18	4.02E-04	1.28E-11	6.87E-12	2.63E-13	2.79E+00	1.28E-12	1.56E-17	3.23E-02	**2.97E+00**
Bi-214	3.27E-02	1.33E-01	4.68E-03	1.12E-04	1.40E-01	2.68E-08	9.03E-08	2.42E-12	9.72E-10	--	8.24E-01	3.72E-12	3.74E-11	1.71E-04	**1.13E+00**
Bk-249	3.94E-04	--	--	--	9.21E+00	--	--	--	--	--	8.22E+00	--	--	--	**1.74E+01**
Bk-250	9.81E-10	--	--	--	--	--	--	--	--	--	7.11E-08	--	--	--	**7.21E-08**
C-14	3.10E-03	6.51E-04	--	--	--	--	--	--	--	--	2.66E-03	--	1.39E-06	1.81E-03	**8.22E-03**
Ca-45	2.91E-11	--	--	--	--	--	--	--	--	--	--	--	--	--	**2.91E-11**
Cd-109	7.93E-07	1.27E-05	--	--	--	--	8.74E-05	--	--	--	2.65E-05	5.53E-07	--	--	**1.28E-04**
Cd-113	3.76E-23	2.23E-25	--	--	--	--	--	--	--	--	--	--	--	--	**3.79E-23**
Cd-113m	1.72E-04	2.56E-07	--	--	--	--	--	--	--	--	--	--	--	--	**1.72E-04**
Ce-139	--	--	--	--	--	--	--	--	--	--	3.51E-05	1.74E-13	--	--	**3.51E-05**
Ce-141	--	--	--	--	--	--	--	--	--	--	1.75E+00	--	--	--	**1.75E+00**
Ce-144	6.21E-04	4.47E-03	--	--	4.38E-07	--	--	3.78E-02	--	--	1.13E+00	--	--	--	**1.17E+00**
Cf-249	8.55E-02	6.28E-02	9.92E-02	--	5.30E-01	4.28E-03	6.47E+00	--	--	--	2.73E+00	--	--	1.78E-03	**9.98E+00**
Cf-250	4.29E-03	5.51E-02	--	--	--	9.81E-08	--	--	--	--	2.72E+01	--	--	6.70E-11	**2.73E+01**
Cf-251	6.63E-04	2.20E-03	2.30E-04	--	--	--	1.15E-04	--	--	--	3.95E-01	--	--	7.13E-04	**3.99E-01**
Cf-252	2.17E-05	3.52E-04	--	--	--	--	2.41E-03	--	--	--	2.69E+01	--	--	1.68E+00	**2.86E+01**
Cf-253	--	--	--	--	--	--	--	--	--	--	2.98E-04	--	--	--	**2.98E-04**
Cf-254	--	--	--	--	--	--	--	--	--	--	2.37E-04	--	--	--	**2.37E-04**
Cl-36	1.70E-07	--	--	--	--	--	--	--	--	--	--	--	--	--	**1.70E-07**
Cm-242	1.46E-03	1.60E-03	--	--	2.05E-06	--	4.03E-01	--	--	--	3.27E+00	--	--	8.69E-03	**3.68E+00**
Cm-243	2.59E-02	1.42E-01	2.34E-01	--	4.29E-01	7.52E-05	1.05E-01	2.95E-02	--	--	1.67E+00	--	--	6.49E-02	**2.70E+00**
Cm-244	1.24E+02	1.02E+02	8.68E+00	--	1.08E+03	1.50E-03	3.79E+02	1.16E+00	--	--	5.37E+03	--	--	7.03E+01	**7.13E+03**
Cm-245	1.02E-04	1.08E+00	1.94E-04	--	4.26E-04	3.49E-08	2.29E-02	--	--	--	1.97E+00	--	--	1.17E-02	**3.09E+00**
Cm-246	6.60E-03	1.22E-03	--	--	2.71E-02	1.44E-12	--	--	--	--	3.99E+01	--	--	6.78E-03	**3.99E+01**
Cm-247	1.22E-09	4.05E-09	2.45E-11	--	--	--	1.49E-05	--	--	--	3.72E-01	--	--	7.53E-03	**3.80E-01**
Cm-248	2.25E-04	1.39E-04	--	--	--	1.69E-07	1.23E-01	--	--	--	3.41E-01	--	--	2.36E-05	**4.64E-01**

Table 3-8. Total CH Radionuclide Activity (Ci) on a Site Basis Decayed through 2018
Continued

Radionuclide	ANL	Hanford (RL)	INL	KAPL-NFS	LANL	LBNL	LLNL	MFC	NNSS	NRD	ORNL	SNL	SPRU	SRS	Grand Total
Cm-249	--	--	--	--	--	--	--	--	--	--	9.25E-07	--	--	--	**9.25E-07**
Cm-250	7.01E-09	--	--	--	--	--	--	--	--	--	5.08E-07	--	--	--	**5.15E-07**
Co-58	--	1.99E-06	--	--	--	--	--	--	--	--	5.42E-03	--	--	--	**5.42E-03**
Co-60	1.08E-02	1.82E+00	8.31E-04	--	5.70E-04	--	8.09E-04	3.43E-03	--	--	4.06E-01	6.05E-05	--	2.32E-03	**2.24E+00**
Cs-134	2.10E-02	2.21E-03	--	--	--	--	--	3.15E-02	--	--	7.14E-01	--	--	8.56E-06	**7.68E-01**
Cs-135	3.20E-07	5.98E-10	--	--	--	--	--	--	--	--	--	--	--	--	**3.21E-07**
Cs-137	1.22E+01	3.00E+02	1.70E+00	--	9.36E+00	1.62E-07	3.60E-01	1.33E+00	--	--	5.08E+02	3.39E-01	3.04E+00	1.52E+00	**8.38E+02**
Es-253	--	--	--	--	--	--	--	--	--	--	4.03E-04	--	--	--	**4.03E-04**
Eu-152	3.36E-04	1.28E-01	1.74E-04	--	7.36E-04	--	2.09E-04	--	--	--	1.65E+00	7.02E-06	--	1.96E-04	**1.78E+00**
Eu-154	2.69E-02	2.99E+00	--	--	5.34E-04	--	2.44E-03	8.81E-03	--	--	9.05E+00	1.56E-04	--	6.96E-03	**1.21E+01**
Eu-155	3.43E-03	3.67E+00	--	--	2.19E-05	--	--	8.90E-03	--	--	5.59E+00	--	--	1.57E-02	**9.28E+00**
Fe-55	6.62E-03	1.72E-02	--	--	--	--	--	--	--	--	2.10E-03	--	--	--	**2.59E-02**
Fe-59	4.90E-23	--	--	--	--	--	--	--	--	--	--	--	--	--	**4.90E-23**
Fr-221	7.59E-05	2.14E-03	4.84E-05	1.47E-04	1.42E-01	1.00E-18	4.02E-04	1.28E-11	6.87E-12	2.63E-13	2.79E+00	1.28E-12	1.56E-17	3.23E-02	**2.97E+00**
Fr-223	1.61E-07	9.18E-07	2.57E-04	1.33E-08	3.98E-02	1.11E-24	1.10E-01	2.61E-13	1.40E-11	--	1.07E-01	2.95E-13	5.31E-12	1.27E-04	**2.58E-01**
Gd-152	1.45E-18	1.92E-15	3.12E-20	--	1.36E-19	--	3.76E-20	--	--	--	2.40E-15	1.06E-19	--	1.69E-18	**4.33E-15**
Gd-153	--	3.34E-21	--	--	--	--	--	--	--	--	3.80E-02	--	--	--	**3.80E-02**
H-3	8.62E-03	7.71E+01	--	--	4.04E+04	--	--	--	--	--	3.02E-02	--	--	2.64E-04	**4.05E+04**
Hg-203	--	--	--	--	--	--	--	--	--	--	--	4.74E-24	--	--	**4.74E-24**
Ho-166m	--	--	--	--	--	--	--	--	--	--	6.37E-04	--	--	3.29E-07	**6.38E-04**
I-129	2.95E-07	1.14E-05	--	--	--	--	--	--	--	--	5.08E-04	--	--	3.93E-03	**4.45E-03**
I-131	--	--	--	--	--	--	--	--	--	--	3.86E-04	--	--	--	**3.86E-04**
In-113m	--	--	--	--	--	--	--	--	--	--	--	4.58E-14	--	--	**4.58E-14**
Ir-192	--	--	--	--	--	--	--	--	--	--	1.51E-06	--	--	--	**1.51E-06**
K-40	2.20E-04	1.42E-02	--	--	--	--	2.96E-08	--	--	--	1.27E-02	2.16E-04	--	6.63E-07	**2.74E-02**
Kr-85	5.67E-01	8.93E-04	--	--	4.87E-02	--	--	--	--	--	--	--	--	4.92E-06	**6.17E-01**
La-140	--	--	--	--	--	--	--	--	--	--	3.61E-08	--	--	--	**3.61E-08**
Mn-54	7.96E-05	2.75E-03	--	--	9.38E-08	--	--	5.03E-04	--	--	5.20E-03	--	--	--	**8.53E-03**
Na-22	2.26E-03	5.68E-04	--	--	1.79E-03	--	1.32E-04	--	--	--	1.02E-06	--	--	1.02E-03	**5.77E-03**
Na-24	--	--	--	--	5.42E-24	--	--	--	--	--	--	--	--	--	**5.42E-24**
Nb-93m	2.86E-06	2.17E-09	--	--	--	--	--	--	--	--	--	--	--	--	**2.86E-06**
Nb-94	--	1.13E-03	--	--	3.25E-05	--	1.13E-08	--	--	--	6.79E-04	--	--	2.86E-07	**1.84E-03**
Nb-95	7.08E-18	2.04E-08	--	--	--	--	--	--	--	--	4.19E-01	--	--	--	**4.19E-01**
Nb-95m	3.78E-20	1.05E-10	--	--	--	--	--	--	--	--	7.33E-03	--	--	--	**7.33E-03**
Nd-144	1.14E-18	4.25E-18	--	--	1.99E-19	--	--	2.02E-17	--	--	3.90E-17	--	--	--	**6.48E-17**
Ni-59	--	3.15E-10	--	--	--	--	--	--	--	--	2.53E-02	--	--	6.34E-10	**2.53E-02**
Ni-63	1.08E-05	9.77E-03	--	--	--	--	--	--	--	--	3.95E+00	--	--	--	**3.96E+00**
Np-237	4.11E-02	3.81E-01	5.35E-01	4.21E-05	4.01E-01	1.72E-05	9.13E-02	6.69E-02	1.80E-04	7.79E-05	1.54E+00	4.58E-04	2.72E-08	4.55E+00	**7.61E+00**
Np-238	8.20E-06	8.03E-06	--	--	2.41E-10	--	1.57E-02	--	--	--	1.09E-06	--	--	4.75E-05	**1.58E-02**
Np-239	1.00E+00	4.41E-01	2.91E-01	--	1.64E+00	1.80E-03	1.22E-01	9.33E-03	--	--	9.78E+00	--	--	8.48E-01	**1.41E+01**
Np-240	3.08E-08	4.93E-14	--	--	9.85E-09	1.61E-19	1.17E-13	--	--	--	5.16E-06	--	--	5.31E-16	**5.20E-06**
Np-240m	2.57E-05	4.11E-11	--	--	8.21E-06	1.34E-16	9.75E-11	--	--	--	4.30E-03	--	--	4.42E-13	**4.34E-03**
Pa-231	1.68E-08	1.21E-04	6.57E-06	6.71E-06	8.03E-03	7.56E-20	1.14E+01	1.20E-09	8.60E-09	--	1.05E-01	3.84E-10	8.31E-09	4.71E-03	**1.15E+01**
Pa-233	4.11E-02	3.81E-01	4.92E-01	4.21E-05	2.65E-01	1.05E-05	5.58E-02	6.69E-02	1.80E-04	7.79E-05	1.01E+00	4.58E-04	2.72E-08	2.98E+00	**5.29E+00**
Pa-234	1.29E-05	7.08E-03	1.12E-02	5.32E-06	2.78E-04	6.59E-13	1.10E-05	2.42E-06	3.22E-06	--	9.22E-05	1.42E-08	2.93E-06	5.68E-04	**1.93E-02**
Pa-234m	9.93E-03	5.44E+00	8.63E+00	4.09E-03	2.14E-01	5.07E-10	8.43E-03	1.86E-03	2.48E-03	--	7.09E-02	1.10E-05	2.26E-03	4.37E-01	**1.48E+01**
Pb-209	7.59E-05	2.14E-03	4.84E-05	1.47E-04	1.42E-01	1.00E-18	4.02E-04	1.28E-11	6.87E-12	2.63E-13	2.79E+00	1.28E-12	1.56E-17	3.23E-02	**2.97E+00**

Table 3-8. Total CH Radionuclide Activity (Ci) on a Site Basis Decayed through 2018
Continued

Radionuclide	ANL	Hanford (RL)	INL	KAPL-NFS	LANL	LBNL	LLNL	MFC	NNSS	NRD	ORNL	SNL	SPRU	SRS	Grand Total
Pb-210	1.60E-02	5.27E-03	6.80E-05	1.57E-05	3.75E-04	7.06E-11	1.28E-10	2.44E-14	7.80E-11	--	4.49E-01	2.92E-06	1.13E-12	1.93E-05	**4.71E-01**
Pb-211	1.17E-05	6.66E-05	9.57E-03	9.63E-07	1.48E+00	7.30E-24	4.09E+00	1.89E-11	1.02E-09	--	4.36E+00	2.14E-11	3.85E-10	9.20E-03	**9.94E+00**
Pb-212	1.16E-04	2.76E-01	2.52E-03	7.19E-03	8.22E+00	1.80E-10	7.15E-04	7.95E-19	1.89E-15	--	4.02E+00	2.42E-05	--	9.85E-02	**1.26E+01**
Pb-214	3.27E-02	1.33E-01	4.68E-03	1.12E-04	1.40E-01	2.68E-08	9.03E-08	2.42E-12	9.72E-10	--	8.24E-01	3.72E-12	3.74E-11	1.71E-04	**1.13E+00**
Pd-107	1.59E-06	1.21E-07	--	--	--	--	--	--	--	--	--	--	--	--	**1.71E-06**
Pm-147	7.69E-01	1.07E+01	--	--	--	--	--	--	--	--	1.11E-06	--	--	--	**1.15E+01**
Po-210	1.60E-02	3.52E-03	5.70E-05	1.57E-05	2.38E-05	3.51E-12	8.62E-12	7.92E-15	7.80E-11	--	4.49E-01	2.92E-06	6.94E-13	1.93E-05	**4.68E-01**
Po-211	3.21E-08	1.83E-07	2.63E-05	2.65E-09	4.07E-03	2.01E-26	1.12E-02	5.21E-14	2.80E-12	--	1.20E-02	5.88E-14	1.06E-12	2.53E-05	**2.73E-02**
Po-212	7.45E-05	1.77E-01	1.61E-03	4.61E-03	5.26E+00	1.15E-10	4.58E-04	5.09E-19	1.21E-15	--	2.57E+00	1.55E-05	--	6.31E-02	**8.08E+00**
Po-213	7.43E-05	2.10E-03	4.74E-05	1.44E-04	1.39E-01	9.82E-19	3.93E-04	1.25E-11	6.73E-12	2.57E-13	2.74E+00	1.25E-12	1.53E-17	3.16E-02	**2.91E+00**
Po-214	3.27E-02	1.33E-01	4.68E-03	1.12E-04	1.40E-01	2.68E-08	9.03E-08	2.42E-12	9.72E-10	--	8.24E-01	3.71E-12	3.74E-11	1.71E-04	**1.13E+00**
Po-215	1.17E-05	6.66E-05	9.57E-03	9.63E-07	1.48E+00	7.30E-24	4.09E+00	1.89E-11	1.02E-09	--	4.36E+00	2.14E-11	3.85E-10	9.20E-03	**9.94E+00**
Po-216	1.16E-04	2.76E-01	2.52E-03	7.19E-03	8.22E+00	1.80E-10	7.15E-04	7.95E-19	1.89E-15	--	4.02E+00	2.42E-05	--	9.85E-02	**1.26E+01**
Po-218	3.27E-02	1.33E-01	4.68E-03	1.12E-04	1.40E-01	2.68E-08	9.03E-08	2.42E-12	9.73E-10	--	8.24E-01	3.72E-12	3.74E-11	1.71E-04	**1.13E+00**
Pr-144	6.21E-04	4.47E-03	--	--	4.38E-07	--	--	3.78E-02	--	--	1.13E+00	--	--	--	**1.17E+00**
Pr-144m	8.69E-06	6.26E-05	--	--	6.13E-09	--	--	5.29E-04	--	--	1.58E-02	--	--	--	**1.64E-02**
Pu-236	3.20E-10	--	--	--	--	--	--	--	--	--	--	--	--	--	**3.20E-10**
Pu-238	5.47E+00	1.21E+04	1.57E+04	1.44E+00	3.15E+05	6.59E-03	2.34E+03	4.41E+00	1.30E+01	--	5.28E+03	2.90E-01	2.78E-03	9.88E+04	**4.50E+05**
Pu-239	1.52E+01	4.25E+04	1.85E+04	4.66E+01	4.50E+04	7.26E-04	3.31E+03	8.72E+00	2.39E+02	--	6.52E+02	4.17E+00	2.58E-01	2.23E+05	**3.33E+05**
Pu-240	7.93E+00	1.82E+04	4.29E+03	4.66E+01	1.17E+04	2.00E-05	9.17E+02	6.54E-01	5.46E+01	--	7.93E+02	1.19E+00	--	1.08E+05	**1.44E+05**
Pu-241	4.01E+01	2.92E+05	2.42E+04	4.28E+01	1.84E+05	3.27E-04	6.15E+03	--	2.31E+02	--	1.26E+04	7.01E+00	3.03E-02	1.12E+06	**1.64E+06**
Pu-242	1.02E-01	8.60E+00	6.64E-01	--	1.12E+01	1.34E-19	3.51E-01	1.58E-04	3.43E-03	--	9.41E+00	3.21E-04	6.86E-04	5.07E+01	**8.10E+01**
Pu-243	1.22E-09	4.05E-09	2.45E-11	--	--	--	1.49E-05	--	--	--	3.72E-01	--	--	7.53E-03	**3.80E-01**
Pu-244	2.57E-05	4.12E-11	--	--	8.22E-06	1.34E-16	9.76E-11	--	--	--	4.31E-03	--	--	4.43E-13	**4.34E-03**
Pu-246	1.75E-09	--	--	--	--	--	--	--	--	--	1.15E-07	--	--	--	**1.17E-07**
Ra-223	1.17E-05	6.66E-05	9.57E-03	9.63E-07	1.48E+00	7.30E-24	4.09E+00	1.89E-11	1.02E-09	--	4.36E+00	2.14E-11	3.85E-10	9.20E-03	**9.94E+00**
Ra-224	1.16E-04	2.76E-01	2.52E-03	7.19E-03	8.22E+00	1.80E-10	7.15E-04	7.95E-19	1.89E-15	--	4.02E+00	2.42E-05	--	9.85E-02	**1.26E+01**
Ra-225	7.59E-05	2.14E-03	5.30E-05	1.47E-04	1.42E-01	2.69E-18	5.45E-04	1.28E-11	6.87E-12	2.63E-13	3.76E+00	1.28E-12	1.56E-17	3.23E-02	**3.93E+00**
Ra-226	3.27E-02	1.33E-01	4.69E-03	1.12E-04	1.40E-01	2.68E-08	1.06E-07	2.42E-12	9.73E-10	--	8.24E-01	3.72E-12	3.74E-11	1.71E-04	**1.14E+00**
Ra-228	1.33E-04	8.36E-03	2.25E-05	6.05E-03	5.99E-06	1.34E-08	3.43E-06	7.13E-18	3.00E-15	--	1.39E-03	2.42E-05	--	1.10E-03	**1.71E-02**
Rb-87	1.84E-10	--	--	--	--	--	--	--	--	--	--	--	--	--	**1.84E-10**
Rh-103m	--	--	--	--	--	--	--	--	--	--	8.87E-01	--	--	--	**8.87E-01**
Rh-106	1.81E-03	1.23E-04	--	--	9.98E-06	--	--	3.25E-02	--	--	7.32E+00	--	--	2.89E-07	**7.35E+00**
Rn-219	1.17E-05	6.66E-05	9.57E-03	9.63E-07	1.48E+00	7.30E-24	4.09E+00	1.89E-11	1.02E-09	--	4.36E+00	2.14E-11	3.85E-10	9.20E-03	**9.94E+00**
Rn-220	1.16E-04	2.76E-01	2.52E-03	7.19E-03	8.22E+00	1.80E-10	7.15E-04	7.95E-19	1.89E-15	--	4.02E+00	2.42E-05	--	9.85E-02	**1.26E+01**
Rn-222	3.27E-02	1.33E-01	4.68E-03	1.12E-04	1.40E-01	2.68E-08	9.03E-08	2.42E-12	9.73E-10	--	8.24E-01	3.72E-12	3.74E-11	1.71E-04	**1.13E+00**
Ru-103	--	--	--	--	--	--	--	--	--	--	8.88E-01	--	--	--	**8.88E-01**
Ru-106	1.81E-03	1.23E-04	--	--	9.98E-06	--	--	3.25E-02	--	--	7.32E+00	--	--	2.89E-07	**7.35E+00**
S-35	1.08E-11	--	--	--	--	--	--	--	--	--	--	--	--	--	**1.08E-11**
Sb-125	6.14E-05	7.95E-03	--	--	8.43E-06	--	5.20E-06	1.49E-02	--	--	4.32E-01	--	--	9.39E-04	**4.56E-01**
Sb-126	1.51E-07	9.13E-10	--	--	1.03E-06	--	--	--	--	--	1.77E-07	--	--	--	**1.36E-06**
Sb-126m	9.44E-06	6.52E-09	--	--	7.39E-06	--	--	--	--	--	--	--	--	--	**1.68E-05**
Se-79	3.58E-06	4.15E-05	--	--	--	--	--	--	--	--	--	--	--	--	**4.51E-05**
Sm-147	1.37E-11	8.10E-11	--	--	--	--	--	--	--	--	1.68E-13	--	--	--	**9.48E-11**
Sm-148	1.88E-34	6.25E-31	1.37E-37	--	1.07E-36	--	1.65E-37	--	--	--	3.87E-30	3.45E-35	--	3.33E-34	**4.50E-30**
Sm-151	--	3.23E-03	--	--	2.84E-06	--	--	--	--	--	1.43E+01	--	--	--	**1.43E+01**
Sn-113	--	--	--	--	--	--	--	--	--	--	--	4.58E-14	--	--	**4.58E-14**

Table 3-8. Total CH Radionuclide Activity (Ci) on a Site Basis Decayed through 2018
Continued

Radionuclide	ANL	Hanford (RL)	INL	KAPL-NFS	LANL	LBNL	LLNL	MFC	NNSS	NRD	ORNL	SNL	SPRU	SRS	Grand Total
Sn-119m	--	1.44E-18	--	--	--	--	--	--	--	--	--	--	--	--	**1.44E-18**
Sn-121	--	4.41E-10	--	--	9.06E-05	--	--	--	--	--	--	--	--	--	**9.06E-05**
Sn-121m	--	5.69E-10	--	--	1.17E-04	--	--	--	--	--	--	--	--	--	**1.17E-04**
Sn-126	9.44E-06	6.52E-09	--	--	7.39E-06	--	--	--	--	--	--	--	--	--	**1.68E-05**
Sr-85	6.46E-17	--	--	--	--	--	--	--	--	--	--	2.30E-19	--	--	**6.49E-17**
Sr-89	--	4.50E-24	--	--	--	--	--	--	--	--	3.80E-01	--	--	--	**3.80E-01**
Sr-90	9.14E+00	6.15E+02	1.87E+00	--	4.04E+00	--	4.07E-01	1.29E+00	--	--	2.11E+02	1.49E-02	1.20E-01	9.62E-01	**8.44E+02**
Ta-182	--	7.70E-11	--	--	--	--	--	--	--	--	--	--	--	--	**7.70E-11**
Tc-99	8.97E-03	1.90E-03	--	2.87E-01	--	--	--	--	--	--	3.28E+01	--	1.46E-04	1.76E-05	**3.31E+01**
Te-123	--	--	--	--	--	--	--	--	--	--	--	6.98E-22	--	--	**6.98E-22**
Te-123m	--	--	--	--	--	--	--	--	--	--	--	9.77E-15	--	--	**9.77E-15**
Te-125m	1.50E-05	1.93E-03	--	--	2.06E-06	--	4.28E-07	3.57E-03	--	--	3.56E-02	--	--	2.29E-04	**4.13E-02**
Th-227	1.15E-05	6.57E-05	1.36E-02	9.50E-07	2.11E+00	2.09E-23	5.83E+00	1.87E-11	1.00E-09	--	5.94E+00	2.11E-11	3.79E-10	9.07E-03	**1.39E+01**
Th-228	1.16E-04	2.76E-01	2.66E-03	7.18E-03	9.58E+00	2.38E-10	7.25E-04	7.95E-19	1.89E-15	--	4.05E+00	2.42E-05	--	9.84E-02	**1.40E+01**
Th-229	7.59E-05	2.14E-03	6.22E-05	1.47E-04	1.42E-01	8.27E-18	6.74E-04	1.28E-11	6.87E-12	2.63E-13	4.58E+00	1.28E-12	1.56E-17	3.23E-02	**4.76E+00**
Th-230	8.46E-04	1.19E-03	5.60E-05	2.58E-02	2.59E-03	8.56E-16	2.45E-03	1.12E-08	5.52E-07	--	1.22E-02	4.87E-09	5.76E-08	6.72E-03	**5.19E-02**
Th-231	2.74E-04	2.04E-01	1.67E-01	3.17E-02	5.63E-02	7.15E-14	8.90E-03	5.69E-05	5.12E-05	--	7.86E-03	5.49E-06	1.31E-04	2.28E+00	**2.75E+00**
Th-232	4.72E-04	1.46E-02	1.87E-03	8.64E-03	4.99E-04	1.12E-06	2.86E-04	1.23E-16	7.60E-15	--	6.45E-02	2.42E-05	--	2.62E-03	**9.35E-02**
Th-234	9.93E-03	5.44E+00	8.63E+00	4.09E-03	2.14E-01	5.07E-10	8.43E-03	1.86E-03	2.48E-03	--	7.09E-02	1.10E-05	2.26E-03	4.37E-01	**1.48E+01**
Tl-206	2.11E-08	6.96E-09	8.65E-11	2.07E-11	3.84E-10	7.20E-17	1.12E-16	3.23E-20	1.03E-16	--	5.93E-07	3.86E-12	1.49E-18	2.55E-11	**6.21E-07**
Tl-207	1.17E-05	6.64E-05	9.54E-03	9.61E-07	1.47E+00	7.28E-24	4.08E+00	1.89E-11	1.01E-09	--	4.35E+00	2.13E-11	3.84E-10	9.17E-03	**9.92E+00**
Tl-208	4.18E-05	9.91E-02	9.04E-04	2.59E-03	2.95E+00	6.46E-11	2.57E-04	2.86E-19	6.79E-16	--	1.44E+00	8.71E-06	--	3.54E-02	**4.53E+00**
Tl-209	1.59E-06	4.50E-05	1.02E-06	3.09E-06	2.98E-03	2.11E-20	8.44E-06	2.69E-13	1.44E-13	5.52E-15	5.87E-02	2.69E-14	3.28E-19	6.78E-04	**6.24E-02**
U-232	3.00E-05	8.07E-01	3.38E-02	--	2.69E+02	--	2.57E-03	--	--	--	1.05E+01	--	--	8.63E-02	**2.80E+02**
U-233	1.99E-02	3.32E+00	2.43E+00	1.67E-01	4.18E+01	2.63E-12	2.89E+00	2.91E-07	1.10E-08	1.22E-09	4.48E+01	7.01E-09	1.77E-13	7.95E+00	**1.03E+02**
U-234	3.34E-01	5.02E+00	2.04E+00	1.67E-01	4.05E+01	1.86E-09	6.48E-02	1.22E-03	7.55E-03	--	8.55E-01	1.64E-04	2.09E-03	1.72E+02	**2.21E+02**
U-235	2.74E-04	2.04E-01	1.67E-01	3.17E-02	5.63E-02	7.15E-14	8.90E-03	5.69E-05	5.12E-05	--	7.86E-03	5.49E-06	1.31E-04	2.28E+00	**2.75E+00**
U-236	7.81E-06	4.00E-03	1.42E-04	3.17E-02	6.01E-03	5.92E-14	5.14E-06	2.51E-06	2.18E-05	--	7.27E-03	1.59E-07	--	2.97E-03	**5.22E-02**
U-237	9.59E-04	6.99E+00	5.72E-01	1.02E-03	4.30E+00	7.64E-09	1.44E-01	--	5.54E-03	--	3.01E-01	1.68E-04	7.26E-07	2.61E+01	**3.84E+01**
U-238	9.93E-03	5.44E+00	9.59E+00	4.09E-03	3.22E-01	7.80E-10	1.30E-02	1.86E-03	2.48E-03	--	1.07E-01	1.10E-05	2.26E-03	6.34E-01	**1.61E+01**
U-240	2.57E-05	4.11E-11	--	--	8.21E-06	1.34E-16	9.75E-11	--	--	--	4.30E-03	--	--	4.42E-13	**4.34E-03**
Xe-131m	--	--	--	--	--	--	--	--	--	--	1.55E-05	--	--	--	**1.55E-05**
Y-89m	--	4.18E-28	--	--	--	--	--	--	--	--	3.53E-05	--	--	--	**3.53E-05**
Y-90	9.14E+00	6.15E+02	1.87E+00	--	4.04E+00	--	4.07E-01	1.29E+00	--	--	2.11E+02	1.49E-02	1.20E-01	9.62E-01	**8.44E+02**
Zn-65	--	3.60E-08	--	--	--	--	--	--	--	--	3.75E-03	--	--	--	**3.75E-03**
Zr-93	5.28E-06	2.92E-09	--	--	--	--	--	--	--	--	--	--	--	--	**5.29E-06**
Zr-95	3.21E-18	8.91E-09	--	--	--	--	--	--	--	--	6.23E-01	--	--	--	**6.23E-01**
Grand Total	**2.47E+02**	**4.10E+05**	**9.61E+04**	**1.52E+02**	**6.58E+05**	**2.80E-02**	**1.50E+04**	**9.89E+01**	**5.59E+02**	**3.31E+01**	**2.94E+04**	**3.65E+02**	**6.48E+00**	**1.77E+06**	**2.98E+06**

Data Source: CID Data Version D.18.00.33 (LANL-CO 2019b). 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 2018

Radionuclide	ANL	BAPL	Hanford (RL)	INL	KAPL-S	LANL	MFC	ORNL	SNL	SPRU	SRS	Grand Total
Ac-225	5.12E-03	4.14E-05	7.80E-04	8.30E-05	1.28E-06	5.95E-15	2.96E-08	4.39E-03	3.87E-10	1.98E-16	1.51E-05	**1.04E-02**
Ac-227	2.58E-01	1.38E-14	7.72E-02	8.72E-07	1.09E-08	4.27E-08	1.68E-03	1.51E-03	6.97E-09	3.43E-09	7.33E-05	**3.39E-01**
Ac-228	3.18E-02	1.35E-18	6.97E-04	5.45E-05	1.48E-04	2.39E-16	7.29E-17	2.51E-04	9.05E-18	1.12E-16	3.82E-15	**3.29E-02**
Ag-108	1.09E-03	--	--	--	--	--	4.63E-07	4.33E-08	--	--	--	**1.09E-03**
Ag-108m	1.25E-02	--	--	--	--	--	5.32E-06	4.97E-07	--	--	--	**1.25E-02**
Ag-109m	1.29E+00	--	--	--	--	--	--	1.94E-06	--	--	--	**1.29E+00**
Ag-110	8.00E-03	--	1.97E-10	--	3.14E-09	--	9.11E-06	1.07E-03	--	--	--	**9.07E-03**
Ag-110m	5.88E-01	--	1.45E-08	--	2.31E-07	--	6.70E-04	7.84E-02	--	--	--	**6.67E-01**
Am-241	1.32E+02	2.94E-02	2.75E+03	8.19E+02	5.58E-02	3.11E+00	1.02E+02	3.73E+02	2.79E+01	3.54E-01	1.46E+02	**4.36E+03**
Am-242	2.54E-01	--	1.02E+00	--	--	--	2.48E-03	7.98E-02	--	--	3.24E-02	**1.39E+00**
Am-242m	2.55E-01	--	1.03E+00	--	--	--	2.49E-03	8.01E-02	--	--	3.26E-02	**1.40E+00**
Am-243	6.47E+00	1.13E-04	4.97E+00	5.78E-18	2.50E-06	--	1.11E-02	3.87E+01	--	--	1.44E+00	**5.16E+01**
Am-245	1.32E-11	--	--	--	--	--	--	2.30E-03	--	--	1.32E-10	**2.30E-03**
Am-246	--	--	--	--	--	--	--	1.00E-08	--	--	--	**1.00E-08**
Ar-37	1.08E-03	--	--	--	--	--	--	--	--	--	--	**1.08E-03**
Ar-39	8.63E-03	--	--	--	--	--	3.97E-04	--	--	--	--	**9.03E-03**
Ar-42	2.38E-02	--	--	--	--	--	--	--	--	--	--	**2.38E-02**
At-217	5.12E-03	4.14E-05	7.80E-04	8.30E-05	1.28E-06	5.95E-15	2.96E-08	4.39E-03	3.87E-10	1.98E-16	1.51E-05	**1.04E-02**
Ba-133	2.15E+00	--	--	--	--	--	--	6.50E-04	--	--	--	**2.15E+00**
Ba-137m	1.68E+03	5.04E+01	1.50E+05	1.38E+04	4.51E+01	1.35E+03	3.01E+03	4.69E+03	2.96E+02	1.96E+01	2.32E+01	**1.75E+05**
Ba-140	--	--	--	--	--	--	2.51E-04	--	--	--	--	**2.51E-04**
Be-10	--	--	--	--	--	--	3.16E-09	2.39E-06	--	--	--	**2.39E-06**
Bi-210	8.85E-01	2.25E-18	1.05E+00	1.33E-09	1.88E-07	2.20E-12	6.13E-15	1.00E+00	3.71E-11	6.94E-12	4.97E-09	**2.94E+00**
Bi-211	2.60E-01	1.96E-15	7.74E-02	8.72E-07	1.06E-08	4.27E-08	3.85E-04	8.82E-04	6.97E-09	3.43E-09	7.33E-05	**3.38E-01**
Bi-212	5.01E+00	8.41E-03	1.27E-03	2.73E-05	1.13E-04	8.56E-17	4.29E-05	2.25E-01	1.99E-18	3.23E-17	2.44E-15	**5.25E+00**
Bi-213	5.12E-03	4.14E-05	7.80E-04	8.29E-05	1.28E-06	5.95E-15	2.95E-08	4.39E-03	3.87E-10	1.98E-16	1.51E-05	**1.04E-02**
Bi-214	6.44E-10	4.30E-15	3.03E+00	3.40E-08	1.64E-06	5.49E-11	8.06E-12	2.98E+00	1.32E-09	2.30E-10	4.26E-08	**6.01E+00**
Bk-249	9.07E-07	--	--	--	--	--	--	1.59E+02	--	--	9.09E-06	**1.59E+02**
Bk-250	--	--	--	--	--	--	--	1.15E-04	--	--	--	**1.15E-04**
C-14	--	1.57E-03	3.23E-04	--	1.48E-01	--	1.88E-02	3.04E-02	--	2.95E-05	8.02E-04	**2.00E-01**
Ca-45	9.68E-02	--	--	--	--	--	--	--	--	--	--	**9.68E-02**
Cd-109	1.29E+00	--	--	--	--	--	--	1.94E-06	--	--	--	**1.29E+00**
Cd-113	9.51E-21	--	2.01E-18	--	--	--	4.28E-22	8.96E-21	--	--	--	**2.03E-18**
Cd-113m	9.09E-01	--	6.74E-01	--	--	--	4.10E-02	3.12E-03	--	--	--	**1.63E+00**
Cd-115m	5.30E-02	--	--	--	--	--	--	--	--	--	--	**5.30E-02**
Ce-139	1.01E+00	--	--	--	--	--	--	8.81E-09	--	--	--	**1.01E+00**
Ce-141	1.76E-01	--	--	--	--	--	1.89E-01	6.12E-01	--	--	--	**9.78E-01**
Ce-144	4.92E+01	--	2.54E-02	2.45E-01	--	1.17E-01	3.11E+02	1.27E+01	--	--	9.20E-07	**3.74E+02**
Cf-249	6.47E-01	--	--	1.10E-03	1.87E-13	--	1.22E-09	6.76E+00	--	--	1.27E-03	**7.41E+00**
Cf-250	3.49E-02	--	--	1.07E-02	--	--	--	4.67E+01	--	--	1.88E-05	**4.68E+01**
Cf-251	7.84E-09	--	--	2.84E-04	2.37E-15	--	--	2.09E+00	--	--	8.26E-07	**2.09E+00**
Cf-252	9.01E-04	--	--	3.05E-04	4.92E-17	--	--	6.80E+00	--	--	6.80E-03	**6.81E+00**
Cf-254	--	--	--	--	--	--	--	1.95E-05	--	--	--	**1.95E-05**
Cm-242	1.29E-01	--	8.47E-01	--	7.29E-07	--	5.04E-03	1.38E+00	--	--	2.68E-02	**2.39E+00**
Cm-243	1.92E-01	--	1.92E+01	--	2.34E-03	--	6.32E-05	3.12E-01	--	--	2.41E-03	**1.97E+01**
Cm-244	6.37E+01	--	4.96E+02	2.10E+02	7.39E-03	--	2.85E+00	6.07E+03	--	--	1.02E+02	**6.94E+03**

Table 3-9. Total RH Radionuclide Activity (Ci) on a Site Basis Decayed through 2018
Continued

Radionuclide	ANL	BAPL	Hanford (RL)	INL	KAPL-S	LANL	MFC	ORNL	SNL	SPRU	SRS	Grand Total
Cm-245	1.29E-03	--	7.94E-02	1.48E-01	2.30E-08	--	2.02E-07	8.46E-01	--	--	1.78E-02	**1.09E+00**
Cm-246	5.13E-07	--	3.54E-02	1.58E-07	3.00E-09	--	3.06E-09	4.58E+01	--	--	2.38E-02	**4.59E+01**
Cm-247	6.06E-10	--	1.12E-10	1.23E-12	7.07E-15	--	--	2.21E-02	--	--	4.49E-08	**2.21E-02**
Cm-248	1.80E-10	--	1.69E-06	6.10E-11	1.40E-14	--	5.96E-12	2.19E-01	--	--	8.62E-06	**2.19E-01**
Cm-250	--	--	--	--	--	--	--	4.43E-08	--	--	--	**4.43E-08**
Co-58	3.93E-01	--	3.74E-09	--	--	--	2.35E-05	--	--	--	--	**3.93E-01**
Co-60	3.25E+01	3.71E-01	2.55E+01	2.46E+02	1.20E+00	2.03E-01	8.85E+01	2.39E+00	--	1.71E-05	3.51E-11	**3.97E+02**
Cr-51	3.16E-02	--	--	--	--	--	1.92E-04	--	--	--	--	**3.18E-02**
Cs-134	3.15E+01	8.72E-04	4.02E+00	--	--	--	6.00E+01	5.00E+01	--	--	2.09E-02	**1.46E+02**
Cs-135	--	--	5.47E-04	--	1.90E-05	--	1.21E-03	5.29E-03	--	--	--	**7.07E-03**
Cs-137	1.78E+03	5.34E+01	1.59E+05	1.46E+04	4.78E+01	1.43E+03	3.19E+03	4.97E+03	3.13E+02	2.08E+01	2.45E+01	**1.85E+05**
Dy-159	1.14E-01	--	--	--	--	--	--	--	--	--	--	**1.14E-01**
Es-254	--	--	--	--	--	--	--	1.15E-04	--	--	--	**1.15E-04**
Es-254m	--	--	--	--	--	--	--	2.63E-07	--	--	--	**2.63E-07**
Eu-149	7.20E-02	--	--	--	--	--	--	--	--	--	--	**7.20E-02**
Eu-152	9.20E-01	4.56E+00	1.79E+00	1.38E-01	--	--	8.00E-03	2.92E+01	--	--	--	**3.66E+01**
Eu-154	1.24E+03	1.72E+00	3.15E+02	1.72E+01	3.55E-02	5.77E-02	5.75E+00	7.92E+01	--	--	4.01E-01	**1.66E+03**
Eu-155	4.72E+00	3.30E-02	2.42E+02	1.10E+01	--	3.03E-01	3.82E+01	8.68E+00	--	--	5.50E-03	**3.05E+02**
Fe-55	5.98E+01	1.41E-02	7.30E-01	--	3.02E+00	--	2.90E+01	2.29E-03	--	--	--	**9.26E+01**
Fe-59	1.74E-02	--	--	--	--	--	6.26E-04	--	--	--	--	**1.80E-02**
Fr-221	5.12E-03	4.14E-05	7.80E-04	8.30E-05	1.28E-06	5.95E-15	2.96E-08	4.39E-03	3.87E-10	1.98E-16	1.51E-05	**1.04E-02**
Fr-223	3.56E-03	1.90E-16	1.07E-03	1.20E-08	1.51E-10	5.89E-10	2.32E-05	2.08E-05	9.61E-11	4.73E-11	1.01E-06	**4.67E-03**
Gd-152	1.65E-16	8.19E-16	3.76E-14	1.10E-15	--	--	1.44E-18	1.67E-14	--	--	--	**5.64E-14**
Gd-153	2.61E-01	--	3.44E-05	--	--	--	5.27E-06	9.06E-07	--	--	--	**2.61E-01**
H-3	1.66E+01	1.18E-01	1.95E+03	--	6.16E-02	--	1.64E-01	1.41E+00	--	--	5.17E-02	**1.96E+03**
Hf-175	3.59E-02	--	--	--	--	--	--	--	--	--	--	**3.59E-02**
Hf-181	1.18E-03	--	--	--	--	--	--	--	--	--	--	**1.18E-03**
Ho-166m	--	--	--	--	--	--	8.74E-08	1.28E-07	--	--	--	**2.15E-07**
I-125	1.70E-01	--	--	--	--	--	--	--	--	--	--	**1.70E-01**
I-129	2.04E-10	1.98E-05	2.18E-03	--	1.51E-05	--	6.03E-02	4.47E-04	--	--	--	**6.30E-02**
In-113m	1.51E-01	--	--	--	--	--	--	2.15E+00	--	--	--	**2.30E+00**
In-114	1.21E-02	--	--	--	--	--	--	--	--	--	--	**1.21E-02**
In-114m	1.26E-02	--	--	--	--	--	--	--	--	--	--	**1.26E-02**
In-115	1.12E-17	--	--	--	--	--	--	--	--	--	--	**1.12E-17**
In-115m	5.86E-06	--	--	--	--	--	--	--	--	--	--	**5.86E-06**
Ir-194	1.24E-02	--	--	--	--	--	--	--	--	--	--	**1.24E-02**
K-42	2.38E-02	--	--	--	--	--	--	--	--	--	--	**2.38E-02**
Kr-85	4.45E+01	2.01E+00	2.26E+02	--	7.25E-01	4.82E+02	2.83E+00	2.67E+01	--	--	6.61E-01	**7.86E+02**
La-137	--	--	--	--	--	--	--	7.49E-08	--	--	--	**7.49E-08**
La-140	--	--	--	--	--	--	2.89E-04	--	--	--	--	**2.89E-04**
Lu-177	3.71E-04	--	--	--	--	--	--	--	--	--	--	**3.71E-04**
Lu-177m	1.74E-03	--	--	--	--	--	--	--	--	--	--	**1.74E-03**
Mn-54	8.97E+00	--	4.15E-02	--	--	--	1.04E+00	--	--	--	--	**1.01E+01**
Mo-93	--	--	2.74E-05	--	--	--	3.16E-02	--	--	--	--	**3.16E-02**
Na-22	3.44E-02	--	6.24E-05	--	--	--	1.04E-05	--	--	--	--	**3.45E-02**
Nb-91	1.41E-02	--	--	--	--	--	--	--	--	--	--	**1.41E-02**
Nb-92	--	--	--	--	--	--	5.56E-09	--	--	--	--	**5.56E-09**

Table 3-9. Total RH Radionuclide Activity (Ci) on a Site Basis Decayed through 2018
Continued

Radionuclide	ANL	BAPL	Hanford (RL)	INL	KAPL-S	LANL	MFC	ORNL	SNL	SPRU	SRS	Grand Total
Nb-93m	4.82E-01	2.45E-03	3.19E-04	--	2.14E-05	--	7.73E-03	6.25E-01	--	--	--	**1.12E+00**
Nb-94	--	--	7.62E-02	--	4.62E-02	--	2.22E-01	9.09E-02	--	--	--	**4.35E-01**
Nb-95	1.16E+01	--	5.88E-15	2.03E-05	--	--	1.75E-01	5.50E-01	--	--	--	**1.23E+01**
Nb-95m	6.41E-02	--	3.14E-17	1.08E-07	--	--	2.00E-03	5.03E-03	--	--	--	**7.11E-02**
Nd-144	1.71E-15	--	3.17E-14	3.10E-15	--	1.48E-15	1.08E-14	2.76E-13	--	--	3.66E-16	**3.26E-13**
Nd-147	--	--	--	--	--	--	1.90E-04	--	--	--	--	**1.90E-04**
Ni-59	1.14E-02	1.03E-01	2.06E-04	--	8.91E-02	--	2.22E-01	1.92E-04	--	--	2.88E-10	**4.26E-01**
Ni-63	1.56E+00	8.02E+00	7.34E-01	--	1.20E+01	--	3.75E+01	1.56E-02	--	--	--	**5.98E+01**
Np-235	1.29E+00	--	--	--	--	--	--	4.26E-08	--	--	--	**1.29E+00**
Np-237	1.11E-03	1.61E-04	2.86E-01	3.14E-03	8.72E-05	4.52E-06	6.98E-02	3.74E-01	1.79E-05	3.45E-07	2.48E+00	**3.21E+00**
Np-238	1.15E-03	--	4.62E-03	--	--	--	1.73E-05	3.61E-04	--	--	1.47E-04	**6.29E-03**
Np-239	6.47E+00	1.13E-04	4.97E+00	5.78E-18	2.50E-06	--	1.12E-02	3.87E+01	--	--	1.44E+00	**5.16E+01**
Np-240	8.62E-23	--	2.07E-09	2.92E-23	9.71E-17	--	5.68E-24	1.85E-05	--	--	1.08E-15	**1.85E-05**
Np-240m	7.19E-20	--	1.73E-06	2.43E-20	8.09E-14	--	4.73E-21	1.54E-02	--	--	9.04E-13	**1.54E-02**
Os-185	1.62E-03	--	--	--	--	--	--	--	--	--	--	**1.62E-03**
Os-194	1.24E-02	--	--	--	--	--	--	--	--	--	--	**1.24E-02**
Pa-231	1.79E-08	8.36E-12	1.35E-05	1.46E-05	7.62E-08	6.98E-07	5.30E-01	7.71E-07	1.80E-07	7.40E-08	4.05E-04	**5.30E-01**
Pa-233	6.81E-03	1.04E-04	2.86E-01	3.13E-03	8.66E-05	4.52E-06	4.25E-02	2.29E-01	1.79E-05	3.45E-07	2.48E+00	**3.04E+00**
Pa-234	7.07E-05	2.37E-11	1.47E-03	1.95E-03	6.04E-11	5.30E-08	2.12E-06	2.55E-05	1.85E-06	2.06E-05	9.62E-05	**3.64E-03**
Pa-234m	5.44E-02	1.82E-08	1.13E+00	1.50E+00	4.65E-08	4.07E-05	1.63E-03	1.96E-02	1.42E-03	1.59E-02	7.40E-02	**2.80E+00**
Pb-209	5.12E-03	4.14E-05	7.80E-04	8.29E-05	1.28E-06	5.95E-15	2.95E-08	4.39E-03	3.87E-10	1.98E-16	1.51E-05	**1.04E-02**
Pb-210	8.85E-01	3.97E-18	1.05E+00	1.33E-09	1.88E-07	2.20E-12	9.75E-15	1.00E+00	3.71E-11	6.94E-12	4.97E-09	**2.94E+00**
Pb-211	2.60E-01	1.96E-15	7.74E-02	8.72E-07	1.06E-08	4.27E-08	3.85E-04	8.82E-04	6.97E-09	3.43E-09	7.33E-05	**3.38E-01**
Pb-212	5.01E+00	8.41E-03	1.27E-03	2.73E-05	1.13E-04	8.56E-17	4.29E-05	2.25E-01	1.99E-18	3.23E-17	2.44E-15	**5.25E+00**
Pb-214	6.44E-10	4.30E-15	3.03E+00	3.40E-08	1.64E-06	5.49E-11	8.06E-12	2.98E+00	1.32E-09	2.30E-10	4.26E-08	**6.01E+00**
Pd-107	--	--	7.64E-05	--	7.97E-07	--	4.82E-05	1.79E-03	--	--	--	**1.91E-03**
Pm-145	5.68E-01	--	--	--	--	--	3.26E-03	2.00E-05	--	--	--	**5.72E-01**
Pm-146	7.47E-01	--	--	--	--	--	1.18E-03	2.49E-04	--	--	--	**7.48E-01**
Pm-147	7.67E+01	1.52E-01	3.54E+00	--	2.55E-02	1.41E-04	1.28E+01	1.52E+01	--	--	5.29E-02	**1.08E+02**
Pm-148	1.94E-04	--	--	--	--	--	--	--	--	--	--	**1.94E-04**
Pm-148m	3.73E-03	--	--	--	--	--	--	--	--	--	--	**3.73E-03**
Po-210	1.57E+00	8.01E-20	1.05E+00	1.31E-09	1.88E-07	2.20E-12	2.65E-16	9.98E-01	2.24E-11	4.26E-12	4.97E-09	**3.62E+00**
Po-211	7.14E-04	5.38E-18	2.13E-04	2.40E-09	2.90E-11	1.17E-10	1.06E-06	2.43E-06	1.92E-11	9.42E-12	2.02E-07	**9.30E-04**
Po-212	3.21E+00	5.39E-03	8.15E-04	1.75E-05	7.25E-05	5.49E-17	2.75E-05	1.44E-01	1.27E-18	2.07E-17	1.56E-15	**3.36E+00**
Po-213	5.01E-03	4.06E-05	7.63E-04	8.12E-05	1.25E-06	5.82E-15	2.89E-08	4.30E-03	3.79E-10	1.94E-16	1.48E-05	**1.02E-02**
Po-214	6.44E-10	4.29E-15	3.03E+00	3.40E-08	1.64E-06	5.49E-11	8.06E-12	2.98E+00	1.32E-09	2.30E-10	4.26E-08	**6.00E+00**
Po-215	2.60E-01	1.96E-15	7.74E-02	8.72E-07	1.06E-08	4.27E-08	3.85E-04	8.82E-04	6.97E-09	3.43E-09	7.33E-05	**3.38E-01**
Po-216	5.01E+00	8.41E-03	1.27E-03	2.73E-05	1.13E-04	8.56E-17	4.29E-05	2.25E-01	1.99E-18	3.23E-17	2.44E-15	**5.25E+00**
Po-218	6.44E-10	4.30E-15	3.03E+00	3.40E-08	1.64E-06	5.49E-11	8.06E-12	2.98E+00	1.32E-09	2.30E-10	4.26E-08	**6.01E+00**
Pr-144	4.92E+01	--	2.54E-02	2.45E-01	--	1.17E-01	3.12E+02	1.27E+01	--	--	9.20E-07	**3.74E+02**
Pr-144m	6.89E-01	--	3.56E-04	3.43E-03	--	1.64E-03	4.36E+00	1.78E-01	--	--	1.29E-08	**5.23E+00**
Pu-236	5.56E-01	--	1.57E-06	9.90E-07	--	--	3.32E-04	1.41E-04	--	--	--	**5.57E-01**
Pu-238	1.33E+02	1.25E+00	2.20E+03	6.10E+02	1.20E+00	1.53E+00	3.69E+01	1.71E+03	1.40E+01	1.77E-02	4.26E+03	**8.97E+03**
Pu-239	1.09E+02	1.03E-03	1.04E+03	6.99E+02	1.31E-02	9.26E+01	3.78E+01	4.96E+01	3.76E+01	1.25E+00	1.13E+01	**2.08E+03**
Pu-240	6.49E+01	--	5.78E+02	3.90E+02	1.30E-02	2.51E+00	9.41E+00	1.24E+02	2.40E+01	--	7.11E+00	**1.20E+03**
Pu-241	9.00E+01	1.67E-01	1.39E+04	3.01E+03	2.29E-01	7.35E+01	3.45E+02	3.76E+03	2.98E+02	1.77E-01	4.78E+03	**2.62E+04**
Pu-242	5.05E-02	1.85E-05	5.06E-01	2.33E-01	3.94E-06	1.52E-03	7.72E-03	1.36E+00	1.13E-02	7.07E-03	5.21E-01	**2.70E+00**

Table 3-9. Total RH Radionuclide Activity (Ci) on a Site Basis Decayed through 2018
Continued

Radionuclide	ANL	BAPL	Hanford (RL)	INL	KAPL-S	LANL	MFC	ORNL	SNL	SPRU	SRS	Grand Total
Pu-243	6.06E-10	--	1.12E-10	1.23E-12	7.07E-15	--	--	2.21E-02	--	--	4.49E-08	**2.21E-02**
Pu-244	7.20E-20	--	1.73E-06	2.43E-20	8.10E-14	--	4.74E-21	1.54E-02	--	--	9.05E-13	**1.54E-02**
Pu-246	--	--	--	--	--	--	--	1.00E-08	--	--	--	**1.00E-08**
Ra-223	2.60E-01	1.96E-15	7.74E-02	8.72E-07	1.06E-08	4.27E-08	3.85E-04	8.82E-04	6.97E-09	3.43E-09	7.33E-05	**3.38E-01**
Ra-224	5.01E+00	8.41E-03	1.27E-03	2.73E-05	1.13E-04	8.56E-17	4.29E-05	2.25E-01	1.99E-18	3.23E-17	2.44E-15	**5.25E+00**
Ra-225	5.12E-03	4.14E-05	7.80E-04	9.39E-05	1.28E-06	5.95E-15	5.48E-08	4.40E-03	3.87E-10	1.98E-16	1.52E-05	**1.05E-02**
Ra-226	7.58E-10	5.78E-15	3.03E+00	3.40E-08	1.64E-06	5.49E-11	9.96E-12	2.98E+00	1.32E-09	2.30E-10	4.26E-08	**6.01E+00**
Ra-228	3.18E-02	1.35E-18	6.97E-04	5.45E-05	1.48E-04	2.39E-16	7.29E-17	2.51E-04	9.05E-18	1.12E-16	3.82E-15	**3.29E-02**
Rb-87	--	--	--	--	--	--	2.25E-09	1.95E-07	--	--	--	**1.97E-07**
Re-188	2.02E-03	--	--	--	--	--	--	--	--	--	--	**2.02E-03**
Rh-102	6.94E-01	--	--	--	--	--	--	2.40E-07	--	--	--	**6.94E-01**
Rh-103m	6.37E-01	--	--	--	--	--	3.81E-05	3.29E-01	--	--	--	**9.66E-01**
Rh-106	5.58E+01	--	2.75E-02	--	3.59E-04	1.16E+00	4.32E+01	9.82E+00	--	--	1.18E-05	**1.10E+02**
Rn-219	2.60E-01	1.96E-15	7.74E-02	8.72E-07	1.06E-08	4.27E-08	3.85E-04	8.82E-04	6.97E-09	3.43E-09	7.33E-05	**3.38E-01**
Rn-220	5.01E+00	8.41E-03	1.27E-03	2.73E-05	1.13E-04	8.56E-17	4.29E-05	2.25E-01	1.99E-18	3.23E-17	2.44E-15	**5.25E+00**
Rn-222	6.44E-10	4.30E-15	3.03E+00	3.40E-08	1.64E-06	5.49E-11	8.06E-12	2.98E+00	1.32E-09	2.30E-10	4.26E-08	**6.01E+00**
Ru-103	6.38E-01	--	--	--	--	--	3.82E-05	3.29E-01	--	--	--	**9.68E-01**
Ru-106	5.58E+01	--	2.75E-02	--	3.59E-04	1.16E+00	4.32E+01	9.82E+00	--	--	1.18E-05	**1.10E+02**
S-35	1.18E-02	--	--	--	--	--	--	--	--	--	--	**1.18E-02**
Sb-124	1.75E-01	--	--	--	--	--	1.73E+00	--	--	--	--	**1.90E+00**
Sb-125	4.76E+01	2.85E-03	3.73E+01	--	1.09E-04	1.78E-01	6.48E+00	1.79E+00	--	--	--	**9.34E+01**
Sb-126	1.95E-06	--	2.50E-06	--	2.13E-06	7.90E-03	3.60E-05	1.25E-04	--	--	--	**8.06E-03**
Sb-126m	1.60E-05	--	1.78E-05	--	1.59E-05	5.64E-02	1.55E-03	6.90E-03	--	--	--	**6.49E-02**
Sc-46	8.63E-02	--	--	--	--	--	--	--	--	--	--	**8.63E-02**
Se-75	8.05E-02	--	--	--	--	--	--	--	--	--	--	**8.05E-02**
Se-79	--	--	1.24E-01	--	4.88E-06	--	3.33E-04	9.97E-04	--	--	1.07E-02	**1.36E-01**
Sm-145	2.92E-01	--	--	--	--	--	--	1.82E-09	--	--	--	**2.92E-01**
Sm-146	1.71E-10	--	--	--	--	--	2.02E-11	5.71E-14	--	--	--	**1.92E-10**
Sm-147	5.08E-11	1.01E-13	2.33E-09	--	4.37E-12	6.54E-15	1.54E-09	2.01E-09	--	--	5.15E-11	**5.99E-09**
Sm-148	4.46E-20	3.58E-33	1.78E-29	1.99E-31	--	--	6.30E-36	3.15E-16	--	--	--	**3.15E-16**
Sm-151	1.79E+00	1.57E-01	3.76E+01	--	5.31E-02	2.24E-02	2.62E+00	4.82E+00	--	--	2.83E-01	**4.74E+01**
Sn-113	1.51E-01	--	--	--	--	--	--	2.15E+00	--	--	--	**2.30E+00**
Sn-119m	9.82E-01	--	1.81E-09	--	--	--	8.13E-04	7.37E-05	--	--	--	**9.83E-01**
Sn-121	3.87E-01	--	2.51E-04	--	1.05E-04	7.27E-01	7.77E-04	1.04E-01	--	--	--	**1.22E+00**
Sn-121m	4.99E-01	--	3.24E-04	--	1.35E-04	9.37E-01	1.00E-03	1.34E-01	--	--	--	**1.57E+00**
Sn-123	9.18E-01	--	--	--	--	--	4.38E-04	2.18E-07	--	--	--	**9.18E-01**
Sn-126	1.60E-05	--	1.78E-05	--	1.59E-05	5.64E-02	1.55E-03	6.90E-03	--	--	--	**6.49E-02**
Sr-85	4.85E-02	--	--	--	--	--	--	--	--	--	--	**4.85E-02**
Sr-89	1.48E+00	--	--	--	--	--	1.93E-05	1.32E-01	--	--	--	**1.61E+00**
Sr-90	1.27E+03	5.29E+01	1.00E+05	1.25E+04	4.25E+01	1.00E+03	2.65E+03	6.11E+03	2.34E+02	2.87E+00	1.77E+01	**1.24E+05**
Ta-182	2.82E+02	--	--	--	--	--	5.10E-05	4.26E-01	--	--	--	**2.82E+02**
Tb-157	3.86E-02	--	--	--	--	--	--	1.60E-09	--	--	--	**3.86E-02**
Tb-160	2.31E-02	--	--	--	--	--	--	--	--	--	--	**2.31E-02**
Tc-97	3.08E-09	--	--	--	--	--	1.38E-07	--	--	--	--	**1.42E-07**
Tc-97m	1.00E-01	--	--	--	--	--	--	--	--	--	--	**1.00E-01**
Tc-98	--	--	--	--	--	--	2.22E-09	8.63E-08	--	--	--	**8.86E-08**
Tc-99	5.68E-03	1.33E-02	5.17E+00	--	1.43E-02	--	1.56E+01	2.08E-01	--	4.48E-03	1.12E-03	**2.10E+01**

Table 3-9. Total RH Radionuclide Activity (Ci) on a Site Basis Decayed through 2018
Continued

Radionuclide	ANL	BAPL	Hanford (RL)	INL	KAPL-S	LANL	MFC	ORNL	SNL	SPRU	SRS	Grand Total
Te-121	1.75E-01	--	--	--	--	--	--	--	--	--	--	**1.75E-01**
Te-121m	1.76E-01	--	--	--	--	--	--	--	--	--	--	**1.76E-01**
Te-123	1.27E-15	--	--	--	--	--	--	--	--	--	--	**1.27E-15**
Te-123m	2.04E-01	--	--	--	--	--	--	--	--	--	--	**2.04E-01**
Te-125m	1.17E+01	2.34E-04	9.12E+00	--	2.66E-05	4.34E-02	7.67E-01	3.81E-01	--	--	5.30E-15	**2.20E+01**
Te-127	1.98E+00	--	--	--	--	--	2.36E-04	9.34E-08	--	--	--	**1.98E+00**
Te-127m	2.02E+00	--	--	--	--	--	2.41E-04	9.54E-08	--	--	--	**2.02E+00**
Te-129	1.99E-02	--	--	--	--	--	--	--	--	--	--	**1.99E-02**
Te-129m	3.10E-02	--	--	--	--	--	--	--	--	--	--	**3.10E-02**
Th-227	2.55E-01	4.63E-15	7.64E-02	8.60E-07	1.06E-08	4.21E-08	7.51E-04	1.10E-03	6.87E-09	3.38E-09	7.23E-05	**3.34E-01**
Th-228	4.99E+00	8.41E-03	1.27E-03	2.73E-05	1.13E-04	8.56E-17	4.27E-05	2.25E-01	1.99E-18	3.23E-17	2.44E-15	**5.23E+00**
Th-229	5.12E-03	4.15E-05	7.80E-04	1.16E-04	1.28E-06	5.95E-15	1.05E-07	4.41E-03	3.87E-10	1.98E-16	1.55E-05	**1.05E-02**
Th-230	1.75E-05	2.67E-10	1.71E-04	4.39E-05	4.75E-04	6.35E-08	3.16E-07	1.23E+00	2.43E-06	3.54E-07	1.72E-05	**1.23E+00**
Th-231	8.43E-03	3.79E-06	5.39E-02	2.68E-01	4.25E-04	8.25E-03	3.09E-03	2.69E-03	4.26E-03	1.17E-03	1.47E+00	**1.82E+00**
Th-232	2.03E-10	2.25E-16	1.22E-03	1.42E-04	2.39E-04	1.17E-15	1.21E-14	1.32E-03	8.76E-17	6.96E-16	9.78E-15	**2.92E-03**
Th-234	5.44E-02	1.82E-08	1.13E+00	1.50E+00	4.65E-08	4.07E-05	1.63E-03	1.96E-02	1.42E-03	1.59E-02	7.40E-02	**2.80E+00**
Tl-206	1.17E-06	2.97E-24	1.39E-06	1.75E-15	2.48E-13	2.90E-18	8.09E-21	1.32E-06	4.90E-17	9.17E-18	6.56E-15	**3.88E-06**
Tl-207	2.59E-01	1.95E-15	7.72E-02	8.69E-07	1.05E-08	4.26E-08	3.84E-04	8.80E-04	6.95E-09	3.42E-09	7.31E-05	**3.37E-01**
Tl-208	1.80E+00	3.02E-03	4.57E-04	9.82E-06	4.07E-05	3.08E-17	1.54E-05	8.10E-02	7.15E-19	1.16E-17	8.75E-16	**1.89E+00**
Tl-209	1.08E-04	8.70E-07	1.64E-05	1.74E-06	2.68E-08	1.25E-16	6.21E-10	9.23E-05	8.13E-12	4.16E-18	3.18E-07	**2.19E-04**
Tm-170	3.07E-02	--	--	--	--	--	--	--	--	--	--	**3.07E-02**
Tm-171	4.46E-01	--	--	--	--	--	--	5.38E-06	--	--	--	**4.46E-01**
U-232	1.50E+00	8.40E-03	6.28E-04	9.94E-10	1.56E-06	--	8.76E-06	2.20E-01	--	--	--	**1.73E+00**
U-233	5.55E-05	9.86E-03	7.56E-01	5.37E+00	1.82E-03	4.43E-11	1.19E-02	2.98E+00	2.20E-06	2.25E-12	6.73E-02	**9.20E+00**
U-234	2.89E-02	2.90E-04	1.62E+00	4.39E+00	2.42E-03	1.73E-03	1.87E-01	1.61E-01	1.32E-01	1.28E-02	2.14E-01	**6.74E+00**
U-235	8.43E-03	3.79E-06	5.39E-02	2.68E-01	4.25E-04	8.25E-03	3.09E-03	2.69E-03	4.26E-03	1.17E-03	1.47E+00	**1.82E+00**
U-236	1.92E-07	4.57E-05	1.71E-01	1.17E-05	5.30E-04	6.06E-06	2.46E-03	3.26E-03	1.42E-06	4.70E-06	2.78E-05	**1.77E-01**
U-237	2.10E-03	3.91E-06	3.32E-01	7.05E-02	5.47E-06	1.76E-03	9.06E-03	8.81E-02	7.13E-03	4.25E-06	1.14E-01	**6.25E-01**
U-238	5.55E-02	1.82E-08	1.13E+00	1.51E+00	4.65E-08	4.07E-05	2.41E-03	2.87E-02	1.42E-03	1.59E-02	7.41E-02	**2.82E+00**
U-240	7.19E-20	--	1.73E-06	2.43E-20	8.09E-14	--	4.73E-21	1.54E-02	--	--	9.04E-13	**1.54E-02**
V-49	3.65E+00	--	--	--	--	--	--	--	--	--	--	**3.65E+00**
W-181	9.24E-03	--	--	--	--	--	--	--	--	--	--	**9.24E-03**
W-185	9.91E-03	--	--	--	--	--	--	--	--	--	--	**9.91E-03**
W-188	2.00E-03	--	--	--	--	--	--	--	--	--	--	**2.00E-03**
Xe-127	9.96E-03	--	--	--	--	--	--	--	--	--	--	**9.96E-03**
Y-89m	1.38E-04	--	--	--	--	--	1.80E-09	1.23E-05	--	--	--	**1.50E-04**
Y-90	1.27E+03	5.29E+01	1.00E+05	1.25E+04	4.25E+01	1.00E+03	2.65E+03	6.11E+03	2.34E+02	2.87E+00	1.77E+01	**1.24E+05**
Y-91	3.29E+00	--	--	--	--	--	5.69E-04	--	--	--	--	**3.29E+00**
Zn-65	7.27E-02	--	2.30E-04	--	--	--	2.74E-01	--	--	--	--	**3.47E-01**
Zr-93	2.72E-05	3.11E-03	4.95E-04	--	1.22E-04	--	1.59E-03	2.57E-02	--	--	--	**3.11E-02**
Zr-95	5.44E+00	--	2.67E-15	9.21E-06	--	--	1.70E-01	4.27E-01	--	--	--	**6.04E+00**
Grand Total	**8.78E+03**	**2.28E+02**	**5.33E+05**	**5.93E+04**	**1.97E+02**	**5.46E+03**	**1.30E+04**	**3.46E+04**	**1.48E+03**	**4.80E+01**	**9.40E+03**	**6.65E+05**

Data Source: CID Data Version D.18.00.33 (LANL-CO 2019b). 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 2018

TRU Waste Generator Site	CH Activity (Ci)	RH Activity (Ci)	Total Activity (Ci)
Argonne National Laboratory	2.47E+02	8.78E+03	9.02E+03
Bettis Atomic Power Laboratory	--	2.28E+02	2.28E+02
Hanford (Richland) Site	4.10E+05	5.33E+05	9.43E+05
Idaho National Laboratory	9.61E+04	5.93E+04	1.55E+05
Knolls Atomic Power Laboratory - Nuclear Fuel Services	1.52E+02	--	1.52E+02
Knolls Atomic Power Laboratory - Schenectady	--	1.97E+02	1.97E+02
Lawrence Berkeley National Laboratory	2.80E-02	--	2.80E-02
Lawrence Livermore National Laboratory	1.50E+04	--	1.50E+04
Los Alamos National Laboratory	6.58E+05	5.46E+03	6.64E+05
Material and Fuels Complex	9.89E+01	1.30E+04	1.31E+04
Nevada National Security Site	5.59E+02	--	5.59E+02
Nuclear Radiation Development Site	3.31E+01	--	3.31E+01
Oak Ridge National Laboratory	2.94E+04	3.46E+04	6.40E+04
Sandia National Laboratories	3.65E+02	1.48E+03	1.84E+03
Savannah River Site	1.77E+06	9.40E+03	1.78E+06
Separations Process Research Unit	6.48E+00	4.80E+01	5.45E+01
Grand Total	**2.98E+06**	**6.65E+05**	**3.65E+06**

Data Source: CID Data Version D.18.00.33 (LANL-CO 2019b). 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 Adjusted ATWIR-2018 and this report. For comparison, the activities reported in this table were decay-corrected through the end of CY 2033. The net change column includes both increases and decreases in activity 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 decreased by ~475,000 Ci. This decrease, when offset slightly by the increase of ~9,110 Ci that were emplaced at the WIPP during CY 2018, results in an overall decrease of ~468,000 Ci. This is primarily attributed to the removal of three SRS waste streams, as discussed in section 3.1.2, which collectively account for a decrease of ~237,000 Ci. RL also contributed to the decrease in activity mainly due to re-evaluating and updating anticipated activity estimates for the RLPFP-01 and RL300-08 waste streams, resulting in a combined decrease of ~196,000 Ci.

Table 3-11. CH/RH Activity Changes Decayed through 2033

TRU Waste Generator Site	Adjusted ATWIR-2018 Total (Ci)	ATWIR-2019 Total (Ci)	Net Change (Ci)
Hanford (Richland) Site	8.46E+05	6.33E+05	-2.13E+05
Idaho National Laboratory	1.74E+05	1.23E+05	-5.14E+04
Los Alamos National Laboratory	4.39E+05	5.12E+05	+7.29E+04
Oak Ridge National Laboratory	3.67E+04	4.26E+04	+5.91E+03
Savannah River Site	1.52E+06	1.23E+06	-2.89E+05
Small Quantity Sites	2.91E+04	2.78E+04	-1.36E+03
Anticipated Total	**3.05E+06**	**2.57E+06**	**-4.75E+05**
WIPP (Emplaced)	1.72E+06	1.73E+06	+9.11E+03
WCS (Temporary Storage)	5.89E+03	4.36E+03	-1.53E+03
Emplaced/Temporary Storage Total	**1.73E+06**	**1.74E+06**	**+7.58E+03**
Grand Total	**4.78E+06**	**4.31E+06**	**-4.68E+05**

Data Source: CID Data Versions D.17.02.33.LWA (LANL-CO 2019a) and D.18.00.33 (LANL-CO 2019b).
Note: This table only contains data for WIPP-bound waste streams at the TRU waste generator sites.

4.0 POTENTIAL TRU WASTE AND TRU WASTE BEYOND CY 2033

This section presents the TRU waste inventory data that were collected and reported using the methodology discussed in section 2.0. Actual numerical values in this section are rounded to three significant figures for presentation purposes.

Potential waste streams have meaningful uncertainties regarding their eligibility, due to technical or legal considerations, for emplacement in the WIPP repository as of the data cutoff date for this report. As discussed in section 4.1, a site may designate waste streams as potential for many different reasons. In most cases, a waste stream is reported as potential because of technical considerations, such as the lack of characterization data; however, sites may also use this designation at the direction of the DOE. Regardless of whether a waste stream is listed as WIPP-bound or potential in this report, TRU waste must meet all WIPP requirements (e.g., WIPP WAC and HWFP) before it can be disposed of at the WIPP.

For strategic planning initiatives across the DOE complex, the sites were requested by the DOE to report defense-related TRU waste projected beyond CY 2033, where appropriate. These projected inventory estimates include information on decontamination and decommissioning (D&D) activities and all other site activities that have produced or will produce defense-related TRU waste. The DOE may use these inventory estimates as a planning basis for future TRU waste storage and disposal needs (see section 4.2).

4.1 Potential TRU Waste

As described in section 1.0, a waste stream is designated either WIPP-bound or potential. The potential TRU waste streams identified in Table 4-1 and Table 4-2 collectively represent

~14,200 m^3, or 24 percent, of the final form TRU waste volume reported by the TRU waste generator sites during this year's data collection.

The DOE/CBFO has listed the criteria for categorizing waste streams as potential (Patterson 2018). 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-TRU 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, waste material 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 the DOE.

Three sites (BL, RP, and WV) reported only potential waste streams and no WIPP-bound waste streams. 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 until the waste stream meets the criteria to be 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	9.63E+00	Incomplete Data
BL-Parks-A	RH	6.30E-01	Incomplete Data
IN-BN-539	CH	5.17E+01	Incomplete Data
IN-DD-001	CH	4.00E+03	Incomplete Data
IN-ID-TRU-RHNH	RH	2.52E+00	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
RL170-08	RH	3.30E-01	Regulatory Restrictions
RL200-10	RH	2.20E-01	Incomplete Data
RL300-11	RH	7.56E+00	Regulatory Restrictions
RLALPHA-08	RH	1.08E+03	Incomplete Data
RLCH2-08	RH	3.52E+00	TRU Waste Determination
RLDD-01	CH	7.03E+02	Incomplete Data
RLDD-08	RH	7.18E+01	Incomplete Data
RLN622FD-01	CH	2.10E-01	Incomplete Data
RLPFP-02	CH	8.40E-01	Incomplete Data
RLPRC-01	CH	1.88E+00	Defense Determination
RLPURX-02	CH	3.76E+02	Incomplete Data
Grand Total		**6.31E+03**	

[1]See Figure 1-1 for site designators. Data Source: CID Data Version D.18.00.33 (LANL-CO 2019b).

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	4.47E+02
RP-W754	CH	3.29E+02
RP-W755	CH	8.09E+02
SR-KAC-HET-1	CH	1.61E+02
SR-KAC-PuOx-1	CH	2.04E+02
WV-M010a	CH	2.98E+01
WV-T004a	CH	4.83E+00
WV-T004b	RH	3.15E+00
WV-T006a	CH	2.41E+02
WV-T006b	RH	2.70E+02
WV-T017b	RH	7.56E+00
WV-W024a	CH	1.58E+01

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

Waste Stream ID[1]	Handling	Final Form Anticipated Volume (m^3)
WV-W024b	RH	3.15E+01
WV-W050a	CH	3.36E+00
WV-W050b	RH	5.04E+00
WV-Z001	CH	4.30E+03
Grand Total		**7.93E+03**

[1]See Figure 1-1 for site designators. Data Source: CID Data Version D.18.00.33 (LANL-CO 2019b).

Upon resolution of the applicable constraints, waste streams categorized as potential may be re-categorized as WIPP-bound from one report to the next. As shown in Table 4-3, three potential waste streams from INL were reassigned to preexisting WIPP-bound waste streams during CY 2018.

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

ATWIR-2018 Potential Waste Stream ID[1]	ATWIR-2019 WIPP-bound Waste Stream ID[1]	Reason
IN-ID-AMWTP-Hot Silver	IN-BN-510.4	Added previously missing data
IN-ID-AMWTP-U232	IN-BN-510.4	Added previously missing data
IN-UN-00C	IN-BN-650	Added previously missing data

[1]See Figure 1-1 for site designators. Data Source: CID Data Version D.18.00.33 (LANL-CO 2019b).

4.2 TRU Waste Projected Beyond 2033

Strategic planning for future TRU waste management needs is dependent upon the sites providing estimates of all their currently stored and projected TRU waste, including D&D waste. To accomplish this, the TRU waste generator sites were given direction during this collection campaign to report all projected generation estimates up to *and beyond* CY 2050. Table 4-4 identifies the portion of CH- and RH-TRU volume that is projected beyond CY 2033.

Table 4-4. Projected CH/RH-TRU Volume Beyond 2033

Waste Stream ID[1]	Handling	Final Form Volume Projected Beyond 2033 (m^3)	End Generation Year
AE-T001	CH	2.50E+01	2050
AE-T003	CH	1.26E+00	2050
AE-T009	RH	2.02E+01	2050
AW-N027.531	CH	3.57E+00	2050
AW-T031.1322	RH	2.14E+01	2050
AW-T033.1325	CH	2.14E+01	2050
AW-W020.13	RH	7.56E+00	2050
LA-CIN01.001	CH	6.59E+01	2050
LA-MHD01.001	CH	4.11E+03	2050
LA-MHD03.001	CH	6.37E+02	2050
LA-OS-00-01.001	CH	8.16E+00	2050
LL-M001	CH	2.90E+02	2050
LL-T004	CH	5.86E-01	2050
LL-W018-S5100	CH	9.21E+01	2050
OR-REDC-CH-HET	CH	5.45E+02	2062
OR-REDC-RH-HET	RH	1.56E+02	2062
OR-RF-RH-HET	RH	1.76E+01	2062
OR-TBD-RH-HET	RH	5.61E+01	2062
RL200-02	CH	2.58E+03	2037
RL325-01	CH	5.04E+00	2045
RL325-05	CH	3.01E+01	2045
RL325-07	RH	4.75E+01	2045
RL325-08	RH	3.96E+01	2045
RLDD-01	CH	5.29E+03	2057
RLDD-02	CH	3.03E+03	2040
RLDD-08	RH	5.78E+02	2057
RLDD-10	RH	3.33E+02	2045
RLWTP-08	RH	5.97E+01	2050
SR-KAC-HET	CH	3.72E+01	2036
SR-KAC-HET-1	CH	8.13E+01	2039
SR-KAC-PuOx	CH	4.74E+01	2036
SR-KAC-PuOx-1	CH	1.03E+02	2039
SR-RH-773A.01	RH	1.89E+00	2036
SR-W027-221H-HEPA	CH	6.48E+00	2036
SR-W027-221H-HET-C	CH	1.89E+00	2036
SR-W027-773A-HET	CH	8.99E+01	2050
Grand Total		**1.84E+04**	

[1]See Figure 1-1 for site designators. Data Source: CID Data Version D.18.00.33 (LANL-CO 2019b).

5.0 SUMMARY

This report is an update to the inventory used in the ATWIR-2018 and focuses on data changes resulting from waste 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 the DOE/CBFO, the DOE complex, WIPP stakeholders, and regulators, as of December 31, 2018.

The 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 and packaging materials, and chemical constituents in this update were primarily caused by: removal of three projected waste streams at SRS; revision of projected TRU waste estimates at RL and LANL; the acquisition of new characterization data, processing information, and repackaging experience resulting in more accurate TRU waste inventory estimates; and the implementation of the DOE/CBFO clarification of TRU waste volume calculation methodology.

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 purposes.

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 a surface dose rate not greater than 200 millirem per hour.

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 in the WIPP repository. Emplaced inventory is tracked by the WDS, the official database of record for waste emplaced in the WIPP repository.

Final Form Waste – Form of waste in packaging approved for shipment to and emplacement in the WIPP repository.

Hazardous Waste Facility Permit – Authorizes the management, storage, and disposal of CH- and RH-TRU mixed waste at the WIPP, and establishes the general and specific standards for these activities.

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 the 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 – 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 4.1, a designation within this report for a waste stream with meaningful uncertainties regarding its eligibility, due to technical or legal considerations, for emplacement in the WIPP repository, as of the data cutoff date for this report. This designation is not intended to identify whether the waste stream will ultimately be disposed of in the WIPP repository. Regardless of its designation in this report, TRU waste must meet all WIPP requirements before it can be disposed of in the WIPP repository. Potential inventory will not be included in PA.

Projected Inventory – The 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 2033 is presented in this report). TRU waste in projected waste streams includes waste from programs that have not come on-line as of the data cutoff date for this report, as well as waste from ongoing projects and D&D waste that has not yet been packaged.

Quality Assurance Program Document – The QAPD establishes QA program requirements for achieving quality for all work sponsored by the CBFO using a graded approach. The provisions of the QAPD apply to all programs and projects managed by the CBFO which require a QA program, including those implementing activities related to compliance certification, waste characterization and certification, repository performance assessment, waste isolation, waste transportation, nuclear safety, environmental protection, and management and operation of the WIPP.

Radioactive – Refers 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 a surface dose rate equal to or exceeding 200 millirem per hour.

Stored Inventory – The part of the TRU waste inventory that currently exists (already generated, but not yet shipped to the WIPP) as of the data cutoff date.

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 – Waste containing more than 100 nanocuries of alpha-emitting TRU isotopes per gram of waste, with half-lives greater than 20 years, except for: (A) high-level radioactive waste; (B) waste that the Secretary of Energy has determined, with the concurrence of the Administrator of the U.S. Environmental Protection Agency, does not need the degree of isolation required by the disposal regulations; or (C) waste that the Nuclear Regulatory Commission has approved for disposal on a case-by-case basis in accordance with Part 61 of Title 10, Code of Federal Regulations.

TRU Waste Generator Sites – The DOE facilities throughout the United States that generate or store TRU waste. These facilities may be referred to as "sites."

Waste Acceptance Criteria – Constraints (limits) on the physical, chemical, and radiological properties of TRU waste and its packaging as determined by the WIPP's authorization basis requirements. TRU waste will not be approved for shipment to and disposal at the WIPP until it has been certified as meeting these criteria. The WAC ensures that TRU waste is managed and disposed of in a manner that protects human health and safety and the environment.

Waste Control Specialists, LLC – WCS, located in Andrews County, Texas, is a licensed commercial radioactive waste disposal facility.

Waste Data System – The DOE information system designed to verify compliance with requirements, and to track and archive TRU waste containers disposed of in the WIPP repository.

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 disposal of radioactive waste generated by atomic energy defense activities.

Waste Material – A non-radiological material that is present in TRU waste (e.g., cellulose, plastic, and rubber)

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

Waste Stream – Waste 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 repository as of the data cutoff date. WIPP-bound inventory will be included in PA.

7.0 REFERENCES

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APPENDIX A WIPP-BOUND TRU WASTE PROFILE REPORTS

The following WPRs contain final form information through CY 2033 on waste streams that are placed in the WIPP-bound category as of the inventory date, December 31, 2018.

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**	12/31/2018
Stream Name	ANL-E Contact-Handled Mixed Heterogeneous Debris					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum Dir Ld w/ Liner	32.3	86.3	118.7
Final Form Total	32.3	86.3	118.7

Waste Material Parameters

Material Parameter	Average Density (kg/m^3)
Iron-based Metal/Alloys	43.18
Aluminum-based Metal/Alloys	0.76
Other Metal/Alloys	3.46
Other Inorganic Materials	3.63
Cellulose	3.13
Rubber	6.17
Plastic	22.56
Cement	0.00
Solidified Inorganic Material	1.52
Solidified Organic Material	0.08
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	36.71
Packaging Material, Rubber	0.56
Packaging Material, Steel	129.52
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	5.34E-02
Am-243	8.01E-03
Cm-244	1.04E+00
Cs-137	1.00E-01
Np-237	3.22E-04
Pu-238	9.01E-03
Pu-239	1.10E-01
Pu-240	5.06E-02
Pu-241	2.16E-01
Pu-242	6.56E-04
Pu-244	2.13E-07
Sr-90	7.56E-02
Th-229	6.38E-07
Th-230	4.16E-06
Th-232	3.22E-06
U-233	1.66E-04
U-234	2.70E-03
U-235	2.24E-06
U-236	3.05E-08
U-238	8.07E-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.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	ANL-E Contact-Handled Solidified Organic and Inorganic Homogenous Solids					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum Dir Ld w/ Liner	9.7	4.4	14.1
Final Form Total	9.7	4.4	14.1

Waste Material Parameters

Material Parameter	Average Density (kg/m^3)
Iron-based Metal/Alloys	0.00
Aluminum-based Metal/Alloys	1.73
Other Metal/Alloys	0.00
Other Inorganic Materials	1.73
Cellulose	0.00
Rubber	0.00
Plastic	0.00
Cement	0.00
Solidified Inorganic Material	152.12
Solidified Organic Material	17.09
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	36.71
Packaging Material, Rubber	0.56
Packaging Material, Steel	129.52
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	1.24E-01
Am-243	3.64E-03
Cm-244	6.56E-04
Cs-137	2.37E-02
Np-237	2.09E-04
Pu-238	3.12E-01
Pu-239	1.50E-01
Pu-240	1.37E-01
Pu-241	1.03E+00
Pu-242	1.72E-03
Pu-244	3.00E-08
Sr-90	1.16E-02
Th-229	1.19E-08
Th-230	2.50E-05
Th-232	6.40E-06
U-233	1.92E-05
U-234	9.60E-04
U-235	6.14E-07
U-236	2.97E-07
U-238	2.51E-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.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	RH TRU					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
RH Can w/ Remov Lid w/ 3 - 55-gal w/o Liner	17.6	23.9	41.6
RH Lead Shielded Cntr w/ 1 - 30 gal w/o Liner	18.6	6.8	25.4
Final Form Total	36.2	30.8	67.0

Waste Material Parameters

Material Parameter	**Average Density (kg/m^3)**
Iron-based Metal/Alloys	69.79
Aluminum-based Metal/Alloys	33.64
Other Metal/Alloys	31.14
Other Inorganic Materials	42.82
Cellulose	55.05
Rubber	15.29
Plastic	27.25
Cement	0.00
Solidified Inorganic Material	2.78
Solidified Organic Material	0.28
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	5.97
Packaging Material, Rubber	0.76
Packaging Material, Steel	1982.76
Packaging Material, Lead	1486.21

Final Form Radionuclides

Isotope	**Typical Concentration (Ci/m^3)**
Am-241	1.97E+00
Am-243	9.66E-02
Cm-244	9.51E-01
Cs-137	2.66E+01
Np-237	1.66E-05
Pu-238	1.98E+00
Pu-239	1.63E+00
Pu-240	9.69E-01
Pu-241	1.34E+00
Pu-242	7.54E-04
Pu-244	1.07E-21
Sr-90	1.90E+01
Th-229	7.65E-05
Th-230	2.62E-07
Th-232	3.04E-12
U-233	8.28E-07
U-234	4.31E-04
U-235	1.26E-04
U-236	2.87E-09
U-238	8.28E-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.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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

Appendix A

Waste Profile Report

Site	Material and Fuels Complex	**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**	12/31/2018
Stream Name	MFC CH-MTRU Due to RCRA Metals					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum Dir Ld w/o Liner	0.4	3.2	3.6
Final Form Total	0.4	3.2	3.6

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	57.45
Other Inorganic Materials	6.89
Cellulose	21.25
Rubber	0.00
Plastic	17.22
Cement	0.00
Solidified Inorganic Material	37.88
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.56
Packaging Material, Steel	129.52
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	1.03E+01
Am-243	1.01E-10
Cs-137	8.55E-05
Np-237	4.42E-04
Pu-239	3.26E-01
Sr-90	9.13E-05
Th-229	8.43E-14
Th-230	3.07E-16
U-233	1.92E-09
U-234	6.69E-11
U-235	3.71E-06
U-238	2.62E-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.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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

Appendix A

Waste Profile Report

Site	Material and Fuels Complex	**Summary Category**	S5000	**Defense Determination**	Defense-Related	**Handling**	RH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	**Waste Matrix Code Group**	Heterogeneous Debris Waste			**Inventory Date**	12/31/2018
Stream Name	RH TRU Hot Cell Waste					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
RH Can w/ Remov Lid w/ 3 - 55-gal w/o Liner	5.0	18.9	23.9
Final Form Total	5.0	18.9	23.9

Waste Material Parameters

Material Parameter	Average Density (kg/m^3)
Iron-based Metal/Alloys	57.80
Aluminum-based Metal/Alloys	60.52
Other Metal/Alloys	49.92
Other Inorganic Materials	1.97
Cellulose	16.89
Rubber	0.00
Plastic	24.02
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	8.62
Packaging Material, Rubber	0.56
Packaging Material, Steel	922.22
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	2.79E+00
Am-243	4.53E-04
Cm-244	1.19E-01
Cs-137	4.02E+01
Np-237	2.78E-03
Pu-238	7.67E-01
Pu-239	7.85E-01
Pu-240	8.40E-02
Pu-241	1.19E+00
Pu-242	2.86E-04
Sr-90	6.29E+01
Th-229	5.18E-14
Th-230	1.81E-09
Th-232	2.07E-16
U-233	6.16E-09
U-234	1.97E-03
U-235	2.97E-05
U-236	4.20E-05
U-238	1.40E-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).

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	MFC CH-TRU Waste					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum Dir Ld w/o Liner	4.0	18.9	22.9
Final Form Total	4.0	18.9	22.9

Waste Material Parameters

Material Parameter	Average Density (kg/m^3)
Iron-based Metal/Alloys	21.75
Aluminum-based Metal/Alloys	6.74
Other Metal/Alloys	6.11
Other Inorganic Materials	28.20
Cellulose	52.21
Rubber	1.37
Plastic	53.53
Cement	0.00
Solidified Inorganic Material	15.77
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.56
Packaging Material, Steel	129.52
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	1.82E+00
Am-243	4.08E-04
Cm-244	5.09E-02
Cs-137	5.81E-02
Np-237	2.85E-03
Pu-238	1.92E-01
Pu-239	3.30E-01
Pu-240	2.86E-02
Pu-242	6.89E-06
Sr-90	5.63E-02
Th-229	5.46E-13
Th-230	4.88E-10
Th-232	5.38E-18
U-233	1.24E-08
U-234	5.34E-05
U-235	1.90E-06
U-236	1.10E-07
U-238	7.71E-05

No Hazardous Waste Numbers Provided

TRUCON Code(s)

125/225

Waste Stream Description

Miscellaneous process material debris waste.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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

Appendix A

Waste Profile Report

Site	Material and Fuels Complex	**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**	12/31/2018
Stream Name	RH MTRU Hot Cell Waste					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
RH Can w/ Remov Lid w/ 3 - 55-gal w/o Liner	3.2	5.7	8.8
Final Form Total	3.2	5.7	8.8

Waste Material Parameters

Material Parameter	Average Density (kg/m^3)
Iron-based Metal/Alloys	37.22
Aluminum-based Metal/Alloys	5.03
Other Metal/Alloys	139.56
Other Inorganic Materials	28.97
Cellulose	87.20
Rubber	0.00
Plastic	86.45
Cement	0.00
Solidified Inorganic Material	4.51
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	8.62
Packaging Material, Rubber	0.56
Packaging Material, Steel	922.22
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	4.02E+00
Am-243	2.62E-05
Cm-244	4.08E-04
Cs-137	2.52E+02
Np-237	3.69E-04
Pu-238	2.11E+00
Pu-239	2.15E+00
Pu-240	8.39E-01
Pu-241	3.59E+01
Pu-242	9.95E-05
Pu-244	5.37E-22
Sr-90	1.29E+02
Th-229	1.19E-08
Th-230	3.09E-08
Th-232	8.13E-16
U-233	1.35E-03
U-234	1.59E-02
U-235	2.69E-04
U-236	1.65E-04
U-238	2.35E-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.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	Irradiated TRU material waste					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
RH Can w/ Remov Lid w/ 3 - 55-gal 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	0.00
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	88.76
Other Inorganic Materials	0.00
Cellulose	14.81
Rubber	0.00
Plastic	44.44
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	8.62
Packaging Material, Rubber	0.56
Packaging Material, Steel	922.22
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	3.89E-03
Am-243	1.49E-05
Cs-137	7.06E+00
Np-237	2.13E-05
Pu-238	1.65E-01
Pu-239	1.36E-04
Pu-241	2.21E-02
Pu-242	2.45E-06
Sr-90	6.99E+00
Th-229	5.49E-06
Th-230	3.53E-11
Th-232	2.98E-17
U-233	1.30E-03
U-234	3.84E-05
U-235	5.01E-07
U-236	6.04E-06
U-238	2.41E-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.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	Absorbed Liquids					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum Dir Ld w/ Liner	110.0	0.0	110.0
Final Form Total	110.0	0.0	110.0

Waste Material Parameters

Material Parameter	Average Density (kg/m^3)
Iron-based Metal/Alloys	2.15
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.01
Other Inorganic Materials	5.42
Cellulose	0.00
Rubber	0.02
Plastic	4.30
Cement	0.00
Solidified Inorganic Material	291.45
Solidified Organic Material	43.52
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	36.71
Packaging Material, Rubber	0.56
Packaging Material, Steel	129.52
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	2.35E-01
Am-243	3.28E-06
Cs-137	5.58E-04
Np-237	1.42E-05
Pu-238	5.36E-02
Pu-239	4.27E-01
Pu-240	1.30E-01
Pu-241	1.09E+00
Pu-242	2.75E-05
Sr-90	6.14E-04
Th-229	6.84E-18
Th-230	6.56E-12
Th-232	9.52E-22
U-233	2.17E-12
U-234	7.15E-06
U-235	2.05E-06
U-236	3.86E-10
U-238	1.19E-05

Haz. Waste No(s).

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

No TRUCON Codes Provided

Waste Stream Description

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

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	Empty Bottles and Absorbent					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum Dir Ld 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	2.70
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	95.44
Cellulose	0.00
Rubber	0.00
Plastic	17.84
Cement	0.00
Solidified Inorganic Material	97.37
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	36.71
Packaging Material, Rubber	0.56
Packaging Material, Steel	129.52
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	7.50E-01
Cs-137	4.63E-07
Np-237	8.01E-06
Pu-238	9.83E-02
Pu-239	9.56E-01
Pu-240	4.64E-01
Pu-241	3.93E+00
Pu-242	1.34E-04
Sr-90	5.06E-07
Th-229	1.30E-14
Th-230	6.22E-11
Th-232	3.05E-18
U-233	9.99E-11
U-234	2.68E-06
U-235	5.95E-07
U-236	4.12E-08
U-238	6.25E-14

Haz. Waste No(s).

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

No TRUCON Codes Provided

Waste Stream Description

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

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	MFC Retrievable ANL-E RH TRU Containers - Stage 2					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
RH Can w/ Remov Lid w/ 3 - 55-gal w/o Liner	55.4	0.0	55.4
Final Form Total	55.4	0.0	55.4

Waste Material Parameters

Material Parameter	Average Density (kg/m^3)
Iron-based Metal/Alloys	146.43
Aluminum-based Metal/Alloys	12.13
Other Metal/Alloys	10.22
Other Inorganic Materials	5.12
Cellulose	6.71
Rubber	3.10
Plastic	15.61
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	8.62
Packaging Material, Rubber	0.56
Packaging Material, Steel	922.22
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	8.44E+00
Cm-244	1.64E-01
Cs-137	4.33E+01
Np-237	2.73E-07
Pu-238	1.91E+00
Pu-239	8.87E+00
Pu-240	4.72E+00
Pu-241	3.98E+01
Pu-242	2.23E-03
Sr-90	2.97E+01
Th-229	2.49E-09
Th-230	2.87E-08
Th-232	3.45E-20
U-233	2.83E-04
U-234	3.12E-02
U-235	1.11E-03
U-236	1.40E-08
U-238	4.09E-04

Haz. Waste No(s).

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

TRUCON Code(s)

321, 322, 325

Waste Stream Description

The 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.18.00.33***

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**	12/31/2018
Stream Name	Paper, Metal, Glass					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
100-gal Drum Dir Ld w/o 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	614.75
Aluminum-based Metal/Alloys	0.88
Other Metal/Alloys	7.18
Other Inorganic Materials	23.57
Cellulose	104.52
Rubber	9.80
Plastic	73.87
Cement	0.00
Solidified Inorganic Material	3.60
Solidified Organic Material	0.05
Soil	0.43
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.31
Packaging Material, Steel	113.42
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	1.05E+00
Np-237	2.58E-05
Pu-238	2.26E-01
Pu-239	2.63E+00
Pu-240	6.15E-01
Pu-241	4.09E+00
Pu-242	7.50E-05
Th-229	7.43E-14
Th-230	1.45E-08
Th-232	7.19E-18
U-233	4.26E-10
U-234	3.96E-04
U-235	1.14E-04
U-236	7.28E-08
U-238	8.10E-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.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	Special Setups Waste					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum Dir Ld w/ Liner	1.1	0.0	1.1
SWB w/ 4 - 55-gal Drums w/ Liners	18.5	0.0	18.5
TDOP w/ 10 - 55-gal Drums w/ Liners	6.3	0.0	6.3
Final Form Total	25.8	0.0	25.8

Waste Material Parameters

Material Parameter	**Average Density (kg/m^3)**
Iron-based Metal/Alloys	0.04
Aluminum-based Metal/Alloys	0.04
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	0.32
Rubber	0.00
Plastic	4.27
Cement	27.66
Solidified Inorganic Material	1109.00
Solidified Organic Material	0.00
Soil	0.35
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	36.68
Packaging Material, Rubber	0.97
Packaging Material, Steel	465.89
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	**Typical Concentration (Ci/m^3)**
Am-241	2.05E+00
Cs-137	2.38E-08
Np-237	6.79E-05
Pu-238	1.38E-01
Pu-239	3.66E+00
Pu-240	8.14E-01
Pu-241	4.43E+00
Pu-242	8.27E-05
Sr-90	2.61E-08
Th-229	1.29E-14
Th-230	1.54E-10
Th-232	5.95E-19
U-233	2.94E-10
U-234	1.70E-05
U-235	4.72E-06
U-236	2.41E-08
U-238	1.28E-14

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.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	Solidified Plutonium Recovery Incinerator Waste					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum Dir Ld w/ Liner	0.2	0.0	0.2
SWB w/ 4 - 55-gal Drums w/ Liners	30.2	0.0	30.2
TDOP w/ 10 - 55-gal Drums w/ Liners	2.1	0.0	2.1
Final Form Total	32.6	0.0	32.6

Waste Material Parameters

Material Parameter	**Average Density (kg/m^3)**
Iron-based Metal/Alloys	17.89
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	1.34
Other Inorganic Materials	0.00
Cellulose	0.14
Rubber	0.08
Plastic	24.87
Cement	5.72
Solidified Inorganic Material	367.23
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	36.67
Packaging Material, Rubber	0.99
Packaging Material, Steel	474.08
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	**Typical Concentration (Ci/m^3)**
Am-241	1.42E+00
Cs-137	6.99E-09
Np-237	1.87E-05
Pu-238	2.63E-01
Pu-239	6.88E+00
Pu-240	1.54E+00
Pu-241	1.25E+01
Pu-242	1.19E-04
Sr-90	7.66E-09
Th-229	8.98E-18
Th-230	5.81E-13
Th-232	1.13E-20
U-233	2.85E-12
U-234	6.69E-07
U-235	1.19E-07
U-236	4.57E-09
U-238	1.85E-15

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.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	AMWTP PCB Soil					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^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	56.21
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	2.16
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	17.30
Soil	900.23
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	36.71
Packaging Material, Rubber	0.56
Packaging Material, Steel	129.52
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	1.94E-01
Cs-137	2.46E-05
Np-237	4.92E-06
Pu-238	9.35E-04
Pu-239	3.54E-02
Pu-240	7.86E-03
Pu-241	4.21E-02
Pu-242	1.03E-06
Sr-90	2.69E-05
Th-229	9.34E-16
Th-230	6.57E-11
Th-232	5.74E-21
U-233	2.13E-11
U-234	7.15E-06
U-235	2.30E-06
U-236	2.33E-10
U-238	1.60E-16

Haz. Waste No(s).

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

No TRUCON Codes Provided

Waste Stream Description

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**	12/31/2018
Stream Name	Supercompacted Debris Waste					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

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	359.32
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	37.63
Rubber	3.72
Plastic	331.70
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	0.00
Packaging Material, Rubber	0.31
Packaging Material, Steel	113.42
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	1.74E-01
Np-237	2.97E-06
Pu-238	2.09E-02
Pu-239	6.37E-01
Pu-240	1.49E-01
Pu-241	5.46E-01
Pu-242	1.26E-05
Th-229	4.04E-14
Th-230	2.30E-11
Th-232	8.81E-18
U-233	1.05E-10
U-234	5.50E-07
U-235	5.64E-09
U-236	3.97E-08
U-238	1.76E-14

Haz. Waste No(s).

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

TRUCON Code(s)

121/221

Waste Stream Description

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

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	Supercompacted Debris Waste					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
100-gal Drum Dir Ld w/o Liner	18.2	0.0	18.2
Final Form Total	18.2	0.0	18.2

Waste Material Parameters

Material Parameter	Average Density (kg/m^3)
Iron-based Metal/Alloys	561.68
Aluminum-based Metal/Alloys	9.39
Other Metal/Alloys	4.45
Other Inorganic Materials	41.77
Cellulose	107.54
Rubber	11.92
Plastic	84.75
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	2.92
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.31
Packaging Material, Steel	113.42
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	1.45E+00
Am-243	1.99E-04
Cs-137	5.61E-05
Np-237	1.80E-04
Pu-238	1.72E-01
Pu-239	1.32E+00
Pu-240	3.21E-01
Pu-241	1.57E+00
Pu-242	4.48E-05
Sr-90	6.12E-05
Th-229	8.35E-13
Th-230	7.20E-10
Th-232	5.87E-18
U-233	3.81E-09
U-234	1.69E-05
U-235	2.58E-06
U-236	4.76E-08
U-238	9.39E-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.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	Supercompacted Debris Waste					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

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	436.39
Aluminum-based Metal/Alloys	0.55
Other Metal/Alloys	17.64
Other Inorganic Materials	45.33
Cellulose	98.80
Rubber	3.20
Plastic	144.31
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	113.42
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	3.17E+00
Am-243	4.47E-05
Cs-137	1.39E-03
Np-237	2.49E-04
Pu-238	3.95E-01
Pu-239	3.59E+00
Pu-240	1.42E+00
Pu-241	1.14E+01
Pu-242	2.08E-04
Sr-90	1.52E-03
Th-229	1.15E-12
Th-230	5.29E-09
Th-232	2.58E-17
U-233	5.24E-09
U-234	1.18E-04
U-235	1.97E-04
U-236	2.10E-07
U-238	4.30E-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.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	Supercompacted Debris Waste					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
100-gal Drum Dir Ld w/o Liner	383.4	0.0	383.4
Final Form Total	383.4	0.0	383.4

Waste Material Parameters

Material Parameter	Average Density (kg/m^3)
Iron-based Metal/Alloys	514.27
Aluminum-based Metal/Alloys	4.11
Other Metal/Alloys	6.30
Other Inorganic Materials	29.58
Cellulose	110.89
Rubber	8.04
Plastic	95.01
Cement	0.00
Solidified Inorganic Material	0.12
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	113.42
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	7.37E-01
Am-243	1.17E-04
Cm-244	5.03E-03
Cs-137	3.38E-04
Np-237	3.18E-05
Pu-238	9.11E+00
Pu-239	1.09E+00
Pu-240	2.69E-01
Pu-241	1.39E+00
Pu-242	4.13E-05
Sr-90	3.69E-04
Th-229	1.50E-08
Th-230	2.52E-09
Th-232	3.15E-18
U-233	4.25E-05
U-234	1.20E-04
U-235	1.05E-05
U-236	3.19E-08
U-238	1.26E-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

TRUCON Code(s)

121/221

Waste Stream Description

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

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	Supercompacted Debris Waste					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
100-gal Drum Dir Ld w/o Liner	2918.0	0.0	2918.0
SWB Dir Ld w/ Liner	26.3	0.0	26.3
Final Form Total	2944.3	0.0	2944.3

Waste Material Parameters

Material Parameter	**Average Density (kg/m^3)**
Iron-based Metal/Alloys	611.48
Aluminum-based Metal/Alloys	0.88
Other Metal/Alloys	7.15
Other Inorganic Materials	23.44
Cellulose	103.96
Rubber	9.75
Plastic	73.47
Cement	0.00
Solidified Inorganic Material	3.58
Solidified Organic Material	0.05
Soil	0.09
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.01
Packaging Material, Rubber	0.31
Packaging Material, Steel	113.79
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	**Typical Concentration (Ci/m^3)**
Am-241	1.75E+00
Am-243	8.13E-05
Cm-244	2.07E-03
Cs-137	4.77E-04
Np-237	3.62E-05
Pu-238	3.49E+00
Pu-239	3.22E+00
Pu-240	7.51E-01
Pu-241	3.76E+00
Pu-242	1.13E-04
Sr-90	5.25E-04
Th-229	6.49E-09
Th-230	6.92E-11
Th-232	6.34E-07
U-233	7.37E-04
U-234	7.57E-05
U-235	2.13E-05
U-236	2.22E-09
U-238	9.34E-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.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	AMWTP Non-PCB Soil					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum Dir Ld w/ Liner	10.9	0.0	10.9
Final Form Total	10.9	0.0	10.9

Waste Material Parameters

Material Parameter	Average Density (kg/m^3)
Iron-based Metal/Alloys	41.36
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.19
Cellulose	0.00
Rubber	0.00
Plastic	3.04
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	706.39
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	36.71
Packaging Material, Rubber	0.56
Packaging Material, Steel	129.52
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	1.98E-01
Cs-137	1.20E-06
Np-237	2.65E-06
Pu-238	2.65E-02
Pu-239	5.32E-01
Pu-240	1.17E-01
Pu-241	7.19E-01
Pu-242	1.48E-05
Sr-90	1.32E-06
Th-229	4.98E-16
Th-230	5.12E-11
Th-232	8.51E-20
U-233	1.14E-11
U-234	5.60E-06
U-235	6.65E-07
U-236	3.45E-09
U-238	5.65E-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.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	TRU non-PCB Liquids					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^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	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	7.57
Cement	0.00
Solidified Inorganic Material	24.80
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	36.71
Packaging Material, Rubber	0.56
Packaging Material, Steel	129.52
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	8.19E-02
Cs-137	3.65E-05
Np-237	7.50E-06
Pu-238	1.45E-03
Pu-239	5.48E-02
Pu-240	1.22E-02
Pu-241	6.63E-02
Pu-242	1.59E-06
Sr-90	4.00E-05
Th-229	1.43E-15
Th-230	1.89E-14
Th-232	8.88E-21
U-233	3.26E-11
U-234	4.09E-09
U-235	5.40E-11
U-236	3.60E-10
U-238	2.47E-16

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.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

Waste Stream ID: **IN-BN-538**

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**	12/31/2018
Stream Name	Oversized Debris Items from Supercompactor Facility					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
SLB2 Dir Ld	332.6	0.0	332.6
Final Form Total	332.6	0.0	332.6

Waste Material Parameters

Material Parameter	Average Density (kg/m^3)
Iron-based Metal/Alloys	199.16
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	18.27
Rubber	0.00
Plastic	0.31
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	0.00
Packaging Material, Rubber	0.11
Packaging Material, Steel	165.09
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	1.17E-02
Cs-137	3.23E-07
Np-237	1.46E-07
Pu-238	3.29E-03
Pu-239	6.11E-02
Pu-240	1.36E-02
Pu-241	8.33E-02
Pu-242	1.78E-06
Sr-90	3.55E-07
Th-229	7.02E-20
Th-230	7.90E-14
Th-232	1.25E-09
U-233	2.23E-14
U-234	8.64E-08
U-235	2.76E-08
U-236	4.02E-11
U-238	2.77E-17

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.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	AMWTP WMF-676 PCB Contaminated Debris					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum Dir Ld w/ Liner	115.9	0.0	115.9
Final Form Total	115.9	0.0	115.9

Waste Material Parameters

Material Parameter	Average Density (kg/m^3)
Iron-based Metal/Alloys	180.21
Aluminum-based Metal/Alloys	0.08
Other Metal/Alloys	39.65
Other Inorganic Materials	9.89
Cellulose	20.06
Rubber	0.34
Plastic	23.65
Cement	0.00
Solidified Inorganic Material	0.78
Solidified Organic Material	2.38
Soil	0.47
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	36.71
Packaging Material, Rubber	0.56
Packaging Material, Steel	129.52
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	7.40E-02
Am-243	1.40E-06
Cs-137	1.11E-04
Np-237	1.72E-06
Pu-238	1.38E-02
Pu-239	2.52E-01
Pu-240	5.72E-02
Pu-241	2.66E-01
Pu-242	5.19E-06
Sr-90	1.22E-04
Th-229	8.27E-19
Th-230	3.96E-13
Th-232	4.18E-22
U-233	2.63E-13
U-234	4.32E-07
U-235	4.11E-08
U-236	1.69E-10
U-238	1.98E-06

Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D022, D027, D028, D029, D030, D032, D033, D034, D037, D043, F001, F002, F004, F005, F006, F007, F009, P030, P098, P099, P106, U003, U103, U108, U134, U151

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).

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	AMWTP Sludge Repackaging Project (SRP) Combined Sludge Waste					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
SWB w/ 4 - 55-gal Drums w/ Liners	194.9	0.0	194.9
TDOP w/ 10 - 55-gal Drums w/ Liners	2606.1	0.0	2606.1
Final Form Total	2801.0	0.0	2801.0

Waste Material Parameters

Material Parameter	Average Density (kg/m^3)
Iron-based Metal/Alloys	4.48
Aluminum-based Metal/Alloys	0.13
Other Metal/Alloys	4.48
Other Inorganic Materials	19.70
Cellulose	0.13
Rubber	0.13
Plastic	6.26
Cement	0.00
Solidified Inorganic Material	630.99
Solidified Organic Material	178.97
Soil	0.13
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	36.71
Packaging Material, Rubber	0.96
Packaging Material, Steel	493.83
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	3.17E+00
Am-243	6.47E-07
Cm-244	2.11E-04
Cs-137	1.15E-05
Np-237	5.02E-05
Pu-238	8.58E-02
Pu-239	1.19E+00
Pu-240	2.70E-01
Pu-241	1.43E+00
Pu-242	3.26E-05
Sr-90	1.26E-05
Th-229	2.44E-09
Th-230	9.89E-10
Th-232	1.97E-19
U-233	2.77E-05
U-234	1.08E-04
U-235	9.19E-06
U-236	7.99E-09
U-238	6.05E-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.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	Solidified Acid/Caustic Waste					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

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	0.8	0.0	0.8
TDOP w/ 10 - 55-gal Drums w/ Liners	10.5	0.0	10.5
Final Form Total	11.8	0.0	11.8

Waste Material Parameters

Material Parameter	**Average Density (kg/m^3)**
Iron-based Metal/Alloys	0.07
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.07
Other Inorganic Materials	0.56
Cellulose	2.76
Rubber	0.25
Plastic	2.28
Cement	0.00
Solidified Inorganic Material	418.55
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	36.71
Packaging Material, Rubber	0.94
Packaging Material, Steel	480.73
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	**Typical Concentration (Ci/m^3)**
Am-241	1.52E-01
Cs-137	4.67E-08
Np-237	1.50E-05
Pu-238	7.12E+00
Pu-239	1.24E-02
Pu-240	7.74E-03
Pu-241	4.08E-02
Pu-242	8.57E-06
Sr-90	5.10E-08
Th-229	4.45E-14
Th-230	1.52E-09
Th-232	9.04E-20
U-233	2.53E-10
U-234	8.20E-05
U-235	4.88E-11
U-236	9.16E-10
U-238	5.52E-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.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	Cemented Sludge					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum Dir Ld w/ Liner	1.9	0.0	1.9
SWB w/ 4 - 55-gal Drums w/ Liners	30.2	0.0	30.2
TDOP w/ 10 - 55-gal Drums w/ Liners	2.1	0.0	2.1
Final Form Total	34.2	0.0	34.2

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	0.03
Cement	0.00
Solidified Inorganic Material	1124.34
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	36.67
Packaging Material, Rubber	0.97
Packaging Material, Steel	457.17
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	**Typical Concentration (Ci/m^3)**
Am-241	5.25E-05
Cs-137	2.38E-08
Np-237	1.31E-06
Pu-238	1.97E-01
Pu-239	3.13E-04
Pu-240	2.14E-04
Pu-241	2.00E-04
Pu-242	2.45E-07
Sr-90	2.60E-08
Th-229	3.90E-15
Th-230	5.29E-11
Th-232	2.50E-21
U-233	2.22E-11
U-234	2.56E-06
U-235	4.40E-08
U-236	2.53E-11
U-238	1.52E-16

Haz. Waste No(s).

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

TRUCON Code(s)

111/211

Waste Stream Description

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

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	First/Second Stage Sludge					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum Dir Ld w/ Liner	7.1	0.0	7.1
SWB w/ 4 - 55-gal Drums w/ Liners	34.4	0.0	34.4
TDOP w/ 10 - 55-gal Drums w/ Liners	75.6	0.0	75.6
Final Form Total	117.2	0.0	117.2

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	1.74
Other Inorganic Materials	0.00
Cellulose	0.36
Rubber	0.11
Plastic	3.57
Cement	6.80
Solidified Inorganic Material	873.19
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	36.70
Packaging Material, Rubber	0.94
Packaging Material, Steel	467.01
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	**Typical Concentration (Ci/m^3)**
Am-241	1.50E+01
Am-243	1.45E-07
Cs-137	7.31E-09
Np-237	2.14E-04
Pu-238	1.23E-01
Pu-239	1.33E+00
Pu-240	3.40E-01
Pu-241	4.00E+00
Pu-242	1.38E-04
Sr-90	8.02E-09
Th-229	4.03E-14
Th-230	3.03E-10
Th-232	2.48E-19
U-233	9.20E-10
U-234	3.31E-05
U-235	6.33E-06
U-236	1.01E-08
U-238	2.01E-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

Waste Stream Description

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

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	Building 374 Sludge					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum Dir Ld w/ Liner	0.2	0.0	0.2
SWB w/ 4 - 55-gal Drums w/ Liners	13.4	0.0	13.4
TDOP w/ 10 - 55-gal Drums w/ Liners	29.4	0.0	29.4
Final Form Total	43.1	0.0	43.1

Waste Material Parameters

Material Parameter	**Average Density (kg/m^3)**
Iron-based Metal/Alloys	5.96
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	0.05
Rubber	0.03
Plastic	4.14
Cement	45.99
Solidified Inorganic Material	815.51
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	36.70
Packaging Material, Rubber	0.96
Packaging Material, Steel	487.14
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	**Typical Concentration (Ci/m^3)**
Am-241	1.27E-01
Cs-137	2.34E-09
Np-237	1.30E-06
Pu-238	3.96E-03
Pu-239	9.02E-02
Pu-240	1.94E-02
Pu-241	1.66E-01
Pu-242	2.95E-06
Sr-90	2.57E-09
Th-229	2.45E-16
Th-230	2.91E-09
Th-232	1.42E-20
U-233	5.59E-12
U-234	3.17E-04
U-235	3.20E-05
U-236	5.74E-10
U-238	3.62E-03

Haz. Waste No(s).

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

TRUCON Code(s)

111/211

Waste Stream Description

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

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	Compressible and/or Combustible					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

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	614.75
Aluminum-based Metal/Alloys	0.88
Other Metal/Alloys	7.18
Other Inorganic Materials	23.57
Cellulose	104.52
Rubber	9.80
Plastic	73.87
Cement	0.00
Solidified Inorganic Material	3.60
Solidified Organic Material	0.05
Soil	0.43
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	20.29
Packaging Material, Rubber	0.31
Packaging Material, Steel	113.42
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	1.75E+00
Cs-137	3.40E-07
Np-237	2.32E-05
Pu-238	3.27E-01
Pu-239	1.94E+00
Pu-240	9.33E-01
Pu-241	8.37E+00
Pu-242	1.89E-04
Sr-90	3.73E-07
Th-229	1.72E-14
Th-230	1.05E-09
Th-232	2.73E-18
U-233	1.97E-10
U-234	5.79E-05
U-235	1.82E-05
U-236	5.53E-08
U-238	9.30E-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.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	Solid Dry Wastes					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
100-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	614.75
Aluminum-based Metal/Alloys	0.88
Other Metal/Alloys	7.18
Other Inorganic Materials	23.57
Cellulose	104.52
Rubber	9.80
Plastic	73.87
Cement	0.00
Solidified Inorganic Material	3.60
Solidified Organic Material	0.05
Soil	0.43
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	20.29
Packaging Material, Rubber	0.31
Packaging Material, Steel	113.42
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	1.08E-01
Cs-137	8.38E-08
Np-237	2.16E-05
Pu-238	1.45E-02
Pu-239	3.15E-01
Pu-240	7.11E-02
Pu-241	4.97E-01
Pu-242	8.93E-06
Sr-90	9.18E-08
Th-229	1.65E-14
Th-230	3.03E-10
Th-232	2.08E-19
U-233	1.88E-10
U-234	1.65E-05
U-235	5.20E-06
U-236	4.21E-09
U-238	5.61E-06

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.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	Heavy Materials					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

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	614.75
Aluminum-based Metal/Alloys	0.88
Other Metal/Alloys	7.18
Other Inorganic Materials	23.57
Cellulose	104.52
Rubber	9.80
Plastic	73.87
Cement	0.00
Solidified Inorganic Material	3.60
Solidified Organic Material	0.05
Soil	0.43
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	20.29
Packaging Material, Rubber	0.31
Packaging Material, Steel	113.42
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	2.04E+00
Np-237	2.18E-05
Pu-238	2.64E-01
Pu-239	2.00E+00
Pu-240	1.04E+00
Pu-241	7.53E+00
Pu-242	2.42E-04
Th-229	1.04E-17
Th-230	5.67E-12
Th-232	7.60E-21
U-233	3.32E-12
U-234	6.21E-06
U-235	1.98E-06
U-236	3.08E-09
U-238	3.76E-15

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.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	RH TRU Debris Waste from ANL-E stored at INL					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^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	476.19
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	44.17
Other Inorganic Materials	20.79
Cellulose	11.27
Rubber	0.00
Plastic	20.37
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	8.62
Packaging Material, Rubber	0.56
Packaging Material, Steel	922.22
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	9.22E-02
Cs-137	9.34E-02
Np-237	5.97E-08
Pu-238	1.17E-02
Pu-239	3.51E-02
Pu-240	2.07E-02
Pu-241	1.03E-01
Pu-242	6.69E-04
Sr-90	8.32E-02
Th-229	1.44E-07
Th-230	2.25E-09
Th-232	6.05E-20
U-233	8.18E-04
U-234	1.22E-04
U-235	3.87E-06
U-236	1.23E-09
U-238	6.99E-07

Haz. Waste No(s).

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

TRUCON Code(s)

321, 325

Waste Stream Description

This waste stream consists of two 55 gallon drums generated from repackaging of six bins of general plant waste generated at ANL-E during D&D operations.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	RH Laboratory Waste from INL					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^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	59.02
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	5.19
Rubber	0.22
Plastic	15.83
Cement	0.00
Solidified Inorganic Material	11.43
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	8.62
Packaging Material, Rubber	0.56
Packaging Material, Steel	922.22
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	5.28E+00
Cs-137	3.33E-01
Np-237	6.87E-06
Pu-238	5.11E-01
Pu-239	2.79E+01
Pu-240	5.87E+00
Pu-242	6.44E-02
Sr-90	8.67E-02
Th-229	2.31E-10
Th-230	2.54E-09
Th-232	6.86E-17
U-233	6.57E-07
U-234	7.19E-05
U-235	1.19E-06
U-236	6.95E-07
U-238	2.21E-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.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	Solidified Waste Sludge from Bettis Atomic Power Lab.					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
RH Can w/ Remov Lid w/ 3 - 55-gal w/o Liner	1.3	0.0	1.3
Final Form Total	1.3	0.0	1.3

Waste Material Parameters

Material Parameter	Average Density (kg/m^3)
Iron-based Metal/Alloys	165.08
Aluminum-based Metal/Alloys	25.40
Other Metal/Alloys	0.00
Other Inorganic Materials	0.79
Cellulose	3.51
Rubber	1.48
Plastic	7.27
Cement	53.02
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	8.62
Packaging Material, Rubber	0.56
Packaging Material, Steel	922.22
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	1.20E-02
Cs-137	9.07E+00
Np-237	1.57E-08
Pu-238	2.86E-01
Pu-239	1.57E-01
Pu-240	3.32E-03
Pu-242	5.70E-04
Sr-90	1.48E+01
Th-229	6.49E-07
Th-230	5.91E-08
Th-232	3.88E-20
U-233	1.85E-03
U-234	1.61E-03
U-235	3.63E-05
U-236	3.93E-10
U-238	2.51E-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**	12/31/2018
Stream Name	RH-TRU Debris Waste From Experimental Breeder Reactor					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

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	113.61
Aluminum-based Metal/Alloys	13.62
Other Metal/Alloys	809.52
Other Inorganic Materials	0.00
Cellulose	0.45
Rubber	0.45
Plastic	10.16
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	8.62
Packaging Material, Rubber	0.56
Packaging Material, Steel	922.22
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	1.26E-06
Cs-137	2.83E+01
Np-237	1.62E-12
Pu-238	1.72E-04
Pu-239	3.32E+00
Pu-240	1.21E-03
Pu-241	3.46E-06
Pu-242	5.89E-14
Sr-90	2.61E+00
Th-229	6.40E-12
Th-230	1.59E-09
Th-232	1.42E-20
U-233	1.82E-08
U-234	4.48E-05
U-235	1.32E-02
U-236	1.43E-10
U-238	2.84E-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

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	Sodium contaminated RH TRU Waste from Materials and Fuels Complex at INL.					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
RH Can w/ Remov Lid w/ 3 - 55-gal 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	99.47
Aluminum-based Metal/Alloys	1.46
Other Metal/Alloys	27.21
Other Inorganic Materials	2.63
Cellulose	1.46
Rubber	0.88
Plastic	1.46
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	157.99
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	8.62
Packaging Material, Rubber	0.56
Packaging Material, Steel	922.22
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	4.27E+00
Cm-244	2.38E-02
Cs-137	1.72E+01
Np-237	2.74E-06
Pu-238	1.48E+00
Pu-239	4.16E+00
Pu-240	2.63E+00
Pu-241	2.79E+01
Pu-242	1.54E-03
Sr-90	2.16E+01
Th-229	6.67E-11
Th-230	1.69E-07
Th-232	7.69E-18
U-233	3.79E-07
U-234	9.20E-03
U-235	3.29E-04
U-236	1.56E-07
U-238	4.21E-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 treated sodium contaminated waste from Materials and Fuels complex

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	Sodium contaminated RH TRU Waste from Materials and Fuels Complex at INL.					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
RH Can w/ Remov Lid w/ 3 - 55-gal w/o Liner	20.2	0.0	20.2
Final Form Total	20.2	0.0	20.2

Waste Material Parameters

Material Parameter	Average Density (kg/m^3)
Iron-based Metal/Alloys	199.16
Aluminum-based Metal/Alloys	3.16
Other Metal/Alloys	53.74
Other Inorganic Materials	6.32
Cellulose	3.16
Rubber	3.16
Plastic	3.16
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	47.42
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	8.62
Packaging Material, Rubber	0.56
Packaging Material, Steel	922.22
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	2.13E+00
Cm-244	9.02E-03
Cs-137	5.46E+00
Np-237	1.36E-06
Pu-238	8.74E-01
Pu-239	3.53E+00
Pu-240	2.00E+00
Pu-241	1.58E+01
Pu-242	7.01E-04
Sr-90	7.69E+00
Th-229	1.91E-11
Th-230	1.31E-07
Th-232	5.83E-18
U-233	1.09E-07
U-234	7.11E-03
U-235	2.72E-04
U-236	1.18E-07
U-238	2.21E-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 55-gallon drums of treated waste.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	RH-TRU Debris Waste From Materials and Fuels Complex Hot Fuel Examination Facility at the INL.					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
RH Can w/ Remov Lid w/ 3 - 55-gal w/o Liner	18.3	0.0	18.3
Final Form Total	18.3	0.0	18.3

Waste Material Parameters

Material Parameter	Average Density (kg/m^3)
Iron-based Metal/Alloys	148.14
Aluminum-based Metal/Alloys	1.08
Other Metal/Alloys	3.24
Other Inorganic Materials	12.95
Cellulose	14.05
Rubber	10.82
Plastic	28.19
Cement	0.00
Solidified Inorganic Material	0.45
Solidified Organic Material	1.08
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	8.62
Packaging Material, Rubber	0.56
Packaging Material, Steel	922.22
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	2.94E-02
Cs-137	4.25E+01
Np-237	3.83E-08
Pu-238	1.84E-02
Pu-239	3.57E+00
Pu-240	2.89E+00
Pu-241	7.85E-04
Pu-242	4.28E-04
Sr-90	1.88E+01
Th-229	2.49E-06
Th-230	2.04E-06
Th-232	3.38E-17
U-233	7.08E-03
U-234	5.54E-02
U-235	5.88E-03
U-236	3.42E-07
U-238	1.21E-02

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

Some of the containers in this waste stream have hazardous waste codes applied by the generator.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	RH-TRU Waste From Materials and Fuels Complex at the INL.					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
RH Can w/ Remov Lid w/ 3 - 55-gal w/o Liner	1.3	0.0	1.3
Final Form Total	1.3	0.0	1.3

Waste Material Parameters

Material Parameter	Average Density (kg/m^3)
Iron-based Metal/Alloys	18.18
Aluminum-based Metal/Alloys	1.15
Other Metal/Alloys	0.00
Other Inorganic Materials	1.61
Cellulose	0.46
Rubber	0.00
Plastic	1.61
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	8.62
Packaging Material, Rubber	0.56
Packaging Material, Steel	922.22
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	7.72E-02
Cs-137	1.25E+01
Np-237	5.01E-08
Pu-238	2.37E-02
Pu-239	1.36E-01
Pu-240	3.50E-02
Pu-242	6.50E-04
Sr-90	1.38E+01
Th-229	1.94E-09
Th-230	2.59E-07
Th-232	1.02E-19
U-233	1.10E-05
U-234	1.41E-02
U-235	7.97E-04
U-236	2.07E-09
U-238	1.07E-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.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	Analytical Laboratory waste from MFC (formerly know as ANL-W)					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^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	158.73
Aluminum-based Metal/Alloys	48.25
Other Metal/Alloys	0.00
Other Inorganic Materials	6.03
Cellulose	1.40
Rubber	3.02
Plastic	67.94
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	48.25
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	8.62
Packaging Material, Rubber	0.56
Packaging Material, Steel	922.22
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	6.61E-02
Cs-137	1.88E-01
Np-237	4.29E-08
Pu-238	4.22E-03
Pu-239	3.81E-02
Pu-240	5.44E-03
Pu-242	3.51E-03
Sr-90	5.68E-01
Th-229	3.78E-08
Th-230	3.95E-09
Th-232	1.59E-20
U-233	2.15E-04
U-234	2.15E-04
U-235	1.19E-05
U-236	3.22E-10
U-238	8.48E-07

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.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	Organic Setups					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
SWB w/ 4 - 55-gal Drums w/ Liners	3.4	0.0	3.4
TDOP w/ 10 - 55-gal Drums w/ Liners	37.8	0.0	37.8
Final Form Total	41.2	0.0	41.2

Waste Material Parameters

Material Parameter	**Average Density (kg/m^3)**
Iron-based Metal/Alloys	4.21
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	15.55
Cellulose	0.16
Rubber	0.04
Plastic	6.67
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	766.36
Soil	0.04
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	36.71
Packaging Material, Rubber	0.96
Packaging Material, Steel	493.59
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	**Typical Concentration (Ci/m^3)**
Am-241	2.94E-02
Cs-137	8.00E-09
Np-237	1.03E-06
Pu-238	5.59E-03
Pu-239	1.72E-01
Pu-240	3.74E-02
Pu-241	2.34E-01
Pu-242	3.36E-06
Sr-90	8.79E-09
Th-229	1.97E-16
Th-230	4.27E-12
Th-232	2.73E-20
U-233	4.48E-12
U-234	4.73E-07
U-235	1.18E-07
U-236	1.11E-09
U-238	6.64E-07

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.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	Organic and Sludge Immobilization System Waste					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

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	0.05
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	3.21
Cellulose	0.05
Rubber	0.00
Plastic	3.21
Cement	540.48
Solidified Inorganic Material	0.00
Solidified Organic Material	456.43
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	36.71
Packaging Material, Rubber	0.56
Packaging Material, Steel	129.52
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	6.96E-02
Cs-137	1.01E-07
Np-237	4.93E-06
Pu-238	2.36E-02
Pu-239	5.82E-01
Pu-240	1.26E-01
Pu-241	1.15E+00
Pu-242	9.07E-06
Sr-90	1.11E-07
Th-229	3.75E-15
Th-230	3.80E-11
Th-232	3.68E-19
U-233	4.27E-11
U-234	2.13E-06
U-235	6.46E-07
U-236	7.46E-09
U-238	2.81E-15

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.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	Rocky Flats Generated Suspect RH TRU waste received from AMWTP					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
RH Can w/ Remov Lid w/ 3 - 55-gal w/o Liner	1.3	0.0	1.3
Final Form Total	1.3	0.0	1.3

Waste Material Parameters

Material Parameter	Average Density (kg/m^3)
Iron-based Metal/Alloys	94.92
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	22.00
Cellulose	38.59
Rubber	0.35
Plastic	7.65
Cement	116.67
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	8.62
Packaging Material, Rubber	0.56
Packaging Material, Steel	922.22
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	8.03E+01
Cs-137	6.35E-02
Np-237	1.04E-04
Pu-238	2.57E-02
Pu-239	1.28E+00
Pu-240	2.82E-01
Pu-242	5.58E-04
Sr-90	3.88E-03
Th-229	8.57E-08
Th-230	5.04E-08
Th-232	3.30E-18
U-233	2.44E-04
U-234	1.37E-03
U-235	4.52E-04
U-236	3.35E-08
U-238	3.36E-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 of 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.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	Rocky Flats Raschig Rings Stored at the INL					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^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	0.00
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	220.95
Cellulose	25.71
Rubber	0.00
Plastic	16.67
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	36.71
Packaging Material, Rubber	0.56
Packaging Material, Steel	129.52
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	1.78E+00
Np-237	3.20E-05
Pu-238	5.28E-03
Pu-239	2.17E-01
Pu-240	4.80E-02
Pu-241	1.60E-01
Pu-242	6.33E-06
Th-229	6.37E-13
Th-230	8.79E-12
Th-232	4.25E-18
U-233	1.37E-09
U-234	1.71E-07
U-235	2.35E-09
U-236	1.56E-08
U-238	1.08E-14

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.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	Rocky Flats Transuranic Graphite Debris					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
TDOP w/ 10 - 55-gal Drums w/ Liners	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	5.89
Aluminum-based Metal/Alloys	0.01
Other Metal/Alloys	0.06
Other Inorganic Materials	178.38
Cellulose	4.32
Rubber	0.01
Plastic	2.62
Cement	0.00
Solidified Inorganic Material	0.01
Solidified Organic Material	0.01
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	36.71
Packaging Material, Rubber	0.95
Packaging Material, Steel	495.24
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	4.04E-01
Np-237	6.42E-06
Pu-238	9.33E-02
Pu-239	2.28E+00
Pu-240	5.23E-01
Pu-241	2.55E+00
Pu-242	3.97E-05
Th-229	3.08E-18
Th-230	1.21E-14
Th-232	3.82E-21
U-233	9.81E-13
U-234	2.63E-08
U-235	2.25E-10
U-236	1.55E-09
U-238	6.16E-16

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.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	Rocky Flats Combustibles and Plastic Stored at INL					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
TDOP w/ 10 - 55-gal Drums w/ Liners	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	3.42
Aluminum-based Metal/Alloys	0.14
Other Metal/Alloys	0.50
Other Inorganic Materials	7.58
Cellulose	58.08
Rubber	3.26
Plastic	82.32
Cement	0.00
Solidified Inorganic Material	0.01
Solidified Organic Material	0.02
Soil	0.01
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	36.71
Packaging Material, Rubber	0.95
Packaging Material, Steel	495.24
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	1.86E-03
Np-237	2.98E-09
Pu-238	1.56E-04
Pu-239	5.91E-03
Pu-240	1.31E-03
Pu-241	7.07E-03
Pu-242	1.71E-07
Th-229	4.62E-18
Th-230	5.20E-14
Th-232	2.40E-20
U-233	3.16E-14
U-234	2.25E-09
U-235	2.91E-11
U-236	1.94E-10
U-238	1.33E-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)

116/216

Waste Stream Description

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

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	RH TRU Waste from INL.					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

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	205.16
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	96.43
Other Inorganic Materials	10.78
Cellulose	0.83
Rubber	0.83
Plastic	14.17
Cement	0.00
Solidified Inorganic Material	38.47
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	8.62
Packaging Material, Rubber	0.56
Packaging Material, Steel	922.22
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Cs-137	8.45E-02
Np-237	1.16E-03
Pu-239	3.44E+00
Pu-240	2.53E+00
Th-229	9.38E-06
Th-230	2.15E-13
Th-232	5.65E-05
U-233	2.67E-02
U-234	1.17E-08
U-235	2.14E-04
U-236	3.00E-07
U-238	1.06E-03

Haz. Waste No(s).

D004, D005, D006, D007, D008, D010, D011, D019

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

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	ICP Retrieved Debris Waste (Filters/Graphite)					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum Dir Ld w/ Liner	663.0	0.0	663.0
Final Form Total	663.0	0.0	663.0

Waste Material Parameters

Material Parameter	Average Density (kg/m^3)
Iron-based Metal/Alloys	1.17
Aluminum-based Metal/Alloys	0.13
Other Metal/Alloys	0.12
Other Inorganic Materials	232.36
Cellulose	90.00
Rubber	0.64
Plastic	6.22
Cement	0.60
Solidified Inorganic Material	40.61
Solidified Organic Material	0.54
Soil	28.38
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	36.71
Packaging Material, Rubber	0.56
Packaging Material, Steel	129.52
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	7.89E-01
Cs-137	1.46E-06
Np-237	1.30E-05
Pu-238	6.38E-02
Pu-239	1.82E+00
Pu-240	4.06E-01
Pu-241	1.79E+00
Pu-242	4.21E-05
Sr-90	1.60E-06
Th-229	3.66E-09
Th-230	1.32E-08
Th-232	5.80E-13
U-233	1.04E-05
U-234	3.59E-04
U-235	9.22E-06
U-236	4.81E-08
U-238	5.39E-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

Waste Stream Description

Pre-1970 buried waste retrieved for the Idaho Cleanup Project

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	ICP Retrieved Sludge Waste (Inorganic/Organic Sludge/Roaster Oxide)					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum Dir Ld w/ Liner	2796.4	0.0	2796.4
Final Form Total	2796.4	0.0	2796.4

Waste Material Parameters

Material Parameter	Average Density (kg/m^3)
Iron-based Metal/Alloys	0.23
Aluminum-based Metal/Alloys	0.01
Other Metal/Alloys	0.04
Other Inorganic Materials	38.77
Cellulose	0.83
Rubber	0.18
Plastic	0.43
Cement	0.17
Solidified Inorganic Material	228.32
Solidified Organic Material	260.20
Soil	25.98
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	36.71
Packaging Material, Rubber	0.56
Packaging Material, Steel	129.52
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	1.59E+00
Cm-244	2.36E-05
Cs-137	1.24E-05
Np-237	2.59E-05
Pu-238	2.12E-02
Pu-239	5.06E-01
Pu-240	1.14E-01
Pu-241	7.90E-01
Pu-242	2.00E-05
Sr-90	1.36E-05
Th-229	6.59E-09
Th-230	1.26E-08
Th-232	1.33E-18
U-233	1.87E-05
U-234	3.43E-04
U-235	9.05E-06
U-236	1.34E-08
U-238	1.32E-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)

112/212, 122/222, 127/227

Waste Stream Description

Pre-1970 buried waste retrieved for the Idaho Cleanup Project

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	ICP Retrieved Soils					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum Dir Ld w/ Liner	633.6	0.0	633.6
Final Form Total	633.6	0.0	633.6

Waste Material Parameters

Material Parameter	Average Density (kg/m^3)
Iron-based Metal/Alloys	0.54
Aluminum-based Metal/Alloys	0.02
Other Metal/Alloys	0.12
Other Inorganic Materials	17.13
Cellulose	15.86
Rubber	0.31
Plastic	4.98
Cement	0.31
Solidified Inorganic Material	43.80
Solidified Organic Material	4.43
Soil	490.89
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	36.71
Packaging Material, Rubber	0.56
Packaging Material, Steel	129.52
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	8.96E-01
Cs-137	1.47E-05
Np-237	1.44E-05
Pu-238	2.48E-02
Pu-239	6.57E-01
Pu-240	1.46E-01
Pu-241	8.15E-01
Pu-242	2.12E-05
Sr-90	1.61E-05
Th-229	1.04E-09
Th-230	1.13E-08
Th-232	3.86E-10
U-233	2.96E-06
U-234	3.07E-04
U-235	4.40E-05
U-236	1.73E-08
U-238	9.34E-04

Haz. Waste No(s).

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

TRUCON Code(s)

112/212, 122/222, 127/227

Waste Stream Description

Pre-1970 buried waste retrieved for the Idaho Cleanup Project

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	Miscellaneous Source Material					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^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	71.43
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	1.59
Other Inorganic Materials	15.87
Cellulose	0.00
Rubber	0.00
Plastic	7.94
Cement	0.00
Solidified Inorganic Material	30.16
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	8.62
Packaging Material, Rubber	0.56
Packaging Material, Steel	922.22
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	2.80E+01
Cs-137	2.52E-04
Np-237	1.82E-05
Pu-238	5.98E-02
Pu-239	1.90E+00
Pu-240	4.87E-01
Pu-241	1.10E+00
Pu-242	4.71E-05
Sr-90	2.16E-04
Th-229	4.64E-15
Th-230	1.53E-10
Th-232	1.42E-18
U-233	7.92E-11
U-234	8.47E-06
U-235	7.88E-08
U-236	2.88E-08
U-238	1.87E-09

No Hazardous Waste Numbers Provided

TRUCON Code(s)

320

Waste Stream Description

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

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	INL Sludge Repackage Project Combined Sludge Waste					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
SWB w/ 4 - 55-gal Drums w/ Liners	79.0	0.0	79.0
TDOP w/ 10 - 55-gal Drums w/ Liners	1054.2	0.0	1054.2
Final Form Total	1133.2	0.0	1133.2

Waste Material Parameters

Material Parameter	**Average Density (kg/m^3)**
Iron-based Metal/Alloys	1.27
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.06
Other Inorganic Materials	8.86
Cellulose	0.18
Rubber	0.48
Plastic	4.76
Cement	0.00
Solidified Inorganic Material	366.81
Solidified Organic Material	220.07
Soil	0.12
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	36.71
Packaging Material, Rubber	0.96
Packaging Material, Steel	493.83
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	**Typical Concentration (Ci/m^3)**
Am-241	9.30E+00
Am-243	2.17E-08
Cs-137	3.83E-08
Np-237	1.22E-04
Pu-238	6.11E-02
Pu-239	8.36E-01
Pu-240	2.13E-01
Pu-241	2.24E+00
Pu-242	6.60E-05
Sr-90	4.20E-08
Th-229	7.95E-09
Th-230	3.67E-10
Th-232	1.56E-19
U-233	9.03E-05
U-234	4.00E-05
U-235	8.10E-06
U-236	6.31E-09
U-238	2.40E-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.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	RH-TRU Debris from TRA at the INL					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^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	31.75
Aluminum-based Metal/Alloys	4.76
Other Metal/Alloys	23.81
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	3.17
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	8.62
Packaging Material, Rubber	0.56
Packaging Material, Steel	922.22
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	6.10E-05
Cm-244	3.19E+02
Np-237	2.71E-11
Pu-240	5.16E+00
Pu-241	1.85E-02
Th-229	8.26E-21
Th-232	5.92E-17
U-233	1.16E-16
U-236	6.03E-07

Haz. Waste No(s).

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

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

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

Waste Stream ID: **IN-IW-608**

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**	12/31/2018
Stream Name	Heterogeneous Debris from Large Item Repackaging					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
SWB Dir Ld w/ Liner	41.4	0.0	41.4
Final Form Total	41.4	0.0	41.4

Waste Material Parameters

Material Parameter	Average Density (kg/m^3)
Iron-based Metal/Alloys	201.12
Aluminum-based Metal/Alloys	0.49
Other Metal/Alloys	1.38
Other Inorganic Materials	1.92
Cellulose	11.38
Rubber	0.44
Plastic	19.88
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	1.21
Packaging Material, Rubber	0.19
Packaging Material, Steel	154.26
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	1.24E-02
Cs-137	7.48E-09
Np-237	3.95E-07
Pu-238	1.04E+00
Pu-239	4.88E-02
Pu-240	1.16E-02
Pu-241	6.26E-02
Pu-242	2.68E-06
Sr-90	8.22E-09
Th-229	1.90E-19
Th-230	1.35E-13
Th-232	8.49E-23
U-233	6.03E-14
U-234	2.93E-07
U-235	4.81E-12
U-236	3.44E-11
U-238	4.16E-17

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

Waste Stream Description

Heterogeneous debris resulting from repackaging of large items. Waste may include secondary debris from decontamination and reprocessing activities.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	Contaminated Soil					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum Dir Ld w/ Liner	0.2	0.0	0.2
SLB2 Dir Ld	44.3	0.0	44.3
Final Form Total	44.6	0.0	44.6

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	286.51
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	0.17
Packaging Material, Rubber	0.11
Packaging Material, Steel	164.92
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	**Typical Concentration (Ci/m^3)**
Am-241	2.35E-05
Np-237	7.61E-12
Pu-238	2.97E-02
Pu-239	4.50E-05
Pu-240	3.08E-05
Pu-241	3.73E-05
Pu-242	3.56E-08
Th-229	4.86E-22
Th-230	3.87E-13
Th-232	2.25E-23
U-233	1.66E-17
U-234	8.41E-08
U-235	4.44E-14
U-236	9.13E-13
U-238	5.53E-18

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**	12/31/2018
Stream Name	Compacted Waste					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

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	614.75
Aluminum-based Metal/Alloys	0.88
Other Metal/Alloys	7.18
Other Inorganic Materials	23.57
Cellulose	104.52
Rubber	9.80
Plastic	73.87
Cement	0.00
Solidified Inorganic Material	3.60
Solidified Organic Material	0.05
Soil	0.43
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	20.29
Packaging Material, Rubber	0.31
Packaging Material, Steel	113.42
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	1.86E+02
Np-237	2.74E-03
Pu-238	9.66E+02
Pu-239	1.57E+00
Pu-240	1.08E+00
Pu-241	8.48E-01
Pu-242	1.24E-03
Th-229	4.52E-12
Th-230	1.15E-07
Th-232	7.08E-18
U-233	3.47E-08
U-234	8.27E-03
U-235	4.64E-09
U-236	9.56E-08
U-238	5.79E-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.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	Compacted Waste with Lead					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

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	614.75
Aluminum-based Metal/Alloys	0.88
Other Metal/Alloys	7.18
Other Inorganic Materials	23.57
Cellulose	104.52
Rubber	9.80
Plastic	73.87
Cement	0.00
Solidified Inorganic Material	3.60
Solidified Organic Material	0.05
Soil	0.43
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	20.29
Packaging Material, Rubber	0.31
Packaging Material, Steel	113.42
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	2.32E+02
Cs-137	5.61E-04
Np-237	3.23E-03
Pu-238	7.65E+02
Pu-239	1.25E+00
Pu-240	8.55E-01
Pu-241	6.59E-01
Pu-242	9.88E-04
Sr-90	6.13E-04
Th-229	5.31E-12
Th-230	9.08E-08
Th-232	5.62E-18
U-233	4.08E-08
U-234	6.55E-03
U-235	3.70E-09
U-236	7.59E-08
U-238	4.60E-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**	12/31/2018
Stream Name	Non-Compacted Waste					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

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	614.75
Aluminum-based Metal/Alloys	0.88
Other Metal/Alloys	7.18
Other Inorganic Materials	23.57
Cellulose	104.52
Rubber	9.80
Plastic	73.87
Cement	0.00
Solidified Inorganic Material	3.60
Solidified Organic Material	0.05
Soil	0.43
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	20.29
Packaging Material, Rubber	0.31
Packaging Material, Steel	113.42
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	6.19E+00
Am-243	1.18E-11
Np-237	7.10E-05
Pu-238	2.29E+00
Pu-239	2.04E-03
Pu-240	1.39E-03
Pu-241	1.19E-03
Pu-242	1.61E-06
Th-229	1.15E-13
Th-230	3.72E-10
Th-232	9.16E-21
U-233	8.88E-10
U-234	2.32E-05
U-235	1.18E-06
U-236	1.24E-10
U-238	7.49E-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.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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

Appendix A

Waste Profile Report

Site	Idaho National Laboratory	**Summary Category**	S5000	**Defense Determination**	Defense-Related	**Handling**	RH
Source Cat.	Discarding Excess/Expired Materials	**Waste Matrix Code Group**	Heterogeneous Debris Waste			**Inventory Date**	12/31/2018
Stream Name	Monsanto					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
RH Can NS15 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	38.46
Aluminum-based Metal/Alloys	1.19
Other Metal/Alloys	2.56
Other Inorganic Materials	1.71
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	2153.85
Packaging Material, Rubber	0.00
Packaging Material, Steel	2692.31
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	6.20E+01
Am-243	4.94E-18
Np-237	2.01E-06
Pu-238	1.05E+02
Pu-239	8.41E-02
Pu-240	4.65E-03
Pu-241	3.82E-02
Pu-242	2.60E-05
Pu-244	2.08E-20
Th-229	2.52E-19
Th-230	1.36E-11
Th-232	3.40E-23
U-233	1.10E-13
U-234	2.95E-05
U-235	8.28E-12
U-236	1.38E-11
U-238	4.03E-16

Haz. Waste No(s).

D006, D007, D008, D011

TRUCON Code(s)

320

Waste Stream Description

Neutron sources from Monsanto

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	Scrap Processing Equipment					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
100-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	614.75
Aluminum-based Metal/Alloys	0.88
Other Metal/Alloys	7.18
Other Inorganic Materials	23.57
Cellulose	104.52
Rubber	9.80
Plastic	73.87
Cement	0.00
Solidified Inorganic Material	3.60
Solidified Organic Material	0.05
Soil	0.43
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	20.29
Packaging Material, Rubber	0.31
Packaging Material, Steel	113.42
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	3.45E+01
Am-243	1.40E-13
Np-237	3.35E-04
Pu-239	1.78E-11
Th-229	1.61E-16
U-233	5.12E-11
U-235	8.77E-22

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**	12/31/2018
Stream Name	RH-TRU Debris Waste from the Naval Nuclear Propulsion Program (NNPP)					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
RH Can w/ Remov Lid w/ 3 - 55-gal w/o Liner	138.6	0.0	138.6
Final Form Total	138.6	0.0	138.6

Waste Material Parameters

Material Parameter	Average Density (kg/m^3)
Iron-based Metal/Alloys	67.17
Aluminum-based Metal/Alloys	9.81
Other Metal/Alloys	0.06
Other Inorganic Materials	2.29
Cellulose	1.33
Rubber	0.05
Plastic	1.70
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	8.62
Packaging Material, Rubber	0.56
Packaging Material, Steel	922.22
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	6.96E-01
Cs-137	7.99E+01
Np-237	2.25E-08
Pu-238	2.58E+00
Pu-239	7.94E-02
Pu-240	8.01E-02
Pu-241	2.74E+00
Pu-242	2.61E-04
Sr-90	7.34E+01
Th-229	3.27E-07
Th-230	9.55E-09
Th-232	5.85E-22
U-233	3.72E-02
U-234	1.04E-02
U-235	2.30E-04
U-236	2.37E-10
U-238	5.64E-05

Haz. Waste No(s).

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

TRUCON Code(s)

322

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. Waste stream includes debris waste generated during analysis of post-irradiated nuclear fuel from Naval Reactors programs using destructive examination methods.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

Waste Stream ID: **IN-RF-005**

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**	12/31/2018
Stream Name	Evaporator Salts					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum Dir Ld w/ Liner	18.5	0.0	18.5
Final Form Total	18.5	0.0	18.5

Waste Material Parameters

Material Parameter	Average Density (kg/m^3)
Iron-based Metal/Alloys	35.31
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	1.08
Rubber	0.00
Plastic	3.24
Cement	406.53
Solidified Inorganic Material	0.00
Solidified Organic Material	506.37
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	36.71
Packaging Material, Rubber	0.56
Packaging Material, Steel	129.52
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	1.75E+00
Np-237	2.95E-05
Pu-238	8.62E-03
Pu-239	3.02E-01
Pu-240	8.61E-02
Pu-241	8.00E-01
Pu-242	4.24E-05
Sr-90	1.71E-06
Th-229	5.57E-15
Th-230	3.64E-11
Th-232	6.29E-20
U-233	1.27E-10
U-234	3.97E-06
U-235	7.36E-07
U-236	2.55E-09
U-238	2.66E-05

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.

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**	12/31/2018
Stream Name	Dirt					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^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	23.06
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.84
Other Inorganic Materials	6.07
Cellulose	8.17
Rubber	0.00
Plastic	12.25
Cement	0.00
Solidified Inorganic Material	82.28
Solidified Organic Material	0.06
Soil	640.70
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	36.71
Packaging Material, Rubber	0.56
Packaging Material, Steel	129.52
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	4.33E-02
Np-237	5.48E-07
Pu-238	2.10E-03
Pu-239	1.95E-01
Pu-240	3.54E-02
Pu-241	1.54E-01
Pu-242	2.85E-06
Th-229	1.03E-16
Th-230	1.64E-09
Th-232	2.59E-20
U-233	2.36E-12
U-234	1.78E-04
U-235	8.65E-06
U-236	1.05E-09
U-238	2.46E-03

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.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	Graphite Heels					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

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	2.00
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	432.13
Cellulose	0.00
Rubber	0.00
Plastic	40.72
Cement	0.00
Solidified Inorganic Material	0.61
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	36.71
Packaging Material, Rubber	0.56
Packaging Material, Steel	129.52
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	5.56E+00
Cs-137	5.88E-07
Np-237	6.75E-05
Pu-238	2.12E+00
Pu-239	2.66E+01
Pu-240	6.02E+00
Pu-241	1.36E+01
Pu-242	4.48E-04
Sr-90	6.40E-07
Th-229	5.46E-13
Th-230	1.40E-09
Th-232	2.15E-16
U-233	1.84E-09
U-234	4.31E-05
U-235	1.84E-07
U-236	1.25E-06
U-238	4.86E-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.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	Sand, Slag and Crucible Heels					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum Dir Ld w/ Liner	2.9	0.0	2.9
Final Form Total	2.9	0.0	2.9

Waste Material Parameters

Material Parameter	Average Density (kg/m^3)
Iron-based Metal/Alloys	4.93
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	201.46
Cellulose	0.00
Rubber	6.79
Plastic	55.82
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	36.71
Packaging Material, Rubber	0.56
Packaging Material, Steel	129.52
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	8.75E-01
Np-237	8.34E-06
Pu-238	4.14E-01
Pu-239	6.83E+00
Pu-240	1.61E+00
Pu-241	1.17E+01
Pu-242	1.16E-04
Th-229	2.27E-14
Th-230	1.25E-10
Th-232	1.88E-17
U-233	1.32E-10
U-234	5.76E-06
U-235	2.69E-08
U-236	1.91E-07
U-238	7.20E-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.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	Molten Salt - 30% Unpulverized					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum Dir Ld w/ Liner	13.4	0.0	13.4
Final Form Total	13.4	0.0	13.4

Waste Material Parameters

Material Parameter	Average Density (kg/m^3)
Iron-based Metal/Alloys	22.32
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	120.92
Other Inorganic Materials	188.86
Cellulose	20.75
Rubber	0.00
Plastic	1.60
Cement	0.00
Solidified Inorganic Material	1.51
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	36.71
Packaging Material, Rubber	0.56
Packaging Material, Steel	129.52
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	3.31E+01
Np-237	2.14E-04
Pu-238	8.87E-01
Pu-239	1.56E+01
Pu-240	3.60E+00
Pu-241	2.29E+01
Pu-242	6.36E-04
Th-229	3.97E-14
Th-230	1.16E-11
Th-232	2.63E-18
U-233	9.10E-10
U-234	2.51E-06
U-235	1.53E-08
U-236	1.07E-07
U-238	9.87E-14

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.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	Molten Salt - 30%Pulverized					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum Dir Ld w/ Liner	8.4	0.0	8.4
Final Form Total	8.4	0.0	8.4

Waste Material Parameters

Material Parameter	Average Density (kg/m^3)
Iron-based Metal/Alloys	47.73
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	12.97
Other Inorganic Materials	427.88
Cellulose	0.00
Rubber	0.00
Plastic	24.43
Cement	0.00
Solidified Inorganic Material	3.54
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	36.71
Packaging Material, Rubber	0.56
Packaging Material, Steel	129.52
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	1.07E+01
Cs-137	5.26E-07
Np-237	1.44E-04
Pu-238	1.63E-01
Pu-239	2.26E+00
Pu-240	5.34E-01
Pu-241	5.81E+00
Pu-242	1.56E-04
Sr-90	5.73E-07
Th-229	4.02E-13
Th-230	3.63E-11
Th-232	6.23E-18
U-233	2.33E-09
U-234	1.92E-06
U-235	8.91E-09
U-236	6.32E-08
U-238	9.68E-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.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	Electrorefining Salt					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum Dir Ld w/ Liner	8.8	0.0	8.8
Final Form Total	8.8	0.0	8.8

Waste Material Parameters

Material Parameter	Average Density (kg/m^3)
Iron-based Metal/Alloys	17.88
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	11.22
Other Inorganic Materials	116.15
Cellulose	5.77
Rubber	0.00
Plastic	11.25
Cement	0.00
Solidified Inorganic Material	5.88
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	36.71
Packaging Material, Rubber	0.56
Packaging Material, Steel	129.52
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	5.97E+00
Np-237	6.84E-05
Pu-238	6.38E-01
Pu-239	1.76E+01
Pu-240	4.07E+00
Pu-241	1.93E+01
Pu-242	4.15E-04
Th-229	1.28E-14
Th-230	8.31E-12
Th-232	2.97E-18
U-233	2.93E-10
U-234	1.81E-06
U-235	1.73E-08
U-236	1.20E-07
U-238	6.44E-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 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.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	Gibson Salts					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^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	64.86
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	289.67
Cellulose	0.00
Rubber	0.00
Plastic	16.21
Cement	0.00
Solidified Inorganic Material	3.63
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	36.71
Packaging Material, Rubber	0.56
Packaging Material, Steel	129.52
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	1.01E+01
Np-237	1.68E-04
Pu-238	3.73E-01
Pu-239	4.12E+00
Pu-240	6.85E-01
Pu-241	4.93E+00
Pu-242	3.57E-04
Th-229	5.12E-12
Th-230	1.02E-09
Th-232	9.81E-17
U-233	8.77E-09
U-234	1.56E-05
U-235	5.68E-08
U-236	2.84E-07
U-238	7.76E-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 pyroredox process for extraction of impurities from plutonium metal.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	Direct Oxide Reduction Salt					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

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	21.19
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	43.24
Other Inorganic Materials	159.18
Cellulose	0.00
Rubber	0.00
Plastic	13.51
Cement	0.00
Solidified Inorganic Material	12.11
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	36.71
Packaging Material, Rubber	0.56
Packaging Material, Steel	129.52
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	6.58E+00
Np-237	7.83E-05
Pu-238	1.02E+00
Pu-239	2.36E+01
Pu-240	5.42E+00
Pu-241	3.03E+01
Pu-242	5.64E-04
Th-229	1.47E-14
Th-230	1.78E-11
Th-232	3.95E-18
U-233	3.36E-10
U-234	3.38E-06
U-235	1.81E-07
U-236	1.60E-07
U-238	8.75E-14

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**	12/31/2018
Stream Name	Ash, Incinerator (Virgin)					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

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	76.56
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	350.92
Cellulose	0.00
Rubber	0.00
Plastic	28.00
Cement	0.00
Solidified Inorganic Material	77.07
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	36.71
Packaging Material, Rubber	0.56
Packaging Material, Steel	129.52
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	2.52E+00
Np-237	3.04E-05
Pu-238	3.27E-01
Pu-239	1.31E+01
Pu-240	2.82E+00
Pu-241	2.00E+01
Pu-242	2.73E-04
Th-229	5.71E-15
Th-230	2.51E-10
Th-232	2.06E-18
U-233	1.30E-10
U-234	2.77E-05
U-235	8.67E-06
U-236	8.36E-08
U-238	4.23E-14

Haz. Waste No(s).

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

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.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	Soot					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum Dir Ld w/ Liner	3.4	0.0	3.4
Final Form Total	3.4	0.0	3.4

Waste Material Parameters

Material Parameter	Average Density (kg/m^3)
Iron-based Metal/Alloys	20.08
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	2.43
Other Inorganic Materials	60.41
Cellulose	0.00
Rubber	0.00
Plastic	34.05
Cement	0.00
Solidified Inorganic Material	104.64
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	36.71
Packaging Material, Rubber	0.56
Packaging Material, Steel	129.52
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	3.57E-01
Np-237	6.69E-06
Pu-238	4.14E-02
Pu-239	1.48E+00
Pu-240	3.26E-01
Pu-241	1.83E+00
Pu-242	4.20E-05
Th-229	7.36E-14
Th-230	3.59E-11
Th-232	1.53E-17
U-233	2.14E-10
U-234	9.65E-07
U-235	1.16E-08
U-236	7.73E-08
U-238	5.21E-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.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	Dirt					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

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	1.56
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.29
Plastic	16.85
Cement	0.00
Solidified Inorganic Material	0.45
Solidified Organic Material	0.00
Soil	839.78
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	36.71
Packaging Material, Rubber	0.56
Packaging Material, Steel	129.52
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	1.85E-01
Cs-137	7.29E-07
Np-237	2.22E-06
Pu-238	1.63E-02
Pu-239	3.73E-01
Pu-240	8.29E-02
Pu-241	4.99E-01
Pu-242	1.09E-05
Sr-90	7.98E-07
Th-229	1.64E-15
Th-230	8.55E-13
Th-232	2.42E-19
U-233	1.88E-11
U-234	9.27E-08
U-235	7.36E-10
U-236	4.91E-09
U-238	3.37E-15

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.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

Waste Stream ID: **IN-RF-745**

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**	12/31/2018
Stream Name	Pits 11 and 12 Evaporator Salts					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum Dir Ld w/ Liner	9.7	0.0	9.7
Final Form Total	9.7	0.0	9.7

Waste Material Parameters

Material Parameter	Average Density (kg/m^3)
Iron-based Metal/Alloys	9.73
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	1.73
Cement	290.87
Solidified Inorganic Material	0.00
Solidified Organic Material	473.59
Soil	179.29
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	36.71
Packaging Material, Rubber	0.56
Packaging Material, Steel	129.52
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	4.92E-02
Np-237	7.87E-07
Pu-238	8.17E-05
Pu-239	3.09E-03
Pu-240	6.87E-04
Pu-241	3.71E-03
Pu-242	9.01E-08
Th-229	5.87E-16
Th-230	5.68E-11
Th-232	2.01E-21
U-233	6.71E-12
U-234	3.09E-06
U-235	6.01E-07
U-236	4.07E-11
U-238	2.00E-05

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-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**	12/31/2018
Stream Name	Pits 11 and 12 Evaporator Legacy Dirt					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

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	10.81
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.03
Cellulose	5.40
Rubber	0.00
Plastic	4.59
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.01
Soil	707.90
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	36.71
Packaging Material, Rubber	0.56
Packaging Material, Steel	129.52
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	1.81E+00
Np-237	2.94E-05
Pu-238	1.08E-01
Pu-239	7.43E-01
Pu-240	1.79E-01
Pu-241	5.58E-01
Pu-242	4.29E-05
Th-229	4.87E-14
Th-230	3.87E-09
Th-232	1.17E-18
U-233	3.73E-10
U-234	1.41E-04
U-235	3.57E-07
U-236	1.59E-08
U-238	1.99E-14

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.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	Cemented Miscellaneous Sludge					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^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	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	6.49
Cement	555.96
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	36.71
Packaging Material, Rubber	0.56
Packaging Material, Steel	129.52
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	3.06E-03
Np-237	7.76E-09
Pu-238	2.06E-03
Pu-239	7.73E-02
Pu-240	1.72E-02
Pu-241	9.66E-02
Pu-242	2.25E-06
Th-229	5.27E-17
Th-230	5.63E-12
Th-232	2.46E-18
U-233	1.66E-13
U-234	8.59E-08
U-235	1.07E-09
U-236	7.12E-09
U-238	4.90E-15

Haz. Waste No(s).

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

No TRUCON Codes Provided

Waste Stream Description

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).

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	Dirt					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum 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	0.30
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	5.18
Cellulose	1.08
Rubber	0.00
Plastic	2.09
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	2.00
Soil	995.15
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	36.71
Packaging Material, Rubber	0.56
Packaging Material, Steel	129.52
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	2.32E-02
Np-237	4.95E-07
Pu-238	7.37E-04
Pu-239	1.55E-02
Pu-240	3.53E-03
Pu-241	2.41E-02
Pu-242	4.93E-07
Th-229	9.38E-17
Th-230	1.02E-10
Th-232	2.58E-21
U-233	2.14E-12
U-234	1.11E-05
U-235	2.55E-06
U-236	1.05E-10
U-238	4.91E-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.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

Waste Stream ID: **IN-SD-178**

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**	12/31/2018
Stream Name	Pre-1980 INL-Exhumed SDA Soil					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum Dir Ld w/ Liner	8.0	0.0	8.0
Final Form Total	8.0	0.0	8.0

Waste Material Parameters

Material Parameter	Average Density (kg/m^3)
Iron-based Metal/Alloys	12.54
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	1.95
Rubber	0.00
Plastic	2.16
Cement	0.00
Solidified Inorganic Material	14.53
Solidified Organic Material	0.00
Soil	939.78
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	36.71
Packaging Material, Rubber	0.56
Packaging Material, Steel	129.52
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	2.15E+00
Cs-137	2.88E-05
Np-237	2.99E-05
Pu-238	1.44E-02
Pu-239	5.40E-01
Pu-240	1.20E-01
Pu-241	6.70E-01
Pu-242	1.57E-05
Sr-90	3.17E-05
Th-229	5.63E-15
Th-230	1.93E-09
Th-232	8.77E-20
U-233	1.29E-10
U-234	2.09E-04
U-235	7.08E-06
U-236	3.55E-09
U-238	3.05E-03

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

Waste Stream Description

This waste includes containers of soils exhumed, generated and/or repackaged during the EWR Project and the IDR Project. The exhumed waste includes all loose soil waste found in boxes, bins, and cargos.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	Transuranic Debris					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	0.0	12.6	12.6
Final Form Total	0.0	12.6	12.6

Waste Material Parameters

Material Parameter	Average Density (kg/m^3)
Iron-based Metal/Alloys	1.85
Aluminum-based Metal/Alloys	0.01
Other Metal/Alloys	0.00
Other Inorganic Materials	0.05
Cellulose	1.53
Rubber	0.14
Plastic	1.23
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	45.24
Packaging Material, Rubber	0.56
Packaging Material, Steel	922.22
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	1.03E-03
Am-243	1.32E-07
Cm-244	4.15E-04
Cs-137	1.99E+00
Np-237	6.80E-06
Pu-238	3.69E-02
Pu-239	6.05E-05
Pu-240	4.90E-05
Pu-241	1.11E-02
Pu-242	3.07E-07
Pu-244	4.30E-15
Sr-90	1.97E+00
Th-229	2.97E-12
Th-230	6.29E-09
Th-232	1.07E-13
U-233	1.17E-09
U-234	4.57E-05
U-235	9.44E-07
U-236	9.13E-06
U-238	3.63E-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.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	Transuranic Sludge					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

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	31.75
Aluminum-based Metal/Alloys	15.87
Other Metal/Alloys	1666.67
Other Inorganic Materials	0.00
Cellulose	15.87
Rubber	15.87
Plastic	15.87
Cement	0.00
Solidified Inorganic Material	31.75
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	45.24
Packaging Material, Rubber	0.56
Packaging Material, Steel	922.22
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	6.77E-02
Am-243	7.21E-09
Cm-244	3.24E-03
Cs-137	3.52E+01
Np-237	1.74E-07
Pu-238	1.16E+00
Pu-239	1.96E-02
Pu-240	1.96E-02
Pu-241	1.35E-01
Sr-90	2.72E+01
Th-229	2.03E-06
Th-230	7.53E-04
Th-232	3.80E-04
U-233	2.88E-03
U-234	2.91E-03
U-235	6.56E-04
U-236	6.56E-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.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	Transuranic Debris					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

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	18.55
Aluminum-based Metal/Alloys	0.11
Other Metal/Alloys	0.02
Other Inorganic Materials	0.45
Cellulose	15.28
Rubber	1.38
Plastic	12.26
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	45.24
Packaging Material, Rubber	0.56
Packaging Material, Steel	922.22
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	3.01E-04
Am-243	1.31E-06
Cm-244	1.83E-04
Cs-137	7.92E-01
Np-237	2.30E-06
Pu-238	1.32E-02
Pu-239	2.05E-05
Pu-240	1.65E-05
Pu-241	5.26E-03
Pu-242	1.04E-07
Pu-244	4.26E-14
Sr-90	7.92E-01
Th-229	2.30E-11
Th-230	3.34E-08
Th-232	1.03E-12
U-233	9.58E-09
U-234	1.52E-05
U-235	3.19E-07
U-236	3.08E-06
U-238	1.23E-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.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	Building 234 TRU Waste					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum Dir Ld w/ Liner	87.2	79.4	166.5
Final Form Total	87.2	79.4	166.5

Waste Material Parameters

Material Parameter	Average Density (kg/m^3)
Iron-based Metal/Alloys	6.90
Aluminum-based Metal/Alloys	0.90
Other Metal/Alloys	0.00
Other Inorganic Materials	11.59
Cellulose	1.76
Rubber	0.10
Plastic	10.89
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	53.86
Soil	497.80
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	36.71
Packaging Material, Rubber	0.56
Packaging Material, Steel	129.52
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	7.99E-02
Np-237	2.53E-07
Pu-238	8.63E-03
Pu-239	2.80E-01
Pu-240	2.80E-01
Pu-241	2.57E-01
Th-229	8.83E-07
Th-230	1.55E-04
Th-232	5.19E-05
U-233	1.00E-03
U-234	1.00E-03
U-235	1.90E-04
U-236	1.91E-04
U-238	2.46E-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**	12/31/2018
Stream Name	Cemented TRU Waste					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum Dir Ld w/ Liner	228.7	266.5	495.2
55-gal POC - 12" w/ Liner	0.5	0.0	0.5
SWB Dir Ld w/ Liner	30.1	0.0	30.1
SWB w/ 4 - 55-gal Drums w/ Liners	10.9	0.0	10.9
Final Form Total	270.2	266.5	536.7

Waste Material Parameters

Material Parameter	**Average Density (kg/m^3)**
Iron-based Metal/Alloys	42.43
Aluminum-based Metal/Alloys	0.01
Other Metal/Alloys	12.93
Other Inorganic Materials	6.41
Cellulose	0.40
Rubber	1.21
Plastic	20.00
Cement	848.43
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	1.46
Vitrified	0.00
Packaging Material, Cellulose	0.52
Packaging Material, Plastic	34.83
Packaging Material, Rubber	0.55
Packaging Material, Steel	139.87
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	**Typical Concentration (Ci/m^3)**
Am-241	6.42E+01
Am-243	2.10E-03
Cs-137	3.11E-06
Np-237	4.37E-04
Pu-238	8.19E+00
Pu-239	1.32E+01
Pu-240	3.59E+00
Pu-241	7.01E+01
Pu-242	3.96E-03
Pu-244	2.01E-09
Sr-90	3.11E-06
Th-229	3.63E-09
Th-230	1.09E-09
Th-232	4.06E-07
U-233	4.13E-04
U-234	1.19E-03
U-235	1.31E-05
U-236	5.55E-06
U-238	5.01E-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.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	Cemented TRU Waste					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum Dir Ld w/ Liner	19.5	0.0	19.5
SWB Dir Ld w/ Liner	101.5	0.0	101.5
Final Form Total	121.1	0.0	121.1

Waste Material Parameters

Material Parameter	Average Density (kg/m^3)
Iron-based Metal/Alloys	75.47
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.02
Cellulose	0.91
Rubber	0.05
Plastic	5.38
Cement	512.41
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	6.94
Packaging Material, Rubber	0.25
Packaging Material, Steel	150.27
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	2.42E+00
Am-243	9.86E-06
Cs-137	3.79E-07
Np-237	1.39E-05
Pu-238	2.31E-01
Pu-239	3.09E+00
Pu-240	1.20E-01
Pu-241	8.01E-01
Pu-242	1.79E-05
Sr-90	3.25E-07
Th-229	9.33E-08
Th-230	9.23E-10
Th-232	1.41E-18
U-233	3.94E-09
U-234	2.64E-05
U-235	6.39E-06
U-236	1.43E-08
U-238	4.00E-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)

111/211, 114/214, 125/225

Waste Stream Description

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

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	Cemented TRU Waste					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

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	1.48
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	7.10
Cement	633.22
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	36.71
Packaging Material, Rubber	0.56
Packaging Material, Steel	129.52
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	1.32E-02
Am-243	7.48E-06
Cs-137	3.85E-05
Np-237	5.35E-06
Pu-238	4.12E-02
Pu-239	2.17E-01
Pu-240	1.36E-02
Pu-241	9.36E-02
Pu-242	5.99E-07
Sr-90	3.83E-05
Th-229	2.03E-07
Th-230	6.60E-09
Th-232	1.59E-19
U-233	9.06E-11
U-234	1.80E-04
U-235	4.31E-06
U-236	1.61E-09
U-238	1.72E-04

Haz. Waste No(s).

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

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.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	Cemented TRU Waste					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

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	3.47
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	97.09
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	36.71
Packaging Material, Rubber	0.56
Packaging Material, Steel	129.52
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	8.76E-02
Am-243	7.64E-05
Cs-137	6.31E-06
Np-237	7.71E-06
Pu-238	6.76E-02
Pu-239	1.89E-01
Pu-240	3.66E-02
Pu-241	2.79E-01
Pu-242	2.55E-06
Sr-90	6.27E-06
Th-229	3.90E-07
Th-230	5.92E-10
Th-232	3.62E-18
U-233	1.30E-10
U-234	1.65E-05
U-235	1.42E-07
U-236	2.05E-08
U-238	2.14E-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

TRUCON Code(s)

125/225

Waste Stream Description

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

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	Heterogeneous Debris					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal POC - 12" w/ Liner	0.1	0.0	0.1
SWB Dir Ld w/ Liner	1.9	0.0	1.9
Final Form Total	2.0	0.0	2.0

Waste Material Parameters

Material Parameter	Average Density (kg/m^3)
Iron-based Metal/Alloys	24.59
Aluminum-based Metal/Alloys	0.10
Other Metal/Alloys	2.95
Other Inorganic Materials	15.94
Cellulose	2.03
Rubber	3.05
Plastic	9.41
Cement	0.00
Solidified Inorganic Material	0.39
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	41.60
Packaging Material, Plastic	12.53
Packaging Material, Rubber	0.35
Packaging Material, Steel	305.96
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	5.98E-02
Np-237	1.93E-09
Pu-238	8.29E+01
Pu-239	4.95E-02
Pu-240	2.49E-02
Pu-241	1.90E+00
Pu-242	2.05E-05
Th-229	2.42E-22
Th-230	8.61E-09
Th-232	1.82E-22
U-233	1.06E-16
U-234	9.37E-03
U-235	2.50E-09
U-236	7.37E-11
U-238	3.18E-16

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)

122/222

Waste Stream Description

Mixed heterogeneous debris waste generated in TA-55.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	Heterogeneous Debris					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum Dir Ld w/ Liner	0.2	0.0	0.2
55-gal POC - 12" w/ Liner	0.1	0.0	0.1
Final Form Total	0.4	0.0	0.4

Waste Material Parameters

Material Parameter	Average Density (kg/m^3)
Iron-based Metal/Alloys	188.76
Aluminum-based Metal/Alloys	0.76
Other Metal/Alloys	22.62
Other Inorganic Materials	122.41
Cellulose	15.62
Rubber	23.43
Plastic	72.27
Cement	0.00
Solidified Inorganic Material	3.01
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	236.53
Packaging Material, Plastic	86.53
Packaging Material, Rubber	1.32
Packaging Material, Steel	1002.24
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	1.26E+00
Np-237	4.07E-08
Pu-238	1.75E+03
Pu-239	1.04E+00
Pu-240	5.25E-01
Pu-241	4.01E+01
Pu-242	4.31E-04
Th-229	5.10E-21
Th-230	1.81E-07
Th-232	3.83E-21
U-233	2.22E-15
U-234	1.97E-01
U-235	5.27E-08
U-236	1.55E-09
U-238	6.69E-15

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)

122/222

Waste Stream Description

Mixed heterogeneous debris waste generated in TA-55.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	MIXED COMBUSTIBLE/NONCOMBUSTIBLE WASTE					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum Dir Ld w/ Liner	0.8	0.0	0.8
55-gal POC - 12" w/ Liner	2.8	0.0	2.8
Final Form Total	3.7	0.0	3.7

Waste Material Parameters

Material Parameter	Average Density (kg/m^3)
Iron-based Metal/Alloys	98.64
Aluminum-based Metal/Alloys	0.40
Other Metal/Alloys	11.82
Other Inorganic Materials	63.97
Cellulose	8.16
Rubber	12.25
Plastic	37.77
Cement	0.00
Solidified Inorganic Material	1.57
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	444.04
Packaging Material, Plastic	130.24
Packaging Material, Rubber	1.99
Packaging Material, Steel	1767.87
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	2.26E-01
Np-237	7.31E-09
Pu-238	3.16E+02
Pu-239	1.88E-01
Pu-240	9.43E-02
Pu-241	7.19E+00
Pu-242	7.75E-05
Th-229	9.15E-22
Th-230	3.27E-08
Th-232	6.89E-22
U-233	3.99E-16
U-234	3.57E-02
U-235	9.48E-09
U-236	2.79E-10
U-238	1.20E-15

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)

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

Waste Stream Description

MIXED HETEROGENEOUS DEBRIS WASTE, PU-238

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	COMBINED COMBUSTIBLE AND NON-COMBUSTIBLE WASTE					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum Dir Ld w/ Liner	3.2	0.0	3.2
55-gal POC - 12" w/ Liner	5.1	0.0	5.1
Final Form Total	8.2	0.0	8.2

Waste Material Parameters

Material Parameter	Average Density (kg/m^3)
Iron-based Metal/Alloys	19.98
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	1.24
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	10.46
Cement	0.00
Solidified Inorganic Material	63.45
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	355.30
Packaging Material, Plastic	111.55
Packaging Material, Rubber	1.71
Packaging Material, Steel	1440.45
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	4.59E+01
Np-237	1.49E-06
Pu-238	3.75E+00
Pu-239	9.74E+01
Pu-240	2.47E+01
Pu-241	4.32E+02
Pu-242	2.40E-03
Th-229	1.86E-19
Th-230	3.29E-10
Th-232	1.76E-18
U-233	8.12E-14
U-234	3.58E-04
U-235	6.04E-06
U-236	3.92E-07
U-238	2.24E-08

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)

124/224, 125/225

Waste Stream Description

INORGANIC HOMOGENEOUS TRU WASTE FROM TA55-PF4

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	TRU METAL WASTE					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum Dir Ld w/ Liner	2.1	0.0	2.1
55-gal POC - 12" w/ Liner	0.1	0.0	0.1
SLB2 Dir Ld	14.8	0.0	14.8
SWB Dir Ld w/ Liner	15.0	0.0	15.0
Final Form Total	32.1	0.0	32.1

Waste Material Parameters

Material Parameter	**Average Density (kg/m^3)**
Iron-based Metal/Alloys	368.15
Aluminum-based Metal/Alloys	1.49
Other Metal/Alloys	44.13
Other Inorganic Materials	238.75
Cellulose	30.47
Rubber	45.70
Plastic	140.96
Cement	0.00
Solidified Inorganic Material	5.87
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	2.63
Packaging Material, Plastic	3.69
Packaging Material, Rubber	0.19
Packaging Material, Steel	167.22
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	**Typical Concentration (Ci/m^3)**
Am-241	1.25E-01
Np-237	4.05E-09
Pu-238	5.90E-02
Pu-239	1.23E+00
Pu-240	1.75E-01
Pu-241	3.27E+00
Pu-242	7.23E-04
Pu-244	7.89E-10
Th-229	5.07E-22
Th-230	9.62E-12
Th-232	1.01E-19
U-233	2.21E-16
U-234	1.05E-05
U-235	1.80E-07
U-236	2.07E-08
U-238	2.80E-06

Haz. Waste No(s).

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

TRUCON Code(s)

125/225

Waste Stream Description

ALL OTHER NON-COMBUSTIBLE WASTE

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	COMBINED COMBUSTIBLE AND NON-COMBUSTIBLE WASTE					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum Dir Ld w/ Liner	1.9	0.0	1.9
55-gal POC - 12" w/ Liner	4.7	0.0	4.7
SWB Dir Ld w/ Liner	7.5	0.0	7.5
Final Form Total	14.1	0.0	14.1

Waste Material Parameters

Material Parameter	**Average Density (kg/m^3)**
Iron-based Metal/Alloys	34.71
Aluminum-based Metal/Alloys	0.14
Other Metal/Alloys	4.16
Other Inorganic Materials	22.51
Cellulose	2.87
Rubber	4.31
Plastic	13.29
Cement	0.00
Solidified Inorganic Material	0.55
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	192.72
Packaging Material, Plastic	58.43
Packaging Material, Rubber	0.99
Packaging Material, Steel	853.73
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	**Typical Concentration (Ci/m^3)**
Am-241	2.48E-01
Np-237	8.01E-09
Pu-238	3.52E+02
Pu-239	2.08E-01
Pu-240	1.04E-01
Pu-241	7.89E+00
Pu-242	8.51E-05
Th-229	1.00E-21
Th-230	3.66E-08
Th-232	7.59E-22
U-233	4.38E-16
U-234	3.98E-02
U-235	1.05E-08
U-236	3.08E-10
U-238	1.32E-15

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)

125/225

Waste Stream Description

PF4 TRU Packaged Waste

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	Homogeneous Inorganic Solids					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum Dir Ld w/ Liner	1.5	0.0	1.5
55-gal POC - 12" w/ Liner	1.0	0.0	1.0
SWB Dir Ld w/ Liner	3.8	0.0	3.8
Final Form Total	6.3	0.0	6.3

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	0.40
Cement	0.00
Solidified Inorganic Material	75.22
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	94.34
Packaging Material, Plastic	35.24
Packaging Material, Rubber	0.64
Packaging Material, Steel	492.49
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	**Typical Concentration (Ci/m^3)**
Am-241	1.18E+01
Np-237	3.81E-07
Pu-238	1.20E+00
Pu-239	3.13E+01
Pu-240	8.00E+00
Pu-241	1.39E+02
Pu-242	7.85E-04
Th-229	4.78E-20
Th-230	1.07E-10
Th-232	3.22E-19
U-233	2.08E-14
U-234	1.16E-04
U-235	1.57E-06
U-236	7.71E-08
U-238	3.75E-09

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)

124/224

Waste Stream Description

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

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	Heterogeneous Debris					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum Dir Ld w/ Liner	273.2	4305.6	4578.8
55-gal POC - 12" w/ Liner	26.0	0.0	26.0
SWB Dir Ld w/ Liner	137.2	0.0	137.2
SWB w/ 4 - 55-gal Drums w/ Liners	14.3	0.0	14.3
Final Form Total	450.7	4305.6	4756.4

Waste Material Parameters

Material Parameter	**Average Density (kg/m^3)**
Iron-based Metal/Alloys	137.72
Aluminum-based Metal/Alloys	1.69
Other Metal/Alloys	9.26
Other Inorganic Materials	9.29
Cellulose	22.46
Rubber	6.85
Plastic	18.18
Cement	0.00
Solidified Inorganic Material	29.16
Solidified Organic Material	0.03
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	3.15
Packaging Material, Plastic	36.35
Packaging Material, Rubber	0.56
Packaging Material, Steel	142.89
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	**Typical Concentration (Ci/m^3)**
Am-241	1.79E+00
Am-243	6.93E-05
Cs-137	3.33E-07
Np-237	1.60E-05
Pu-238	4.90E+01
Pu-239	5.13E+00
Pu-240	1.36E+00
Pu-241	2.04E+01
Pu-242	1.72E-03
Pu-244	1.39E-09
Sr-90	3.33E-07
Th-229	1.68E-10
Th-230	5.23E-09
Th-232	1.56E-18
U-233	1.91E-05
U-234	5.70E-03
U-235	2.29E-06
U-236	3.18E-07
U-238	5.80E-06

Haz. Waste No(s).

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

TRUCON Code(s)

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

Waste Stream Description

Mixed heterogeneous debris waste generated in TA-55.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	Heterogeneous Debris					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum Dir Ld w/ Liner	130.4	199.5	329.9
55-gal POC - 12" w/ Liner	1.4	0.0	1.4
SLB2 Dir Ld	0.0	650.3	650.3
SWB Dir Ld w/ Liner	18.8	0.0	18.8
Final Form Total	150.6	849.8	1000.4

Waste Material Parameters

Material Parameter	**Average Density (kg/m^3)**
Iron-based Metal/Alloys	73.49
Aluminum-based Metal/Alloys	1.31
Other Metal/Alloys	3.33
Other Inorganic Materials	6.70
Cellulose	26.65
Rubber	1.29
Plastic	10.05
Cement	0.00
Solidified Inorganic Material	20.68
Solidified Organic Material	0.01
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.81
Packaging Material, Plastic	12.35
Packaging Material, Rubber	0.26
Packaging Material, Steel	156.11
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	**Typical Concentration (Ci/m^3)**
Am-241	9.59E-01
Am-243	3.18E-05
Cm-244	1.07E+00
Cs-137	4.16E-03
Np-237	2.47E-05
Pu-238	7.64E-01
Pu-239	7.66E+00
Pu-240	1.80E+00
Pu-241	2.71E+01
Pu-242	1.13E-04
Sr-90	3.91E-03
Th-229	1.19E-17
Th-230	1.21E-10
Th-232	2.81E-07
U-233	3.77E-12
U-234	1.32E-04
U-235	2.13E-06
U-236	1.88E-07
U-238	1.27E-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

TRUCON Code(s)

112/212, 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.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	Heterogeneous Debris					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

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	77.1	0.0	77.1
TDOP Dir Ld	22.5	0.0	22.5
Final Form Total	100.4	0.0	100.4

Waste Material Parameters

Material Parameter	**Average Density (kg/m^3)**
Iron-based Metal/Alloys	81.00
Aluminum-based Metal/Alloys	2.88
Other Metal/Alloys	1.29
Other Inorganic Materials	0.51
Cellulose	19.85
Rubber	3.20
Plastic	8.25
Cement	0.00
Solidified Inorganic Material	4.83
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	1.23
Packaging Material, Rubber	0.19
Packaging Material, Steel	157.87
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	**Typical Concentration (Ci/m^3)**
Am-241	4.34E-01
Am-243	2.59E-06
Cs-137	9.28E-08
Np-237	6.76E-06
Pu-238	2.19E+00
Pu-239	1.13E+00
Pu-240	3.66E-01
Pu-241	2.15E+00
Pu-242	5.55E-05
Sr-90	9.26E-08
Th-229	2.17E-09
Th-230	2.98E-09
Th-232	2.68E-19
U-233	2.47E-05
U-234	3.27E-04
U-235	2.05E-07
U-236	1.08E-08
U-238	8.61E-15

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)

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.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	Heterogeneous Debris Waste					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum Dir Ld w/ Liner	2.7	0.0	2.7
SWB Dir Ld w/ Liner	1.9	0.0	1.9
Final Form Total	4.6	0.0	4.6

Waste Material Parameters

Material Parameter	Average Density (kg/m^3)
Iron-based Metal/Alloys	73.12
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	17.94
Other Inorganic Materials	16.96
Cellulose	4.60
Rubber	4.42
Plastic	19.52
Cement	0.00
Solidified Inorganic Material	7.01
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	22.23
Packaging Material, Rubber	0.41
Packaging Material, Steel	139.61
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	4.20E+00
Am-243	8.86E-06
Cm-244	7.04E-01
Cs-137	1.13E-07
Np-237	3.12E-05
Pu-238	7.76E-03
Pu-239	1.68E-01
Pu-240	3.28E-02
Pu-241	2.64E-01
Pu-242	1.89E-06
Sr-90	1.12E-07
Th-229	7.44E-08
Th-230	1.64E-12
Th-232	3.81E-19
U-233	4.82E-10
U-234	8.89E-08
U-235	6.62E-10
U-236	3.87E-09
U-238	1.17E-15

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)

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.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	Heterogeneous Debris Waste					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum Dir Ld w/ Liner	0.2	0.0	0.2
55-gal POC - 12" w/ Liner	0.1	0.0	0.1
SWB Dir Ld w/ Liner	5.6	0.0	5.6
Final Form Total	5.9	0.0	5.9

Waste Material Parameters

Material Parameter	**Average Density (kg/m^3)**
Iron-based Metal/Alloys	13.65
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	13.11
Other Inorganic Materials	0.91
Cellulose	1.93
Rubber	2.06
Plastic	4.53
Cement	0.00
Solidified Inorganic Material	2.65
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	9.45
Packaging Material, Plastic	5.03
Packaging Material, Rubber	0.24
Packaging Material, Steel	187.84
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	**Typical Concentration (Ci/m^3)**
Am-241	2.19E-01
Am-243	7.57E-03
Cs-137	2.50E-05
Np-237	1.71E-05
Pu-238	1.01E-02
Pu-239	8.22E-03
Pu-240	4.46E-03
Pu-241	1.05E-01
Pu-242	1.29E-04
Sr-90	2.48E-05
Th-229	5.05E-14
Th-230	3.12E-11
Th-232	5.22E-20
U-233	2.88E-10
U-234	9.07E-07
U-235	3.24E-11
U-236	5.29E-10
U-238	8.00E-14

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)

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.18.00.33***

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**	12/31/2018
Stream Name	Heterogeneous Debris					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum Dir Ld w/ Liner	3.2	0.0	3.2
SWB Dir Ld w/ Liner	18.8	0.0	18.8
TDOP Dir Ld	4.5	0.0	4.5
Final Form Total	26.5	0.0	26.5

Waste Material Parameters

Material Parameter	**Average Density (kg/m^3)**
Iron-based Metal/Alloys	252.64
Aluminum-based Metal/Alloys	0.67
Other Metal/Alloys	4.85
Other Inorganic Materials	1.28
Cellulose	17.34
Rubber	2.69
Plastic	17.48
Cement	0.00
Solidified Inorganic Material	12.33
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	5.23
Packaging Material, Rubber	0.24
Packaging Material, Steel	154.22
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	**Typical Concentration (Ci/m^3)**
Am-241	1.24E-01
Am-243	1.35E-06
Cs-137	2.09E-07
Np-237	3.02E-06
Pu-238	1.40E-01
Pu-239	7.76E-02
Pu-240	2.43E-02
Pu-241	3.64E-01
Pu-242	1.94E-05
Sr-90	2.08E-07
Th-229	8.71E-15
Th-230	7.68E-10
Th-232	2.85E-19
U-233	4.99E-11
U-234	2.17E-05
U-235	1.61E-07
U-236	2.88E-09
U-238	1.20E-14

Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D021, D022, D027, D028, D029, D030, D035, D037, D038, D039, D040, D043, F001, F002, F003, F004, F005, F006, F007, F009

TRUCON Code(s)

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

Waste Stream Description

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

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	Absorbed Waste					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum Dir Ld w/ Liner	50.8	0.0	50.8
55-gal POC - 12" w/ Liner	0.0	0.0	0.0
SWB Dir Ld w/ Liner	7.5	0.0	7.5
Final Form Total	58.4	0.0	58.4

Waste Material Parameters

Material Parameter	**Average Density (kg/m^3)**
Iron-based Metal/Alloys	19.13
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	39.14
Other Inorganic Materials	0.24
Cellulose	8.76
Rubber	3.34
Plastic	27.31
Cement	0.00
Solidified Inorganic Material	523.23
Solidified Organic Material	4.53
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.48
Packaging Material, Plastic	32.24
Packaging Material, Rubber	0.52
Packaging Material, Steel	134.48
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	**Typical Concentration (Ci/m^3)**
Am-241	1.32E+01
Am-243	8.19E-04
Cs-137	8.87E-07
Np-237	1.58E-04
Pu-238	9.29E-01
Pu-239	2.83E+00
Pu-240	5.35E-01
Pu-241	5.04E+00
Pu-242	5.02E-05
Sr-90	8.86E-07
Th-229	2.96E-14
Th-230	1.53E-09
Th-232	3.91E-19
U-233	6.77E-10
U-234	1.68E-04
U-235	1.36E-06
U-236	1.58E-08
U-238	1.45E-05

Haz. Waste No(s).

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

TRUCON Code(s)

112/212, 113/213, 125/225, 126/226, 129/229

Waste Stream Description

Inorganic particulate waste generated in TA-55.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	Homogeneous Inorganic Solids					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum Dir Ld w/ Liner	54.4	0.0	54.4
55-gal POC - 12" w/ Liner	0.2	0.0	0.2
SWB Dir Ld w/ Liner	5.6	0.0	5.6
Final Form Total	60.3	0.0	60.3

Waste Material Parameters

Material Parameter	**Average Density (kg/m^3)**
Iron-based Metal/Alloys	8.09
Aluminum-based Metal/Alloys	0.69
Other Metal/Alloys	0.20
Other Inorganic Materials	0.58
Cellulose	2.36
Rubber	0.39
Plastic	15.90
Cement	0.00
Solidified Inorganic Material	739.84
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	2.33
Packaging Material, Plastic	33.88
Packaging Material, Rubber	0.53
Packaging Material, Steel	140.44
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	**Typical Concentration (Ci/m^3)**
Am-241	6.78E-01
Am-243	1.55E-06
Cs-137	8.64E-06
Np-237	1.09E-06
Pu-238	2.44E-01
Pu-239	7.80E-01
Pu-240	1.27E-01
Pu-241	3.75E+00
Pu-242	2.11E-03
Pu-244	2.33E-09
Sr-90	8.36E-06
Th-229	9.88E-08
Th-230	2.70E-11
Th-232	8.57E-20
U-233	1.64E-13
U-234	2.94E-05
U-235	1.11E-06
U-236	1.75E-08
U-238	1.68E-06

Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D021, D022, D028, D035, D037, D038, D039, D040, F001, F002, F003, F004, F005, F006, F007, F009

TRUCON Code(s)

111/211, 122/222, 124/224, 125/225

Waste Stream Description

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

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	Salt Waste					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum Dir Ld w/ Liner	1.1	0.0	1.1
55-gal POC - 12" w/ Liner	0.2	0.0	0.2
SWB Dir Ld w/ Liner	1.9	0.0	1.9
SWB w/ 4 - 55-gal Drums w/ Liners	0.8	0.0	0.8
Final Form Total	4.0	0.0	4.0

Waste Material Parameters

Material Parameter	**Average Density (kg/m^3)**
Iron-based Metal/Alloys	5.05
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	10.35
Other Inorganic Materials	4.85
Cellulose	0.15
Rubber	0.00
Plastic	5.75
Cement	0.00
Solidified Inorganic Material	101.50
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	28.35
Packaging Material, Plastic	25.84
Packaging Material, Rubber	0.57
Packaging Material, Steel	319.03
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	**Typical Concentration (Ci/m^3)**
Am-241	1.40E+01
Am-243	5.90E-03
Cs-137	6.51E-05
Np-237	1.24E-04
Pu-238	5.58E-01
Pu-239	1.63E+01
Pu-240	4.03E+00
Pu-241	2.82E+01
Pu-242	2.68E-03
Sr-90	6.54E-05
Th-229	5.10E-13
Th-230	5.75E-09
Th-232	7.36E-17
U-233	2.40E-09
U-234	1.29E-04
U-235	3.03E-06
U-236	5.96E-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.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	Absorbed TRU Waste					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum Dir Ld w/ Liner	1.3	0.0	1.3
SWB Dir Ld w/ Liner	1.9	0.0	1.9
Final Form Total	3.1	0.0	3.1

Waste Material Parameters

Material Parameter	Average Density (kg/m^3)
Iron-based Metal/Alloys	14.69
Aluminum-based Metal/Alloys	2.47
Other Metal/Alloys	0.00
Other Inorganic Materials	0.10
Cellulose	8.32
Rubber	1.03
Plastic	12.38
Cement	0.00
Solidified Inorganic Material	177.01
Solidified Organic Material	92.17
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	15.46
Packaging Material, Rubber	0.34
Packaging Material, Steel	144.33
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	3.95E-01
Am-243	4.71E-06
Cs-137	2.07E-06
Np-237	1.96E-03
Pu-238	1.25E-01
Pu-239	3.01E+00
Pu-240	7.03E-01
Pu-241	7.04E+00
Pu-242	4.41E-05
Sr-90	1.32E-06
Th-229	5.85E-12
Th-230	5.67E-09
Th-232	8.22E-18
U-233	3.33E-08
U-234	1.55E-04
U-235	3.80E-06
U-236	8.33E-08
U-238	2.74E-14

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)

125/225

Waste Stream Description

Mixed homogeneous solids

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

Waste Stream ID: **LA-MIN06-NS.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**	12/31/2018
Stream Name	CCP-AK-LANL-015					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum 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	1.82
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	593.66
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	36.71
Packaging Material, Rubber	0.56
Packaging Material, Steel	129.52
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	9.87E+00
Am-243	1.26E-03
Cs-137	3.27E-07
Np-237	1.11E-04
Pu-238	1.04E-01
Pu-239	2.74E+00
Pu-240	6.80E-01
Pu-241	7.49E+00
Pu-242	6.13E-05
Sr-90	1.73E-07
Th-229	5.34E-17
Th-230	1.66E-10
Th-232	4.96E-21
U-233	1.70E-11
U-234	1.81E-04
U-235	2.59E-06
U-236	2.01E-09
U-238	8.23E-05

Haz. Waste No(s).

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

TRUCON Code(s)

125/225, 126/226

Waste Stream Description

Treated Legacy Nitrate Salt Waste

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	Contaminated Soil					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum Dir Ld w/ Liner	8.0	0.0	8.0
SWB Dir Ld w/ Liner	54.5	0.0	54.5
Final Form Total	62.5	0.0	62.5

Waste Material Parameters

Material Parameter	Average Density (kg/m^3)
Iron-based Metal/Alloys	2.57
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.21
Other Inorganic Materials	0.15
Cellulose	0.03
Rubber	0.00
Plastic	3.74
Cement	0.00
Solidified Inorganic Material	1.03
Solidified Organic Material	0.00
Soil	568.56
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	5.74
Packaging Material, Rubber	0.24
Packaging Material, Steel	151.10
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	8.45E-03
Am-243	4.14E-07
Cs-137	4.28E-05
Np-237	1.23E-07
Pu-238	1.94E-03
Pu-239	1.01E-01
Pu-240	1.48E-02
Pu-241	1.54E-01
Pu-242	8.60E-07
Sr-90	6.31E-06
Th-229	3.45E-16
Th-230	1.57E-09
Th-232	1.72E-19
U-233	1.99E-12
U-234	4.26E-05
U-235	1.16E-06
U-236	1.75E-09
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.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

Waste Stream ID: **LA-NCD01**

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**	12/31/2018
Stream Name	Not Assigned					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum Dir Ld w/ Liner	3.2	0.0	3.2
Final Form Total	3.2	0.0	3.2

Waste Material Parameters

Material Parameter	Average Density (kg/m^3)
Iron-based Metal/Alloys	44.14
Aluminum-based Metal/Alloys	0.18
Other Metal/Alloys	5.29
Other Inorganic Materials	28.62
Cellulose	3.65
Rubber	5.48
Plastic	16.90
Cement	0.00
Solidified Inorganic Material	0.70
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	36.71
Packaging Material, Rubber	0.56
Packaging Material, Steel	129.52
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	4.14E-01
Np-237	1.34E-08
Pu-238	1.03E-01
Pu-239	3.49E+00
Pu-240	8.17E-01
Pu-241	1.23E+01
Pu-242	4.73E-05
Th-229	1.68E-21
Th-230	5.80E-11
Th-232	1.14E-18
U-233	7.30E-16
U-234	6.31E-05
U-235	1.87E-06
U-236	2.32E-07
U-238	1.61E-08

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)

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

Waste Stream Description

Noncombustible inorganic/organic waste

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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
Source Cat.	Discarding Excess/Expired Materials	**Waste Matrix Code Group**	Uncategorized Metal Waste		
Stream Name	Defense Sealed Sources				

Handling	CH
Inventory Date	12/31/2018
Activity Concentrations Decayed to CY	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal POC - 12" w/ Liner	0.9	0.0	0.9
55-gal POC - 6" w/ Liner	0.3	6.3	6.6
Final Form Total	1.2	6.3	7.5

Waste Material Parameters

Material Parameter	Average Density (kg/m^3)
Iron-based Metal/Alloys	199.82
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	35.26
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	3336.46
Packaging Material, Plastic	582.72
Packaging Material, Rubber	8.92
Packaging Material, Steel	5150.67
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	4.14E+02
Cs-137	6.67E-01
Np-237	1.34E-05
Pu-238	6.01E+01
Pu-239	1.46E+02
Pu-240	3.59E+01
Pu-241	1.03E+02
Pu-242	2.87E-03
Sr-90	3.20E-05
Th-229	1.48E-12
Th-230	6.35E-09
Th-232	2.62E-19
U-233	1.68E-07
U-234	6.92E-03
U-235	1.74E-08
U-236	1.06E-07
U-238	3.16E-10

No Hazardous Waste Numbers Provided

TRUCON Code(s)
120/220

Waste Stream Description

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

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***
NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	Mixed Waste Sealed Sources					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal POC - 6" w/ Liner	0.0	0.0	0.0
Final Form Total	0.0	0.0	0.0

Waste Material Parameters

Material Parameter	Average Density (kg/m^3)
Iron-based Metal/Alloys	510.00
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	90.00
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	3725.00
Packaging Material, Plastic	642.50
Packaging Material, Rubber	9.83
Packaging Material, Steel	5558.33
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	1.75E+01
Np-237	2.85E-05
Pu-239	2.42E-03
Pu-240	1.53E-03
Pu-241	2.95E-03
Th-229	8.05E-12
Th-232	2.80E-20
U-233	1.85E-08
U-235	1.01E-10
U-236	2.27E-10

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**	12/31/2018
Stream Name	TA-39 Heterogeneous Debris					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum Dir Ld w/ Liner	8.6	0.0	8.6
SWB Dir Ld w/ Liner	73.3	0.0	73.3
Final Form Total	81.9	0.0	81.9

Waste Material Parameters

Material Parameter	**Average Density (kg/m^3)**
Iron-based Metal/Alloys	105.08
Aluminum-based Metal/Alloys	18.79
Other Metal/Alloys	18.79
Other Inorganic Materials	58.01
Cellulose	2.06
Rubber	1.86
Plastic	1.86
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	4.94
Packaging Material, Rubber	0.23
Packaging Material, Steel	151.66
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	**Typical Concentration (Ci/m^3)**
Am-241	9.16E-03
Np-237	2.58E-05
Pu-238	1.77E-02
Pu-239	1.53E-02
Pu-240	5.22E-04
Pu-241	4.67E-03
Pu-242	3.02E-08
Th-229	5.92E-13
Th-230	2.95E-11
Th-232	4.62E-20
U-233	1.22E-09
U-234	5.75E-07
U-235	1.66E-10
U-236	1.70E-10
U-238	5.16E-17

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)

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.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	NON-PN EQUIPMENT					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

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	1.74E-07

Haz. Waste No(s).

D008

No TRUCON Codes Provided

Waste Stream Description

LAMPRE REACTOR VESSEL SEALED IN CASK VESSEL

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	Combined Combustible and NonCombustible					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum Dir Ld w/ Liner	9.5	0.0	9.5
SWB Dir Ld w/ Liner	1.9	0.0	1.9
Final Form Total	11.3	0.0	11.3

Waste Material Parameters

Material Parameter	Average Density (kg/m^3)
Iron-based Metal/Alloys	18.90
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	6.18
Other Inorganic Materials	29.99
Cellulose	24.16
Rubber	2.45
Plastic	70.92
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.47
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	30.82
Packaging Material, Rubber	0.50
Packaging Material, Steel	133.63
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	1.76E-01
Am-243	4.33E-05
Cs-137	2.01E-06
Np-237	6.18E-04
Pu-238	4.73E+00
Pu-239	1.20E+00
Pu-240	2.85E-01
Pu-241	4.66E+00
Pu-242	2.49E-05
Th-229	2.88E-07
Th-230	7.54E-10
Th-232	4.53E-18
U-233	5.14E-05
U-234	8.21E-04
U-235	9.89E-06
U-236	9.18E-07
U-238	1.87E-06

Haz. Waste No(s).

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

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

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	Debris and Metal					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
SWB Dir Ld w/ Liner	9.4	0.0	9.4
Final Form Total	9.4	0.0	9.4

Waste Material Parameters

Material Parameter	Average Density (kg/m^3)
Iron-based Metal/Alloys	56.64
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	18.53
Other Inorganic Materials	89.84
Cellulose	72.37
Rubber	7.34
Plastic	212.46
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	1.42
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	1.21
Packaging Material, Rubber	0.19
Packaging Material, Steel	154.26
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Pu-238	2.81E-01
Pu-239	6.60E-04
Th-230	8.05E-09
U-234	3.95E-05
U-235	2.73E-11

Haz. Waste No(s).

D008

TRUCON Code(s)

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

Waste Stream Description

Metals and Miscellaneous Equipment Debris

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	Cell fuel cans and hot trash					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

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	4.01E-02
Cs-137	1.85E+01
Np-237	5.84E-08
Pu-238	1.97E-02
Pu-239	1.04E+00
Pu-240	3.24E-02
Pu-241	9.49E-01
Pu-242	1.97E-05
Sr-90	1.30E+01
Th-229	7.68E-17
Th-230	8.20E-10
Th-232	1.51E-17
U-233	5.72E-13
U-234	2.24E-05
U-235	1.07E-04
U-236	7.82E-08
U-238	5.26E-07

No Hazardous Waste Numbers Provided

TRUCON Code(s)
117/217

Waste Stream Description
Combined combustible and noncombustible debris waste (RH-TRU) of the CMR facility

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***
NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	Cement paste from CMR building (mixed)					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-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	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	3.03
Cement	1005.42
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	36.71
Packaging Material, Rubber	0.56
Packaging Material, Steel	129.52
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Pu-238	2.39E+00
Th-230	7.60E-08
U-234	3.55E-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**	12/31/2018
Stream Name	SILICON-BASED OIL - LIQUID					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^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	39.55
Aluminum-based Metal/Alloys	7.48
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	15.50
Rubber	1.60
Plastic	22.45
Cement	0.00
Solidified Inorganic Material	223.92
Solidified Organic Material	223.92
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	36.71
Packaging Material, Rubber	0.56
Packaging Material, Steel	129.52
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Pu-238	2.31E-01
Th-230	7.32E-09
U-234	3.42E-05

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

Waste Stream Description

Absorbed Organics on Vermiculite

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	Confinement Vessel Disposition					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum Dir Ld w/ Liner	13.2	0.0	13.2
SWB Dir Ld w/ Liner	3.8	0.0	3.8
Final Form Total	17.0	0.0	17.0

Waste Material Parameters

Material Parameter	Average Density (kg/m^3)
Iron-based Metal/Alloys	26.76
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	8.75
Other Inorganic Materials	42.44
Cellulose	34.19
Rubber	3.47
Plastic	100.38
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.67
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	28.86
Packaging Material, Rubber	0.48
Packaging Material, Steel	135.00
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	1.03E+00
Np-237	5.20E-07
Pu-238	2.57E-01
Pu-239	8.71E+00
Pu-240	2.04E+00
Pu-241	3.08E+01
Pu-242	1.18E-04
Th-229	2.38E-19
Th-230	1.72E-11
Th-232	1.49E-20
U-233	7.62E-14
U-234	1.87E-05
U-235	3.24E-07
U-236	6.04E-09
U-238	1.83E-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)

117/217, 125/225

Waste Stream Description

Mixed heterogeneous combustible and non-combustible debris.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

Waste Stream ID: **LA-TA-21-01**

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**	12/31/2018
Stream Name	Not Assigned					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^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	48.46
Aluminum-based Metal/Alloys	18.48
Other Metal/Alloys	37.15
Other Inorganic Materials	10.56
Cellulose	31.49
Rubber	24.32
Plastic	18.10
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	36.71
Packaging Material, Rubber	0.56
Packaging Material, Steel	129.52
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	1.31E-01
Np-237	4.16E-08
Pu-238	3.11E-02
Pu-239	1.06E+00
Pu-240	2.49E-01
Pu-241	3.60E+00
Pu-242	1.44E-05
Th-229	2.63E-18
Th-230	2.13E-11
Th-232	1.82E-19
U-233	9.00E-14
U-234	2.37E-06
U-235	4.06E-08
U-236	7.37E-09
U-238	2.24E-15

Haz. Waste No(s).

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

TRUCON Code(s)

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

Waste Stream Description

TRU COMBUSTIBLE/NONCOMBUSTIBLE WASTE

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	Graphite Waste			**Inventory Date**	12/31/2018
Stream Name	Graphite					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^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	48.53
Aluminum-based Metal/Alloys	18.51
Other Metal/Alloys	37.20
Other Inorganic Materials	10.57
Cellulose	31.54
Rubber	24.36
Plastic	18.13
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	36.71
Packaging Material, Rubber	0.56
Packaging Material, Steel	129.52
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	5.48E-01
Np-237	6.43E-06
Pu-238	5.60E-02
Pu-239	2.50E+00
Pu-240	5.96E-01
Pu-241	1.24E+00
Pu-242	4.03E-05
Th-229	6.31E-13
Th-230	3.88E-09
Th-232	7.70E-16
U-233	5.41E-10
U-234	1.38E-05
U-235	4.65E-05
U-236	7.42E-07
U-238	2.62E-13

No Hazardous Waste Numbers Provided

TRUCON Code(s)

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

Waste Stream Description

Graphite and Incinerator solids

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	Combustible debris waste (mixed)					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum Dir Ld w/ Liner	329.3	0.0	329.3
Final Form Total	329.3	0.0	329.3

Waste Material Parameters

Material Parameter	Average Density (kg/m^3)
Iron-based Metal/Alloys	26.12
Aluminum-based Metal/Alloys	9.96
Other Metal/Alloys	20.02
Other Inorganic Materials	5.69
Cellulose	16.97
Rubber	13.11
Plastic	9.76
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	36.71
Packaging Material, Rubber	0.56
Packaging Material, Steel	129.52
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	2.41E-01
Np-237	2.67E-06
Pu-238	4.02E+01
Pu-239	6.18E-01
Pu-240	1.87E-01
Pu-241	6.27E-01
Pu-242	3.49E-05
Th-229	2.35E-13
Th-230	1.39E-06
Th-232	2.20E-16
U-233	2.12E-10
U-234	6.31E-03
U-235	2.82E-06
U-236	2.22E-07
U-238	2.17E-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.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	Debris and Metal					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum Dir Ld w/ Liner	143.4	0.0	143.4
SWB Dir Ld w/ Liner	492.6	0.0	492.6
Final Form Total	636.0	0.0	636.0

Waste Material Parameters

Material Parameter	Average Density (kg/m^3)
Iron-based Metal/Alloys	38.59
Aluminum-based Metal/Alloys	14.72
Other Metal/Alloys	29.58
Other Inorganic Materials	8.41
Cellulose	25.08
Rubber	19.37
Plastic	14.41
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	9.22
Packaging Material, Rubber	0.28
Packaging Material, Steel	148.68
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	5.79E-02
Np-237	6.27E-07
Pu-238	1.60E+01
Pu-239	2.80E-01
Pu-240	5.90E-02
Pu-241	1.54E-01
Pu-242	5.26E-06
Th-229	5.29E-14
Th-230	4.06E-07
Th-232	6.57E-17
U-233	4.89E-11
U-234	2.11E-03
U-235	1.96E-08
U-236	6.82E-08
U-238	3.18E-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

Equipment, Debris, and Metal Parts

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	Glass					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^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	31.80
Aluminum-based Metal/Alloys	12.13
Other Metal/Alloys	24.38
Other Inorganic Materials	6.93
Cellulose	20.66
Rubber	15.96
Plastic	11.88
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	36.71
Packaging Material, Rubber	0.56
Packaging Material, Steel	129.52
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	2.11E-01
Np-237	2.46E-06
Pu-238	2.02E+01
Pu-239	6.35E-01
Pu-240	1.79E-01
Pu-241	4.91E-01
Pu-242	2.67E-05
Th-229	2.39E-13
Th-230	5.80E-07
Th-232	2.31E-16
U-233	2.06E-10
U-234	2.84E-03
U-235	4.97E-08
U-236	2.23E-07
U-238	1.74E-13

No Hazardous Waste Numbers Provided

TRUCON Code(s)

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

Waste Stream Description

Glass and Glass Residues

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	Hepa Filters					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum Dir Ld w/ Liner	14.3	0.0	14.3
Final Form Total	14.3	0.0	14.3

Waste Material Parameters

Material Parameter	Average Density (kg/m^3)
Iron-based Metal/Alloys	29.60
Aluminum-based Metal/Alloys	11.29
Other Metal/Alloys	22.69
Other Inorganic Materials	6.45
Cellulose	19.23
Rubber	14.86
Plastic	11.06
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	36.71
Packaging Material, Rubber	0.56
Packaging Material, Steel	129.52
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	5.26E-03
Np-237	6.49E-08
Pu-238	9.62E+01
Pu-239	2.51E-02
Pu-240	5.86E-03
Pu-241	1.07E-02
Pu-242	3.41E-07
Th-229	7.00E-15
Th-230	3.06E-06
Th-232	8.31E-18
U-233	5.73E-12
U-234	1.43E-02
U-235	2.02E-09
U-236	7.65E-09
U-238	2.33E-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

Filter cells, filter trash, and graphite glass filters

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	Non-combustible and combustible debris waste					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum Dir Ld w/ Liner	338.7	0.0	338.7
SWB Dir Ld w/ Liner	7.5	0.0	7.5
Final Form Total	346.3	0.0	346.3

Waste Material Parameters

Material Parameter	Average Density (kg/m^3)
Iron-based Metal/Alloys	25.52
Aluminum-based Metal/Alloys	9.73
Other Metal/Alloys	19.56
Other Inorganic Materials	5.56
Cellulose	16.58
Rubber	12.81
Plastic	9.53
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	35.94
Packaging Material, Rubber	0.55
Packaging Material, Steel	130.06
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	4.29E-01
Np-237	4.65E-06
Pu-238	1.21E+02
Pu-239	7.87E-01
Pu-240	2.65E-01
Pu-241	1.14E+00
Pu-242	7.18E-05
Th-229	4.10E-04
Th-230	5.20E-06
Th-232	2.95E-16
U-233	1.20E-01
U-234	2.19E-02
U-235	5.65E-06
U-236	3.07E-07
U-238	4.35E-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

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	Cemented wastewater treatment sludge (mixed)					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum Dir Ld w/ Liner	15.3	0.0	15.3
SWB Dir Ld w/ Liner	443.7	0.0	443.7
Final Form Total	459.0	0.0	459.0

Waste Material Parameters

Material Parameter	**Average Density (kg/m^3)**
Iron-based Metal/Alloys	76.74
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	13.65
Cement	2146.79
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	2.39
Packaging Material, Rubber	0.21
Packaging Material, Steel	153.43
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	**Typical Concentration (Ci/m^3)**
Am-241	2.26E+01
Cs-137	3.73E-04
Np-237	5.88E-05
Pu-238	6.51E-02
Pu-239	1.36E-01
Pu-240	1.04E-06
Pu-241	8.23E-05
Pu-242	5.98E-11
Sr-90	2.59E-04
Th-229	2.38E-13
Th-230	9.81E-10
Th-232	7.13E-17
U-233	1.01E-09
U-234	1.41E-05
U-235	4.65E-05
U-236	1.81E-07
U-238	2.36E-05

Haz. Waste No(s).

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

No TRUCON Codes Provided

Waste Stream Description

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.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	Solidified organics					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum Dir Ld w/ Liner	3.4	0.0	3.4
Final Form Total	3.4	0.0	3.4

Waste Material Parameters

Material Parameter	Average Density (kg/m^3)
Iron-based Metal/Alloys	27.60
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	27.12
Cement	0.00
Solidified Inorganic Material	476.12
Solidified Organic Material	62.68
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	36.71
Packaging Material, Rubber	0.56
Packaging Material, Steel	129.52
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	2.15E-01
Np-237	2.39E-06
Pu-238	2.22E-02
Pu-239	1.40E+00
Pu-240	2.41E-01
Pu-241	5.32E-01
Pu-242	1.40E-05
Th-229	2.13E-13
Th-230	1.38E-09
Th-232	2.83E-16
U-233	1.92E-10
U-234	5.16E-06
U-235	9.37E-08
U-236	2.86E-07
U-238	8.70E-14

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

Waste Stream Description

Contaminated oil absorbed in vermiculite

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	SOLIDIFIED INORGANIC PROCESS SOLID					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum Dir Ld w/ Liner	55.0	0.0	55.0
Final Form Total	55.0	0.0	55.0

Waste Material Parameters

Material Parameter	Average Density (kg/m^3)
Iron-based Metal/Alloys	7.66
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	214.27
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	36.71
Packaging Material, Rubber	0.56
Packaging Material, Steel	129.52
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	2.06E+00
Np-237	6.39E-06
Pu-238	4.45E-01
Pu-239	1.15E+01
Pu-240	2.75E+00
Pu-241	2.66E+01
Pu-242	2.26E-04
Th-229	4.48E-14
Th-230	4.60E-09
Th-232	2.43E-16
U-233	1.43E-10
U-234	5.26E-05
U-235	5.94E-05
U-236	8.96E-07
U-238	3.86E-13

Haz. Waste No(s).

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

No TRUCON Codes Provided

Waste Stream Description

LEACHED PROCESS RESIDUES

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	Process solids					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

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	29.29
Aluminum-based Metal/Alloys	11.17
Other Metal/Alloys	22.45
Other Inorganic Materials	6.38
Cellulose	19.03
Rubber	14.70
Plastic	10.94
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	36.71
Packaging Material, Rubber	0.56
Packaging Material, Steel	129.52
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	8.69E-03
Np-237	1.07E-07
Pu-238	8.65E-04
Pu-239	4.15E-02
Pu-240	9.69E-03
Pu-241	1.76E-02
Pu-242	5.63E-07
Th-229	1.16E-14
Th-230	6.34E-11
Th-232	1.37E-17
U-233	9.47E-12
U-234	2.17E-07
U-235	3.35E-09
U-236	1.26E-08
U-238	3.84E-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

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	Cemented caustic liquid waste (mixed)					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^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	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	1.02
Cement	1017.20
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	36.71
Packaging Material, Rubber	0.56
Packaging Material, Steel	129.52
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	7.01E-01
Np-237	1.04E-05
Pu-239	1.36E-02
Th-229	1.30E-12
U-233	1.00E-09
U-235	5.89E-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.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	Homogeneous Inorganic Solids					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum Dir Ld w/ Liner	63.4	0.0	63.4
Final Form Total	63.4	0.0	63.4

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	4.47
Cement	0.00
Solidified Inorganic Material	838.19
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	36.71
Packaging Material, Rubber	0.56
Packaging Material, Steel	129.52
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	3.63E-01
Np-237	1.18E-08
Pu-238	3.16E-02
Pu-239	6.52E-02
Pu-240	1.01E-02
Pu-241	1.53E-01
Pu-242	5.87E-07
Th-229	1.48E-21
Th-230	8.52E-13
Th-232	1.70E-20
U-233	6.44E-16
U-234	9.31E-07
U-235	2.76E-08
U-236	3.46E-09
U-238	2.41E-10

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)

111/211, 125/225

Waste Stream Description

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

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

Waste Stream ID: **LA-TA-55-14**

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**	12/31/2018
Stream Name	Not Assigned					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^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	49.06
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	8.73
Cement	1372.54
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	36.71
Packaging Material, Rubber	0.56
Packaging Material, Steel	129.52
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	1.59E+00
Np-237	2.05E-06
Pu-238	4.06E-02
Pu-239	1.42E+00
Pu-240	3.33E-01
Pu-241	4.17E+00
Pu-242	1.93E-05
Th-229	2.03E-15
Th-230	1.21E-10
Th-232	3.89E-18
U-233	1.73E-11
U-234	3.51E-06
U-235	5.85E-08
U-236	3.94E-08
U-238	1.20E-14

No Hazardous Waste Numbers Provided

TRUCON Code(s)

114/214

Waste Stream Description

SOLIDIFIED INORGANIC/PROCESS SOLIDS

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	Combustible debris waste (mixed)					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum Dir Ld w/ Liner	73.5	0.0	73.5
55-gal POC - 12" w/ Liner	3.6	0.0	3.6
SLB2 Dir Ld	14.8	0.0	14.8
SWB Dir Ld w/ Liner	11.3	0.0	11.3
Final Form Total	103.2	0.0	103.2

Waste Material Parameters

Material Parameter	**Average Density (kg/m^3)**
Iron-based Metal/Alloys	63.48
Aluminum-based Metal/Alloys	0.26
Other Metal/Alloys	7.61
Other Inorganic Materials	41.17
Cellulose	5.25
Rubber	7.88
Plastic	24.31
Cement	0.00
Solidified Inorganic Material	1.01
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	20.15
Packaging Material, Plastic	31.82
Packaging Material, Rubber	0.52
Packaging Material, Steel	211.69
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	**Typical Concentration (Ci/m^3)**
Am-241	1.69E+00
Cs-137	3.38E-10
Np-237	2.11E-05
Pu-238	1.93E+01
Pu-239	4.97E+00
Pu-240	1.87E+00
Pu-241	5.73E+01
Pu-242	2.04E-03
Pu-244	1.39E-09
Th-229	1.02E-17
Th-230	3.89E-09
Th-232	4.33E-17
U-233	3.23E-12
U-234	4.23E-03
U-235	6.52E-05
U-236	8.78E-06
U-238	1.49E-05

Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D021, D022, D026, D027, D028, D029, D030, D035, D036, D037, D038, D039, D040, D043, F001, F002, F003, F004, F005

TRUCON Code(s)

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

Waste Stream Description

Combustible waste 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.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

Waste Stream ID: **LA-TA-55-20**

Appendix A

Waste Profile Report

Site	Los Alamos 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**	12/31/2018
Stream Name	Not Assigned					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

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

Waste Material Parameters

Material Parameter	Average Density (kg/m^3)
Iron-based Metal/Alloys	52.23
Aluminum-based Metal/Alloys	0.21
Other Metal/Alloys	6.26
Other Inorganic Materials	33.87
Cellulose	4.32
Rubber	6.48
Plastic	20.00
Cement	0.00
Solidified Inorganic Material	0.83
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	36.71
Packaging Material, Rubber	0.56
Packaging Material, Steel	129.52
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	3.35E-01
Np-237	5.97E-08
Pu-238	1.17E-01
Pu-239	2.44E+00
Pu-240	6.47E-01
Pu-241	1.09E+01
Pu-242	5.99E-05
Th-229	2.49E-20
Th-230	8.62E-12
Th-232	4.72E-21
U-233	8.07E-15
U-234	9.39E-06
U-235	8.88E-08
U-236	1.91E-09
U-238	9.29E-16

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

Waste Stream Description

Combustible waste

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	Metal debris waste (mixed)					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^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	119.91
Aluminum-based Metal/Alloys	0.48
Other Metal/Alloys	14.37
Other Inorganic Materials	77.76
Cellulose	9.92
Rubber	14.88
Plastic	45.91
Cement	0.00
Solidified Inorganic Material	1.91
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	36.71
Packaging Material, Rubber	0.56
Packaging Material, Steel	129.52
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	1.42E-01
Np-237	1.52E-06
Pu-238	1.01E+01
Pu-239	2.51E-01
Pu-240	8.97E-02
Pu-241	3.91E-01
Pu-242	2.39E-05
Th-229	1.27E-13
Th-230	7.98E-07
Th-232	9.99E-17
U-233	1.18E-10
U-234	2.84E-03
U-235	1.90E-08
U-236	1.04E-07
U-238	8.74E-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.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	Non-combustible and combustible debris waste (mixed)					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum Dir Ld w/ Liner	86.3	0.0	86.3
55-gal POC - 12" w/ Liner	1.4	0.0	1.4
SLB2 Dir Ld	155.2	0.0	155.2
SWB Dir Ld w/ Liner	5.6	0.0	5.6
Final Form Total	248.6	0.0	248.6

Waste Material Parameters

Material Parameter	**Average Density (kg/m^3)**
Iron-based Metal/Alloys	57.30
Aluminum-based Metal/Alloys	0.23
Other Metal/Alloys	6.87
Other Inorganic Materials	37.16
Cellulose	4.74
Rubber	7.11
Plastic	21.94
Cement	0.00
Solidified Inorganic Material	0.91
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	3.28
Packaging Material, Plastic	13.68
Packaging Material, Rubber	0.28
Packaging Material, Steel	164.39
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	**Typical Concentration (Ci/m^3)**
Am-241	8.77E-01
Am-243	9.89E-08
Np-237	3.90E-08
Pu-238	2.45E+00
Pu-239	1.64E+00
Pu-240	6.49E-01
Pu-241	2.30E+01
Pu-242	1.09E-03
Pu-244	7.29E-10
Th-229	8.68E-21
Th-230	3.02E-10
Th-232	6.45E-19
U-233	3.18E-15
U-234	3.29E-04
U-235	2.61E-06
U-236	1.32E-07
U-238	3.37E-05

Haz. Waste No(s).

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

TRUCON Code(s)

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

Waste Stream Description

Non-combustible and combustible waste generated from facility and equipment operations and maintenance. This waste includes, but may not be limited to non-combustible solids and may also contain a smaller fraction of combustible solids and a small fraction of homogeneous solids.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

Waste Stream ID: **LA-TA-55-32**

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**	12/31/2018
Stream Name	Not Assigned					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum Dir Ld w/ Liner	2.3	0.0	2.3
55-gal POC - 12" w/ Liner	0.0	0.0	0.0
Final Form Total	2.4	0.0	2.4

Waste Material Parameters

Material Parameter	**Average Density (kg/m^3)**
Iron-based Metal/Alloys	1.26
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	1.24
Cement	0.00
Solidified Inorganic Material	21.81
Solidified Organic Material	2.87
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	11.91
Packaging Material, Plastic	39.22
Packaging Material, Rubber	0.60
Packaging Material, Steel	173.48
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	**Typical Concentration (Ci/m^3)**
Am-241	3.59E+00
Np-237	1.16E-07
Pu-238	8.32E-01
Pu-239	2.83E+01
Pu-240	6.62E+00
Pu-241	1.00E+02
Pu-242	3.83E-04
Th-229	1.45E-20
Th-230	6.60E-11
Th-232	2.76E-19
U-233	6.34E-15
U-234	7.19E-05
U-235	1.40E-06
U-236	6.57E-08
U-238	3.23E-09

Haz. Waste No(s).

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

No TRUCON Codes Provided

Waste Stream Description

HOMOGENEOUS INORGANICS

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	LEACHED PROCESS RESIDUES					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

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	19.78
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	3.52
Cement	553.38
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	36.71
Packaging Material, Rubber	0.56
Packaging Material, Steel	129.52
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	1.02E+00
Np-237	3.30E-08
Pu-238	2.12E+01
Pu-239	1.20E+00
Pu-240	5.03E-01
Pu-241	3.52E+01
Pu-242	3.15E-02
Pu-244	3.48E-08
Th-229	4.13E-21
Th-230	2.19E-09
Th-232	3.68E-21
U-233	1.80E-15
U-234	2.39E-03
U-235	4.46E-08
U-236	1.49E-09
U-238	4.89E-13

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.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

Waste Stream ID: **LA-TA-55-54**

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**	12/31/2018
Stream Name	Not Assigned					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum Dir Ld w/ Liner	6.9	0.0	6.9
55-gal POC - 12" w/ Liner	0.3	0.0	0.3
Final Form Total	7.3	0.0	7.3

Waste Material Parameters

Material Parameter	**Average Density (kg/m^3)**
Iron-based Metal/Alloys	16.69
Aluminum-based Metal/Alloys	0.07
Other Metal/Alloys	2.00
Other Inorganic Materials	10.83
Cellulose	1.38
Rubber	2.07
Plastic	6.39
Cement	0.00
Solidified Inorganic Material	0.27
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	27.05
Packaging Material, Plastic	42.41
Packaging Material, Rubber	0.65
Packaging Material, Steel	229.33
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	**Typical Concentration (Ci/m^3)**
Am-241	4.13E+00
Np-237	1.34E-07
Pu-238	1.03E+00
Pu-239	3.49E+01
Pu-240	8.16E+00
Pu-241	1.23E+02
Pu-242	4.72E-04
Th-229	1.67E-20
Th-230	1.11E-10
Th-232	1.01E-18
U-233	7.30E-15
U-234	1.21E-04
U-235	2.75E-06
U-236	2.16E-07
U-238	1.35E-08

Haz. Waste No(s).

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

No TRUCON Codes Provided

Waste Stream Description

HOMOGENEOUS INORGANICS

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

Waste Stream ID: **LA-TRU-Empty-110**

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**	12/31/2018
Stream Name	Empty containers					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

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	40.84
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.11
Plastic	7.31
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	1.21
Packaging Material, Rubber	0.19
Packaging Material, Steel	154.26
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	6.95E-03
Am-243	2.33E-08
Np-237	2.16E-08
Pu-239	2.41E-05
Pu-240	5.63E-06
Pu-241	3.05E-04
Th-229	4.64E-17
Th-232	6.58E-23
U-233	2.89E-13
U-235	9.49E-14
U-236	6.67E-13

Haz. Waste No(s).

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

No TRUCON Codes Provided

Waste Stream Description

Empty containers identified as TRU resulting from repackaging/remediation of debris waste streams

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	Empty containers					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

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	66.21
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.29
Plastic	18.77
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	1.21
Packaging Material, Rubber	0.19
Packaging Material, Steel	154.26
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	1.63E-02
Am-243	5.16E-07
Cs-137	6.02E-09
Np-237	2.16E-07
Pu-238	1.53E+00
Pu-239	2.63E-02
Pu-240	6.07E-03
Pu-241	8.47E-02
Pu-242	1.13E-09
Sr-90	6.01E-09
Th-229	4.06E-17
Th-230	2.24E-09
Th-232	4.44E-21
U-233	9.28E-13
U-234	2.46E-04
U-235	1.60E-08
U-236	1.80E-10
U-238	1.75E-19

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)

125/225

Waste Stream Description

Empty containers identified as TRU resulting from repackaging/remediation of debris waste streams

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	Empty containers					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
SWB Dir Ld w/ Liner	82.7	0.0	82.7
Final Form Total	82.7	0.0	82.7

Waste Material Parameters

Material Parameter	Average Density (kg/m^3)
Iron-based Metal/Alloys	312.15
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	1.16
Plastic	37.66
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	1.21
Packaging Material, Rubber	0.19
Packaging Material, Steel	154.26
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	2.62E+00
Am-243	2.66E-04
Cs-137	1.55E-05
Np-237	5.10E-05
Pu-238	2.66E-01
Pu-239	5.65E-01
Pu-240	1.23E-01
Pu-241	2.42E+00
Pu-242	3.15E-06
Pu-244	4.49E-15
Sr-90	1.55E-05
Th-229	3.13E-08
Th-230	4.41E-10
Th-232	5.92E-19
U-233	2.20E-10
U-234	4.83E-05
U-235	1.79E-07
U-236	1.38E-08
U-238	5.03E-06

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

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	LBL-Non Mixed Waste					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

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	9.62
Other Inorganic Materials	3.52
Cellulose	5.19
Rubber	0.00
Plastic	3.05
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	36.71
Packaging Material, Rubber	0.56
Packaging Material, Steel	129.52
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	2.57E-02
Am-243	4.29E-03
Cm-244	3.58E-03
Cs-137	3.85E-07
Np-237	4.07E-05
Pu-238	1.57E-02
Pu-239	1.47E-03
Pu-240	4.76E-05
Pu-241	5.50E-04
Pu-242	3.18E-19
Pu-244	3.19E-16
Th-229	1.96E-17
Th-230	2.04E-15
Th-232	2.67E-06
U-233	6.22E-12
U-234	4.43E-09
U-235	1.44E-13
U-236	1.41E-13
U-238	1.86E-09

No Hazardous Waste Numbers Provided

TRUCON Code(s)

125/225

Waste Stream Description

Heterogeneous transuranic, non mixed waste

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	LBL - Mixed Waste					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

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	0.52
Cellulose	1.76
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	36.71
Packaging Material, Rubber	0.56
Packaging Material, Steel	129.52
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	4.19E-05
Am-243	5.71E-08
Np-237	2.76E-07
Pu-239	2.62E-04
Pu-241	2.28E-04
Th-229	1.33E-19
U-233	4.22E-14
U-235	2.58E-14

Haz. Waste No(s).

D007

TRUCON Code(s)

125/225

Waste Stream Description

Heterogeneous transuranic mixed waste

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	R&D Glovebox Waste					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum Dir Ld w/o Liner	113.8	306.6	420.4
55-gal POC - 12" w/ Liner	5.1	10.0	15.1
SWB Dir Ld w/o Liner	13.2	58.3	71.4
Final Form Total	132.1	374.9	506.9

Waste Material Parameters

Material Parameter	Average Density (kg/m^3)
Iron-based Metal/Alloys	34.87
Aluminum-based Metal/Alloys	10.55
Other Metal/Alloys	23.20
Other Inorganic Materials	3.28
Cellulose	18.19
Rubber	16.37
Plastic	55.81
Cement	6.99
Solidified Inorganic Material	6.24
Solidified Organic Material	0.82
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	17.13
Packaging Material, Plastic	4.70
Packaging Material, Rubber	0.57
Packaging Material, Steel	196.21
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	3.13E+00
Am-243	2.41E-04
Cm-244	7.48E-01
Cs-137	6.67E-04
Np-237	1.69E-04
Pu-238	3.93E+00
Pu-239	5.88E+00
Pu-240	1.65E+00
Pu-241	1.07E+01
Pu-242	6.67E-04
Pu-244	1.93E-13
Sr-90	6.67E-04
Th-229	1.28E-06
Th-230	4.84E-06
Th-232	5.21E-07
U-233	4.99E-04
U-234	1.24E-04
U-235	1.66E-05
U-236	4.88E-09
U-238	1.91E-05

Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D022, D028, D029, D035, D040, F001, F002, F005

TRUCON Code(s)

116/216, 125/225

Waste Stream Description

Specific waste items in this waste stream may include paper cartons, cardboard, Kimwipes, cotton swabs, tissues, cheesecloth, grinding paper, plastic (e.g., bags, sheet, tape, containers, pipette tips, and glovebox windows), Neoprene and Hypalon gloves (leaded and non-leaded), aluminum foil, tin cans, hardware (e.g., nuts, bolts, washers, fittings, gauges, fixtures, thermocouples), metal tools (e.g., screwdrivers and pliers), metal parts, equipment (with or without circuit boards), copper (wire, tubing, flanges, rods, and molds), sealed sources, aerosol cans, glass (e.g., beakers, vials, and ion exchange columns with resin), graphite molds , crucibles (magnesium oxide, tantalum), epoxy resin chunks, lead metal (e.g., bricks, foil), Kaufman cans (lead seams), lead-lined and cadmium-lined steel cans, mercury batteries, fluorescent and incandescent light bulbs, and small quantities of pyrochemical salts and solidified aqueous or organic liquids (individual drums contain less than 50 percent, by volume, solidified liquids, and/or salts).

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***
NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	Pyrochemical salt waste					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum Dir Ld w/o Liner	0.2	0.0	0.2
55-gal POC - 12" w/ Liner	0.2	1.9	2.1
Final Form Total	0.5	1.9	2.3

Waste Material Parameters

Material Parameter	Average Density (kg/m^3)
Iron-based Metal/Alloys	19.33
Aluminum-based Metal/Alloys	5.86
Other Metal/Alloys	0.00
Other Inorganic Materials	102.21
Cellulose	0.00
Rubber	0.00
Plastic	8.48
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	523.44
Packaging Material, Plastic	143.62
Packaging Material, Rubber	2.25
Packaging Material, Steel	2060.82
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	2.69E+01
Cm-244	4.17E-03
Np-237	9.11E-06
Pu-238	1.88E+01
Pu-239	6.52E+01
Pu-240	1.52E+01
Pu-241	7.53E+01
Pu-242	1.56E-03
Th-229	6.33E-16
Th-230	2.45E-10
Th-232	1.11E-17
U-233	2.07E-11
U-234	5.31E-05
U-235	6.42E-08
U-236	4.49E-07
U-238	2.42E-13

No Hazardous Waste Numbers Provided

TRUCON Code(s)

124/224

Waste Stream Description

The waste consists primarily of used chloride and fluoride salts from pyrochemical processes such as electrorefining, molten salt extraction, and direct oxide reduction. There may also be up to 20% heterogeneous organic glovebox bagout waste packaged with the salt waste. This waste does not contain any RCRA listed hazardous materials.

Waste Stream ID: **LL-W018-S5100**

Appendix A

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**	12/31/2018
Stream Name	Combined metal scrap & incidental combust					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
SLB2 Dir Ld	155.2	125.6	280.8
SWB Dir Ld w/o Liner	20.7	77.1	97.8
Final Form Total	175.9	202.7	378.6

Waste Material Parameters

Material Parameter	Average Density (kg/m^3)
Iron-based Metal/Alloys	43.71
Aluminum-based Metal/Alloys	2.66
Other Metal/Alloys	10.52
Other Inorganic Materials	0.44
Cellulose	11.69
Rubber	2.21
Plastic	1.69
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	2.10
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.13
Packaging Material, Steel	162.29
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	6.09E-02
Cm-244	2.76E-05
Np-237	2.13E-07
Pu-238	4.48E-03
Pu-239	4.07E-02
Pu-240	1.22E-02
Pu-241	2.12E-01
Pu-242	2.63E-06
Th-229	1.64E-15
Th-230	7.45E-12
Th-232	1.08E-18
U-233	5.06E-12
U-234	1.45E-07
U-235	4.41E-10
U-236	3.97E-09
U-238	4.49E-15

Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D022, D028, D029, D035, D040, F001, F002, F005

TRUCON Code(s)

125/225

Waste Stream Description

This waste stream is composed primarily of objects which, because of physical size, cannot be packaged in a 55-gallon drum. Typical objects include decommissioned gloveboxes, hoods, and large pieces of equipment (lathes, mills, etc.). This waste stream may contain lead metal (e.g., bricks, foil), Kaufman cans (lead seams), lead-lined and cadmium-lined steel cans, mercury batteries, fluorescent and incandescent light bulbs. The void space in boxes may be filled with other TRU waste items or with foam in plastic bags.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	Sealed Sources					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal POC - 12" w/ Liner	1.0	0.8	1.8
Final Form Total	1.0	0.8	1.8

Waste Material Parameters

Material Parameter	Average Density (kg/m^3)
Iron-based Metal/Alloys	30.29
Aluminum-based Metal/Alloys	6.49
Other Metal/Alloys	18.38
Other Inorganic Materials	16.11
Cellulose	6.57
Rubber	0.00
Plastic	0.14
Cement	0.00
Solidified Inorganic Material	39.65
Solidified Organic Material	20.96
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	575.82
Packaging Material, Plastic	157.99
Packaging Material, Rubber	2.42
Packaging Material, Steel	2254.10
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	7.98E+01
Am-243	1.07E-05
Cm-244	6.11E-04
Cs-137	1.27E-02
Np-237	2.94E-04
Pu-238	1.23E+01
Pu-239	6.15E-01
Pu-240	1.97E-03
Pu-241	2.62E-01
Pu-244	5.90E-22
Sr-90	3.91E-02
Th-229	2.37E-12
Th-230	2.05E-08
Th-232	1.74E-19
U-233	7.16E-09
U-234	4.00E-04
U-235	4.45E-07
U-236	6.40E-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

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	Solidified Waste					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum Dir Ld w/o Liner	23.9	31.5	55.4
Final Form Total	23.9	31.5	55.4

Waste Material Parameters

Material Parameter	Average Density (kg/m^3)
Iron-based Metal/Alloys	8.49
Aluminum-based Metal/Alloys	0.87
Other Metal/Alloys	2.80
Other Inorganic Materials	0.00
Cellulose	6.35
Rubber	4.24
Plastic	40.03
Cement	2.27
Solidified Inorganic Material	155.51
Solidified Organic Material	28.33
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.56
Packaging Material, Steel	129.52
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	1.21E+00
Am-243	5.61E-07
Cm-244	2.77E-04
Cs-137	1.68E-06
Np-237	8.80E-05
Pu-238	5.02E+00
Pu-239	2.89E+00
Pu-240	7.56E-01
Pu-241	8.68E+00
Pu-242	1.52E-04
Sr-90	1.68E-06
Th-229	4.18E-07
Th-230	1.73E-11
Th-232	3.97E-07
U-233	4.75E-02
U-234	1.95E-05
U-235	8.91E-06
U-236	2.24E-09
U-238	5.90E-05

Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D022, D028, D029, D035, D040, F001, F002, F005

TRUCON Code(s)

111/211, 113/213

Waste Stream Description

This waste stream consists of drums classified as homogeneous solids; predominately solidified inorganics with a small percentage of solidified organics.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	AmO2 Bagout/ Silver Bagout					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

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	209.52
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	10.52
Other Inorganic Materials	5.36
Cellulose	209.52
Rubber	31.43
Plastic	52.38
Cement	0.00
Solidified Inorganic Material	526.67
Solidified Organic Material	10.52
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.56
Packaging Material, Steel	129.52
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	6.99E+01
Np-237	1.59E-04
Th-229	4.92E-13
U-233	2.40E-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**	12/31/2018
Stream Name	Returned Smoke Detector Sources					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

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	31.49
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	3.15
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	0.56
Packaging Material, Steel	129.52
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	2.22E+00
Np-237	6.51E-06
Th-229	3.34E-14
U-233	1.26E-10

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**	12/31/2018
Stream Name	Combined metal scrap and incidental combustibles					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
SWB Dir Ld w/o Liner	63.9	124.1	188.0
Final Form Total	63.9	124.1	188.0

Waste Material Parameters

Material Parameter	Average Density (kg/m^3)
Iron-based Metal/Alloys	699.31
Aluminum-based Metal/Alloys	3.57
Other Metal/Alloys	0.00
Other Inorganic Materials	3.57
Cellulose	0.00
Rubber	3.57
Plastic	3.52
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.19
Packaging Material, Steel	154.26
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	7.04E-02
Np-237	8.56E-07
Pu-238	6.23E-02
Pu-239	1.00E+00
Pu-240	2.28E-01
Pu-241	9.85E-01
Pu-242	1.27E-05
Th-229	2.83E-14
Th-230	1.97E-10
Th-232	3.75E-17
U-233	4.59E-11
U-234	2.80E-06
U-235	1.48E-08
U-236	1.01E-07
U-238	2.96E-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.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	V3XA Spheres					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum Dir Ld w/o Liner	5.5	0.0	5.5
Final Form Total	5.5	0.0	5.5

Waste Material Parameters

Material Parameter	Average Density (kg/m^3)
Iron-based Metal/Alloys	459.69
Aluminum-based Metal/Alloys	0.97
Other Metal/Alloys	1.54
Other Inorganic Materials	12.45
Cellulose	1.49
Rubber	0.00
Plastic	0.01
Cement	2.19
Solidified Inorganic Material	67.77
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.56
Packaging Material, Steel	129.52
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	1.42E+00
Np-237	3.53E-06
Pu-238	2.35E-01
Pu-239	9.34E+00
Pu-240	2.14E+00
Pu-241	8.47E+00
Pu-242	1.90E-04
Th-229	2.84E-13
Th-230	9.44E-08
Th-232	1.00E-16
U-233	4.44E-10
U-234	1.29E-03
U-235	8.87E-06
U-236	5.08E-07
U-238	4.54E-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**	12/31/2018
Stream Name	ORNL Analytical Chemistry CH-TRU Debris Waste					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum Dir Ld w/o Liner	39.3	0.0	39.3
55-gal POC - 6" w/ Liner	0.0	0.0	0.0
Final Form Total	39.3	0.0	39.3

Waste Material Parameters

Material Parameter	**Average Density (kg/m^3)**
Iron-based Metal/Alloys	21.27
Aluminum-based Metal/Alloys	2.55
Other Metal/Alloys	3.44
Other Inorganic Materials	4.97
Cellulose	39.09
Rubber	24.96
Plastic	30.82
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.25
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	2.28
Packaging Material, Plastic	0.39
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	2.90E+00
Am-243	8.07E-04
Cm-244	3.55E-01
Cs-137	1.12E+01
Np-237	5.37E-06
Pu-238	5.30E-01
Pu-239	1.26E-01
Pu-240	5.24E-02
Pu-241	8.36E-01
Pu-242	5.59E-05
Pu-244	1.41E-21
Sr-90	1.69E-01
Th-229	6.71E-07
Th-230	4.38E-10
Th-232	1.02E-08
U-233	6.05E-02
U-234	4.77E-04
U-235	8.12E-06
U-236	1.55E-10
U-238	3.89E-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

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	ORNL Analytical Chemistry Laboratory Operations RH-TRU Debris Waste					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

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	31.19
Aluminum-based Metal/Alloys	0.25
Other Metal/Alloys	2.62
Other Inorganic Materials	13.59
Cellulose	4.67
Rubber	1.56
Plastic	27.91
Cement	0.00
Solidified Inorganic Material	0.08
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	45.24
Packaging Material, Rubber	0.56
Packaging Material, Steel	922.22
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	4.24E-02
Am-243	1.72E-15
Cm-244	1.54E+00
Cs-137	3.31E-01
Np-237	1.37E-09
Pu-238	2.03E-01
Pu-239	1.90E-03
Pu-240	1.60E-02
Pu-241	3.77E-10
Pu-242	1.10E-04
Pu-244	6.00E-13
Sr-90	4.96E-01
Th-229	3.60E-09
Th-230	7.21E-11
Th-232	1.17E-22
U-233	4.09E-04
U-234	7.85E-05
U-235	2.56E-06
U-236	4.73E-11
U-238	4.69E-05

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

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	Curium Recovery Facility CH-TRU Waste					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

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

Waste Material Parameters

Material Parameter	Average Density (kg/m^3)
Iron-based Metal/Alloys	159.94
Aluminum-based Metal/Alloys	0.30
Other Metal/Alloys	5.04
Other Inorganic Materials	6.22
Cellulose	29.62
Rubber	5.63
Plastic	11.55
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	77.90
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.56
Packaging Material, Steel	129.52
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	3.08E-02
Am-243	2.14E-03
Cm-244	4.87E-01
Cs-137	1.27E-02
Np-237	2.51E-06
Pu-238	1.27E-01
Pu-239	1.92E-03
Pu-240	8.99E-03
Pu-241	2.33E-01
Pu-242	6.31E-05
Pu-244	1.71E-16
Sr-90	9.16E-03
Th-229	1.14E-08
Th-230	2.53E-12
Th-232	1.13E-19
U-233	5.56E-04
U-234	2.77E-06
U-235	2.86E-08
U-236	2.30E-08
U-238	7.74E-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

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	ORNL General Research & Development CH-TRU Debris Waste					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum Dir Ld w/o Liner	32.3	0.0	32.3
55-gal POC - 12" w/ Liner	0.0	0.0	0.0
55-gal POC - 6" w/ Liner	0.0	0.0	0.0
Final Form Total	32.4	0.0	32.4

Waste Material Parameters

Material Parameter	**Average Density (kg/m^3)**
Iron-based Metal/Alloys	20.43
Aluminum-based Metal/Alloys	5.08
Other Metal/Alloys	5.08
Other Inorganic Materials	20.43
Cellulose	37.63
Rubber	24.76
Plastic	10.27
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.12
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	2.25
Packaging Material, Plastic	0.48
Packaging Material, Rubber	0.57
Packaging Material, Steel	134.73
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	**Typical Concentration (Ci/m^3)**
Am-241	1.78E-01
Am-243	1.48E-02
Cm-244	2.73E-01
Cs-137	8.78E-05
Np-237	3.90E-03
Pu-238	9.11E-02
Pu-239	8.59E-02
Pu-240	8.69E-02
Pu-241	1.12E+00
Pu-242	4.56E-03
Pu-244	3.35E-05
Sr-90	1.31E-04
Th-229	6.26E-07
Th-230	1.25E-11
Th-232	2.15E-07
U-233	7.61E-04
U-234	1.36E-05
U-235	3.39E-06
U-236	3.35E-06
U-238	1.53E-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

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	ORNL General Research & Development RH-TRU Debris Waste					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

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

Waste Material Parameters

Material Parameter	Average Density (kg/m^3)
Iron-based Metal/Alloys	14.40
Aluminum-based Metal/Alloys	3.58
Other Metal/Alloys	3.58
Other Inorganic Materials	14.40
Cellulose	26.54
Rubber	17.46
Plastic	7.25
Cement	0.00
Solidified Inorganic Material	0.09
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	45.24
Packaging Material, Rubber	0.56
Packaging Material, Steel	922.22
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	7.58E-02
Am-243	4.36E-03
Cm-244	3.19E-05
Cs-137	1.68E-05
Np-237	2.59E-04
Pu-239	2.16E-02
Pu-240	3.38E-10
Pu-241	3.42E-08
Pu-242	9.19E-16
Pu-244	1.66E-20
Sr-90	1.68E-05
Th-229	1.25E-16
Th-230	9.37E-42
Th-232	8.23E-31
U-233	3.97E-11
U-234	5.98E-35
U-235	2.13E-12
U-236	5.01E-19
U-238	4.75E-27

Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D019, D022, D028, F002, F005

TRUCON Code(s)

325

Waste Stream Description

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

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	Irradiated Fuels Examination Laboratory CH-TRU Waste					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum Dir Ld w/o Liner	36.8	0.0	36.8
Final Form Total	36.8	0.0	36.8

Waste Material Parameters

Material Parameter	Average Density (kg/m^3)
Iron-based Metal/Alloys	57.62
Aluminum-based Metal/Alloys	10.48
Other Metal/Alloys	26.19
Other Inorganic Materials	5.24
Cellulose	44.52
Rubber	36.67
Plastic	68.10
Cement	0.00
Solidified Inorganic Material	13.10
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.56
Packaging Material, Steel	129.52
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	3.33E-02
Cm-244	1.50E-01
Cs-137	1.17E-02
Np-237	8.06E-06
Pu-238	4.24E-02
Pu-239	5.27E-02
Pu-240	9.06E-03
Pu-241	3.06E-01
Pu-242	2.67E-07
Pu-244	9.13E-20
Sr-90	2.53E-03
Th-229	3.32E-08
Th-230	2.95E-10
Th-232	2.07E-06
U-233	3.78E-03
U-234	3.20E-04
U-235	6.23E-06
U-236	1.41E-05
U-238	7.81E-06

Haz. Waste No(s).

D006, D007, D008, D009, D011, D019, F001, F002, F005

TRUCON Code(s)

125/225

Waste Stream Description

Waste consists of CH-TRU debris from the Irradiated Fuels Examination Laboratory at ORNL

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	ORNL Isotopes Facilities CH-TRU Debris Waste					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum Dir Ld w/o Liner	131.5	0.0	131.5
55-gal POC - 12" w/ Liner	0.2	0.0	0.2
55-gal POC - 6" w/ Liner	0.0	0.0	0.0
Final Form Total	131.7	0.0	131.7

Waste Material Parameters

Material Parameter	**Average Density (kg/m^3)**
Iron-based Metal/Alloys	59.63
Aluminum-based Metal/Alloys	3.13
Other Metal/Alloys	17.12
Other Inorganic Materials	3.68
Cellulose	29.82
Rubber	16.38
Plastic	53.93
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.37
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	1.53
Packaging Material, Plastic	0.35
Packaging Material, Rubber	0.57
Packaging Material, Steel	133.66
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	**Typical Concentration (Ci/m^3)**
Am-241	2.11E+00
Am-243	7.04E-03
Cm-244	9.04E+00
Cs-137	6.63E-04
Np-237	6.26E-04
Pu-238	3.43E+00
Pu-239	2.24E-01
Pu-240	1.86E-01
Pu-241	3.20E+00
Pu-242	7.04E-03
Pu-244	3.33E-07
Sr-90	1.77E-04
Th-229	1.24E-06
Th-230	2.77E-07
Th-232	2.75E-07
U-233	3.17E-03
U-234	6.15E-04
U-235	6.60E-06
U-236	1.05E-06
U-238	4.11E-06

Haz. Waste No(s).

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

TRUCON Code(s)

125/225

Waste Stream Description

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

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	ORNL Isotopes Facilities RH-TRU Debris Waste					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	2.5	0.0	2.5
Final Form Total	2.5	0.0	2.5

Waste Material Parameters

Material Parameter	Average Density (kg/m^3)
Iron-based Metal/Alloys	76.18
Aluminum-based Metal/Alloys	4.00
Other Metal/Alloys	21.87
Other Inorganic Materials	4.70
Cellulose	38.09
Rubber	20.93
Plastic	68.89
Cement	0.00
Solidified Inorganic Material	0.47
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	45.24
Packaging Material, Rubber	0.56
Packaging Material, Steel	922.22
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	1.60E+01
Am-243	1.67E-02
Cm-244	9.95E+01
Cs-137	1.66E-04
Np-237	1.52E-03
Pu-238	1.69E+01
Pu-239	8.06E-01
Pu-240	1.62E+00
Pu-241	4.47E+00
Pu-242	7.18E-04
Sr-90	1.66E-04
Th-229	7.31E-16
Th-230	7.07E-10
Th-232	3.97E-04
U-233	2.33E-10
U-234	7.71E-04
U-235	1.67E-05
U-236	4.79E-09
U-238	1.11E-14

Haz. Waste No(s).

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

TRUCON Code(s)

325

Waste Stream Description

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

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	ORNL Metal Recovery Facility CH-TRU Debris Waste					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum Dir Ld w/o Liner	8.6	0.0	8.6
Final Form Total	8.6	0.0	8.6

Waste Material Parameters

Material Parameter	Average Density (kg/m^3)
Iron-based Metal/Alloys	65.09
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	2.60
Cellulose	72.90
Rubber	26.04
Plastic	36.45
Cement	0.00
Solidified Inorganic Material	5.20
Solidified Organic Material	52.07
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.56
Packaging Material, Steel	129.52
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	1.02E-01
Am-243	1.46E-04
Cm-244	1.30E-02
Cs-137	1.75E-04
Np-237	6.03E-06
Pu-238	1.38E-02
Pu-239	1.31E-01
Pu-240	3.90E-02
Pu-241	7.68E-02
Pu-242	1.37E-05
Sr-90	1.75E-04
Th-229	2.61E-08
Th-230	9.32E-11
Th-232	2.56E-19
U-233	9.90E-05
U-234	3.44E-06
U-235	1.11E-07
U-236	3.46E-09
U-238	2.24E-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

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

Waste Stream ID: **OR-MRF-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**	12/31/2018
Stream Name	ORNL Metal Recovery Facility RH-TRU Debris Waste					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^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	58.86
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	2.35
Cellulose	65.93
Rubber	23.54
Plastic	32.96
Cement	0.00
Solidified Inorganic Material	47.09
Solidified Organic Material	4.71
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	45.24
Packaging Material, Rubber	0.56
Packaging Material, Steel	922.22
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Cs-137	8.08E+00
Pu-239	2.30E+00
Sr-90	5.27E+01
U-235	2.27E-10

Haz. Waste No(s).

D007, D008

TRUCON Code(s)

325

Waste Stream Description

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

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	New Brunswick Laboratory CH-TRU Debris Waste					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum Dir Ld w/o Liner	12.4	0.0	12.4
Final Form Total	12.4	0.0	12.4

Waste Material Parameters

Material Parameter	Average Density (kg/m^3)
Iron-based Metal/Alloys	28.28
Aluminum-based Metal/Alloys	1.85
Other Metal/Alloys	36.60
Other Inorganic Materials	62.49
Cellulose	11.09
Rubber	19.78
Plastic	11.09
Cement	0.00
Solidified Inorganic Material	13.31
Solidified Organic Material	0.37
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.56
Packaging Material, Steel	129.52
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	6.71E-02
Am-243	3.85E-05
Cm-244	4.11E-03
Cs-137	1.61E-05
Np-237	2.80E-06
Pu-238	1.20E-02
Pu-239	7.63E-02
Pu-240	2.99E-02
Pu-241	2.25E-01
Pu-242	7.95E-06
Sr-90	1.61E-05
Th-229	7.04E-09
Th-230	1.21E-11
Th-232	2.18E-22
U-233	4.16E-04
U-234	1.31E-05
U-235	8.53E-07
U-236	8.86E-11
U-238	7.14E-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

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	Nuclear Fuel Services CH-TRU Waste					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum Dir Ld w/o Liner	103.7	0.0	103.7
Final Form Total	103.7	0.0	103.7

Waste Material Parameters

Material Parameter	Average Density (kg/m^3)
Iron-based Metal/Alloys	59.69
Aluminum-based Metal/Alloys	5.27
Other Metal/Alloys	4.83
Other Inorganic Materials	319.96
Cellulose	12.29
Rubber	2.63
Plastic	33.80
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.44
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.56
Packaging Material, Steel	129.52
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	4.31E-01
Am-243	2.79E-06
Cm-244	4.63E-03
Cs-137	5.59E-06
Np-237	6.62E-06
Pu-238	1.56E-01
Pu-239	1.24E+00
Pu-240	4.11E-01
Pu-241	3.27E+00
Pu-242	8.40E-05
Sr-90	5.59E-06
Th-229	2.23E-06
Th-230	9.27E-12
Th-232	2.78E-06
U-233	1.88E-03
U-234	1.01E-05
U-235	7.07E-07
U-236	1.22E-09
U-238	2.84E-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

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	Nuclear Fuel Services CH-TRU Homogeneous Waste					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum Dir Ld w/o Liner	8.8	0.0	8.8
55-gal POC - 12" w/ Liner	0.1	0.0	0.1
Final Form Total	8.9	0.0	8.9

Waste Material Parameters

Material Parameter	Average Density (kg/m^3)
Iron-based Metal/Alloys	6.86
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	13.72
Cement	11.24
Solidified Inorganic Material	69.59
Solidified Organic Material	11.02
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	6.30
Packaging Material, Plastic	1.73
Packaging Material, Rubber	0.58
Packaging Material, Steel	152.78
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	7.06E+00
Am-243	5.89E-04
Cs-137	2.55E-05
Np-237	5.69E-05
Pu-238	1.45E+00
Pu-239	1.14E+01
Pu-240	3.81E+00
Pu-241	3.07E+01
Pu-242	7.14E-04
Sr-90	2.55E-05
Th-229	9.21E-06
Th-230	9.15E-12
Th-232	5.19E-06
U-233	6.13E-04
U-234	1.02E-05
U-235	4.99E-07
U-236	1.13E-08
U-238	2.37E-05

Haz. Waste No(s).

D006, D009

TRUCON Code(s)

111/211

Waste Stream Description

Waste consists of homogeneous waste from NFS

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	Nuclear Fuel Services CH-TRU Soil Waste					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum Dir Ld w/ Liner	26.7	0.0	26.7
Final Form Total	26.7	0.0	26.7

Waste Material Parameters

Material Parameter	Average Density (kg/m^3)
Iron-based Metal/Alloys	0.00
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	1.59
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	10.62
Soil	518.71
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	36.71
Packaging Material, Rubber	0.56
Packaging Material, Steel	129.52
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	8.17E-02
Cs-137	9.35E-08
Np-237	1.02E-06
Pu-238	2.73E-07
Pu-239	1.46E-02
Pu-240	1.55E-01
Pu-241	5.27E-02
Pu-242	1.97E-01
Sr-90	3.79E-07
Th-229	2.84E-07
Th-230	3.14E-05
Th-232	3.11E-07
U-233	2.55E-05
U-234	5.29E-06
U-235	2.48E-07
U-236	4.58E-10
U-238	5.81E-06

Haz. Waste No(s).

F002

TRUCON Code(s)

111/211

Waste Stream Description

Waste consists of soils from NFS

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	ORNL Oxide CH-TRU Debris Waste					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal POC - 6" 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	431.59
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	863.18
Cellulose	143.86
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	3725.00
Packaging Material, Plastic	642.50
Packaging Material, Rubber	9.83
Packaging Material, Steel	5558.33
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	3.02E+03
Am-243	2.43E-03
Cs-137	4.79E-05
Np-237	2.60E-02
Pu-238	8.96E+02
Pu-239	3.35E+02
Pu-240	8.67E+02
Pu-241	1.65E+04
Pu-242	3.90E+00
Sr-90	4.79E-05
Th-229	2.84E-04
Th-230	1.95E-05
Th-232	9.05E-13
U-233	3.22E+00
U-234	1.07E-01
U-235	9.32E-05
U-236	9.30E-04
U-238	1.72E-03

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

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	Paducah Gaseous Diffusion Plant CH-TRU Debris Waste					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum Dir Ld w/o Liner	6.5	0.0	6.5
Final Form Total	6.5	0.0	6.5

Waste Material Parameters

Material Parameter	Average Density (kg/m^3)
Iron-based Metal/Alloys	281.18
Aluminum-based Metal/Alloys	7.94
Other Metal/Alloys	67.26
Other Inorganic Materials	37.83
Cellulose	11.21
Rubber	8.41
Plastic	39.23
Cement	0.00
Solidified Inorganic Material	2.80
Solidified Organic Material	11.21
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.56
Packaging Material, Steel	129.52
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	3.68E-02
Am-243	3.93E-06
Cs-137	2.61E-05
Np-237	1.77E-02
Pu-238	2.31E-02
Pu-239	1.40E-01
Pu-240	3.16E-02
Pu-241	5.22E-01
Pu-242	3.15E-06
Sr-90	2.61E-05
Th-229	8.77E-09
Th-230	5.74E-10
Th-232	6.18E-08
U-233	9.97E-04
U-234	6.25E-04
U-235	1.07E-04
U-236	9.35E-11
U-238	2.63E-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

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	ORNL Radiochemical Processing Research & Development CH-TRU Debris Waste					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum Dir Ld w/o Liner	36.1	0.0	36.1
55-gal POC - 6" w/ Liner	0.0	0.0	0.0
Final Form Total	36.1	0.0	36.1

Waste Material Parameters

Material Parameter	**Average Density (kg/m^3)**
Iron-based Metal/Alloys	51.33
Aluminum-based Metal/Alloys	1.92
Other Metal/Alloys	7.12
Other Inorganic Materials	5.89
Cellulose	29.57
Rubber	7.25
Plastic	32.71
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	1.10
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	1.24
Packaging Material, Plastic	0.21
Packaging Material, Rubber	0.56
Packaging Material, Steel	131.33
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	**Typical Concentration (Ci/m^3)**
Am-241	4.52E-01
Am-243	6.36E-03
Cm-244	1.04E+00
Cs-137	4.97E-03
Np-237	5.82E-04
Pu-238	1.91E-01
Pu-239	4.35E-01
Pu-240	1.69E-01
Pu-241	9.46E-01
Pu-242	4.57E-05
Pu-244	1.60E-05
Sr-90	1.90E-03
Th-229	1.24E-05
Th-230	4.93E-09
Th-232	2.77E-07
U-233	1.86E-02
U-234	7.33E-05
U-235	1.56E-06
U-236	2.73E-08
U-238	5.48E-06

Haz. Waste No(s).

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

TRUCON Code(s)

125/225

Waste Stream Description

Waste consists of CH-TRU debris from radiochemical processing R&D at ORNL

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

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**	12/31/2018
Stream Name	ORNL Radiochemical Processing Research & Development RH-TRU Debris Waste					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	6.3	0.0	6.3
Final Form Total	6.3	0.0	6.3

Waste Material Parameters

Material Parameter	Average Density (kg/m^3)
Iron-based Metal/Alloys	55.65
Aluminum-based Metal/Alloys	2.08
Other Metal/Alloys	7.72
Other Inorganic Materials	6.38
Cellulose	32.06
Rubber	7.87
Plastic	35.47
Cement	0.00
Solidified Inorganic Material	1.19
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	45.24
Packaging Material, Rubber	0.56
Packaging Material, Steel	922.22
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	5.23E-03
Cm-244	1.49E-02
Cs-137	1.20E+01
Np-237	5.25E-08
Pu-238	5.98E-03
Pu-239	1.23E-02
Pu-240	4.59E-04
Pu-241	9.43E-03
Pu-242	2.67E-06
Sr-90	1.40E+00
Th-229	6.57E-06
Th-230	3.19E-08
Th-232	3.84E-05
U-233	2.27E-03
U-234	1.05E-04
U-235	2.13E-06
U-236	4.08E-10
U-238	5.64E-05

Haz. Waste No(s).

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

TRUCON Code(s)

325

Waste Stream Description

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

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	Radiochemical Engineering Development Center CH-TRU Waste					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum Dir Ld w/o Liner	336.2	249.9	586.1
55-gal POC - 12" w/ Liner	0.8	0.0	0.8
55-gal POC - 6" w/ Liner	0.0	0.0	0.0
Final Form Total	337.0	249.9	586.9

Waste Material Parameters

Material Parameter	**Average Density (kg/m^3)**
Iron-based Metal/Alloys	49.54
Aluminum-based Metal/Alloys	2.40
Other Metal/Alloys	1.50
Other Inorganic Materials	19.22
Cellulose	7.21
Rubber	1.95
Plastic	68.31
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.99
Packaging Material, Plastic	0.25
Packaging Material, Rubber	0.56
Packaging Material, Steel	132.68
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	**Typical Concentration (Ci/m^3)**
Am-241	3.81E-01
Am-243	1.38E-02
Cm-244	6.95E+00
Cs-137	4.71E-02
Np-237	1.92E-03
Pu-238	6.72E+00
Pu-239	6.07E-02
Pu-240	9.78E-02
Pu-241	5.92E-01
Pu-242	8.62E-04
Pu-244	2.00E-06
Sr-90	3.15E-01
Th-229	2.66E-06
Th-230	1.41E-05
Th-232	2.47E-08
U-233	7.83E-04
U-234	1.21E-04
U-235	2.57E-07
U-236	4.68E-08
U-238	5.16E-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

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	Radiochemical Engineering Development Center RH-TRU Waste					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
RH Can NS15 w/ Liner	3.5	0.0	3.5
RH Can NS30 w/ Liner	3.6	5.0	8.6
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	41.6	75.6	117.2
Final Form Total	48.7	80.6	129.3

Waste Material Parameters

Material Parameter	**Average Density (kg/m^3)**
Iron-based Metal/Alloys	173.10
Aluminum-based Metal/Alloys	0.03
Other Metal/Alloys	17.30
Other Inorganic Materials	49.12
Cellulose	19.55
Rubber	4.86
Plastic	25.23
Cement	0.00
Solidified Inorganic Material	3.54
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	154.18
Packaging Material, Rubber	0.51
Packaging Material, Steel	1019.29
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	**Typical Concentration (Ci/m^3)**
Am-241	1.84E+00
Am-243	2.93E-01
Cm-244	4.39E+01
Cs-137	1.46E+00
Np-237	2.82E-03
Pu-238	1.15E+01
Pu-239	1.79E-01
Pu-240	7.28E-01
Pu-241	8.09E+00
Pu-242	9.05E-03
Pu-244	2.15E-09
Sr-90	2.53E+01
Th-229	2.96E-14
Th-230	2.84E-10
Th-232	7.36E-21
U-233	3.64E-09
U-234	3.11E-04
U-235	4.06E-06
U-236	2.57E-09
U-238	9.46E-05

Haz. Waste No(s).

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

TRUCON Code(s)

325

Waste Stream Description

Waste consists of RH-TRU debris from REDC at ORNL

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	ORNL Reactor Fuels Research & Development CH-TRU Debris Waste					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum Dir Ld w/o Liner	67.4	0.0	67.4
55-gal POC - 12" w/ Liner	0.0	0.0	0.0
55-gal POC - 6" w/ Liner	0.0	0.0	0.0
Final Form Total	67.5	0.0	67.5

Waste Material Parameters

Material Parameter	**Average Density (kg/m^3)**
Iron-based Metal/Alloys	29.86
Aluminum-based Metal/Alloys	5.43
Other Metal/Alloys	13.57
Other Inorganic Materials	2.71
Cellulose	23.07
Rubber	19.00
Plastic	35.29
Cement	0.00
Solidified Inorganic Material	6.79
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	1.74
Packaging Material, Plastic	0.34
Packaging Material, Rubber	0.57
Packaging Material, Steel	132.99
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	**Typical Concentration (Ci/m^3)**
Am-241	7.84E-01
Am-243	1.84E-04
Cm-244	8.89E-02
Cs-137	1.62E-01
Np-237	1.56E-05
Pu-238	6.57E-01
Pu-239	1.12E+00
Pu-240	5.18E-01
Pu-241	6.05E+00
Pu-242	1.70E-04
Pu-244	9.98E-21
Sr-90	2.75E-01
Th-229	1.59E-04
Th-230	4.47E-09
Th-232	2.39E-06
U-233	4.00E-01
U-234	4.86E-03
U-235	4.82E-06
U-236	1.58E-06
U-238	7.89E-06

Haz. Waste No(s).

D006, D007, D008, D009, D011, D019, F001, F002, F005

TRUCON Code(s)

125/225

Waste Stream Description

Waste consists of CH-TRU debris from reactor fuels R&D at ORNL

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	ORNL Reactor Fuels Research & Development CH-TRU Homogeneous Waste					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum Dir Ld w/o 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	5.43
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	10.86
Cement	9.05
Solidified Inorganic Material	55.19
Solidified Organic Material	9.05
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.56
Packaging Material, Steel	129.52
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	5.15E-02
Cs-137	1.46E-03
Np-237	5.65E-07
Pu-238	3.89E-04
Pu-239	9.94E-04
Sr-90	2.15E-02
Th-229	3.97E-14
Th-230	6.55E-12
U-233	4.08E-11
U-234	4.14E-08
U-235	3.23E-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

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	ORNL Reactor Fuels Research & Development RH-TRU Debris Waste					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	17.6	10.1	27.7
Final Form Total	17.6	10.1	27.7

Waste Material Parameters

Material Parameter	Average Density (kg/m^3)
Iron-based Metal/Alloys	106.05
Aluminum-based Metal/Alloys	24.10
Other Metal/Alloys	21.69
Other Inorganic Materials	21.69
Cellulose	33.74
Rubber	7.23
Plastic	19.28
Cement	0.00
Solidified Inorganic Material	4.82
Solidified Organic Material	2.41
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	45.24
Packaging Material, Rubber	0.56
Packaging Material, Steel	922.22
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	3.20E+00
Am-243	2.48E-02
Cm-244	4.63E+00
Cs-137	6.98E+01
Np-237	1.26E-04
Pu-238	3.49E+00
Pu-239	6.66E-01
Pu-240	9.11E-01
Pu-241	9.21E+01
Pu-242	6.72E-03
Pu-244	5.57E-04
Sr-90	3.75E+01
Th-229	4.50E-07
Th-230	4.44E-02
Th-232	2.64E-06
U-233	5.11E-02
U-234	1.13E-03
U-235	2.93E-05
U-236	6.29E-05
U-238	1.89E-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

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	ORNL Solid Waste Storage Area 5 North 7802N Trench Area Debris Waste					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

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	8.03
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	199.17
Cellulose	1.06
Rubber	0.00
Plastic	1.06
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	2.11
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.56
Packaging Material, Steel	129.52
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	3.04E-01
Am-243	3.02E-04
Cm-244	4.31E-01
Cs-137	1.96E-04
Np-237	1.25E-04
Pu-238	1.12E-02
Pu-239	3.16E-03
Pu-240	8.85E-04
Pu-241	4.22E-03
Pu-242	7.33E-08
Sr-90	1.95E-04
Th-229	6.54E-06
Th-230	4.04E-09
Th-232	2.40E-21
U-233	2.71E-02
U-234	2.20E-04
U-235	6.22E-12
U-236	4.96E-11
U-238	2.28E-17

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

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	ORNL Solid Waste Storage Area 5 North 7802N Trench Area Soil Waste					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

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	2.92
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	1.46
Other Inorganic Materials	6.58
Cellulose	2.92
Rubber	0.00
Plastic	16.09
Cement	0.00
Solidified Inorganic Material	118.46
Solidified Organic Material	2.92
Soil	579.85
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	36.71
Packaging Material, Rubber	0.56
Packaging Material, Steel	129.52
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	6.23E-02
Am-243	5.99E-05
Cm-244	8.64E+00
Cs-137	5.61E-06
Np-237	2.79E-06
Pu-238	4.28E-02
Pu-239	2.59E-02
Pu-240	1.05E-02
Pu-241	7.31E-02
Pu-242	4.42E-06
Sr-90	5.59E-06
Th-229	4.49E-07
Th-230	8.31E-11
Th-232	3.69E-07
U-233	2.41E-11
U-234	4.64E-06
U-235	9.49E-08
U-236	5.67E-10
U-238	1.33E-15

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

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	TBD CH-TRU Debris Waste					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum Dir Ld w/o Liner	22.9	0.0	22.9
Final Form Total	22.9	0.0	22.9

Waste Material Parameters

Material Parameter	Average Density (kg/m^3)
Iron-based Metal/Alloys	34.61
Aluminum-based Metal/Alloys	6.29
Other Metal/Alloys	15.73
Other Inorganic Materials	3.15
Cellulose	26.74
Rubber	22.02
Plastic	40.90
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	7.87
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.56
Packaging Material, Steel	129.52
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	3.85E+00
Am-243	1.74E-04
Cm-244	6.06E-03
Cs-137	6.38E-03
Np-237	1.64E-03
Pu-238	8.45E+00
Pu-239	1.18E+00
Pu-240	8.95E-01
Pu-241	1.04E+00
Pu-242	5.00E-04
Pu-244	6.22E-05
Sr-90	2.46E-03
Th-229	8.74E-04
Th-230	1.41E-05
Th-232	2.20E-05
U-233	2.37E-01
U-234	2.50E-03
U-235	5.76E-05
U-236	1.65E-05
U-238	1.04E-04

Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D022, F001, F002, F004, F005

TRUCON Code(s)

125/225

Waste Stream Description

CH-TRU Debris Waste Needing Further Evaluation

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	TBD RH-TRU Debris Waste					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	13.2	9.5	22.7
Final Form Total	13.2	9.5	22.7

Waste Material Parameters

Material Parameter	Average Density (kg/m^3)
Iron-based Metal/Alloys	270.96
Aluminum-based Metal/Alloys	61.58
Other Metal/Alloys	55.42
Other Inorganic Materials	61.58
Cellulose	86.21
Rubber	18.47
Plastic	49.27
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	12.32
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	45.24
Packaging Material, Rubber	0.56
Packaging Material, Steel	922.22
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	6.18E-02
Am-243	3.71E-06
Cm-244	1.03E-01
Cs-137	1.21E+02
Np-237	6.24E-05
Pu-238	3.55E+00
Pu-239	4.95E-03
Pu-240	1.69E-03
Pu-241	2.70E-01
Pu-242	1.91E-06
Pu-244	2.51E-07
Sr-90	7.41E+01
Th-229	1.92E-04
Th-230	1.88E-06
Th-232	1.09E-13
U-233	4.10E-02
U-234	2.91E-03
U-235	4.16E-05
U-236	6.67E-05
U-238	2.59E-05

Haz. Waste No(s).

D005, D006, D007, D008, D009, D011

TRUCON Code(s)

325

Waste Stream Description

RH-TRU Debris Waste Needing Further Evaluation

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

Waste Stream ID: **OR-W1A-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**	12/31/2018
Stream Name	ER CH TRU Soils					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum Dir Ld w/ Liner	9.0	0.0	9.0
Final Form Total	9.0	0.0	9.0

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	0.52
Rubber	0.00
Plastic	0.52
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	2.10
Soil	258.76
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	36.71
Packaging Material, Rubber	0.56
Packaging Material, Steel	129.52
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	5.47E-01
Am-243	7.46E-05
Cm-244	2.44E-03
Cs-137	2.80E+00
Np-237	2.49E-04
Pu-238	4.72E-02
Pu-239	1.19E-01
Pu-240	4.20E-04
Pu-241	6.82E-01
Pu-242	6.54E-05
Sr-90	2.64E-02
Th-229	5.04E-01
Th-230	2.93E-04
Th-232	7.00E-03
U-233	6.59E-01
U-234	2.28E-02
U-235	3.89E-04
U-236	5.93E-04
U-238	6.83E-03

No Hazardous Waste Numbers Provided

TRUCON Code(s)

111/211

Waste Stream Description

This waste is made up of soils.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

Waste Stream ID: **OR-W1A-RH-SOIL**

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**	12/31/2018
Stream Name	ER RH TRU Soils					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	10.1	0.0	10.1
Final Form Total	10.1	0.0	10.1

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	1.96
Rubber	0.00
Plastic	1.96
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	7.84
Soil	968.58
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	45.24
Packaging Material, Rubber	0.56
Packaging Material, Steel	922.22
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	4.45E-01
Cm-244	3.53E-02
Cs-137	7.50E-01
Np-237	1.44E-08
Pu-238	1.28E-02
Pu-239	1.41E-01
Pu-240	7.92E-02
Pu-241	1.42E+01
Pu-242	7.55E-05
Sr-90	2.25E-01
Th-229	5.41E-07
Th-230	1.86E-09
Th-232	5.78E-22
U-233	6.15E-02
U-234	2.03E-03
U-235	3.39E-05
U-236	2.34E-10
U-238	9.96E-04

No Hazardous Waste Numbers Provided

TRUCON Code(s)

311

Waste Stream Description

This waste is made up of soils.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	ORNL-Liquid Waste Treatment CH-TRU Debris Waste					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum Dir Ld w/o Liner	8.4	0.0	8.4
Final Form Total	8.4	0.0	8.4

Waste Material Parameters

Material Parameter	Average Density (kg/m^3)
Iron-based Metal/Alloys	28.46
Aluminum-based Metal/Alloys	5.18
Other Metal/Alloys	12.94
Other Inorganic Materials	2.59
Cellulose	21.99
Rubber	18.11
Plastic	33.64
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	6.47
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.56
Packaging Material, Steel	129.52
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	5.35E-02
Am-243	9.57E-05
Cm-244	7.76E-04
Cs-137	1.59E-01
Np-237	1.17E-05
Pu-238	1.38E-02
Pu-239	8.35E-01
Pu-240	1.19E-03
Pu-241	7.95E-03
Pu-242	2.17E-06
Sr-90	2.77E-03
Th-229	2.09E-05
Th-230	6.30E-06
Th-232	1.11E-05
U-233	3.21E-04
U-234	3.21E-04
U-235	4.75E-06
U-236	3.75E-06
U-238	9.33E-06

Haz. Waste No(s).

D008

TRUCON Code(s)

125/225

Waste Stream Description

Waste consists of CH-TRU debris from ORNL liquids waste system.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	Oak Ridge Y-12 CH-TRU Debris Waste					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

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	21.93
Aluminum-based Metal/Alloys	3.99
Other Metal/Alloys	9.97
Other Inorganic Materials	1.99
Cellulose	16.95
Rubber	13.96
Plastic	25.92
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	4.98
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.56
Packaging Material, Steel	129.52
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Np-237	1.01E-02
Pu-238	4.14E-04
Pu-239	4.92E-02
Pu-240	2.06E-05
Th-229	7.70E-12
Th-230	1.60E-08
Th-232	6.03E-23
U-233	8.76E-08
U-234	8.71E-04
U-235	1.19E-04
U-236	1.22E-12
U-238	9.75E-04

Haz. Waste No(s).

D008

TRUCON Code(s)

125/225

Waste Stream Description

Waste consists of CH-TRU debris from Y-12

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	RH-TRU Non Mixed Debris Waste from 100-D					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^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	1945.45
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	86.55
Packaging Material, Rubber	1.07
Packaging Material, Steel	3718.18
Packaging Material, Lead	3918.18

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	1.27E-02
Am-243	2.43E-05
Cs-137	7.20E-01
Np-237	4.10E-06
Pu-238	1.05E-02
Pu-239	1.52E-02
Pu-240	1.96E-02
Pu-241	1.14E+00
Pu-242	7.65E-06
Sr-90	5.13E-01
Th-229	2.77E-14
Th-230	5.06E-12
Th-232	5.16E-19
U-233	1.05E-10
U-234	1.82E-07
U-235	3.98E-06
U-236	3.49E-09
U-238	2.95E-05

No Hazardous Waste Numbers Provided

TRUCON Code(s)

325

Waste Stream Description

RH TRU Aluminum capsules from swelling test experiments. Waste was generated by Washington Closure Hanford during reactor burial ground remediation.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	105-C, 105KE, and 105-N Bldg. TRU CH Mixed Debris					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum Dir Ld w/ Liner	38.4	0.0	38.4
SWB Dir Ld w/ Liner	20.7	0.0	20.7
Final Form Total	59.1	0.0	59.1

Waste Material Parameters

Material Parameter	Average Density (kg/m^3)
Iron-based Metal/Alloys	135.42
Aluminum-based Metal/Alloys	6.90
Other Metal/Alloys	0.00
Other Inorganic Materials	44.85
Cellulose	27.60
Rubber	24.15
Plastic	51.06
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	24.29
Packaging Material, Rubber	0.43
Packaging Material, Steel	138.18
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	2.69E-02
Cs-137	2.70E-03
Np-237	7.22E-08
Pu-238	4.72E-03
Pu-239	2.48E-02
Pu-240	1.19E-02
Pu-241	2.72E-01
Pu-242	5.39E-07
Sr-90	5.12E-03
Th-229	3.52E-16
Th-230	1.98E-11
Th-232	7.06E-19
U-233	1.36E-12
U-234	3.00E-07
U-235	4.62E-09
U-236	3.18E-09
U-238	9.41E-08

Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D022, D027, D028, D029, D030, D034, D037, D043, F001, F002, F003, F004, F005

TRUCON Code(s)

125/225

Waste Stream Description

CH TRU Combustible and noncombustible debris from Hanford production reactor storage basin operations. Combustible waste may include wood, plastics, paper, and rags. Noncombustible waste may include metals, glass, concrete, cartridge-type water filters from the Primary Recirculation System, and absorbed liquids.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	NLOP sludge					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum Dir Ld w/ Liner	69.1	0.0	69.1
Final Form Total	69.1	0.0	69.1

Waste Material Parameters

Material Parameter	Average Density (kg/m^3)
Iron-based Metal/Alloys	35.75
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	12.47
Cellulose	0.00
Rubber	0.00
Plastic	0.00
Cement	921.75
Solidified Inorganic Material	614.50
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	36.71
Packaging Material, Rubber	0.56
Packaging Material, Steel	129.52
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	5.80E-01
Cs-137	1.36E+00
Np-237	1.03E-05
Pu-238	6.32E-02
Pu-239	3.35E-01
Pu-240	1.84E-01
Pu-241	5.42E+00
Pu-242	8.76E-05
Sr-90	6.72E+00
Th-229	1.72E-13
Th-230	5.44E-08
Th-232	6.43E-16
U-233	4.03E-10
U-234	5.93E-04
U-235	2.23E-05
U-236	1.33E-06
U-238	4.76E-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.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	105-C, 105KE, and 105-N Bldg RH-TRU Mixed Debris					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
RH Lead Shielded Cntr w/ 1 - 30 gal w/ Liner	115.9	0.0	115.9
Final Form Total	115.9	0.0	115.9

Waste Material Parameters

Material Parameter	Average Density (kg/m^3)
Iron-based Metal/Alloys	148.52
Aluminum-based Metal/Alloys	7.57
Other Metal/Alloys	0.00
Other Inorganic Materials	49.19
Cellulose	30.27
Rubber	26.49
Plastic	52.97
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	86.55
Packaging Material, Rubber	1.07
Packaging Material, Steel	3718.18
Packaging Material, Lead	3918.18

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	7.98E-02
Cm-244	1.20E-04
Cs-137	1.34E+00
Np-237	3.10E-07
Pu-238	1.83E-02
Pu-239	6.75E-02
Pu-240	3.60E-02
Pu-241	5.37E-01
Pu-242	1.00E-06
Sr-90	6.42E-01
Th-229	3.16E-15
Th-230	2.77E-10
Th-232	4.45E-18
U-233	8.43E-12
U-234	2.67E-06
U-235	1.82E-07
U-236	1.39E-08
U-238	3.88E-06

Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D022, D027, D028, D029, D030, D034, D037, D043, F001, F002, F003, F004, F005

TRUCON Code(s)

325

Waste Stream Description

The 105-KE RH waste stream is composed solely of cartridge-type water filters from the Primary Recirculation System. The 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.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	105KE TRU RH Non-mixed solidified inorganics					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
RH Lead Shielded Cntr w/ 1 - 30 gal w/ Liner	687.5	0.0	687.5
Final Form Total	687.5	0.0	687.5

Waste Material Parameters

Material Parameter	Average Density (kg/m^3)
Iron-based Metal/Alloys	3.86
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.14
Cellulose	0.00
Rubber	0.00
Plastic	0.00
Cement	1.05
Solidified Inorganic Material	9.44
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	86.55
Packaging Material, Rubber	1.07
Packaging Material, Steel	3718.18
Packaging Material, Lead	3918.18

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	1.07E+00
Cs-137	4.55E+00
Np-237	8.85E-05
Pu-238	1.16E-01
Pu-239	5.92E-01
Pu-240	3.43E-01
Pu-241	3.84E+00
Pu-242	1.43E-04
Sr-90	6.30E+00
Th-229	2.34E-12
Th-230	1.95E-07
Th-232	1.33E-13
U-233	4.48E-09
U-234	1.76E-03
U-235	7.15E-05
U-236	2.25E-04
U-238	1.56E-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.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	Misc 200 Area TRU Mixed Debris					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum Dir Ld w/ Liner	72.0	0.0	72.0
SWB Dir Ld w/ Liner	3.8	0.0	3.8
Final Form Total	75.8	0.0	75.8

Waste Material Parameters

Material Parameter	Average Density (kg/m^3)
Iron-based Metal/Alloys	1117.27
Aluminum-based Metal/Alloys	252.78
Other Metal/Alloys	0.00
Other Inorganic Materials	66.17
Cellulose	48.49
Rubber	16.72
Plastic	66.19
Cement	0.00
Solidified Inorganic Material	10.62
Solidified Organic Material	0.00
Soil	5.71
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	34.95
Packaging Material, Rubber	0.54
Packaging Material, Steel	130.75
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	5.65E-02
Cs-137	1.24E-04
Np-237	2.08E-07
Pu-238	4.80E-03
Pu-239	1.99E-01
Pu-240	4.53E-02
Pu-241	2.99E-01
Pu-242	3.88E-06
Sr-90	9.18E-06
Th-229	1.83E-15
Th-230	1.23E-11
Th-232	4.77E-18
U-233	5.27E-12
U-234	1.96E-07
U-235	2.98E-09
U-236	1.61E-08
U-238	1.35E-08

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.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
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**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum Dir Ld w/ Liner	13.0	3959.6	3972.6
SLB2 Dir Ld	0.0	369.5	369.5
Final Form Total	13.0	4329.1	4342.1

Waste Material Parameters

Material Parameter	**Average Density (kg/m^3)**
Iron-based Metal/Alloys	2.86
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	410.19
Cellulose	3.78
Rubber	1.75
Plastic	7.39
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	434.28
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	33.59
Packaging Material, Rubber	0.52
Packaging Material, Steel	132.55
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	**Typical Concentration (Ci/m^3)**
Am-241	3.27E-01
Cs-137	6.81E-04
Np-237	1.88E-06
Pu-238	9.69E-03
Pu-239	1.68E-01
Pu-240	5.03E-02
Pu-241	2.82E-01
Pu-242	3.98E-06
Sr-90	1.03E-02
Th-229	4.61E-12
Th-230	1.64E-08
Th-232	7.12E-09
U-233	6.58E-09
U-234	1.11E-06
U-235	4.31E-08
U-236	5.81E-08
U-238	8.71E-07

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

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	201C TRU Mixed Solid Inorganic					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum Dir Ld w/ Liner	14.5	0.0	14.5
Final Form Total	14.5	0.0	14.5

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	25.78
Other Inorganic Materials	8.54
Cellulose	60.16
Rubber	111.34
Plastic	30.07
Cement	0.00
Solidified Inorganic Material	0.87
Solidified Organic Material	0.00
Soil	293.34
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	36.71
Packaging Material, Rubber	0.56
Packaging Material, Steel	129.52
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	1.94E+00
Cs-137	1.58E-01
Np-237	4.42E-06
Pu-238	6.07E-05
Pu-239	1.30E-01
Pu-240	3.20E-02
Pu-241	2.32E-03
Pu-242	4.66E-08
Sr-90	4.06E+00
Th-229	1.37E-14
Th-230	3.43E-13
Th-232	1.14E-18
U-233	6.65E-11
U-234	1.06E-08
U-235	8.95E-10
U-236	6.63E-09
U-238	4.83E-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.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	202S TRU Mixed Debris					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum Dir Ld w/ Liner	1.3	0.0	1.3
Final Form Total	1.3	0.0	1.3

Waste Material Parameters

Material Parameter	Average Density (kg/m^3)
Iron-based Metal/Alloys	2.26
Aluminum-based Metal/Alloys	0.75
Other Metal/Alloys	0.63
Other Inorganic Materials	0.00
Cellulose	2.76
Rubber	0.63
Plastic	43.82
Cement	0.00
Solidified Inorganic Material	2.96
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	36.71
Packaging Material, Rubber	0.56
Packaging Material, Steel	129.52
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	3.96E-02
Cs-137	7.78E-08
Np-237	1.62E-06
Pu-238	8.46E-03
Pu-239	5.19E-02
Pu-240	1.94E-02
Pu-241	8.96E-02
Pu-242	2.23E-06
Sr-90	6.97E-08
Th-229	1.87E-14
Th-230	7.32E-12
Th-232	9.08E-19
U-233	5.38E-11
U-234	1.97E-07
U-235	4.09E-10
U-236	4.60E-09
U-238	2.77E-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.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	209E TRU Mixed Debris					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum Dir Ld w/ Liner	14.7	0.0	14.7
SWB Dir Ld w/ Liner	86.5	0.0	86.5
Final Form Total	101.2	0.0	101.2

Waste Material Parameters

Material Parameter	**Average Density (kg/m^3)**
Iron-based Metal/Alloys	245.04
Aluminum-based Metal/Alloys	0.11
Other Metal/Alloys	2.49
Other Inorganic Materials	29.62
Cellulose	136.71
Rubber	52.07
Plastic	118.35
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	6.37
Packaging Material, Rubber	0.25
Packaging Material, Steel	150.66
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	**Typical Concentration (Ci/m^3)**
Am-241	2.66E+01
Cs-137	4.54E-08
Np-237	2.71E-04
Pu-238	5.06E+00
Pu-239	3.78E+01
Pu-240	1.38E+01
Pu-241	1.15E+02
Pu-242	2.02E-03
Sr-90	4.08E-08
Th-229	2.14E-12
Th-230	5.25E-08
Th-232	4.94E-16
U-233	7.24E-09
U-234	8.67E-04
U-235	2.82E-05
U-236	2.86E-06
U-238	7.16E-05

Haz. Waste No(s).

D006, D007, D008, D018, D019, D043, F002, F003, F005

TRUCON Code(s)

125/225

Waste Stream Description

Combustible and noncombustible debris waste generated during operations, cleanout, and D&D of the 209-E Critical Mass Laboratory (CML) at Hanford. Combustible waste may include wood, plastics, paper, and rags. Noncombustible waste may include metals, glass, concrete, and absorbed liquids.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	209E TRU RH Mixed Debris					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
RH Lead Shielded Cntr w/ 1 - 30 gal 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	6.82
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	2.27
Cellulose	68.18
Rubber	9.09
Plastic	65.45
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	86.55
Packaging Material, Rubber	1.07
Packaging Material, Steel	3718.18
Packaging Material, Lead	3918.18

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	1.21E+01
Np-237	1.24E-04
Pu-238	2.25E+00
Pu-239	1.59E+01
Pu-240	5.55E+00
Pu-241	4.02E+01
Pu-242	6.92E-04
Th-229	2.21E-12
Th-230	3.75E-09
Th-232	4.91E-16
U-233	4.89E-09
U-234	7.31E-05
U-235	1.72E-07
U-236	1.81E-06
U-238	1.18E-12

Haz. Waste No(s).

D006, D007, D018, D019, F002, F003, F005

TRUCON Code(s)

325

Waste Stream Description

Combustible and noncombustible debris waste generated during operations, cleanout, and D&D of the 209-E CML. Combustible waste may include wood, plastics, paper, and rags. Noncombustible waste items may include metals, glass, concrete, and absorbed liquids.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	216-Z-9 TRU Mixed Soil					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum Dir Ld w/ Liner	342.3	0.0	342.3
Final Form Total	342.3	0.0	342.3

Waste Material Parameters

Material Parameter	Average Density (kg/m^3)
Iron-based Metal/Alloys	1.92
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	15.52
Cellulose	0.32
Rubber	0.00
Plastic	0.96
Cement	0.00
Solidified Inorganic Material	17.02
Solidified Organic Material	0.00
Soil	17.03
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	36.71
Packaging Material, Rubber	0.56
Packaging Material, Steel	129.52
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	4.19E+00
Np-237	1.04E-05
Pu-238	1.04E+00
Pu-239	1.31E+01
Pu-240	3.09E+00
Pu-241	3.47E+01
Pu-242	1.85E-04
Th-229	3.93E-14
Th-230	6.87E-10
Th-232	1.11E-16
U-233	1.73E-10
U-234	2.11E-05
U-235	9.05E-08
U-236	6.40E-07
U-238	2.01E-13

Haz. Waste No(s).

D005, D006, D007, D008, D009, D011, D039, F001, F002, F003, F005

TRUCON Code(s)

125/225

Waste Stream Description

Soil contaminated with large quantities of plutonium, americium, organics, and neutralized acid waste solutions that were removed from the 216-Z-9 Crib. Original packaging material (e.g., 10-L stainless steel slip-lid cans, plastic bags, and vermiculite) now waste due to deterioration and TRU contamination.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	221U Solidified sludge					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^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	4.90
Aluminum-based Metal/Alloys	0.68
Other Metal/Alloys	0.21
Other Inorganic Materials	0.91
Cellulose	0.52
Rubber	0.12
Plastic	0.46
Cement	0.00
Solidified Inorganic Material	0.09
Solidified Organic Material	0.00
Soil	0.09
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	36.71
Packaging Material, Rubber	0.56
Packaging Material, Steel	129.52
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	2.93E-04
Cs-137	6.32E-04
Np-237	6.44E-10
Pu-238	3.63E-05
Pu-239	1.62E-03
Pu-240	3.69E-04
Pu-241	1.65E-03
Pu-242	3.14E-08
Sr-90	5.69E-04
Th-229	1.95E-18
Th-230	2.39E-14
Th-232	1.32E-20
U-233	9.55E-15
U-234	7.36E-10
U-235	1.11E-11
U-236	7.64E-11
U-238	3.41E-17

Haz. Waste No(s).

D006, D007, D008, D009, D011, D027, D030, D032, D033, D034, D036, D037, F001, F002

TRUCON Code(s)

122/222

Waste Stream Description

Solidified sludge and laboratory sample debris (e.g., glass sample bottles, plastic, and tape) from characterization efforts of U Plant.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

Waste Stream ID: **RL221U-08**

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**	12/31/2018
Stream Name	U Plant Tank 10 Waste					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
RH Lead Shielded Cntr w/ 1 - 30 gal w/ Liner	30.3	0.0	30.3
Final Form Total	30.3	0.0	30.3

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	228.10
Solidified Organic Material	2.30
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	86.55
Packaging Material, Rubber	1.07
Packaging Material, Steel	3718.18
Packaging Material, Lead	3918.18

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	7.14E-01
Am-243	4.76E-08
Cm-244	1.85E-02
Cs-137	1.47E+01
Np-237	2.08E-03
Pu-238	2.05E-01
Pu-239	1.61E+00
Pu-240	4.56E-01
Pu-241	1.58E+01
Pu-242	4.61E-05
Sr-90	1.12E+01
Th-229	5.26E-11
Th-230	6.89E-07
Th-232	3.13E-07
U-233	1.07E-07
U-234	8.32E-03
U-235	8.73E-06
U-236	1.22E-07
U-238	1.63E-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.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	222S TRU Mixed Debris					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum Dir Ld w/ Liner	65.7	0.0	65.7
SWB Dir Ld w/ Liner	22.6	94.0	116.6
Final Form Total	88.3	94.0	182.3

Waste Material Parameters

Material Parameter	Average Density (kg/m^3)
Iron-based Metal/Alloys	727.94
Aluminum-based Metal/Alloys	144.41
Other Metal/Alloys	0.02
Other Inorganic Materials	48.46
Cellulose	73.64
Rubber	29.08
Plastic	81.71
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	12.15
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	14.01
Packaging Material, Rubber	0.33
Packaging Material, Steel	145.34
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	1.59E-01
Am-243	2.77E-07
Cs-137	9.33E-04
Np-237	2.06E-05
Pu-238	1.18E-02
Pu-239	7.17E-02
Pu-240	3.06E-02
Pu-241	6.00E-01
Pu-242	2.10E-06
Sr-90	8.26E-04
Th-229	1.47E-07
Th-230	1.80E-11
Th-232	1.43E-18
U-233	2.09E-04
U-234	3.82E-07
U-235	4.25E-09
U-236	7.25E-09
U-238	9.15E-05

Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D022, D030, D039, F001, F002, F003, F005

TRUCON Code(s)

125/225

Waste Stream Description

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.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	222S TRU RH Mixed Debris					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
RH Lead Shielded Cntr w/ 1 - 30 gal w/ Liner	1.3	0.0	1.3
Final Form Total	1.3	0.0	1.3

Waste Material Parameters

Material Parameter	Average Density (kg/m^3)
Iron-based Metal/Alloys	717.94
Aluminum-based Metal/Alloys	113.36
Other Metal/Alloys	0.00
Other Inorganic Materials	55.43
Cellulose	136.20
Rubber	58.13
Plastic	139.48
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	19.95
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	86.55
Packaging Material, Rubber	1.07
Packaging Material, Steel	3718.18
Packaging Material, Lead	3918.18

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	2.38E-01
Am-243	1.43E-02
Cs-137	1.30E-01
Np-237	1.57E-03
Pu-238	3.09E-02
Pu-239	3.54E+00
Pu-240	9.07E-02
Pu-241	6.17E+00
Pu-242	3.16E-04
Pu-244	1.31E-06
Sr-90	2.12E-01
Th-229	2.61E-04
Th-230	6.20E-11
Th-232	9.55E-18
U-233	2.47E-01
U-234	1.11E-06
U-235	6.00E-06
U-236	3.22E-08
U-238	2.21E-04

Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D039, F001, F002, F003, F004, F005

TRUCON Code(s)

325

Waste Stream Description

Combustible waste and Noncombustible waste- TRU wastes were generated from multiple operations, primarily from the hot cells, the hoods, or from within the gloveboxes (for standards laboratory tasks) located in the Analytical laboratory.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	231-Z TRU Mixed Debris					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum Dir Ld w/ Liner	153.1	0.0	153.1
SWB Dir Ld w/ Liner	455.0	0.0	455.0
Final Form Total	608.1	0.0	608.1

Waste Material Parameters

Material Parameter	**Average Density (kg/m^3)**
Iron-based Metal/Alloys	259.16
Aluminum-based Metal/Alloys	1.12
Other Metal/Alloys	4.16
Other Inorganic Materials	39.26
Cellulose	50.80
Rubber	9.31
Plastic	66.70
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	10.15
Packaging Material, Rubber	0.29
Packaging Material, Steel	148.03
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	**Typical Concentration (Ci/m^3)**
Am-241	5.47E-01
Am-243	8.75E-08
Cs-137	3.29E-05
Np-237	1.10E-05
Pu-238	9.38E-02
Pu-239	7.74E-01
Pu-240	2.47E-01
Pu-241	3.92E+00
Pu-242	2.10E-05
Sr-90	2.91E-05
Th-229	1.22E-13
Th-230	6.97E-09
Th-232	1.49E-07
U-233	3.55E-10
U-234	9.58E-05
U-235	1.79E-06
U-236	5.85E-08
U-238	7.54E-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.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	231Z TRU Mixed Solid Inorganic					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

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

Waste Material Parameters

Material Parameter	Average Density (kg/m^3)
Iron-based Metal/Alloys	0.00
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	77.99
Other Inorganic Materials	0.14
Cellulose	4.88
Rubber	1.16
Plastic	15.29
Cement	0.00
Solidified Inorganic Material	69.36
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	36.71
Packaging Material, Rubber	0.56
Packaging Material, Steel	129.52
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	1.37E-01
Np-237	1.70E-06
Pu-238	9.35E-05
Pu-239	3.68E-01
Pu-240	1.27E-01
Pu-241	1.11E-01
Pu-242	1.13E-05
Th-229	1.60E-13
Th-230	2.27E-12
Th-232	1.41E-16
U-233	1.42E-10
U-234	1.20E-08
U-235	1.41E-08
U-236	1.47E-07
U-238	6.86E-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.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	233S TRU Mixed Debris					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum Dir Ld w/ Liner	13.7	0.0	13.7
SWB Dir Ld w/ Liner	28.2	0.0	28.2
Final Form Total	41.9	0.0	41.9

Waste Material Parameters

Material Parameter	Average Density (kg/m^3)
Iron-based Metal/Alloys	207.32
Aluminum-based Metal/Alloys	0.87
Other Metal/Alloys	1.89
Other Inorganic Materials	4.73
Cellulose	14.18
Rubber	3.07
Plastic	16.83
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.55
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	12.79
Packaging Material, Rubber	0.31
Packaging Material, Steel	146.19
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	3.39E-01
Cs-137	5.93E-05
Np-237	7.29E-05
Pu-238	5.25E-02
Pu-239	3.81E-01
Pu-240	1.71E-01
Pu-241	2.05E+00
Pu-242	3.48E-05
Sr-90	5.33E-05
Th-229	8.74E-13
Th-230	9.93E-11
Th-232	7.98E-18
U-233	2.49E-09
U-234	1.95E-06
U-235	2.74E-08
U-236	4.04E-08
U-238	3.66E-07

Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, F002, F003

TRUCON Code(s)

125/225

Waste Stream Description

Combustible and noncombustible debris waste generated during cleanout, stabilization, and D&D activities of the 233-S Building (Plutonium Concentration Facility) at Hanford. Combustible waste may include wood, plastics, paper, and rags. Noncombustible waste items may include metals, glass, concrete, and absorbed liquids.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	233S solidified inorganic waste					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum Dir Ld 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	0.04
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	508.44
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	36.71
Packaging Material, Rubber	0.56
Packaging Material, Steel	129.52
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	7.38E-02
Cs-137	9.78E-07
Np-237	5.96E-05
Pu-238	1.66E-02
Pu-239	6.95E-02
Pu-240	2.80E-02
Pu-241	1.09E-01
Pu-242	1.78E-05
Sr-90	8.06E-07
Th-229	9.10E-13
Th-230	1.83E-11
Th-232	1.66E-18
U-233	2.30E-09
U-234	4.37E-07
U-235	6.16E-10
U-236	7.46E-09
U-238	2.48E-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

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	300 Area TRU Mixed Debris					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum Dir Ld w/ Liner	35.1	0.0	35.1
SWB Dir Ld w/ Liner	79.0	0.0	79.0
Final Form Total	114.0	0.0	114.0

Waste Material Parameters

Material Parameter	**Average Density (kg/m^3)**
Iron-based Metal/Alloys	95.20
Aluminum-based Metal/Alloys	0.13
Other Metal/Alloys	10.35
Other Inorganic Materials	42.46
Cellulose	15.48
Rubber	3.22
Plastic	27.46
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	12.13
Packaging Material, Rubber	0.31
Packaging Material, Steel	146.65
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	**Typical Concentration (Ci/m^3)**
Am-241	3.91E+00
Am-243	2.94E-04
Cm-244	2.87E-02
Cs-137	1.51E+00
Np-237	3.55E-05
Pu-238	7.08E-01
Pu-239	1.06E+01
Pu-240	3.37E+00
Pu-241	4.28E+01
Pu-242	1.13E-03
Sr-90	1.70E-04
Th-229	4.34E-07
Th-230	8.79E-08
Th-232	5.46E-05
U-233	7.05E-04
U-234	8.67E-04
U-235	3.76E-05
U-236	6.99E-07
U-238	3.22E-04

Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D022, D027, D028, D029, D030, D034, D037, D043, F001, F002, F003, F004, F005

TRUCON Code(s)

125/225

Waste Stream Description

Combustible and noncombustible debris waste generated from operations, including fuel fabrication, reactor studies, research and development, maintenance, and laboratory operations in the Hanford 300 Area. Combustible waste may include wood, plastics, paper, and rags. Noncombustible waste may include metals, glass, concrete, and absorbed liquids.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	300 Area Mixed Solidified Inorganics					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum Dir Ld w/ Liner	5.7	0.0	5.7
Final Form Total	5.7	0.0	5.7

Waste Material Parameters

Material Parameter	Average Density (kg/m^3)
Iron-based Metal/Alloys	1.91
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	20.17
Cement	374.61
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	36.71
Packaging Material, Rubber	0.56
Packaging Material, Steel	129.52
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	2.27E+00
Cs-137	3.26E-04
Np-237	1.77E-05
Pu-238	4.77E-01
Pu-239	2.65E+00
Pu-240	1.35E+00
Pu-241	1.54E+01
Pu-242	2.25E-04
Sr-90	4.01E-04
Th-229	1.32E-13
Th-230	2.36E-09
Th-232	4.84E-17
U-233	4.55E-10
U-234	4.14E-05
U-235	1.13E-06
U-236	2.80E-07
U-238	1.92E-05

Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D022, D027, D028, D029, D030, D034, D037, D043, F001, F002, F003, F004, F005

TRUCON Code(s)

122/222

Waste Stream Description

Solidified inorganic CH TRU waste generated from operations, including fuel fabrication, reactor studies, research and development, maintenance, and laboratory operations in the Hanford 300 Area.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

Waste Stream ID: **RL300-07**

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**	12/31/2018
Stream Name	300 Area RH TRU Non-Mixed Debris					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	113.4	0.0	113.4
Final Form Total	113.4	0.0	113.4

Waste Material Parameters

Material Parameter	Average Density (kg/m^3)
Iron-based Metal/Alloys	161.54
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	1236.81
Cellulose	40.39
Rubber	0.00
Plastic	10.10
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	45.24
Packaging Material, Rubber	0.56
Packaging Material, Steel	922.22
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	5.32E+00
Am-243	3.01E-02
Cm-244	1.87E+00
Cs-137	3.57E+02
Np-237	2.33E-04
Pu-238	1.83E+00
Pu-239	5.16E-01
Pu-240	6.07E-01
Pu-241	2.51E+01
Pu-242	2.23E-03
Pu-244	2.13E-15
Sr-90	1.70E+02
Th-229	2.47E-06
Th-230	1.11E-07
Th-232	1.23E-13
U-233	1.56E-03
U-234	7.19E-04
U-235	1.22E-05
U-236	1.39E-04
U-238	3.85E-04

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

Waste Stream Description

RH TRUM 300 Area debris waste generated from operations, including fuel fabrication, reactor studies, research and development, maintenance, and laboratory operations.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	300 Area TRU RH Mixed Debris					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	114.7	0.0	114.7
RH Lead Shielded Cntr w/ 1 - 30 gal w/ Liner	268.4	0.0	268.4
Final Form Total	383.1	0.0	383.1

Waste Material Parameters

Material Parameter	**Average Density (kg/m^3)**
Iron-based Metal/Alloys	13.49
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	103.27
Cellulose	3.37
Rubber	0.00
Plastic	0.84
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	74.18
Packaging Material, Rubber	0.92
Packaging Material, Steel	2881.28
Packaging Material, Lead	2745.37

Final Form Radionuclides

Isotope	**Typical Concentration (Ci/m^3)**
Am-241	1.19E+00
Am-243	4.87E-06
Cm-244	5.03E-01
Cs-137	2.96E+02
Np-237	3.15E-06
Pu-238	8.29E-02
Pu-239	2.42E-02
Pu-240	2.45E-02
Pu-241	6.66E-01
Pu-242	3.29E-05
Pu-244	7.70E-14
Sr-90	1.87E+02
Th-229	1.32E-14
Th-230	7.35E-11
Th-232	2.53E-18
U-233	5.52E-11
U-234	1.95E-06
U-235	1.48E-07
U-236	9.29E-09
U-238	2.76E-06

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.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	308 TRU Mixed Debris					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum Dir Ld w/ Liner	31.9	0.0	31.9
SWB Dir Ld w/ Liner	315.8	0.0	315.8
Final Form Total	347.8	0.0	347.8

Waste Material Parameters

Material Parameter	**Average Density (kg/m^3)**
Iron-based Metal/Alloys	321.00
Aluminum-based Metal/Alloys	0.31
Other Metal/Alloys	6.04
Other Inorganic Materials	5.69
Cellulose	11.34
Rubber	2.53
Plastic	13.06
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	4.47
Packaging Material, Rubber	0.23
Packaging Material, Steel	151.99
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	**Typical Concentration (Ci/m^3)**
Am-241	5.95E+01
Am-243	5.33E-06
Cs-137	4.66E-04
Np-237	1.41E-04
Pu-238	1.63E+01
Pu-239	2.72E+01
Pu-240	1.76E+01
Pu-241	2.74E+02
Pu-242	1.67E-02
Sr-90	4.18E-04
Th-229	1.32E-07
Th-230	3.70E-08
Th-232	1.52E-06
U-233	2.15E-04
U-234	7.39E-04
U-235	4.05E-05
U-236	3.65E-06
U-238	5.84E-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.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	308 Building TRU Solid Inorganics					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum Dir Ld w/ Liner	0.4	0.0	0.4
Final Form Total	0.4	0.0	0.4

Waste Material Parameters

Material Parameter	Average Density (kg/m^3)
Iron-based Metal/Alloys	94.05
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	7.14
Cement	226.79
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	36.71
Packaging Material, Rubber	0.56
Packaging Material, Steel	129.52
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	6.10E-01
Np-237	5.78E-06
Pu-238	1.08E-01
Pu-239	7.95E-01
Pu-240	3.02E-01
Pu-241	1.12E+00
Pu-242	3.65E-05
Th-229	3.38E-13
Th-230	1.59E-09
Th-232	2.12E-16
U-233	3.78E-10
U-234	1.07E-05
U-235	2.43E-08
U-236	2.77E-07
U-238	1.76E-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**	12/31/2018
Stream Name	308 Building TRU RH Non-Mixed Debris					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
RH Lead Shielded Cntr w/ 1 - 30 gal w/ Liner	20.7	0.0	20.7
Final Form Total	20.7	0.0	20.7

Waste Material Parameters

Material Parameter	Average Density (kg/m^3)
Iron-based Metal/Alloys	0.49
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.08
Other Inorganic Materials	0.07
Cellulose	0.09
Rubber	0.03
Plastic	0.19
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	86.55
Packaging Material, Rubber	1.07
Packaging Material, Steel	3718.18
Packaging Material, Lead	3918.18

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	2.08E-04
Cm-244	6.07E-06
Cs-137	1.48E-01
Np-237	5.56E-10
Pu-238	1.61E-04
Pu-239	1.15E-04
Pu-240	1.23E-04
Pu-241	2.24E-03
Pu-242	3.75E-08
Sr-90	2.62E-01
Th-229	2.70E-18
Th-230	1.78E-13
Th-232	7.28E-21
U-233	1.04E-14
U-234	4.25E-09
U-235	1.45E-10
U-236	3.28E-11
U-238	4.89E-08

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.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

Waste Stream ID: **RL325-01**

Appendix A

Waste Profile Report

Site	Hanford (Richland) Site	**Summary Category**	S5000	**Defense Determination**	Defense-Related
Source Cat.	R&D/R&D Laboratory Waste	**Waste Matrix Code Group**	Heterogeneous Debris Waste		
Stream Name	325 TRU Mixed Debris				

Handling CH

Inventory Date 12/31/2018

Activity Concentrations Decayed to CY 2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum Dir Ld w/ Liner	503.8	6.3	510.1
SWB Dir Ld w/ Liner	199.3	0.0	199.3
Final Form Total	703.1	6.3	709.4

Waste Material Parameters

Material Parameter	**Average Density (kg/m^3)**
Iron-based Metal/Alloys	57.63
Aluminum-based Metal/Alloys	0.23
Other Metal/Alloys	2.57
Other Inorganic Materials	18.38
Cellulose	10.18
Rubber	2.64
Plastic	17.70
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.20
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	26.74
Packaging Material, Rubber	0.46
Packaging Material, Steel	136.47
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	**Typical Concentration (Ci/m^3)**
Am-241	7.63E-01
Am-243	5.46E-05
Cm-244	4.86E-03
Cs-137	7.59E-03
Np-237	4.44E-05
Pu-238	1.63E-01
Pu-239	6.70E-01
Pu-240	3.06E-01
Pu-241	6.07E+00
Pu-242	4.27E-05
Sr-90	2.07E-02
Th-229	1.27E-07
Th-230	7.23E-08
Th-232	1.06E-05
U-233	2.06E-04
U-234	1.12E-03
U-235	3.31E-05
U-236	6.34E-08
U-238	6.92E-04

Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D022, D027, D028, D029, D030, D032, D033, D034, D035, D036, D037, D038, D039, D040, D043, F001, F002, F003, F004, F005

TRUCON Code(s)

125/225

Waste Stream Description

Debris waste stream containing waste materials associated with the 325 Bldg. laboratory operations, sample analysis, facility cleanout, and facility waste treatment. Operations waste includes any discarded item used in laboratory analysis (e.g., glass beakers, tweezers, latex gloves, plastic tape, glass pipettes) and facility cleanout (e.g., glassware, wipes, and equipment). Maintenance waste may include filters, wipes, and various types of gloves. Small amounts of solid sample residues (unused samples) generated during lab operations are present in the waste.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	325 TRU Mixed Solid Inorganic					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum Dir Ld w/ Liner	12.2	0.0	12.2
Final Form Total	12.2	0.0	12.2

Waste Material Parameters

Material Parameter	Average Density (kg/m^3)
Iron-based Metal/Alloys	91.90
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.02
Other Inorganic Materials	559.33
Cellulose	2.34
Rubber	2.33
Plastic	21.61
Cement	47.90
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	101.55
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	36.71
Packaging Material, Rubber	0.56
Packaging Material, Steel	129.52
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	1.92E+00
Am-243	1.00E-02
Cm-244	3.90E+00
Cs-137	9.61E-03
Np-237	3.45E-04
Pu-238	7.46E-01
Pu-239	2.03E+00
Pu-240	7.91E-01
Pu-241	2.10E+01
Pu-242	2.23E-04
Sr-90	9.70E-03
Th-229	3.16E-12
Th-230	2.25E-09
Th-232	2.88E-17
U-233	1.03E-08
U-234	4.24E-05
U-235	1.41E-06
U-236	1.65E-07
U-238	1.82E-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.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

Waste Stream ID: **RL325-05**

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**	12/31/2018
Stream Name	325 TRU Non-Mixed Debris					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum Dir Ld w/ Liner	25.2	12.4	37.6
SWB Dir Ld w/ Liner	24.4	35.7	60.2
Final Form Total	49.6	48.1	97.8

Waste Material Parameters

Material Parameter	Average Density (kg/m^3)
Iron-based Metal/Alloys	816.26
Aluminum-based Metal/Alloys	3.19
Other Metal/Alloys	36.37
Other Inorganic Materials	249.97
Cellulose	144.19
Rubber	37.38
Plastic	250.71
Cement	10.37
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	2.81
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	14.86
Packaging Material, Rubber	0.33
Packaging Material, Steel	144.74
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	1.50E-01
Am-243	1.58E-03
Cm-244	4.78E-01
Cs-137	4.35E-02
Np-237	2.56E-04
Pu-238	1.00E+01
Pu-239	9.43E-01
Pu-240	1.94E-01
Pu-241	3.05E+00
Pu-242	5.43E-05
Pu-244	1.89E-13
Sr-90	1.64E-01
Th-229	2.48E-07
Th-230	2.12E-10
Th-232	3.06E-09
U-233	1.60E-07
U-234	3.73E-05
U-235	3.60E-07
U-236	8.60E-08
U-238	1.16E-06

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

Waste Stream Description

CH 325 building debris with a solid inorganic waste component. Waste generated 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.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

Waste Stream ID: **RL325-07**

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**	12/31/2018
Stream Name	325 TRU RH Non-Mixed Debris					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
RH Lead Shielded Cntr w/ 1 - 30 gal w/ Liner	40.2	84.5	124.6
Final Form Total	40.2	84.5	124.6

Waste Material Parameters

Material Parameter	Average Density (kg/m^3)
Iron-based Metal/Alloys	374.22
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	3176.53
Cellulose	0.00
Rubber	0.00
Plastic	79.83
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	86.55
Packaging Material, Rubber	1.07
Packaging Material, Steel	3718.18
Packaging Material, Lead	3918.18

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	1.44E+00
Am-243	1.20E-02
Cm-244	6.22E-01
Cs-137	3.13E+00
Np-237	1.24E-04
Pu-238	1.40E+01
Pu-239	3.52E-01
Pu-240	3.55E-01
Pu-241	3.49E+01
Pu-242	6.92E-04
Sr-90	1.72E+01
Th-229	3.66E-13
Th-230	3.55E-09
Th-232	4.02E-16
U-233	2.08E-09
U-234	1.76E-04
U-235	8.75E-06
U-236	2.06E-06
U-238	2.55E-05

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

Waste Stream Description

RH 325 Building debris waste stream. Waste generated from associated 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.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	325 TRU RH Mixed Debris					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
RH Lead Shielded Cntr w/ 1 - 30 gal w/ Liner	206.9	53.5	260.4
Final Form Total	206.9	53.5	260.4

Waste Material Parameters

Material Parameter	Average Density (kg/m^3)
Iron-based Metal/Alloys	72.62
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	616.39
Cellulose	0.00
Rubber	0.00
Plastic	15.49
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	86.55
Packaging Material, Rubber	1.07
Packaging Material, Steel	3718.18
Packaging Material, Lead	3918.18

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	2.68E-01
Am-243	4.39E-06
Cm-244	6.76E-03
Cs-137	7.59E-01
Np-237	4.22E-04
Pu-238	2.48E-02
Pu-239	1.95E-01
Pu-240	8.03E-02
Pu-241	1.02E+00
Pu-242	1.46E-05
Sr-90	4.85E+00
Th-229	5.92E-07
Th-230	1.01E-08
Th-232	4.65E-06
U-233	9.62E-04
U-234	1.57E-04
U-235	6.42E-06
U-236	1.71E-07
U-238	1.22E-05

Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D021, D022, D027, D028, D029, D030, D032, D033, D034, D036, D037, D038, D039, D040, D043, F001, F002, F003, F004, F005

TRUCON Code(s)

325

Waste Stream Description

Typically, drums contain both combustible and noncombustible waste items. If present, boxes typically contain larger waste items (e.g., whole or sectioned glove boxes, ducting, and process vessels). Both drums and boxes may be used for disposal of high-efficiency particulate air filters. The waste is generated from R&D/R&D Laboratory Waste activities at the RADIOCHEMISTRY BUILDING.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	B325 Solidified sludges					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
RH Lead Shielded Cntr w/ 1 - 30 gal w/ Liner	6.5	0.0	6.5
Final Form Total	6.5	0.0	6.5

Waste Material Parameters

Material Parameter	Average Density (kg/m^3)
Iron-based Metal/Alloys	172.47
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.04
Other Inorganic Materials	1049.71
Cellulose	4.40
Rubber	4.36
Plastic	40.55
Cement	89.90
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	190.58
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	86.55
Packaging Material, Rubber	1.07
Packaging Material, Steel	3718.18
Packaging Material, Lead	3918.18

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	1.34E-01
Am-243	1.36E-03
Cm-244	7.35E-02
Cs-137	1.18E+01
Np-237	1.03E-05
Pu-238	1.00E-01
Pu-239	1.07E-02
Pu-240	1.91E-02
Pu-241	9.41E-01
Pu-242	9.21E-05
Sr-90	1.23E+02
Th-229	2.11E-13
Th-230	1.37E-09
Th-232	1.52E-15
U-233	6.88E-10
U-234	3.78E-05
U-235	4.20E-07
U-236	7.71E-06
U-238	1.20E-05

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.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***
NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	618 - 10&11 Burial Grounds TRU Mixed Debris					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
SWB 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	0.71
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	1.28
Other Inorganic Materials	1.23
Cellulose	0.09
Rubber	0.19
Plastic	0.19
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.48
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	1.21
Packaging Material, Rubber	0.19
Packaging Material, Steel	154.26
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	5.60E-01
Am-243	7.70E-05
Cs-137	1.41E-02
Np-237	6.97E-05
Pu-238	1.95E-01
Pu-239	1.16E+00
Pu-240	4.47E-01
Pu-241	2.09E+00
Pu-242	5.14E-05
Sr-90	1.62E-02
Th-229	1.86E-12
Th-230	3.89E-10
Th-232	4.70E-17
U-233	3.55E-09
U-234	6.94E-06
U-235	1.71E-05
U-236	1.59E-07
U-238	1.35E-04

No Hazardous Waste Numbers Provided

TRUCON Code(s)
125/225

Waste Stream Description
Retrieved containerized debris waste from Burial Grounds 618 - 10 and 11

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***
NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	618 - 10&11 Burial Grounds TRU RH Mixed Debris					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
RH Lead Shielded Cntr w/ 1 - 30 gal w/ Liner	18.7	0.0	18.7
Final Form Total	18.7	0.0	18.7

Waste Material Parameters

Material Parameter	Average Density (kg/m^3)
Iron-based Metal/Alloys	73.26
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	132.09
Other Inorganic Materials	141.18
Cellulose	9.73
Rubber	19.52
Plastic	19.52
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	48.77
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	86.55
Packaging Material, Rubber	1.07
Packaging Material, Steel	3718.18
Packaging Material, Lead	3918.18

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	7.53E-02
Cs-137	1.38E+01
Np-237	2.91E-07
Pu-238	1.10E-02
Pu-239	6.55E-02
Pu-240	2.52E-02
Pu-241	1.05E-01
Sr-90	1.58E+01
Th-229	2.64E-15
Th-230	2.22E-11
Th-232	2.66E-18
U-233	7.51E-12
U-234	3.97E-07
U-235	9.86E-06
U-236	8.97E-09
U-238	1.87E-04

No Hazardous Waste Numbers Provided

TRUCON Code(s)

325

Waste Stream Description

Retrieved containerized debris waste from Burial Grounds 618 - 10 and 11.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	TRU Soils/Absorbents from the Arid Lands Ecology Reserve					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

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	2.54
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	3.17
Plastic	80.63
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	377.78
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	36.71
Packaging Material, Rubber	0.56
Packaging Material, Steel	129.52
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	3.02E-04
Cs-137	4.67E-07
Np-237	6.00E-10
Pu-238	3.95E-05
Pu-239	8.41E-02
Pu-240	2.72E-03
Pu-241	6.18E-03
Pu-242	2.66E-07
Pu-244	3.60E-11
Sr-90	4.21E-07
Th-229	1.71E-18
Th-230	2.60E-14
Th-232	9.74E-20
U-233	8.55E-15
U-234	8.01E-10
U-235	5.80E-10
U-236	5.64E-10
U-238	2.89E-16

No Hazardous Waste Numbers Provided

TRUCON Code(s)

125/225

Waste Stream Description

Soils and debris from the 6652H building.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	Argonne Nat Lab TRU Mixed Debris					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum Dir Ld w/ Liner	11.1	0.0	11.1
Final Form Total	11.1	0.0	11.1

Waste Material Parameters

Material Parameter	Average Density (kg/m^3)
Iron-based Metal/Alloys	572.53
Aluminum-based Metal/Alloys	77.67
Other Metal/Alloys	9.56
Other Inorganic Materials	38.39
Cellulose	93.75
Rubber	40.18
Plastic	95.53
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	25.29
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	36.71
Packaging Material, Rubber	0.56
Packaging Material, Steel	129.52
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	5.65E+00
Cs-137	6.45E-08
Np-237	5.53E-05
Pu-238	1.96E+01
Pu-239	4.10E+00
Pu-240	2.09E+00
Pu-241	1.47E+01
Pu-242	7.29E-05
Sr-90	5.70E-08
Th-229	3.66E-12
Th-230	9.73E-07
Th-232	1.30E-06
U-233	3.83E-09
U-234	4.20E-03
U-235	9.65E-05
U-236	2.04E-06
U-238	1.35E-04

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).

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	Bartlesville RH-TRU Mixed Debris					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

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	478.48
Aluminum-based Metal/Alloys	75.55
Other Metal/Alloys	0.00
Other Inorganic Materials	36.94
Cellulose	90.77
Rubber	38.74
Plastic	92.96
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	13.30
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	86.55
Packaging Material, Rubber	1.07
Packaging Material, Steel	3718.18
Packaging Material, Lead	3918.18

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	1.34E+00
Np-237	1.65E-05
Pu-238	1.23E-06
Pu-239	1.02E-05
Pu-240	4.95E-06
Pu-241	9.52E-06
Pu-242	1.43E-09
Th-229	1.46E-12
Th-230	2.65E-14
Th-232	4.96E-21
U-233	1.34E-09
U-234	1.49E-10
U-235	3.73E-13
U-236	5.43E-12
U-238	8.22E-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**	12/31/2018
Stream Name	Battelle Columbus TRU Mixed Debris					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum Dir Ld w/ Liner	18.9	0.0	18.9
SWB Dir Ld w/ Liner	11.3	0.0	11.3
Final Form Total	30.2	0.0	30.2

Waste Material Parameters

Material Parameter	**Average Density (kg/m^3)**
Iron-based Metal/Alloys	839.99
Aluminum-based Metal/Alloys	177.01
Other Metal/Alloys	0.00
Other Inorganic Materials	53.29
Cellulose	64.33
Rubber	24.00
Plastic	75.32
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	11.34
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	23.44
Packaging Material, Rubber	0.42
Packaging Material, Steel	138.77
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	**Typical Concentration (Ci/m^3)**
Am-241	4.95E-01
Np-237	3.67E-05
Pu-238	2.88E+00
Pu-239	4.94E-01
Pu-240	2.21E-01
Pu-241	4.73E+00
Pu-242	1.07E-05
Th-229	4.34E-13
Th-230	5.02E-08
Th-232	1.34E-07
U-233	1.24E-09
U-234	7.15E-04
U-235	2.26E-05
U-236	5.24E-08
U-238	1.17E-04

Haz. Waste No(s).

D005, D006, D007, D008, D009, D011, F001, F002, F003, F005

TRUCON Code(s)

125/225

Waste Stream Description

Typically, drums contain both combustible and noncombustible waste items. Combustible waste may include wood, plastics, paper, and rags. Noncombustible waste items may include metals, glass, concrete, and absorbed liquids. If present, boxes typically contain larger waste items (e.g., whole or sectioned glove boxes, ducting, and process vessels). Both drums and boxes may be used for disposal of high-efficiency particulate air filters.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	BATCO TRU RH Mixed Debris					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
RH Lead Shielded Cntr w/ 1 - 30 gal w/ Liner	6.8	0.0	6.8
Final Form Total	6.8	0.0	6.8

Waste Material Parameters

Material Parameter	Average Density (kg/m^3)
Iron-based Metal/Alloys	1502.25
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	13.42
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	86.55
Packaging Material, Rubber	1.07
Packaging Material, Steel	3718.18
Packaging Material, Lead	3918.18

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	6.30E-01
Am-243	3.70E-03
Cm-244	2.18E-01
Cs-137	6.89E+00
Np-237	2.98E-06
Pu-238	4.24E-01
Pu-239	6.18E-02
Pu-240	1.01E-01
Pu-241	3.74E+00
Pu-242	2.69E-04
Sr-90	4.41E+00
Th-229	2.35E-12
Th-230	9.28E-09
Th-232	8.06E-15
U-233	1.74E-09
U-234	7.31E-05
U-235	2.44E-06
U-236	1.02E-05
U-238	4.73E-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.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	Bettis TRU Non-Mixed Debris					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
RH Lead Shielded Cntr w/ 1 - 30 gal 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	307.44
Aluminum-based Metal/Alloys	48.46
Other Metal/Alloys	0.00
Other Inorganic Materials	23.95
Cellulose	58.48
Rubber	25.06
Plastic	59.59
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	8.35
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	86.55
Packaging Material, Rubber	1.07
Packaging Material, Steel	3718.18
Packaging Material, Lead	3918.18

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	2.65E-02
Cs-137	3.68E-04
Np-237	5.77E-08
Pu-238	8.95E-03
Pu-239	4.47E-02
Pu-240	2.52E-02
Pu-241	1.92E-01
Pu-242	1.00E-06
Sr-90	3.31E-04
Th-229	1.74E-16
Th-230	4.71E-08
Th-232	9.01E-19
U-233	8.53E-13
U-234	7.32E-04
U-235	2.69E-05
U-236	5.22E-09
U-238	2.84E-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.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	Babcock and Wilcox TRU Mixed Debris					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum Dir Ld w/ Liner	57.8	0.0	57.8
SWB Dir Ld w/ Liner	86.5	0.0	86.5
Final Form Total	144.2	0.0	144.2

Waste Material Parameters

Material Parameter	**Average Density (kg/m^3)**
Iron-based Metal/Alloys	68.12
Aluminum-based Metal/Alloys	0.29
Other Metal/Alloys	6.86
Other Inorganic Materials	45.22
Cellulose	32.93
Rubber	7.04
Plastic	35.84
Cement	0.00
Solidified Inorganic Material	1.17
Solidified Organic Material	0.20
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	15.42
Packaging Material, Rubber	0.34
Packaging Material, Steel	144.35
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	**Typical Concentration (Ci/m^3)**
Am-241	1.96E+00
Cs-137	1.31E-03
Np-237	7.49E-06
Pu-238	3.43E-01
Pu-239	1.74E+00
Pu-240	8.68E-01
Pu-241	1.69E+01
Pu-242	7.73E-05
Sr-90	1.18E-03
Th-229	4.27E-14
Th-230	4.62E-09
Th-232	3.11E-17
U-233	1.60E-10
U-234	7.53E-05
U-235	1.82E-06
U-236	1.80E-07
U-238	7.98E-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.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	Babcock & Wilcox solidified inorganics					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum Dir Ld w/ Liner	11.1	0.0	11.1
Final Form Total	11.1	0.0	11.1

Waste Material Parameters

Material Parameter	Average Density (kg/m^3)
Iron-based Metal/Alloys	1.19
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	169.77
Cellulose	0.00
Rubber	0.00
Plastic	4.76
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	36.71
Packaging Material, Rubber	0.56
Packaging Material, Steel	129.52
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	3.62E+00
Cs-137	2.61E-07
Np-237	2.07E-05
Pu-238	6.58E-01
Pu-239	3.85E+00
Pu-240	1.95E+00
Pu-241	2.31E+01
Pu-242	2.61E-04
Sr-90	2.35E-07
Th-229	1.77E-13
Th-230	5.84E-09
Th-232	9.09E-17
U-233	5.54E-10
U-234	8.70E-05
U-235	2.63E-06
U-236	4.61E-07
U-238	4.30E-05

Haz. Waste No(s).

D005, D006, D007, D008, D009, D011, D035, F001, F002, F003, F005

TRUCON Code(s)

122/222

Waste Stream Description

Solidified inorganic CH TRU waste generated from operations and decontamination and decommissioning of the Babcock and Wilcox Parks Township Site Plutonium Facility.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	Babcock and Wilcox TRU RH Mixed Debris					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
RH Lead Shielded Cntr w/ 1 - 30 gal 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	23.16
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	1.16
Other Inorganic Materials	11.58
Cellulose	155.14
Rubber	1.74
Plastic	104.20
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	86.55
Packaging Material, Rubber	1.07
Packaging Material, Steel	3718.18
Packaging Material, Lead	3918.18

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	4.93E+00
Np-237	1.60E-05
Pu-238	8.33E-01
Pu-239	3.45E+00
Pu-240	1.95E+00
Pu-241	4.42E+01
Pu-242	7.86E-05
Th-229	1.16E-13
Th-230	1.39E-09
Th-232	1.72E-16
U-233	3.67E-10
U-234	2.70E-05
U-235	3.74E-08
U-236	6.35E-07
U-238	1.34E-13

Haz. Waste No(s).

D005, D006, D007, D008, D009, D011, F001, F002, F003, F005

TRUCON Code(s)

325

Waste Stream Description

Combustible and noncombustible debris waste generated from operations and decontamination and decommissioning of the Babcock and Wilcox Parks Township Site Plutonium Facility. Combustible waste may include wood, plastics, paper, and rags. Noncombustible waste may include metals, glass, concrete, and absorbed liquids.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	Kerr McGee TRU Mixed Debris					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

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	344.48
Aluminum-based Metal/Alloys	1.61
Other Metal/Alloys	0.34
Other Inorganic Materials	34.62
Cellulose	38.74
Rubber	8.39
Plastic	54.87
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	36.71
Packaging Material, Rubber	0.56
Packaging Material, Steel	129.52
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	1.00E+00
Np-237	2.50E-06
Pu-238	1.79E-01
Pu-239	8.92E-01
Pu-240	4.69E-01
Pu-241	8.81E+00
Pu-242	5.21E-05
Th-229	1.02E-14
Th-230	2.66E-10
Th-232	2.19E-17
U-233	4.30E-11
U-234	5.68E-06
U-235	5.77E-08
U-236	1.11E-07
U-238	7.58E-07

Haz. Waste No(s).
D007, D008, D009, D040, F001, F002, F003

TRUCON Code(s)
125/225

Waste Stream Description

The CFFD (KM) waste stream consists of heterogeneous debris waste generated at the Cimarron Plutonium Fuel Fabrication Facility, operated by the Kerr-McGee Nuclear Corporation. This facility was a MOX fuel fabrication facility. The waste was generated during D&D activities at the facility. The waste includes typical D&D waste, e.g., paper, plastic, leaded rubber gloves, rags, glass, equipment, disassembled gloveboxes, and HEPA filters.

Waste Stream ID: **RLCFF-03**

Appendix A
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**	12/31/2018
Stream Name	Kerr McGee TRU Mixed Solid Inorganic					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

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	30.74
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	22.05
Other Inorganic Materials	451.76
Cellulose	8.13
Rubber	0.98
Plastic	33.79
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	36.71
Packaging Material, Rubber	0.56
Packaging Material, Steel	129.52
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	1.21E+00
Np-237	3.03E-06
Pu-238	3.35E+00
Pu-239	1.42E+00
Pu-240	6.98E-01
Pu-241	6.78E+00
Pu-242	8.83E-05
Th-229	1.20E-14
Th-230	3.66E-09
Th-232	3.26E-17
U-233	5.13E-11
U-234	8.84E-05
U-235	4.65E-07
U-236	1.65E-07
U-238	9.72E-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.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***
NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	Tank Farms TRU Mixed Debris					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum Dir Ld w/ Liner	0.2	7.8	8.0
SWB Dir Ld w/ Liner	1.9	0.0	1.9
Final Form Total	2.1	7.8	9.9

Waste Material Parameters

Material Parameter	**Average Density (kg/m^3)**
Iron-based Metal/Alloys	21.58
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	19.08
Other Inorganic Materials	11.11
Cellulose	1.61
Rubber	0.01
Plastic	1.91
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	29.94
Packaging Material, Rubber	0.49
Packaging Material, Steel	134.24
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	**Typical Concentration (Ci/m^3)**
Am-241	3.76E-03
Cs-137	2.22E-02
Np-237	9.73E-09
Pu-238	3.33E-04
Pu-239	2.63E-03
Pu-240	6.74E-04
Pu-241	4.39E-03
Sr-90	2.00E-02
Th-229	3.91E-17
Th-230	2.89E-13
Th-232	3.15E-20
U-233	1.67E-13
U-234	7.76E-09
U-235	2.07E-11
U-236	1.60E-10

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.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	Tank Farms Absorbed Oils					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
RH Lead Shielded Cntr w/ 1 - 30 gal 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	2.05
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	103.09
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	86.55
Packaging Material, Rubber	1.07
Packaging Material, Steel	3718.18
Packaging Material, Lead	3918.18

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	6.99E-03
Cs-137	4.45E-01
Np-237	1.14E-08
Pu-238	9.92E-05
Pu-239	3.27E-03
Pu-240	7.00E-04
Sr-90	4.18E+00
Th-229	1.78E-17
Th-230	3.30E-14
Th-232	1.28E-20
U-233	1.21E-13
U-234	1.43E-09
U-235	1.61E-11
U-236	1.04E-10

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.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	Energy Systems Group TRU Mixed Debris					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum Dir Ld w/ Liner	18.3	0.0	18.3
SWB Dir Ld w/ Liner	7.5	0.0	7.5
Final Form Total	25.8	0.0	25.8

Waste Material Parameters

Material Parameter	**Average Density (kg/m^3)**
Iron-based Metal/Alloys	317.41
Aluminum-based Metal/Alloys	0.94
Other Metal/Alloys	10.14
Other Inorganic Materials	41.75
Cellulose	39.67
Rubber	26.50
Plastic	53.84
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	26.36
Packaging Material, Rubber	0.45
Packaging Material, Steel	136.74
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	**Typical Concentration (Ci/m^3)**
Am-241	7.72E-01
Cs-137	7.07E-02
Np-237	3.00E-06
Pu-238	1.73E-01
Pu-239	1.02E+00
Pu-240	4.98E-01
Pu-241	9.36E+00
Pu-242	1.25E-04
Sr-90	6.78E-02
Th-229	3.01E-09
Th-230	6.82E-08
Th-232	1.78E-17
U-233	4.89E-06
U-234	1.06E-03
U-235	2.01E-05
U-236	1.03E-07
U-238	1.39E-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.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	Energy Systems Group TRU Solid Inorganics					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-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	29.44
Aluminum-based Metal/Alloys	29.44
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	29.44
Rubber	29.44
Plastic	29.44
Cement	22.22
Solidified Inorganic Material	61.90
Solidified Organic Material	0.00
Soil	124.83
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	36.71
Packaging Material, Rubber	0.56
Packaging Material, Steel	129.52
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	2.71E-02
Cs-137	3.14E-03
Np-237	5.49E-08
Pu-238	7.98E-03
Pu-239	1.73E-01
Pu-240	4.68E-02
Pu-241	4.82E-01
Pu-242	5.14E-05
Sr-90	2.83E-03
Th-229	1.58E-16
Th-230	1.27E-09
Th-232	1.67E-18
U-233	7.90E-13
U-234	1.98E-05
U-235	7.22E-07
U-236	9.69E-09
U-238	7.63E-09

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.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***
NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	Energy Systems Group RH TRU Mixed Debris					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
RH Lead Shielded Cntr w/ 1 - 30 gal w/ Liner	22.8	0.0	22.8
Final Form Total	22.8	0.0	22.8

Waste Material Parameters

Material Parameter	Average Density (kg/m^3)
Iron-based Metal/Alloys	7.26
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	34.55
Other Inorganic Materials	3.27
Cellulose	86.49
Rubber	10.25
Plastic	46.59
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	86.55
Packaging Material, Rubber	1.07
Packaging Material, Steel	3718.18
Packaging Material, Lead	3918.18

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	1.94E-01
Cs-137	7.16E-02
Np-237	4.18E-07
Pu-238	3.04E-02
Pu-239	1.40E-01
Pu-240	7.51E-02
Pu-241	1.70E+00
Pu-242	2.86E-06
Sr-90	2.11E-02
Th-229	1.25E-15
Th-230	2.00E-11
Th-232	2.69E-18
U-233	6.16E-12
U-234	6.17E-07
U-235	9.62E-10
U-236	1.56E-08
U-238	3.11E-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).

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	Exxon TRU Mixed Debris					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum Dir Ld w/ Liner	134.6	0.0	134.6
Final Form Total	134.6	0.0	134.6

Waste Material Parameters

Material Parameter	Average Density (kg/m^3)
Iron-based Metal/Alloys	38.57
Aluminum-based Metal/Alloys	0.16
Other Metal/Alloys	7.62
Other Inorganic Materials	25.00
Cellulose	4.58
Rubber	1.06
Plastic	4.90
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	36.71
Packaging Material, Rubber	0.56
Packaging Material, Steel	129.52
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	2.28E+00
Np-237	1.14E-05
Pu-238	8.65E-01
Pu-239	5.72E-01
Pu-240	4.88E-01
Pu-241	1.08E+01
Pu-242	5.94E-04
Th-229	7.45E-14
Th-230	4.15E-09
Th-232	1.75E-17
U-233	2.67E-10
U-234	7.32E-05
U-235	7.36E-07
U-236	1.01E-07
U-238	2.93E-05

Haz. Waste No(s).

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

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**	12/31/2018
Stream Name	FFTF TRU Non-Mixed Debris					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-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	115.56
Aluminum-based Metal/Alloys	0.47
Other Metal/Alloys	22.84
Other Inorganic Materials	74.91
Cellulose	13.72
Rubber	3.16
Plastic	1.52
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	36.71
Packaging Material, Rubber	0.56
Packaging Material, Steel	129.52
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	1.21E-02
Cs-137	9.40E-03
Np-237	2.67E-08
Pu-238	3.27E-03
Pu-239	1.05E-02
Pu-240	9.06E-03
Pu-241	6.61E-02
Sr-90	6.31E-03
Th-229	8.08E-17
Th-230	2.16E-12
Th-232	3.24E-19
U-233	3.96E-13
U-234	6.64E-08
U-235	7.25E-11
U-236	1.88E-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**	12/31/2018
Stream Name	FFTF RH-TRU Non-Mixed Debris					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

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	4.99
Aluminum-based Metal/Alloys	0.02
Other Metal/Alloys	0.99
Other Inorganic Materials	3.24
Cellulose	0.59
Rubber	0.14
Plastic	0.63
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	86.55
Packaging Material, Rubber	1.07
Packaging Material, Steel	3718.18
Packaging Material, Lead	3918.18

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	8.92E-03
Am-243	7.29E-11
Cs-137	1.37E+00
Np-237	2.42E-08
Pu-238	2.23E-03
Pu-239	7.12E-03
Pu-240	6.12E-03
Pu-241	8.10E-02
Sr-90	1.46E-03
Th-229	1.19E-16
Th-230	2.46E-12
Th-232	3.62E-19
U-233	4.56E-13
U-234	5.87E-08
U-235	6.31E-11
U-236	1.63E-09

No Hazardous Waste Numbers Provided

TRUCON Code(s)

325

Waste Stream Description

Combustible and noncombustible debris from Fast Flux Test Reactor operations, maintenance, and clean out. Combustible waste may include wood, plastics, paper, and rags. Noncombustible waste may include metals, glass, concrete, and absorbed liquids.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	GE San Jose and Vallecitos TRU Mixed Debris					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum Dir Ld w/ Liner	27.1	0.0	27.1
SWB Dir Ld w/ Liner	82.7	0.0	82.7
Final Form Total	109.8	0.0	109.8

Waste Material Parameters

Material Parameter	Average Density (kg/m^3)
Iron-based Metal/Alloys	472.61
Aluminum-based Metal/Alloys	0.53
Other Metal/Alloys	9.40
Other Inorganic Materials	50.29
Cellulose	42.27
Rubber	10.50
Plastic	105.98
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	9.97
Packaging Material, Rubber	0.28
Packaging Material, Steel	148.15
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	1.06E+00
Cs-137	2.38E-07
Np-237	6.44E-06
Pu-238	2.32E-01
Pu-239	1.29E+00
Pu-240	5.62E-01
Pu-241	6.81E+00
Pu-242	8.87E-05
Sr-90	2.14E-07
Th-229	4.51E-14
Th-230	3.93E-08
Th-232	2.01E-17
U-233	1.58E-10
U-234	6.12E-04
U-235	1.29E-05
U-236	1.16E-07
U-238	4.42E-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.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	GE Vallecitos TRU Homogeneous Solids					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

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	4.68
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.24
Cellulose	5.37
Rubber	0.04
Plastic	9.32
Cement	0.00
Solidified Inorganic Material	422.98
Solidified Organic Material	6.49
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	36.71
Packaging Material, Rubber	0.56
Packaging Material, Steel	129.52
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	5.05E+00
Cs-137	3.33E-08
Np-237	1.22E-05
Pu-238	9.17E-01
Pu-239	3.71E+00
Pu-240	2.10E+00
Pu-241	5.48E+01
Pu-242	8.46E-05
Sr-90	3.06E-08
Th-229	4.76E-14
Th-230	2.46E-08
Th-232	9.81E-17
U-233	2.05E-10
U-234	3.45E-04
U-235	1.08E-05
U-236	4.97E-07
U-238	1.62E-04

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.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	GE San Jose and Vallecitos TRU RH Non-Mixed Debris					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
RH Lead Shielded Cntr w/ 1 - 30 gal w/ Liner	6.5	0.0	6.5
Final Form Total	6.5	0.0	6.5

Waste Material Parameters

Material Parameter	Average Density (kg/m^3)
Iron-based Metal/Alloys	1123.51
Aluminum-based Metal/Alloys	177.40
Other Metal/Alloys	0.00
Other Inorganic Materials	86.74
Cellulose	213.15
Rubber	90.96
Plastic	218.28
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	31.23
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	86.55
Packaging Material, Rubber	1.07
Packaging Material, Steel	3718.18
Packaging Material, Lead	3918.18

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	1.94E+00
Cs-137	1.23E+00
Np-237	1.96E-05
Pu-238	1.99E-01
Pu-239	9.98E+00
Pu-240	2.27E+00
Pu-241	4.92E+00
Pu-242	1.94E-04
Sr-90	9.18E-01
Th-229	1.39E-12
Th-230	4.23E-08
Th-232	2.03E-15
U-233	1.40E-09
U-234	1.42E-04
U-235	5.82E-06
U-236	2.35E-06
U-238	1.69E-04

No Hazardous Waste Numbers Provided

TRUCON Code(s)

325

Waste Stream Description

Combustible and noncombustible debris waste from decontamination and decommissioning of Building 102 at the GE-Vallecitos Nuclear Center. Combustible waste may include wood, plastics, paper, and rags. Noncombustible waste may include metals, glass, concrete, and absorbed liquids.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	Trench Designation waste stream					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum Dir Ld w/ Liner	211.7	0.0	211.7
SWB Dir Ld w/ Liner	315.8	0.0	315.8
Final Form Total	527.5	0.0	527.5

Waste Material Parameters

Material Parameter	Average Density (kg/m^3)
Iron-based Metal/Alloys	28.95
Aluminum-based Metal/Alloys	0.10
Other Metal/Alloys	6.84
Other Inorganic Materials	9.55
Cellulose	24.99
Rubber	8.62
Plastic	30.00
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	15.46
Packaging Material, Rubber	0.34
Packaging Material, Steel	144.33
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	8.35E-01
Am-243	1.32E-05
Cm-244	1.55E-03
Cs-137	5.32E-03
Np-237	2.27E-05
Pu-238	1.60E-01
Pu-239	7.27E-01
Pu-240	3.37E-01
Pu-241	7.08E+00
Pu-242	2.49E-05
Sr-90	4.71E-03
Th-229	3.92E-07
Th-230	3.65E-09
Th-232	1.44E-07
U-233	4.08E-04
U-234	5.14E-05
U-235	1.70E-06
U-236	7.99E-08
U-238	2.58E-05

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**	12/31/2018
Stream Name	Trench Designation waste stream					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^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	182.86
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	110.00
Cellulose	0.00
Rubber	0.00
Plastic	73.33
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	36.71
Packaging Material, Rubber	0.56
Packaging Material, Steel	129.52
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	1.61E-01
Np-237	3.52E-07
Pu-238	1.78E-02
Pu-239	7.14E-02
Pu-240	4.03E-02
Pu-241	1.10E+00
Th-229	1.06E-15
Th-230	1.17E-11
Th-232	1.44E-18
U-233	5.20E-12
U-234	3.61E-07
U-235	4.92E-10
U-236	8.35E-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

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	Trench Designation waste stream					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
RH Lead Shielded Cntr w/ 1 - 30 gal w/ Liner	17.6	0.0	17.6
Final Form Total	17.6	0.0	17.6

Waste Material Parameters

Material Parameter	Average Density (kg/m^3)
Iron-based Metal/Alloys	43.10
Aluminum-based Metal/Alloys	0.15
Other Metal/Alloys	10.04
Other Inorganic Materials	14.22
Cellulose	37.50
Rubber	12.69
Plastic	45.30
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	86.55
Packaging Material, Rubber	1.07
Packaging Material, Steel	3718.18
Packaging Material, Lead	3918.18

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	8.12E-01
Am-243	3.58E-06
Cs-137	1.13E-01
Np-237	5.68E-06
Pu-238	9.78E-02
Pu-239	5.41E-01
Pu-240	2.10E-01
Pu-241	5.75E+00
Pu-242	8.44E-06
Sr-90	9.19E-02
Th-229	6.99E-08
Th-230	6.45E-11
Th-232	7.50E-18
U-233	1.14E-04
U-234	1.99E-06
U-235	3.73E-09
U-236	4.34E-08
U-238	9.16E-15

Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D022, D027, D028, D029, D030, D034, D035, D037, D043, F001, F002, F003, F004, F005

TRUCON Code(s)

325

Waste Stream Description

Combustible and noncombustible RH-TRU debris waste retrieved from the Hanford low-level burial grounds that cannot be identified or assigned to an original generator. Combustible waste may include wood, plastics, paper, absorbents, rubber, and rags. Noncombustible waste may include failed machinery, tools, glass, concrete, plumbing, and fixtures.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

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**	12/31/2018
Stream Name	International Atomic Energy Agency TRU Non-Mixed Debris					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^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	546.74
Aluminum-based Metal/Alloys	86.17
Other Metal/Alloys	0.00
Other Inorganic Materials	42.59
Cellulose	104.00
Rubber	44.57
Plastic	105.98
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	14.86
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	36.71
Packaging Material, Rubber	0.56
Packaging Material, Steel	129.52
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	1.88E+00
Cs-137	3.56E-05
Np-237	4.86E-06
Pu-238	9.52E-01
Pu-239	5.26E-01
Pu-240	6.76E-01
Pu-241	3.01E+00
Pu-242	9.98E-04
Sr-90	3.21E-05
Th-229	1.95E-14
Th-230	8.25E-10
Th-232	3.16E-17
U-233	8.33E-11
U-234	2.22E-05
U-235	4.15E-09
U-236	1.60E-07
U-238	1.24E-12

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**	12/31/2018
Stream Name	Lawrence Berkeley Nat Lab TRU Mixed Debris					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
RH Lead Shielded Cntr w/ 1 - 30 gal 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	1138.02
Aluminum-based Metal/Alloys	179.36
Other Metal/Alloys	0.00
Other Inorganic Materials	88.65
Cellulose	216.47
Rubber	92.77
Plastic	220.59
Cement	0.00
Solidified Inorganic Material	30.92
Solidified Organic Material	0.00
Soil	37.11
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	86.55
Packaging Material, Rubber	1.07
Packaging Material, Steel	3718.18
Packaging Material, Lead	3918.18

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	3.93E-01
Cm-244	4.59E+01
Np-237	4.12E-06
Pu-238	4.69E-02
Pu-239	2.36E-01
Pu-240	5.08E-01
Pu-241	9.05E-01
Pu-242	5.39E-06
Th-229	3.10E-13
Th-230	9.54E-10
Th-232	2.86E-16
U-233	3.04E-10
U-234	5.50E-06
U-235	8.39E-09
U-236	3.87E-07
U-238	3.01E-14

Haz. Waste No(s).

D005, D007, D008, D009, D011, D019, F002, F003, F005

TRUCON Code(s)

325

Waste Stream Description

Typically, drums contain both combustible and noncombustible waste items. Combustible waste may include wood, plastics, paper, and rags. Noncombustible waste items may include metals, glass, concrete, and absorbed liquids. Drums may be used for disposal of high-efficiency particulate air filters.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	Lawrence Livermore TRU Mixed Debris					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum Dir Ld w/ Liner	0.4	0.0	0.4
SWB Dir Ld w/ Liner	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	178.08
Aluminum-based Metal/Alloys	28.07
Other Metal/Alloys	0.00
Other Inorganic Materials	13.87
Cellulose	33.87
Rubber	14.52
Plastic	34.52
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	4.84
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	7.69
Packaging Material, Rubber	0.26
Packaging Material, Steel	149.74
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	1.07E-01
Np-237	1.41E-06
Pu-238	1.12E-02
Pu-239	1.99E-01
Pu-240	6.04E-02
Pu-241	1.59E-01
Pu-242	4.03E-06
Th-229	1.66E-13
Th-230	8.66E-08
Th-232	8.96E-17
U-233	1.30E-10
U-234	2.10E-04
U-235	9.54E-06
U-236	8.06E-08
U-238	2.94E-04

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.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	P11 Criticality Facility TRU Mixed Debris					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
SWB Dir Ld w/ Liner	24.4	0.0	24.4
Final Form Total	24.4	0.0	24.4

Waste Material Parameters

Material Parameter	Average Density (kg/m^3)
Iron-based Metal/Alloys	59.46
Aluminum-based Metal/Alloys	29.81
Other Metal/Alloys	0.00
Other Inorganic Materials	59.46
Cellulose	29.65
Rubber	0.00
Plastic	29.65
Cement	29.81
Solidified Inorganic Material	0.25
Solidified Organic Material	0.25
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	1.21
Packaging Material, Rubber	0.19
Packaging Material, Steel	154.26
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	6.70E-02
Np-237	1.61E-07
Pu-238	1.21E-02
Pu-239	4.90E-02
Pu-240	2.77E-02
Pu-241	7.24E-01
Pu-242	1.12E-06
Th-229	6.21E-16
Th-230	1.05E-11
Th-232	1.29E-18
U-233	2.69E-12
U-234	2.82E-07
U-235	3.86E-10
U-236	6.56E-09
U-238	1.39E-15

Haz. Waste No(s).

D005, D006, D007

TRUCON Code(s)

125/225

Waste Stream Description

Misc. demolition debris.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	2345Z TRU Mixed Debris					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum Dir Ld w/ Liner	1890.8	0.4	1891.3
SLB2 Dir Ld	140.4	0.0	140.4
SWB Dir Ld w/ Liner	2306.8	0.0	2306.8
Final Form Total	4338.0	0.4	4338.4

Waste Material Parameters

Material Parameter	**Average Density (kg/m^3)**
Iron-based Metal/Alloys	40.62
Aluminum-based Metal/Alloys	0.20
Other Metal/Alloys	0.88
Other Inorganic Materials	6.46
Cellulose	10.12
Rubber	5.73
Plastic	15.95
Cement	0.00
Solidified Inorganic Material	0.01
Solidified Organic Material	0.01
Soil	0.12
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	16.65
Packaging Material, Rubber	0.35
Packaging Material, Steel	143.82
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	**Typical Concentration (Ci/m^3)**
Am-241	1.61E+00
Am-243	1.90E-05
Cs-137	7.99E-05
Np-237	2.43E-05
Pu-238	3.18E-01
Pu-239	1.57E+00
Pu-240	7.16E-01
Pu-241	1.13E+01
Pu-242	2.16E-04
Sr-90	7.35E-05
Th-229	8.13E-08
Th-230	2.85E-09
Th-232	3.87E-08
U-233	1.32E-04
U-234	4.74E-05
U-235	1.33E-06
U-236	1.48E-07
U-238	2.07E-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

TRUCON Code(s)

125/225

Waste Stream Description

Combustible and noncombustible debris waste generated from operations, maintenance, and D&D activities at the Plutonium Finishing Plant (PFP), which includes the 234-5Z, 232-Z, 236-Z, 2736-ZB, 242-Z, and 291-Z Buildings. Combustible waste may include wood, plastics, paper, and rags. Noncombustible waste items may include metals, glass, concrete, and absorbed liquids.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	PFP Absorbed Plutonium Nitrate Solutions					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum Dir Ld w/ Liner	36.8	0.0	36.8
Final Form Total	36.8	0.0	36.8

Waste Material Parameters

Material Parameter	Average Density (kg/m^3)
Iron-based Metal/Alloys	1.38
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.10
Cellulose	1.63
Rubber	0.02
Plastic	4.60
Cement	0.00
Solidified Inorganic Material	163.88
Solidified Organic Material	7.82
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	36.71
Packaging Material, Rubber	0.56
Packaging Material, Steel	129.52
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	3.43E+00
Cs-137	1.27E-06
Np-237	2.22E-05
Pu-238	7.45E-01
Pu-239	5.80E+00
Pu-240	1.86E+00
Pu-241	1.87E+01
Pu-242	3.70E-04
Sr-90	1.14E-06
Th-229	1.58E-13
Th-230	2.68E-08
Th-232	6.67E-17
U-233	5.51E-10
U-234	4.24E-04
U-235	2.29E-06
U-236	3.86E-07
U-238	1.96E-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).

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	PFP Comprehensive Homogenous Solids					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum Dir Ld w/ Liner	66.4	0.0	66.4
Final Form Total	66.4	0.0	66.4

Waste Material Parameters

Material Parameter	Average Density (kg/m^3)
Iron-based Metal/Alloys	5.30
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.15
Other Inorganic Materials	0.00
Cellulose	3.45
Rubber	0.07
Plastic	4.91
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	26.63
Soil	0.12
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	36.71
Packaging Material, Rubber	0.56
Packaging Material, Steel	129.52
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	7.80E+00
Cs-137	4.06E-05
Np-237	4.29E-05
Pu-238	1.42E+00
Pu-239	1.50E+01
Pu-240	4.88E+00
Pu-241	6.45E+01
Pu-242	5.63E-04
Sr-90	3.65E-05
Th-229	2.91E-13
Th-230	4.65E-09
Th-232	1.75E-16
U-233	1.03E-09
U-234	8.65E-05
U-235	2.14E-06
U-236	1.01E-06
U-238	2.92E-05

Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D019, D022, D030, D032, D033, F001, F002, F003, F005

TRUCON Code(s)

112/212

Waste Stream Description

Homogenous solids generated from operations, maintenance, and D&D activities at the Plutonium Finishing Plant (PFP), which includes the 234-5Z, 232-Z, 236-Z, 2736-ZB, 242-Z, and 291-Z Buildings.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

Waste Stream ID: **RLPFP-05**

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**	12/31/2018
Stream Name	PFP TRU Non-Mixed Debris					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum Dir Ld w/ Liner	309.5	0.2	309.8
SLB2 Dir Ld	450.8	88.7	539.5
SWB Dir Ld w/ Liner	1759.7	0.0	1759.7
Final Form Total	2520.0	88.9	2608.9

Waste Material Parameters

Material Parameter	**Average Density (kg/m^3)**
Iron-based Metal/Alloys	116.63
Aluminum-based Metal/Alloys	0.57
Other Metal/Alloys	2.52
Other Inorganic Materials	18.54
Cellulose	29.06
Rubber	16.45
Plastic	45.78
Cement	0.00
Solidified Inorganic Material	0.04
Solidified Organic Material	0.04
Soil	0.34
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	5.17
Packaging Material, Rubber	0.22
Packaging Material, Steel	153.56
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	**Typical Concentration (Ci/m^3)**
Am-241	5.61E-01
Am-243	1.38E-08
Cs-137	2.07E-08
Np-237	2.07E-05
Pu-238	1.15E-01
Pu-239	1.10E+00
Pu-240	3.19E-01
Pu-241	3.76E+00
Pu-242	7.11E-05
Sr-90	1.91E-08
Th-229	3.95E-15
Th-230	1.62E-12
Th-232	2.33E-19
U-233	8.99E-11
U-234	3.38E-07
U-235	2.02E-07
U-236	9.44E-09
U-238	3.10E-07

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

Waste Stream Description

CH Plutonium Finishing Plant (PFP) generated combustible and noncombustible debris waste generated from operations, maintenance, and D&D activities. Buildings include the 234-5Z, 232-Z, 236-Z, 2736-ZB, 242-Z, and 291-Z. Combustible waste may include wood, plastics, paper, and rags. Noncombustible waste items may include metals, glass, concrete, and absorbed liquids.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	2345Z RH-TRU Mixed Debris					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
RH Lead Shielded Cntr w/ 1 - 30 gal w/ Liner	29.8	0.0	29.8
Final Form Total	29.8	0.0	29.8

Waste Material Parameters

Material Parameter	Average Density (kg/m^3)
Iron-based Metal/Alloys	33.46
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	20.48
Other Inorganic Materials	17.26
Cellulose	4.73
Rubber	9.24
Plastic	25.80
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	86.55
Packaging Material, Rubber	1.07
Packaging Material, Steel	3718.18
Packaging Material, Lead	3918.18

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	2.14E+01
Am-243	1.23E-13
Cs-137	1.50E-05
Np-237	2.05E-04
Pu-238	3.99E+00
Pu-239	1.09E+01
Pu-240	5.27E+00
Pu-241	9.15E+01
Pu-242	1.52E-03
Sr-90	1.35E-05
Th-229	1.60E-12
Th-230	4.47E-09
Th-232	1.89E-16
U-233	5.43E-09
U-234	1.10E-04
U-235	1.11E-06
U-236	1.09E-06
U-238	3.96E-06

Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D019, D022, D030, F001, F002, F003, F004, F005

TRUCON Code(s)

325

Waste Stream Description

Combustible and noncombustible debris waste generated from operations, maintenance, and D&D activities at the Plutonium Finishing Plant (PFP), which includes the 234-5Z, 232-Z, 236-Z, 2736-ZB, 242-Z, and 291-Z Buildings. Combustible waste may include wood, plastics, paper, and rags. Noncombustible waste items may include metals, glass, concrete, and absorbed liquids.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***
NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	202A and 202AL TRU Mixed Debris					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum Dir Ld w/ Liner	312.7	0.0	312.7
SWB Dir Ld w/ Liner	133.5	141.0	274.5
Final Form Total	446.2	141.0	587.2

Waste Material Parameters

Material Parameter	Average Density (kg/m^3)
Iron-based Metal/Alloys	60.47
Aluminum-based Metal/Alloys	0.22
Other Metal/Alloys	0.71
Other Inorganic Materials	18.78
Cellulose	24.22
Rubber	23.12
Plastic	40.92
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	20.12
Packaging Material, Rubber	0.39
Packaging Material, Steel	141.08
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	7.84E+00
Am-243	1.01E-06
Cs-137	2.12E-02
Np-237	3.01E-05
Pu-238	2.88E+00
Pu-239	1.57E+01
Pu-240	5.98E+00
Pu-241	1.40E+02
Pu-242	1.41E-03
Sr-90	1.90E-02
Th-229	2.29E-06
Th-230	2.46E-09
Th-232	2.14E-16
U-233	3.72E-03
U-234	6.72E-05
U-235	3.95E-07
U-236	1.24E-06
U-238	4.70E-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.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	202A & 202AL TRU RH Mixed Debris					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
RH Lead Shielded Cntr w/ 1 - 30 gal w/ Liner	23.9	0.0	23.9
Final Form Total	23.9	0.0	23.9

Waste Material Parameters

Material Parameter	Average Density (kg/m^3)
Iron-based Metal/Alloys	28.14
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.70
Other Inorganic Materials	21.10
Cellulose	14.07
Rubber	47.83
Plastic	35.17
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	86.55
Packaging Material, Rubber	1.07
Packaging Material, Steel	3718.18
Packaging Material, Lead	3918.18

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	3.28E-02
Np-237	2.83E-07
Pu-238	1.27E-03
Pu-239	4.53E-03
Pu-240	1.08E-03
Pu-241	1.75E-01
Pu-242	6.08E-08
Th-229	1.79E-14
Th-230	3.26E-11
Th-232	1.26E-18
U-233	1.88E-11
U-234	1.69E-07
U-235	1.79E-10
U-236	1.28E-09
U-238	3.77E-16

Haz. Waste No(s).

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

TRUCON Code(s)

325

Waste Stream Description

Combustible and noncombustible debris waste generated from facility/equipment operation and maintenance, and analytical laboratory waste activities at the Plutonium Uranium Extraction Facility. Combustible waste may include wood, plastics, paper, and rags. Noncombustible waste may include metals, glass, concrete, and absorbed liquids.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	Rocky Flats TRU Mixed Debris					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum Dir Ld w/ Liner	199.9	0.0	199.9
SWB Dir Ld w/ Liner	3.8	0.0	3.8
Final Form Total	203.7	0.0	203.7

Waste Material Parameters

Material Parameter	**Average Density (kg/m^3)**
Iron-based Metal/Alloys	450.77
Aluminum-based Metal/Alloys	62.78
Other Metal/Alloys	18.87
Other Inorganic Materials	83.72
Cellulose	48.13
Rubber	11.42
Plastic	42.45
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.02
Soil	7.97
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	36.06
Packaging Material, Rubber	0.56
Packaging Material, Steel	129.98
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	**Typical Concentration (Ci/m^3)**
Am-241	5.03E-01
Np-237	5.47E-06
Pu-238	1.62E-02
Pu-239	6.26E-01
Pu-240	1.49E-01
Pu-241	3.98E-01
Pu-242	1.23E-05
Th-229	3.96E-13
Th-230	4.84E-06
Th-232	1.26E-16
U-233	4.00E-10
U-234	1.55E-02
U-235	7.05E-04
U-236	1.50E-07
U-238	2.17E-02

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.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	GE San Jose TRU Mixed Debris					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum Dir Ld w/ Liner	3.4	0.0	3.4
Final Form Total	3.4	0.0	3.4

Waste Material Parameters

Material Parameter	Average Density (kg/m^3)
Iron-based Metal/Alloys	289.03
Aluminum-based Metal/Alloys	0.28
Other Metal/Alloys	6.90
Other Inorganic Materials	27.04
Cellulose	23.48
Rubber	5.74
Plastic	61.50
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	36.71
Packaging Material, Rubber	0.56
Packaging Material, Steel	129.52
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	1.63E+01
Np-237	1.66E-04
Pu-238	1.96E+00
Pu-239	9.82E+00
Pu-240	5.53E+00
Pu-241	3.94E+01
Pu-242	2.22E-04
Th-229	1.18E-11
Th-230	5.94E-07
Th-232	4.96E-15
U-233	1.19E-08
U-234	1.95E-03
U-235	7.57E-05
U-236	5.74E-06
U-238	1.86E-04

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.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	SWOC TRU Mixed Debris					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum Dir Ld w/ Liner	37.4	12.6	50.0
SWB Dir Ld w/ Liner	52.6	11.3	63.9
Final Form Total	90.0	23.9	113.9

Waste Material Parameters

Material Parameter	**Average Density (kg/m^3)**
Iron-based Metal/Alloys	36.14
Aluminum-based Metal/Alloys	0.60
Other Metal/Alloys	1.07
Other Inorganic Materials	7.46
Cellulose	22.13
Rubber	79.16
Plastic	83.79
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.17
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	16.79
Packaging Material, Rubber	0.35
Packaging Material, Steel	143.40
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	**Typical Concentration (Ci/m^3)**
Am-241	2.22E+00
Am-243	2.65E-08
Cs-137	4.18E-03
Np-237	5.32E-06
Pu-238	4.83E-01
Pu-239	1.82E+00
Pu-240	9.78E-01
Pu-241	2.37E+01
Pu-242	1.38E-03
Sr-90	5.18E-06
Th-229	8.41E-09
Th-230	4.49E-10
Th-232	3.50E-17
U-233	1.37E-05
U-234	1.18E-05
U-235	8.51E-08
U-236	2.03E-07
U-238	2.45E-07

Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D022, D027, D028, D029, D030, D034, D035, D037, D039, D043, F001, F002, F003, F004, F005

TRUCON Code(s)

125/225

Waste Stream Description

Combustible and noncombustible debris waste generated from operations, maintenance, and clean up at the Hanford Solid Waste Operations Complex facilities. Combustible waste may include wood, plastics, paper, and rags. Noncombustible waste may include metals, glass, concrete, and absorbed liquids.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

Waste Stream ID: **RLSWO-05**

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**	12/31/2018
Stream Name	SWOC TRU Non-Mixed Debris					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum Dir Ld w/ Liner	14.5	9.9	24.4
SWB Dir Ld w/ Liner	99.6	3.8	103.4
Final Form Total	114.1	13.6	127.8

Waste Material Parameters

Material Parameter	**Average Density (kg/m^3)**
Iron-based Metal/Alloys	28.51
Aluminum-based Metal/Alloys	0.47
Other Metal/Alloys	0.84
Other Inorganic Materials	5.89
Cellulose	17.45
Rubber	62.44
Plastic	66.09
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.14
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	7.98
Packaging Material, Rubber	0.26
Packaging Material, Steel	149.54
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	**Typical Concentration (Ci/m^3)**
Am-241	7.42E-02
Am-243	2.58E-14
Cs-137	4.38E-07
Np-237	7.39E-06
Pu-238	2.86E-02
Pu-239	1.96E-01
Pu-240	6.19E-02
Pu-241	3.82E-01
Pu-242	5.93E-06
Sr-90	4.36E-07
Th-229	2.67E-09
Th-230	3.49E-12
Th-232	2.81E-10
U-233	3.04E-05
U-234	4.20E-07
U-235	1.18E-08
U-236	1.83E-09
U-238	1.67E-07

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

Waste Stream Description

CH Hanford Solid Waste Operations Complex facilities Non-mixed combustible and noncombustible debris waste generated from operations, maintenance, and clean. 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**	12/31/2018
Stream Name	Ward TRU Mixed Debris					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum Dir Ld w/ Liner	40.7	0.0	40.7
SWB Dir Ld w/ Liner	173.0	0.0	173.0
Final Form Total	213.7	0.0	213.7

Waste Material Parameters

Material Parameter	**Average Density (kg/m^3)**
Iron-based Metal/Alloys	185.91
Aluminum-based Metal/Alloys	0.84
Other Metal/Alloys	4.06
Other Inorganic Materials	30.25
Cellulose	39.31
Rubber	10.30
Plastic	58.10
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	7.98
Packaging Material, Rubber	0.26
Packaging Material, Steel	149.54
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	**Typical Concentration (Ci/m^3)**
Am-241	2.90E-01
Cs-137	7.85E-10
Np-237	5.21E-05
Pu-238	5.96E-02
Pu-239	2.15E-01
Pu-240	1.12E-01
Pu-241	2.28E+00
Pu-242	2.26E-05
Sr-90	7.09E-10
Th-229	4.78E-13
Th-230	5.43E-09
Th-232	4.00E-18
U-233	1.55E-09
U-234	8.50E-05
U-235	2.99E-06
U-236	2.32E-08
U-238	1.36E-05

Haz. Waste No(s).

D007, D008, D009, D035, F001, F002, F003, F005

TRUCON Code(s)

125/225

Waste Stream Description

Combustible and noncombustible debris waste generated during decontamination and decommissioning of the Westinghouse Advanced Reactors Division facility in Cheswick, PA. Combustible waste may include wood, plastics, paper, and rags. Noncombustible waste may include metals, glass, concrete, and absorbed liquids.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	WARD solidified inorganics					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum Dir Ld w/ Liner	8.0	0.0	8.0
Final Form Total	8.0	0.0	8.0

Waste Material Parameters

Material Parameter	Average Density (kg/m^3)
Iron-based Metal/Alloys	0.73
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.10
Other Inorganic Materials	0.00
Cellulose	2.92
Rubber	0.00
Plastic	37.76
Cement	366.14
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	36.71
Packaging Material, Rubber	0.56
Packaging Material, Steel	129.52
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	1.56E+01
Cs-137	8.06E-08
Np-237	5.01E-05
Pu-238	3.00E+00
Pu-239	7.40E+00
Pu-240	4.88E+00
Pu-241	7.73E+01
Pu-242	3.96E-03
Th-229	3.27E-13
Th-230	1.30E-08
Th-232	3.57E-16
U-233	1.09E-09
U-234	1.85E-04
U-235	4.83E-06
U-236	1.45E-06
U-238	4.56E-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.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	Waste Treatment Plant TRU RH Mixed Debris					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
RH Lead Shielded Cntr w/ 1 - 30 gal w/ Liner	0.0	0.3	0.3
Final Form Total	0.0	0.3	0.3

Waste Material Parameters

Material Parameter	Average Density (kg/m^3)
Iron-based Metal/Alloys	56.03
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	14.86
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	86.55
Packaging Material, Rubber	1.07
Packaging Material, Steel	3718.18
Packaging Material, Lead	3918.18

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	5.25E-03
Cs-137	1.41E+00
Np-237	5.60E-06
Pu-238	3.61E-03
Pu-239	1.86E-03
Pu-240	3.96E-04
Pu-241	6.95E-04
Sr-90	1.57E+00
Th-229	5.50E-08
Th-230	9.79E-10
Th-232	1.03E-16
U-233	5.21E-05
U-234	8.93E-06
U-235	3.47E-07
U-236	1.74E-07
U-238	7.81E-06

No Hazardous Waste Numbers Provided

TRUCON Code(s)

325

Waste Stream Description

RH debris waste to be generated from future WTP operations

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	CH TRU Project Generated Waste (PGW)					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

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	141.50
Aluminum-based Metal/Alloys	32.04
Other Metal/Alloys	6.39
Other Inorganic Materials	7.01
Cellulose	5.03
Rubber	1.70
Plastic	8.91
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	0.56
Packaging Material, Steel	129.52
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	1.92E-02
Cs-137	2.27E-01
Np-237	1.82E-08
Pu-238	8.04E-03
Pu-239	3.96E-02
Pu-240	2.23E-02
Pu-241	1.88E-01
Pu-242	5.75E-06
Sr-90	1.01E-02
Th-229	5.60E-13
Th-230	2.82E-09
Th-232	1.65E-05
U-233	2.12E-09
U-234	1.02E-04
U-235	3.44E-06
U-236	1.98E-09
U-238	1.25E-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

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	TRU Waste from SNL/NM - Remote Handled					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
RH Can w/ Remov Lid w/ 3 - 55-gal w/o Liner	3.2	0.0	3.2
RH Lead Shielded Cntr w/ 1 - 30 gal w/o Liner	1.2	0.0	1.2
Final Form Total	4.4	0.0	4.4

Waste Material Parameters

Material Parameter	**Average Density (kg/m^3)**
Iron-based Metal/Alloys	163.60
Aluminum-based Metal/Alloys	23.28
Other Metal/Alloys	9.91
Other Inorganic Materials	10.83
Cellulose	7.84
Rubber	2.06
Plastic	11.74
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	6.68
Packaging Material, Rubber	0.70
Packaging Material, Steel	1698.17
Packaging Material, Lead	1087.39

Final Form Radionuclides

Isotope	**Typical Concentration (Ci/m^3)**
Am-241	3.25E+00
Cs-137	3.51E+01
Np-237	3.09E-06
Pu-238	1.59E+00
Pu-239	4.31E+00
Pu-240	2.75E+00
Pu-241	3.25E+01
Pu-242	1.29E-03
Sr-90	2.62E+01
Th-229	6.66E-11
Th-230	4.18E-07
Th-232	1.81E-17
U-233	2.52E-07
U-234	1.52E-02
U-235	4.89E-04
U-236	2.44E-07
U-238	1.63E-04

Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D011, D019, D022, D028, F002, F005

TRUCON Code(s)

321

Waste Stream Description

Heterogeneous RH fuel pieces from accident scenarios R&D and experimental vessels, includes Project Generated Waste (PGW) from repackaging

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	CH TRU Debris waste from Z-machine					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
SWB Dir Ld w/o Liner	15.0	28.2	43.2
Final Form Total	15.0	28.2	43.2

Waste Material Parameters

Material Parameter	Average Density (kg/m^3)
Iron-based Metal/Alloys	230.72
Aluminum-based Metal/Alloys	2.03
Other Metal/Alloys	1.80
Other Inorganic Materials	0.01
Cellulose	0.00
Rubber	0.32
Plastic	0.20
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.34
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.19
Packaging Material, Steel	154.26
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	8.13E+00
Np-237	1.06E-05
Pu-238	2.45E-03
Pu-239	8.38E-02
Pu-240	2.18E-02
Pu-241	1.22E-01
Pu-242	2.55E-06
Th-229	1.05E-14
Th-230	5.19E-13
Th-232	2.55E-19
U-233	8.97E-11
U-234	2.81E-08
U-235	3.30E-10
U-236	2.58E-09
U-238	1.58E-15

No Hazardous Waste Numbers Provided

TRUCON Code(s)

125/225

Waste Stream Description

CH debris waste from the Z-machine, Pu ICE experiments. Waste generated at SNL/NM, but is LANL waste

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	CH TRU solidified waste					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

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	12.50
Other Inorganic Materials	14.88
Cellulose	0.00
Rubber	0.00
Plastic	0.00
Cement	0.01
Solidified Inorganic Material	6.90
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.56
Packaging Material, Steel	129.52
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	3.84E-01
Cs-137	7.52E-03
Np-237	8.50E-07
Pu-238	2.05E-01
Pu-239	5.84E-01
Pu-240	2.58E-01
Pu-241	1.76E+00
Pu-242	2.40E-04
Th-229	2.58E-15
Th-230	8.42E-10
Th-232	9.24E-18
U-233	1.26E-11
U-234	1.51E-05
U-235	5.08E-07
U-236	5.35E-08
U-238	1.08E-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.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	CH TRU sealed source					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

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	1.19
Other Metal/Alloys	4.90
Other Inorganic Materials	78.57
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	0.56
Packaging Material, Steel	129.52
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	6.64E-03
Cs-137	8.10E-07
Np-237	1.59E-08
Pu-238	3.88E-07
Pu-239	7.54E-05
Th-229	5.41E-17
Th-230	2.56E-16
U-233	2.51E-13
U-234	7.88E-12
U-235	5.20E-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: **SA-W139**

Appendix A

Waste Profile Report

Site	Sandia National Laboratories	**Summary Category**	S5000	**Defense Determination**	Defense-Related	**Handling**	RH
Source Cat.	Remediation/D&D Waste	**Waste Matrix Code Group**	Composite Filter Waste			**Inventory Date**	12/31/2018
Stream Name	D&D from AHCF					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
RH Lead Shielded Cntr w/ 1 - 30 gal w/o Liner	0.0	0.7	0.7
Final Form Total	0.0	0.7	0.7

Waste Material Parameters

Material Parameter	Average Density (kg/m^3)
Iron-based Metal/Alloys	60.61
Aluminum-based Metal/Alloys	14.39
Other Metal/Alloys	0.00
Other Inorganic Materials	0.61
Cellulose	0.00
Rubber	0.00
Plastic	0.00
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.15
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	1.65
Packaging Material, Rubber	1.07
Packaging Material, Steel	3718.18
Packaging Material, Lead	3918.18

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	2.08E+01
Cs-137	2.43E+02
Np-237	6.69E-06
Pu-238	1.07E+01
Pu-239	2.85E+01
Pu-240	1.82E+01
Pu-241	2.37E+02
Pu-242	8.53E-03
Sr-90	1.82E+02
Th-229	1.47E-10
Th-230	9.21E-07
Th-232	1.33E-17
U-233	1.67E-06
U-234	1.00E-01
U-235	3.23E-03
U-236	5.38E-07
U-238	1.08E-03

No Hazardous Waste Numbers Provided

TRUCON Code(s)

321

Waste Stream Description

Filter and associated PGW from AHCF

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	D&D Debris					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

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	5.6	0.0	5.6
Final Form Total	6.3	0.0	6.3

Waste Material Parameters

Material Parameter	**Average Density (kg/m^3)**
Iron-based Metal/Alloys	3.67
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	139.87
Other Inorganic Materials	25.33
Cellulose	48.64
Rubber	0.00
Plastic	24.64
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	4.78
Packaging Material, Rubber	0.23
Packaging Material, Steel	151.77
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	**Typical Concentration (Ci/m^3)**
Am-241	4.46E-03
Cs-137	4.84E-01
Np-237	4.33E-09
Pu-238	4.43E-04
Pu-239	4.12E-02
Pu-241	4.84E-03
Pu-242	1.09E-04
Sr-90	1.92E-02
Th-229	2.49E-18
Th-230	9.18E-09
U-233	2.83E-14
U-234	3.33E-04
U-235	2.09E-05
U-238	3.60E-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.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	D&D Debris					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^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	52.91
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	904.07
Other Inorganic Materials	164.87
Cellulose	36.24
Rubber	0.00
Plastic	1.69
Cement	299.47
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	45.24
Packaging Material, Rubber	0.56
Packaging Material, Steel	922.22
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	1.63E-01
Cs-137	4.54E+00
Np-237	1.59E-07
Pu-238	6.05E-03
Pu-239	3.67E-01
Pu-241	3.63E-02
Pu-242	1.48E-03
Sr-90	1.38E+00
Th-229	9.15E-17
Th-230	1.28E-07
Th-232	3.68E-16
U-233	1.04E-12
U-234	4.64E-03
U-235	4.52E-04
U-236	2.49E-06
U-238	5.07E-03

Haz. Waste No(s).

D007, D008, D009, 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.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	Process cell and sump cleanout sludge					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

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

Waste Material Parameters

Material Parameter	Average Density (kg/m^3)
Iron-based Metal/Alloys	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	10.32
Cement	0.00
Solidified Inorganic Material	190.79
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	45.24
Packaging Material, Rubber	0.56
Packaging Material, Steel	922.22
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	7.21E-02
Cs-137	1.94E+01
Np-237	6.98E-08
Pu-238	9.97E-03
Pu-239	8.80E-01
Pu-241	1.73E-01
Pu-242	6.78E-03
Sr-90	4.30E-01
Th-229	4.00E-17
Th-230	1.78E-07
U-233	4.55E-13
U-234	6.44E-03
U-235	4.96E-04
U-238	9.95E-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

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	221H U Oxide CH TRU Debris					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal POC - 12" 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	418.03
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	1567.62
Cellulose	0.00
Rubber	0.00
Plastic	104.51
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	575.82
Packaging Material, Plastic	157.99
Packaging Material, Rubber	2.42
Packaging Material, Steel	2254.10
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	5.23E-03
Am-243	1.40E-09
Cm-244	1.09E-03
Cs-137	1.17E-03
Np-237	1.32E-03
Pu-238	5.07E-03
Pu-239	3.45E-01
Pu-240	6.34E-07
Pu-242	1.32E-03
Sr-90	1.17E-03
Th-229	2.20E-02
Th-230	4.29E-03
Th-232	1.32E-03
U-233	4.96E+00
U-234	7.21E+00
U-235	5.79E-01
U-236	4.84E-14
U-238	1.71E-02

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.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	SR-AGNS-HOM					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

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	0.8	0.0	0.8
Final Form Total	1.3	0.0	1.3

Waste Material Parameters

Material Parameter	**Average Density (kg/m^3)**
Iron-based Metal/Alloys	121.21
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	1608.66
Solidified Inorganic Material	1.73
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	36.68
Packaging Material, Rubber	0.85
Packaging Material, Steel	359.84
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	**Typical Concentration (Ci/m^3)**
Am-241	4.87E-01
Np-237	5.33E-04
Pu-238	6.07E-01
Pu-239	1.07E+00
Pu-240	2.52E-01
Pu-241	8.63E+00
Pu-242	4.38E-05
Th-229	3.61E-12
Th-230	4.10E-09
Th-232	6.62E-18
U-233	1.37E-08
U-234	7.96E-05
U-235	3.44E-06
U-236	4.47E-08
U-238	7.36E-05

Haz. Waste No(s).

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

TRUCON Code(s)

111/211, 154

Waste Stream Description

This waste is comprised of aqueous liquids solidified with lime and cement in a 55-gallon drum and aqueous liquid that had been absorbed using Florco-X and then later solidified with cement and water inside a 55-gallon drum.

Waste Stream ID: **SR-BCLDP.003.001**

Appendix A

Waste Profile Report

Site	Savannah River Site	**Summary Category**	S3000	**Defense Determination**	Defense-Related	**Handling**	CH
Source Cat.	Discarding Excess/Expired Materials	**Waste Matrix Code Group**	Solidified Organics			**Inventory Date**	12/31/2018
Stream Name	BCL JN-1 CH TRU Homogeneous Sludge					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

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	1.59
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.24
Cellulose	1.87
Rubber	0.00
Plastic	6.11
Cement	0.00
Solidified Inorganic Material	92.20
Solidified Organic Material	164.31
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.56
Packaging Material, Steel	129.52
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	1.38E-01
Am-243	1.09E-04
Cm-244	7.89E-03
Cs-137	3.54E-02
Np-237	1.54E-06
Pu-238	1.14E-01
Pu-239	1.55E-02
Pu-240	2.52E-02
Pu-241	1.59E+00
Pu-242	7.52E-05
Sr-90	3.52E-02
Th-229	7.66E-14
Th-230	1.01E-09
Th-232	2.43E-16
U-233	1.90E-10
U-234	2.28E-05
U-235	3.69E-07
U-236	9.88E-07
U-238	2.18E-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

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	CH Mixed TRU Cartridge Water Filters(S5000)					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

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	93.82
Cellulose	89.33
Rubber	3.44
Plastic	17.18
Cement	0.00
Solidified Inorganic Material	26.16
Solidified Organic Material	34.09
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.56
Packaging Material, Steel	129.52
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	4.79E-02
Am-243	1.31E-04
Cs-137	4.65E-03
Np-237	1.87E-05
Pu-238	2.23E-01
Pu-239	3.92E-03
Pu-240	6.45E-03
Pu-242	7.67E-08
Sr-90	4.54E-03
Th-229	3.00E-12
Th-230	6.90E-09
Th-232	1.06E-18
U-233	2.88E-09
U-234	5.49E-05
U-235	8.03E-07
U-236	2.87E-09
U-238	1.55E-05

Haz. Waste No(s).

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

TRUCON Code(s)

119/219

Waste Stream Description

This waste consists of CH Cartridge Water Filters

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	BCL JN-4 CH TRU Heterogeneous Debris					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

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	199.50
Aluminum-based Metal/Alloys	2.04
Other Metal/Alloys	1.02
Other Inorganic Materials	4.08
Cellulose	53.06
Rubber	11.74
Plastic	81.63
Cement	0.00
Solidified Inorganic Material	157.66
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	154.26
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	2.65E-02
Np-237	4.16E-08
Pu-238	7.58E+00
Pu-239	2.66E-02
Pu-240	1.23E-02
Pu-241	2.24E-01
Pu-242	3.81E-06
Th-229	6.38E-17
Th-230	2.52E-09
Th-232	2.25E-19
U-233	4.38E-13
U-234	1.09E-04
U-235	1.31E-10
U-236	1.83E-09
U-238	2.95E-15

Haz. Waste No(s).

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

TRUCON Code(s)

121/221

Waste Stream Description

Heterogeneous debris waste from the D&D of Battelle Columbus Lab Building JN-4

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	CH TRU - Heterogeneous debris from the DWPF laboratory					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

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	6.98
Aluminum-based Metal/Alloys	3.49
Other Metal/Alloys	0.00
Other Inorganic Materials	13.96
Cellulose	33.74
Rubber	0.00
Plastic	58.17
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	0.56
Packaging Material, Steel	129.52
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	4.51E-01
Cs-137	1.25E-02
Np-237	5.26E-06
Pu-238	9.01E-02
Pu-239	1.48E-02
Pu-240	2.33E-01
Pu-241	2.80E-01
Sr-90	1.23E-02
Th-229	1.49E-05
Th-230	1.79E-10
Th-232	2.45E-17
U-233	1.41E-02
U-234	3.20E-06
U-235	1.95E-06
U-236	8.27E-08
U-238	5.52E-05

No Hazardous Waste Numbers Provided

TRUCON Code(s)

125/225, 154

Waste Stream Description

CH TRU waste consisting of contaminated laboratory debris

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	Commingled waste from HBL and 235F.					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

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	171.62
Aluminum-based Metal/Alloys	11.82
Other Metal/Alloys	18.95
Other Inorganic Materials	18.95
Cellulose	28.30
Rubber	1.78
Plastic	21.06
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	9.22
Packaging Material, Rubber	0.29
Packaging Material, Steel	148.05
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	**Typical Concentration (Ci/m^3)**
Am-241	7.98E-05
Np-237	6.86E-05
Pu-238	5.22E-01
Pu-239	3.75E-04
Pu-240	2.05E-04
Pu-241	8.84E-03
Pu-242	2.44E-07
Th-229	3.21E-13
Th-230	1.74E-10
Th-232	3.75E-21
U-233	1.46E-09
U-234	7.51E-06
U-235	1.85E-12
U-236	3.04E-11
U-238	1.90E-16

Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D022, D029, D043, F002, F005, U133

TRUCON Code(s)

125/225, 154

Waste Stream Description

This waste consists of repackaged waste from a large steel box that was originally loaded from two separate SRS generator facilities (i.e. H-B line and 235F)

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	CH TRU Heterogeneous debris from the K Area Plutonium surveillance program					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum Dir Ld w/o Liner	2.1	183.5	185.6
Final Form Total	2.1	183.5	185.6

Waste Material Parameters

Material Parameter	Average Density (kg/m^3)
Iron-based Metal/Alloys	24.37
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	2.25
Rubber	20.87
Plastic	157.14
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	0.00
Packaging Material, Rubber	0.56
Packaging Material, Steel	129.52
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	7.58E-01
Np-237	5.98E-06
Pu-238	2.33E-01
Pu-239	2.00E+00
Pu-240	5.19E-01
Pu-241	4.36E+00
Pu-242	1.71E-04
Th-229	2.43E-14
Th-230	7.76E-11
Th-232	9.48E-18
U-233	1.15E-10
U-234	3.36E-06
U-235	3.82E-06
U-236	7.69E-08
U-238	1.34E-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

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

Waste Stream ID: **SR-KAC-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**	12/31/2018
Stream Name	CH Mixed TRU Heterogeneous debris from the K Area Plutonium surveillance program					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

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	24.37
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	2.25
Rubber	20.87
Plastic	157.14
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	0.00
Packaging Material, Rubber	0.56
Packaging Material, Steel	129.52
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	7.58E-01
Np-237	5.98E-06
Pu-238	2.33E-01
Pu-239	2.00E+00
Pu-240	5.19E-01
Pu-241	4.36E+00
Pu-242	1.71E-04
Th-229	2.43E-14
Th-230	7.76E-11
Th-232	9.48E-18
U-233	1.15E-10
U-234	3.36E-06
U-235	3.82E-06
U-236	7.69E-08
U-238	1.34E-07

Haz. Waste No(s).

D006, D008

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**	12/31/2018
Stream Name	K-Area Pu Oxide waste associated with 6 MT material					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal CCO w/ Liner	0.0	234.2	234.2
Final Form Total	0.0	234.2	234.2

Waste Material Parameters

Material Parameter	Average Density (kg/m^3)
Iron-based Metal/Alloys	522.02
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	86.65
Other Inorganic Materials	216.97
Cellulose	0.00
Rubber	0.00
Plastic	34.69
Cement	8.66
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	1804.69
Packaging Material, Plastic	602.34
Packaging Material, Rubber	9.22
Packaging Material, Steel	6328.13
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	9.51E+02
Np-237	1.59E-02
Pu-238	2.42E+02
Pu-239	9.49E+02
Pu-240	4.61E+02
Pu-241	4.76E+03
Pu-242	2.14E-01
Th-229	7.84E-09
Th-230	5.98E-07
Th-232	3.37E-18
U-233	8.91E-04
U-234	6.50E-01
U-235	6.09E-03
U-236	1.37E-06
U-238	2.40E-03

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.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	CH TRU Heterogeneous debris from the Los Alamos Scientific Laboratory (LASL)					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

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	63.94
Aluminum-based Metal/Alloys	0.05
Other Metal/Alloys	1.15
Other Inorganic Materials	6.65
Cellulose	7.73
Rubber	6.54
Plastic	7.81
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	0.56
Packaging Material, Steel	129.52
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	9.20E-01
Am-243	3.76E-07
Cs-137	2.37E-06
Np-237	4.70E-05
Pu-238	3.97E+02
Pu-239	4.68E-01
Pu-240	7.40E-01
Pu-241	6.19E+00
Pu-242	9.40E-04
Sr-90	2.82E-06
Th-229	6.34E-08
Th-230	3.49E-06
Th-232	6.44E-08
U-233	1.44E-04
U-234	7.88E-02
U-235	1.12E-06
U-236	1.10E-07
U-238	7.29E-13

Haz. Waste No(s).

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

TRUCON Code(s)

125/225, 154

Waste Stream Description

This CH TRU waste stream consists of debris and Impure Oxide shipped to the SRS from the LASL in 1971 and 1972.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	CH Mixed TRU/F listed solvents - Heterogeneous debris from Mound Laboratories					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final 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	13.2	0.0	13.2
Final Form Total	14.6	0.0	14.6

Waste Material Parameters

Material Parameter	**Average Density (kg/m^3)**
Iron-based Metal/Alloys	80.88
Aluminum-based Metal/Alloys	0.28
Other Metal/Alloys	1.53
Other Inorganic Materials	14.07
Cellulose	28.22
Rubber	4.18
Plastic	20.35
Cement	0.00
Solidified Inorganic Material	0.53
Solidified Organic Material	0.00
Soil	4.79
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	3.16
Packaging Material, Rubber	0.23
Packaging Material, Steel	151.77
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	**Typical Concentration (Ci/m^3)**
Am-241	3.39E-02
Am-243	8.19E-08
Cm-244	3.49E-06
Cs-137	6.00E-06
Np-237	6.89E-06
Pu-238	5.75E+00
Pu-239	8.34E-02
Pu-240	1.28E-02
Pu-241	2.91E-01
Pu-242	8.11E-06
Sr-90	5.97E-06
Th-229	6.12E-07
Th-230	2.40E-06
Th-232	2.49E-07
U-233	1.74E-03
U-234	1.08E-03
U-235	4.65E-07
U-236	1.52E-09
U-238	8.34E-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

Waste Stream Description

This waste stream is primarily solids consisting of booties, lab coats, floor sweeping, labware, rags, and other job control waste.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	CH TRU Heterogeneous debris from the Mound Plant					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum Dir Ld w/ Liner	15.3	0.0	15.3
SLB2 Dir Ld	14.8	0.0	14.8
SWB Dir Ld w/o Liner	30.1	0.0	30.1
Final Form Total	60.2	0.0	60.2

Waste Material Parameters

Material Parameter	**Average Density (kg/m^3)**
Iron-based Metal/Alloys	56.83
Aluminum-based Metal/Alloys	0.11
Other Metal/Alloys	0.71
Other Inorganic Materials	6.54
Cellulose	18.38
Rubber	2.40
Plastic	10.67
Cement	0.00
Solidified Inorganic Material	0.57
Solidified Organic Material	0.26
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	9.35
Packaging Material, Rubber	0.27
Packaging Material, Steel	150.62
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	**Typical Concentration (Ci/m^3)**
Am-241	5.50E-01
Am-243	1.89E-06
Cm-244	1.00E-03
Cs-137	2.50E-03
Np-237	5.60E-05
Pu-238	2.69E+02
Pu-239	3.30E-01
Pu-240	4.49E-01
Pu-241	3.89E+00
Pu-242	5.48E-04
Sr-90	2.49E-03
Th-229	1.66E-13
Th-230	1.88E-06
Th-232	1.62E-06
U-233	9.43E-10
U-234	5.26E-02
U-235	1.04E-06
U-236	5.32E-08
U-238	3.81E-06

Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D019, D022, D027, D028, D029, D030, D032, D034, D037, D043, F002, F004, F005

TRUCON Code(s)

125/225, 154, 425

Waste Stream Description

This CH TRU waste stream consists of debris shipped to the SRS from the Mound Plant in 1971 and 1972.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	CH Mixed TRU Soil / Gravel (S4000)					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

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	68.28
Cellulose	0.34
Rubber	0.12
Plastic	5.02
Cement	0.00
Solidified Inorganic Material	19.94
Solidified Organic Material	0.00
Soil	835.36
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	3.67
Packaging Material, Rubber	0.56
Packaging Material, Steel	129.52
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	**Typical Concentration (Ci/m^3)**
Am-241	7.50E-03
Cs-137	2.02E-06
Np-237	1.03E-06
Pu-238	4.99E-01
Pu-239	1.24E-02
Pu-240	1.79E-03
Pu-241	1.88E-02
Pu-242	2.39E-06
Sr-90	2.01E-06
Th-229	4.79E-15
Th-230	4.20E-09
Th-232	3.28E-20
U-233	2.18E-11
U-234	9.50E-05
U-235	6.11E-11
U-236	2.66E-10
U-238	1.85E-15

Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, F002, F003, F004, F005, F007, F009

TRUCON Code(s)

111/211

Waste Stream Description

Soil mixed with absorbent and some commingled debris.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	Heterogeneous Debris Waste from the NIST					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

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	105.71
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	13.21
Cement	138.10
Solidified Inorganic Material	7.29
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.56
Packaging Material, Steel	129.52
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	3.05E+01
Np-237	5.86E-05
Pu-238	3.81E+01
Pu-239	1.23E+01
Pu-240	2.90E+00
Pu-241	9.97E+01
Pu-242	5.18E-04
Th-229	1.31E-13
Th-230	1.32E-07
Th-232	1.11E-13
U-233	7.48E-10
U-234	2.71E-03
U-235	2.99E-05
U-236	3.75E-04
U-238	1.19E-06

No Hazardous Waste Numbers Provided

TRUCON Code(s)

125/225, 154

Waste Stream Description

This material consist of a combination of unirradiated PuO/UO fuel pellets, Pacemaker source and solidified Pu solutions

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	RH TRU Heterogeneous debris from the HB-Line					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

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	136.56
Aluminum-based Metal/Alloys	7.89
Other Metal/Alloys	10.26
Other Inorganic Materials	55.26
Cellulose	46.57
Rubber	116.83
Plastic	412.84
Cement	0.00
Solidified Inorganic Material	2.37
Solidified Organic Material	0.79
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	45.24
Packaging Material, Rubber	0.56
Packaging Material, Steel	922.22
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	5.66E-02
Np-237	5.53E-01
Pu-238	3.33E+02
Pu-239	2.71E-01
Pu-240	1.40E-01
Pu-241	6.13E+00
Pu-242	1.61E-04
Th-229	1.65E-09
Th-230	2.14E-07
Th-232	7.51E-16
U-233	9.38E-06
U-234	7.72E-03
U-235	1.37E-05
U-236	3.81E-06
U-238	1.21E-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.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	RH TRU spent Berl saddles from H-Canyon dissolver off-gas system.					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
RH Lead Shielded Cntr w/ 1 - 30 gal 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	171.06
Aluminum-based Metal/Alloys	9.89
Other Metal/Alloys	12.85
Other Inorganic Materials	69.21
Cellulose	58.34
Rubber	146.34
Plastic	517.13
Cement	0.00
Solidified Inorganic Material	2.97
Solidified Organic Material	0.99
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	86.55
Packaging Material, Rubber	1.07
Packaging Material, Steel	3718.18
Packaging Material, Lead	3918.18

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Np-237	5.48E-04
Pu-238	1.30E+00
Pu-239	1.16E-02
Pu-240	7.94E-03
Pu-242	1.37E-04
Th-229	2.57E-12
Th-230	6.73E-09
Th-232	1.45E-19
U-233	1.17E-08
U-234	1.56E-04
U-235	5.73E-11
U-236	1.18E-09
U-238	1.06E-13

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).

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	RH TRU Heterogeneous debris from the 235F facility.					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	1.3	0.0	1.3
Final Form Total	1.3	0.0	1.3

Waste Material Parameters

Material Parameter	Average Density (kg/m^3)
Iron-based Metal/Alloys	57.02
Aluminum-based Metal/Alloys	3.11
Other Metal/Alloys	1.52
Other Inorganic Materials	16.56
Cellulose	9.69
Rubber	58.23
Plastic	73.30
Cement	0.00
Solidified Inorganic Material	0.68
Solidified Organic Material	0.13
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	45.24
Packaging Material, Rubber	0.56
Packaging Material, Steel	922.22
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	1.02E+02
Np-237	2.82E-02
Pu-238	3.00E+02
Pu-239	2.38E+00
Pu-240	6.29E-01
Pu-241	3.70E+03
Pu-242	2.29E-04
Th-229	1.31E-10
Th-230	9.99E-08
Th-232	1.15E-17
U-233	5.98E-07
U-234	4.32E-03
U-235	1.17E-08
U-236	9.30E-08
U-238	1.78E-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

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	RH TRU Heterogeneous debris from the 772F and 772-1F laboratories.					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

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

Waste Material Parameters

Material Parameter	Average Density (kg/m^3)
Iron-based Metal/Alloys	115.23
Aluminum-based Metal/Alloys	8.46
Other Metal/Alloys	23.26
Other Inorganic Materials	232.57
Cellulose	58.14
Rubber	43.34
Plastic	576.14
Cement	0.00
Solidified Inorganic Material	1.06
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	45.24
Packaging Material, Rubber	0.56
Packaging Material, Steel	922.22
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	1.44E-02
Cs-137	9.74E-01
Np-237	6.33E-06
Pu-238	5.14E-02
Pu-239	4.25E-02
Pu-240	1.29E-02
Pu-241	6.40E-02
Pu-242	2.12E-06
Sr-90	9.50E-01
Th-229	3.06E-13
Th-230	6.80E-10
Th-232	2.06E-16
U-233	4.36E-10
U-234	5.83E-06
U-235	2.95E-08
U-236	2.64E-07
U-238	5.26E-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.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	RH TRU Heterogeneous debris from the SRNL					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	16.4	0.0	16.4
RH Can w/ Remov Lid w/ 3 - 55-gal w/o Liner	0.6	10.7	11.3
Final Form Total	17.0	10.7	27.7

Waste Material Parameters

Material Parameter	**Average Density (kg/m^3)**
Iron-based Metal/Alloys	190.27
Aluminum-based Metal/Alloys	2.09
Other Metal/Alloys	12.74
Other Inorganic Materials	125.26
Cellulose	68.17
Rubber	103.23
Plastic	213.81
Cement	0.00
Solidified Inorganic Material	4.32
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	30.26
Packaging Material, Rubber	0.56
Packaging Material, Steel	922.22
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	**Typical Concentration (Ci/m^3)**
Am-241	1.54E-01
Am-243	5.14E-02
Cm-244	3.61E+00
Cs-137	8.41E-01
Np-237	4.03E-06
Pu-238	2.62E+00
Pu-239	7.28E-02
Pu-240	4.28E-02
Pu-241	4.43E-01
Pu-242	2.04E-05
Pu-244	3.26E-14
Sr-90	6.14E-01
Th-229	1.33E-13
Th-230	7.16E-09
Th-232	5.49E-18
U-233	2.23E-10
U-234	1.09E-04
U-235	1.00E-09
U-236	1.64E-08
U-238	4.43E-14

Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D019, D022, D027, D028, D029, D043, F002, F004, F005

TRUCON Code(s)

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.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

Waste Stream ID: **SR-RH-DWPF-HET**

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**	12/31/2018
Stream Name	RH TRU - Heterogeneous debris from the DWPF					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
RH Lead Shielded Cntr w/ 1 - 30 gal w/o Liner	0.0	3.3	3.3
Final Form Total	0.0	3.3	3.3

Waste Material Parameters

Material Parameter	Average Density (kg/m^3)
Iron-based Metal/Alloys	8.12
Aluminum-based Metal/Alloys	4.06
Other Metal/Alloys	0.00
Other Inorganic Materials	16.25
Cellulose	39.26
Rubber	0.00
Plastic	67.69
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	1.65
Packaging Material, Rubber	1.07
Packaging Material, Steel	3718.18
Packaging Material, Lead	3918.18

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	5.26E-01
Cs-137	1.91E-01
Np-237	4.09E-06
Pu-238	1.15E-01
Pu-239	1.72E-02
Pu-240	2.71E-01
Pu-241	5.79E-01
Sr-90	1.91E-02
Th-229	1.44E-07
Th-230	1.49E-14
Th-232	1.98E-21
U-233	1.64E-02
U-234	3.25E-08
U-235	2.27E-06
U-236	8.02E-10
U-238	6.43E-05

No Hazardous Waste Numbers Provided

TRUCON Code(s)

325

Waste Stream Description

RH TRU waste consisting of contaminated debris

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	RH TRU Heterogeneous debris from the FB-Line					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	1.3	0.0	1.3
Final Form Total	1.3	0.0	1.3

Waste Material Parameters

Material Parameter	Average Density (kg/m^3)
Iron-based Metal/Alloys	27.33
Aluminum-based Metal/Alloys	0.31
Other Metal/Alloys	0.70
Other Inorganic Materials	128.57
Cellulose	6.04
Rubber	9.19
Plastic	76.61
Cement	0.00
Solidified Inorganic Material	0.08
Solidified Organic Material	0.45
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	45.24
Packaging Material, Rubber	0.56
Packaging Material, Steel	922.22
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	3.30E+00
Cs-137	4.25E-06
Np-237	1.34E-05
Pu-238	1.41E+00
Pu-239	1.45E+00
Pu-240	1.44E+00
Pu-241	1.09E+01
Pu-242	7.12E-05
Sr-90	4.16E-06
Th-229	1.19E-05
Th-230	2.13E-08
Th-232	1.77E-16
U-233	1.04E-02
U-234	2.05E-04
U-235	2.96E-06
U-236	5.53E-07
U-238	2.07E-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.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	RH TRU Heterogeneous debris from the F-Canyon dissolver off-gas system.					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
RH Lead Shielded Cntr w/ 1 - 30 gal 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	1700.62
Cellulose	0.00
Rubber	0.00
Plastic	124.08
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	86.55
Packaging Material, Rubber	1.07
Packaging Material, Steel	3718.18
Packaging Material, Lead	3918.18

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	2.02E-03
Np-237	6.26E-05
Pu-238	4.96E-05
Pu-239	1.91E-03
Pu-240	1.39E-03
Pu-241	9.39E-03
Pu-242	5.21E-01
Th-229	2.01E-12
Th-230	1.40E-05
Th-232	5.89E-15
U-233	3.52E-09
U-234	1.17E-01
U-235	1.49E+00
U-236	9.18E-06
U-238	7.46E-02

Haz. Waste No(s).

D006, D007, D008, D009, D011, D019, D022, D028, D029, F002, F005

TRUCON Code(s)

321

Waste Stream Description

This waste stream is primarily solids consisting silver coated ceramics (Berl or Beryl saddles) and debris materials.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	RH Debris from Mound Laboratories					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	3.2	0.0	3.2
Final Form Total	3.2	0.0	3.2

Waste Material Parameters

Material Parameter	Average Density (kg/m^3)
Iron-based Metal/Alloys	60.66
Aluminum-based Metal/Alloys	0.04
Other Metal/Alloys	0.48
Other Inorganic Materials	8.30
Cellulose	3.67
Rubber	2.88
Plastic	6.71
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	45.24
Packaging Material, Rubber	0.56
Packaging Material, Steel	922.22
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	1.66E-01
Np-237	2.31E-07
Pu-238	7.13E+02
Pu-239	5.25E-01
Pu-240	2.87E-01
Pu-241	1.07E+01
Pu-242	3.42E-04
Th-229	4.92E-16
Th-230	6.18E-07
Th-232	1.34E-17
U-233	2.74E-12
U-234	1.66E-02
U-235	4.14E-09
U-236	6.81E-08
U-238	4.25E-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

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	Remote Handled PuBe Sources					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

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

Waste Material Parameters

Material Parameter	Average Density (kg/m^3)
Iron-based Metal/Alloys	1793.65
Aluminum-based Metal/Alloys	52.78
Other Metal/Alloys	15.08
Other Inorganic Materials	0.00
Cellulose	1906.35
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	45.24
Packaging Material, Rubber	0.56
Packaging Material, Steel	922.22
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	9.60E+00
Np-237	3.28E-05
Pu-238	1.38E+02
Pu-239	2.26E+00
Pu-240	1.36E+00
Pu-241	4.60E+01
Pu-242	2.27E-03
Th-229	2.44E-13
Th-230	2.30E-07
Th-232	1.20E-16
U-233	7.65E-10
U-234	4.49E-03
U-235	2.44E-08
U-236	4.43E-07
U-238	3.87E-12

No Hazardous Waste Numbers Provided

TRUCON Code(s)
320

Waste Stream Description
This waste stream consists of three PuBe sources.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***
NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	Remote Handled (RH) Mixed TRU Debris (S5000)					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

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

Waste Material Parameters

Material Parameter	Average Density (kg/m^3)
Iron-based Metal/Alloys	8.41
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	264.60
Other Inorganic Materials	33.49
Cellulose	31.27
Rubber	5.56
Plastic	80.00
Cement	0.00
Solidified Inorganic Material	11.70
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	45.24
Packaging Material, Rubber	0.56
Packaging Material, Steel	922.22
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	3.41E-02
Am-243	2.93E-02
Cm-244	2.42E+00
Cs-137	7.61E-03
Np-237	2.13E-04
Pu-238	1.16E-01
Pu-239	1.37E-01
Pu-240	4.37E-02
Pu-241	1.18E+00
Pu-242	1.49E-05
Pu-244	3.54E-16
Sr-90	5.36E-03
Th-229	9.96E-13
Th-230	3.87E-11
Th-232	7.82E-19
U-233	4.53E-09
U-234	1.67E-06
U-235	6.74E-10
U-236	6.37E-09
U-238	1.16E-14

Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D019, D022, D027, D028, D029, D043, F002, F004, F005, U133

TRUCON Code(s)

322

Waste Stream Description

RH Mixed TRU waste resulting from solvent tank emptying and closure in the E-Area of SRS.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	CH TRU - Heterogeneous debris from the D&D of the 211-F-Area					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

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	51.04
Aluminum-based Metal/Alloys	0.50
Other Metal/Alloys	0.04
Other Inorganic Materials	0.48
Cellulose	2.26
Rubber	0.00
Plastic	22.46
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	145.98
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	**Typical Concentration (Ci/m^3)**
Am-241	1.93E-03
Am-243	5.33E-07
Cm-244	4.74E-05
Cs-137	2.20E-05
Np-237	7.51E-06
Pu-238	5.99E-01
Pu-239	3.39E-02
Pu-240	4.74E-03
Pu-241	7.54E-02
Pu-242	4.20E-06
Sr-90	5.36E-03
Th-229	1.86E-10
Th-230	2.69E-10
Th-232	1.17E-17
U-233	5.30E-07
U-234	1.07E-05
U-235	8.06E-09
U-236	5.94E-08
U-238	1.70E-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

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	Organic Sludge from D&D of the SRS F-Area 800 Series Underground Tanks					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

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	3.6	0.0	3.6
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	7.86
Cement	525.04
Solidified Inorganic Material	3.94
Solidified Organic Material	27.63
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	3.86
Packaging Material, Rubber	0.56
Packaging Material, Steel	129.52
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	**Typical Concentration (Ci/m^3)**
Am-241	2.87E-02
Am-243	1.43E-04
Np-237	2.03E-02
Pu-238	2.38E+00
Pu-239	2.18E-01
Pu-240	4.14E-02
Pu-241	5.13E-01
Pu-242	9.46E-02
Th-229	3.25E-05
Th-230	7.67E-06
Th-232	1.22E-13
U-233	9.25E-02
U-234	2.09E-01
U-235	1.65E-04
U-236	6.20E-04
U-238	1.00E-02

Haz. Waste No(s).

D004, D005, D007, D008, D009, D011

TRUCON Code(s)

112/212

Waste Stream Description

Absorbed organic sludge

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	Sludge from D&D of the SRS F-Area 800 Series Underground Tanks					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

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	8.4	0.0	8.4
SWB Dir Ld w/o Liner	1.9	0.0	1.9
Final Form Total	10.7	0.0	10.7

Waste Material Parameters

Material Parameter	**Average Density (kg/m^3)**
Iron-based Metal/Alloys	39.30
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	2.84
Cellulose	15.00
Rubber	0.00
Plastic	30.77
Cement	162.43
Solidified Inorganic Material	8.55
Solidified Organic Material	0.05
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	1.44
Packaging Material, Rubber	0.50
Packaging Material, Steel	133.87
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	**Typical Concentration (Ci/m^3)**
Am-241	1.50E-01
Am-243	5.80E-05
Cm-244	2.61E-03
Cs-137	4.26E-04
Np-237	5.83E-04
Pu-238	4.61E+01
Pu-239	2.63E+00
Pu-240	3.68E-01
Pu-241	5.44E+00
Pu-242	1.27E-03
Sr-90	1.83E-04
Th-229	2.73E-12
Th-230	2.96E-08
Th-232	1.17E-15
U-233	1.24E-08
U-234	9.73E-04
U-235	2.55E-06
U-236	4.79E-06
U-238	7.51E-05

Haz. Waste No(s).

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

TRUCON Code(s)

127/227

Waste Stream Description

Absorbed sludge

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	CH Mixed TRU Debris (S5000)					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

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	0.0	4.8
SWB Dir Ld w/o Liner	63.9	0.0	63.9
Final Form Total	69.6	0.0	69.6

Waste Material Parameters

Material Parameter	**Average Density (kg/m^3)**
Iron-based Metal/Alloys	62.02
Aluminum-based Metal/Alloys	0.82
Other Metal/Alloys	0.06
Other Inorganic Materials	1.95
Cellulose	7.45
Rubber	4.26
Plastic	20.04
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	0.44
Packaging Material, Rubber	0.22
Packaging Material, Steel	152.24
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	**Typical Concentration (Ci/m^3)**
Am-241	6.96E-02
Am-243	5.32E-06
Cm-244	1.65E-03
Cs-137	5.64E-05
Np-237	6.67E-05
Pu-238	7.12E+00
Pu-239	1.46E-01
Pu-240	4.12E-02
Pu-241	5.12E-01
Pu-242	1.07E-04
Sr-90	5.59E-05
Th-229	2.55E-09
Th-230	4.32E-08
Th-232	1.69E-09
U-233	5.80E-06
U-234	9.91E-04
U-235	1.37E-07
U-236	6.10E-09
U-238	5.04E-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.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	Spill cleanup debris.					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-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	129.05
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	32.10
Cellulose	25.67
Rubber	0.00
Plastic	24.38
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	36.71
Packaging Material, Rubber	0.56
Packaging Material, Steel	129.52
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	3.42E-01
Am-243	4.22E-01
Cm-244	3.48E+01
Cs-137	5.20E-06
Np-237	5.54E-07
Pu-238	6.56E-01
Pu-239	9.18E-04
Pu-240	1.65E-01
Pu-241	2.29E-01
Pu-242	1.33E-04
Pu-244	5.92E-15
Sr-90	5.16E-06
Th-229	8.66E-16
Th-230	2.18E-10
Th-232	2.78E-18
U-233	5.91E-12
U-234	9.44E-06
U-235	4.37E-12
U-236	2.30E-08
U-238	1.04E-13

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

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	CH Mixed TRU HEPA Filters (S5000)					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

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	24.92
Aluminum-based Metal/Alloys	0.23
Other Metal/Alloys	0.00
Other Inorganic Materials	1.55
Cellulose	10.31
Rubber	0.00
Plastic	18.05
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	36.71
Packaging Material, Rubber	0.56
Packaging Material, Steel	129.52
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	2.73E-01
Am-243	1.12E-14
Cs-137	1.98E-07
Np-237	1.96E-06
Pu-238	7.17E-02
Pu-239	9.33E-01
Pu-240	2.51E-01
Pu-241	2.47E+00
Pu-242	3.16E-05
Sr-90	1.97E-07
Th-229	1.03E-07
Th-230	1.50E-09
Th-232	4.58E-18
U-233	2.35E-04
U-234	3.32E-05
U-235	7.02E-07
U-236	3.71E-08
U-238	5.10E-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

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	CH Mixed TRU/Thirds Heterogeneous debris from 221F					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

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	5.6	0.0	5.6
Final Form Total	6.5	0.0	6.5

Waste Material Parameters

Material Parameter	**Average Density (kg/m^3)**
Iron-based Metal/Alloys	42.53
Aluminum-based Metal/Alloys	0.44
Other Metal/Alloys	0.52
Other Inorganic Materials	6.78
Cellulose	29.60
Rubber	7.07
Plastic	31.39
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	4.76
Packaging Material, Rubber	0.24
Packaging Material, Steel	151.05
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	**Typical Concentration (Ci/m^3)**
Am-241	3.71E-01
Am-243	7.73E-07
Cm-244	4.55E-03
Cs-137	8.18E-05
Np-237	4.85E-06
Pu-238	3.84E-01
Pu-239	1.52E+00
Pu-240	4.19E-01
Pu-241	5.73E+00
Pu-242	2.59E-04
Sr-90	8.14E-05
Th-229	1.36E-14
Th-230	6.22E-09
Th-232	4.78E-08
U-233	7.84E-11
U-234	1.71E-04
U-235	2.23E-06
U-236	4.96E-08
U-238	1.48E-05

Haz. Waste No(s).

D006, D007, D008, D009, D022, D028, D029, F001, F002, F003, F005

TRUCON Code(s)

125/225, 154

Waste Stream Description

200 Areas (F and H Separations Facilities). This waste is primarily solids consisting of mainly booties, lab coats, floor sweepings, rags, labware, and other job control wastes. Small HEPAs, liquids, sludges and resins may also be found in this stream. The waste is generated primarily through separation activities in the course of plutonium production, includes small amounts of TRU waste from on site laboratories.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	CH Mixed TRU/Thirds Heterogeneous debris from 221F					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^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	7.4	0.0	7.4
Final Form Total	12.0	0.0	12.0

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	0.61
Other Inorganic Materials	41.16
Cellulose	0.05
Rubber	0.00
Plastic	2.37
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	14.12
Packaging Material, Rubber	0.28
Packaging Material, Steel	151.41
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	8.86E-02
Cm-244	2.13E-03
Cs-137	6.29E-02
Np-237	8.56E-07
Pu-238	1.11E-02
Pu-239	2.02E-01
Pu-240	5.08E-02
Pu-241	1.29E+00
Pu-242	8.80E-06
Sr-90	1.76E-02
Th-229	1.16E-09
Th-230	2.95E-09
Th-232	7.26E-17
U-233	2.63E-06
U-234	6.42E-05
U-235	2.03E-06
U-236	2.98E-07
U-238	7.74E-07

Haz. Waste No(s).

D006, D007, D008, D009, D011, D019, D022, D028, D029, F002, F005

TRUCON Code(s)

125/225, 154, 425

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.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	CH Mixed TRU Solids (S3000)					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

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	1.67
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	1.62
Rubber	0.63
Plastic	26.65
Cement	0.00
Solidified Inorganic Material	255.28
Solidified Organic Material	4.38
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	36.71
Packaging Material, Rubber	0.56
Packaging Material, Steel	129.52
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	4.63E-01
Am-243	1.16E-07
Cs-137	2.21E-02
Np-237	1.50E-05
Pu-238	3.50E-01
Pu-239	1.83E+00
Pu-240	4.11E-01
Pu-241	3.62E+00
Pu-242	5.81E-05
Sr-90	1.15E-05
Th-229	9.76E-14
Th-230	1.79E-09
Th-232	1.08E-17
U-233	3.74E-10
U-234	3.54E-05
U-235	3.19E-08
U-236	7.30E-08
U-238	3.08E-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

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	CH Mixed TRU/Thirds Heterogeneous debris from 772F					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum Dir Ld w/ Liner	5.0	0.0	5.0
55-gal Drum Dir Ld w/o Liner	6.9	79.4	86.3
SWB Dir Ld w/o Liner	5.6	24.4	30.1
Final Form Total	17.6	103.8	121.4

Waste Material Parameters

Material Parameter	**Average Density (kg/m^3)**
Iron-based Metal/Alloys	10.98
Aluminum-based Metal/Alloys	0.64
Other Metal/Alloys	0.86
Other Inorganic Materials	18.27
Cellulose	6.41
Rubber	4.12
Plastic	43.98
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	1.52
Packaging Material, Rubber	0.47
Packaging Material, Steel	135.65
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	**Typical Concentration (Ci/m^3)**
Am-241	2.32E-01
Am-243	2.10E-06
Cm-244	2.76E-03
Cs-137	8.55E-04
Np-237	2.37E-04
Pu-238	8.53E+00
Pu-239	3.88E-01
Pu-240	9.65E-02
Pu-241	1.70E+00
Pu-242	4.43E-05
Sr-90	8.45E-04
Th-229	3.15E-08
Th-230	5.57E-08
Th-232	5.06E-07
U-233	7.53E-05
U-234	1.56E-03
U-235	1.53E-06
U-236	1.14E-08
U-238	1.29E-06

Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D019, D022, D028, D029, F002, F003, F005

TRUCON Code(s)

125/225, 154

Waste Stream Description

This waste stream is composed of Job Control waste, sludges and resins, HEPA filters and metal equipment.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	CH Mixed TRU/F listed solvents - Heterogeneous debris from 221F					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

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	5.6	0.0	5.6
Final Form Total	7.7	0.0	7.7

Waste Material Parameters

Material Parameter	**Average Density (kg/m^3)**
Iron-based Metal/Alloys	46.77
Aluminum-based Metal/Alloys	0.13
Other Metal/Alloys	0.02
Other Inorganic Materials	1.89
Cellulose	40.42
Rubber	0.59
Plastic	18.64
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	9.96
Packaging Material, Rubber	0.29
Packaging Material, Steel	147.55
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	**Typical Concentration (Ci/m^3)**
Am-241	1.96E-01
Am-243	1.97E-07
Cm-244	2.53E-05
Cs-137	4.50E-07
Np-237	1.88E-06
Pu-238	5.22E-02
Pu-239	6.38E-01
Pu-240	1.61E-01
Pu-241	1.61E+00
Pu-242	1.53E-05
Sr-90	4.46E-07
Th-229	4.06E-09
Th-230	1.19E-09
Th-232	2.94E-18
U-233	9.23E-06
U-234	2.63E-05
U-235	1.06E-07
U-236	2.38E-08
U-238	3.21E-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**	12/31/2018
Stream Name	CH TRU HEPA filters					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

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	0.8	4.2	5.0
SLB2 Dir Ld	7.4	0.0	7.4
SWB Dir Ld w/o Liner	79.0	16.9	95.9
Final Form Total	89.9	21.1	111.0

Waste Material Parameters

Material Parameter	**Average Density (kg/m^3)**
Iron-based Metal/Alloys	4.13
Aluminum-based Metal/Alloys	22.80
Other Metal/Alloys	0.00
Other Inorganic Materials	9.73
Cellulose	6.37
Rubber	0.09
Plastic	13.19
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.90
Packaging Material, Rubber	0.21
Packaging Material, Steel	153.25
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	**Typical Concentration (Ci/m^3)**
Am-241	1.42E-02
Am-243	1.19E-07
Cs-137	1.36E-03
Np-237	3.97E-05
Pu-238	9.10E+00
Pu-239	3.56E-02
Pu-240	1.00E-02
Pu-241	1.80E-01
Pu-242	1.80E-05
Sr-90	1.35E-03
Th-229	1.86E-13
Th-230	7.89E-08
Th-232	1.83E-19
U-233	8.45E-10
U-234	1.78E-03
U-235	1.10E-07
U-236	1.48E-09
U-238	1.39E-14

Haz. Waste No(s).

D006, D007, D008, D009, D011, D019, D022, D029, D035, D039, D040, D043

TRUCON Code(s)

119/219, 425

Waste Stream Description

This waste stream is mixed TRU composed of HEPA filters

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	CH Mixed TRU/F listed solvents - Heterogeneous debris from 221H					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final 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	14.7	0.0	14.7
SWB Dir Ld w/o Liner	75.2	0.0	75.2
Final Form Total	93.5	0.0	93.5

Waste Material Parameters

Material Parameter	**Average Density (kg/m^3)**
Iron-based Metal/Alloys	24.87
Aluminum-based Metal/Alloys	1.16
Other Metal/Alloys	0.38
Other Inorganic Materials	9.19
Cellulose	5.90
Rubber	16.21
Plastic	51.24
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	1.40
Packaging Material, Rubber	0.27
Packaging Material, Steel	149.42
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	**Typical Concentration (Ci/m^3)**
Am-241	1.47E-01
Am-243	1.79E-06
Cm-244	2.54E-03
Cs-137	1.38E-05
Np-237	1.49E-03
Pu-238	7.64E+01
Pu-239	2.51E-01
Pu-240	7.05E-02
Pu-241	5.18E+00
Pu-242	1.60E-04
Sr-90	1.36E-05
Th-229	1.25E-07
Th-230	5.26E-07
Th-232	2.26E-06
U-233	3.54E-04
U-234	1.47E-02
U-235	2.29E-06
U-236	8.35E-09
U-238	2.39E-06

Haz. Waste No(s).

D006, D008, D009, D019, D022, D029, D039, D040, D043, F001, F002, F003, F005, U133

TRUCON Code(s)

125/225, 154

Waste Stream Description

This waste stream is primarily solids consisting of booties, lab coats, floor sweeping, labware, rags, and other job control waste. This stream differs from SR-W026 because solvent rags are suspected to be in the waste. Small HEPA filters, sludges, resins, absorbed liquids, and large metal equipment are also in these waste streams.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	CH Mixed TRU - Heterogeneous debris from 221H					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final 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	12.0	12.4	24.4
SWB Dir Ld w/o Liner	13.2	20.7	33.8
Final Form Total	26.4	33.1	59.5

Waste Material Parameters

Material Parameter	**Average Density (kg/m^3)**
Iron-based Metal/Alloys	45.81
Aluminum-based Metal/Alloys	6.97
Other Metal/Alloys	0.30
Other Inorganic Materials	15.62
Cellulose	4.26
Rubber	25.53
Plastic	52.68
Cement	0.00
Solidified Inorganic Material	1.49
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.78
Packaging Material, Rubber	0.35
Packaging Material, Steel	143.60
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	**Typical Concentration (Ci/m^3)**
Am-241	2.35E-01
Am-243	7.02E-06
Cs-137	2.91E-05
Np-237	2.31E-03
Pu-238	1.73E+00
Pu-239	8.48E-01
Pu-240	2.04E-01
Pu-241	1.44E+00
Pu-242	1.16E-04
Sr-90	2.90E-05
Th-229	6.08E-09
Th-230	1.69E-08
Th-232	2.38E-18
U-233	1.73E-05
U-234	4.71E-04
U-235	7.07E-06
U-236	2.41E-08
U-238	4.32E-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**	12/31/2018
Stream Name	CH Mixed TRU Absorbed / Stabilized Liquids					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

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	5.99
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	105.82
Cellulose	3.99
Rubber	3.99
Plastic	45.92
Cement	0.00
Solidified Inorganic Material	31.95
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	27.54
Packaging Material, Rubber	0.56
Packaging Material, Steel	129.52
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	**Typical Concentration (Ci/m^3)**
Am-241	3.37E-01
Am-243	1.15E-07
Cs-137	5.04E-03
Np-237	1.39E-04
Pu-238	7.47E-01
Pu-239	7.97E-01
Pu-240	2.17E-01
Pu-241	2.15E+00
Pu-242	7.75E-05
Sr-90	5.00E-03
Th-229	2.45E-09
Th-230	6.92E-08
Th-232	1.56E-15
U-233	5.56E-06
U-234	1.51E-03
U-235	2.88E-05
U-236	6.33E-06
U-238	1.51E-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

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	CH Mixed TRU consisting of HEPA Filters from the 235-F.					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

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	9.4	0.0	9.4
Final Form Total	9.8	0.0	9.8

Waste Material Parameters

Material Parameter	**Average Density (kg/m^3)**
Iron-based Metal/Alloys	2.77
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.67
Cellulose	27.14
Rubber	0.00
Plastic	16.94
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	1.57
Packaging Material, Rubber	0.21
Packaging Material, Steel	153.20
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	**Typical Concentration (Ci/m^3)**
Am-241	1.09E-02
Am-243	2.16E-14
Cs-137	6.61E-08
Np-237	1.70E-04
Pu-238	9.58E-01
Pu-239	6.50E-03
Pu-240	2.82E-03
Pu-241	4.02E-02
Pu-242	4.98E-06
Sr-90	6.57E-08
Th-229	5.09E-13
Th-230	1.08E-08
Th-232	3.29E-20
U-233	2.89E-09
U-234	2.98E-04
U-235	2.51E-06
U-236	3.33E-10
U-238	3.09E-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

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	CH Mixed TRU/F listed solvents - Heterogeneous debris from 235F					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final 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	3.8	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	55.28
Aluminum-based Metal/Alloys	1.56
Other Metal/Alloys	2.76
Other Inorganic Materials	7.74
Cellulose	9.55
Rubber	26.05
Plastic	47.03
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	142.58
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	**Typical Concentration (Ci/m^3)**
Am-241	2.42E-01
Am-243	1.47E-06
Cm-244	3.02E-04
Cs-137	2.35E-06
Np-237	4.28E-03
Pu-238	1.20E+02
Pu-239	1.62E-01
Pu-240	6.98E-02
Pu-241	4.91E+00
Pu-242	1.34E-04
Sr-90	2.33E-06
Th-229	7.78E-08
Th-230	1.15E-06
Th-232	1.51E-06
U-233	2.21E-04
U-234	3.21E-02
U-235	3.18E-06
U-236	8.27E-09
U-238	1.45E-06

Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D035, F002, F003

TRUCON Code(s)

125/225, 154

Waste Stream Description

This 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.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	CH mixed TRU S3000 solids from 235F					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^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	2.78
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	2.78
Cellulose	2.78
Rubber	2.78
Plastic	8.33
Cement	0.00
Solidified Inorganic Material	258.21
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	36.71
Packaging Material, Rubber	0.56
Packaging Material, Steel	129.52
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	1.42E-01
Np-237	2.37E-07
Pu-238	2.41E+02
Pu-239	1.74E-01
Pu-240	9.54E-02
Pu-241	3.91E+00
Pu-242	1.14E-04
Th-229	4.88E-16
Th-230	1.16E-07
Th-232	2.51E-18
U-233	2.87E-12
U-234	4.17E-03
U-235	1.03E-09
U-236	1.69E-08
U-238	1.06E-13

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.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

Waste Stream ID: **SR-W027-235F-IR**

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**	12/31/2018
Stream Name	Unknown					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum Dir Ld w/o Liner	0.0	47.3	47.3
SWB Dir Ld w/o Liner	0.0	11.3	11.3
Final Form Total	0.0	58.5	58.5

Waste Material Parameters

Material Parameter	**Average Density (kg/m^3)**
Iron-based Metal/Alloys	65.02
Aluminum-based Metal/Alloys	1.83
Other Metal/Alloys	3.25
Other Inorganic Materials	9.11
Cellulose	11.23
Rubber	30.64
Plastic	55.32
Cement	0.00
Solidified Inorganic Material	0.21
Solidified Organic Material	0.10
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.49
Packaging Material, Steel	134.29
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	**Typical Concentration (Ci/m^3)**
Am-241	2.46E-01
Am-243	1.73E-06
Cm-244	4.12E-04
Cs-137	3.02E-06
Np-237	5.03E-03
Pu-238	1.46E+02
Pu-239	1.91E-01
Pu-240	8.22E-02
Pu-241	6.97E+00
Pu-242	1.57E-04
Sr-90	3.02E-06
Th-229	2.29E-09
Th-230	3.32E-08
Th-232	1.77E-06
U-233	2.60E-04
U-234	3.61E-02
U-235	3.74E-06
U-236	2.43E-10
U-238	1.70E-06

Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D035, F002, F003

TRUCON Code(s)

125/225, 154

Waste Stream Description

This waste stream will be composed of heterogeneous debris from inventory reduction activities resulting from D&D of the 235F Metallurgical Building.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	CH Mixed TRU Debris (S5000)					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum Dir Ld w/ Liner	1.3	0.0	1.3
Final Form Total	1.3	0.0	1.3

Waste Material Parameters

Material Parameter	Average Density (kg/m^3)
Iron-based Metal/Alloys	140.39
Aluminum-based Metal/Alloys	3.59
Other Metal/Alloys	8.26
Other Inorganic Materials	18.31
Cellulose	23.34
Rubber	67.86
Plastic	96.22
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	1.08
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	36.71
Packaging Material, Rubber	0.56
Packaging Material, Steel	129.52
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	1.70E+00
Np-237	4.97E-04
Pu-238	2.40E-02
Pu-239	4.17E-02
Pu-240	9.86E-03
Pu-241	1.18E+02
Pu-242	1.72E-06
Th-229	2.32E-12
Th-230	7.99E-12
Th-232	1.80E-19
U-233	1.06E-08
U-234	3.45E-07
U-235	2.06E-10
U-236	1.46E-09
U-238	1.33E-15

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.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	CH Mixed TRU/F listed solvents - Heterogeneous debris from 773A					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final 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	10.9	210.4	221.3
SLB2 Dir Ld	7.4	0.0	7.4
SWB Dir Ld w/o Liner	75.2	71.4	146.6
Final Form Total	105.9	281.9	387.8

Waste Material Parameters

Material Parameter	**Average Density (kg/m^3)**
Iron-based Metal/Alloys	34.79
Aluminum-based Metal/Alloys	0.66
Other Metal/Alloys	1.20
Other Inorganic Materials	13.64
Cellulose	10.99
Rubber	6.67
Plastic	30.37
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	1.17
Packaging Material, Rubber	0.41
Packaging Material, Steel	139.55
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	**Typical Concentration (Ci/m^3)**
Am-241	1.64E-01
Am-243	1.04E-03
Cm-244	8.44E-02
Cs-137	7.34E-04
Np-237	2.33E-04
Pu-238	9.73E+00
Pu-239	4.16E-01
Pu-240	9.57E-02
Pu-241	1.51E+00
Pu-242	2.06E-05
Pu-244	1.13E-15
Sr-90	7.30E-04
Th-229	1.57E-08
Th-230	6.73E-08
Th-232	5.17E-07
U-233	4.47E-05
U-234	1.88E-03
U-235	1.08E-06
U-236	1.13E-08
U-238	1.02E-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.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	CH Mixed TRU Homogeneous Solids (S3000)					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-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	1.45
Aluminum-based Metal/Alloys	0.03
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	6.90
Rubber	2.18
Plastic	21.81
Cement	0.00
Solidified Inorganic Material	89.24
Solidified Organic Material	240.95
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	36.71
Packaging Material, Rubber	0.56
Packaging Material, Steel	129.52
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	5.95E-04
Cs-137	6.38E-03
Np-237	1.34E-05
Pu-238	6.44E+01
Pu-239	4.16E-05
Pu-240	2.12E-05
Pu-241	3.78E-04
Pu-242	2.04E-05
Sr-90	6.33E-03
Th-229	6.29E-14
Th-230	5.64E-07
Th-232	3.88E-22
U-233	2.86E-10
U-234	1.27E-02
U-235	2.05E-13
U-236	3.14E-12
U-238	1.58E-14

Haz. Waste No(s).

D004, D005, D006, D007, D008, D009, D010, D011, D019, D022, D027, D028, D029, D043, F002, F004, F005

TRUCON Code(s)

127/227

Waste Stream Description

CH Mixed TRU Homogeneous Solids resulting from liquid absorption at the SRNL.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	CH Mixed TRU - Heterogeneous debris from FB-Line					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^3)

Final 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	32.0	0.0	32.0
Final Form Total	63.7	0.0	63.7

Waste Material Parameters

Material Parameter	**Average Density (kg/m^3)**
Iron-based Metal/Alloys	25.46
Aluminum-based Metal/Alloys	0.26
Other Metal/Alloys	0.32
Other Inorganic Materials	8.59
Cellulose	9.15
Rubber	8.30
Plastic	58.12
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	18.29
Packaging Material, Rubber	0.38
Packaging Material, Steel	141.94
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	**Typical Concentration (Ci/m^3)**
Am-241	8.51E-01
Am-243	1.29E-06
Cm-244	2.79E-03
Cs-137	4.42E-06
Np-237	4.86E-05
Pu-238	3.62E-01
Pu-239	2.51E+00
Pu-240	7.20E-01
Pu-241	8.47E+00
Pu-242	1.32E-04
Sr-90	4.40E-06
Th-229	5.23E-09
Th-230	2.80E-09
Th-232	7.04E-08
U-233	1.19E-05
U-234	6.35E-05
U-235	1.85E-07
U-236	1.07E-07
U-238	7.63E-07

Haz. Waste No(s).

D005, D006, D007, D008, D009, D011, D018, D019, D022, D029, D039, D040, D043, F001, F002, F003, F005, U002, U151

TRUCON Code(s)

125/225, 133/233, 154

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 present in the waste stream.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	CH mixed TRU from 221H					**Activity Concentrations Decayed to CY**	2018

Waste Volume Detail (m^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	14.8	0.0	14.8
SWB Dir Ld w/o Liner	63.9	0.0	63.9
Final Form Total	82.9	0.0	82.9

Waste Material Parameters

Material Parameter	**Average Density (kg/m^3)**
Iron-based Metal/Alloys	40.04
Aluminum-based Metal/Alloys	0.01
Other Metal/Alloys	0.04
Other Inorganic Materials	3.31
Cellulose	46.63
Rubber	1.64
Plastic	27.37
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	0.00
Packaging Material, Rubber	0.20
Packaging Material, Steel	154.93
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	**Typical Concentration (Ci/m^3)**
Am-241	5.66E-03
Am-243	4.80E-10
Cm-244	5.44E-05
Cs-137	2.01E-05
Np-237	4.10E-05
Pu-238	2.52E+00
Pu-239	1.33E-02
Pu-240	3.97E-03
Pu-241	6.25E-02
Pu-242	7.72E-06
Sr-90	2.00E-05
Th-229	1.22E-13
Th-230	1.66E-08
Th-232	4.64E-20
U-233	6.96E-10
U-234	4.66E-04
U-235	4.32E-09
U-236	4.70E-10
U-238	4.79E-15

Haz. Waste No(s).

D006, D007, D008, D009, D011, D019, D022, D029, D043, F002, F005, U133

TRUCON Code(s)

125/225, 154, 425

Waste Stream Description

This waste stream is defense related debris consisting of large equipment and job control waste packaged in large steel boxes

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

APPENDIX B POTENTIAL TRU WASTE PROFILE REPORTS

The following WPRs contain final form information through CY 2033 on potential TRU waste streams as of the inventory date, December 31, 2018. These waste streams were placed in the potential category for various reasons, as stated in section 4.1 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
RL Hanford (Richland) Site
RP Hanford Site – Office of River Protection
SR Savannah River Site
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**	12/31/2018
Stream Name	Parks Township TRU Waste					**Activity Concentrations as of CY**	2000

Waste Volume Detail (m^3)

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	5.6	0.0	5.6
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	144.01
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	7.98E+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	1.39E-06
U-238	2.79E-06

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

Waste Stream Description

Waste from Parks Township ROD 63FR3629, 65FR82985, 69FR39446 amended 27 February 2008 Point of Contact William Spurgeon.

Waste Stream ID: **BL-Parks-A**

Appendix B

Waste Profile Report

Site	Babcock and Wilcox Nuclear Energy Services	**Summary Category**	S5000	**Defense Determination**	Pending Determination	**Handling**	RH
Source Cat.	Source Information Not Compiled	**Waste Matrix Code Group**	Heterogeneous Debris Waste			**Inventory Date**	12/31/2018
Stream Name	Parks Township TRU Waste					**Activity Concentrations as of CY**	2000

Waste Volume Detail (m^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	8.62
Packaging Material, Rubber	0.56
Packaging Material, Steel	922.22
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	7.94E-02
Pu-239	6.23E+00

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

Waste Stream Description

Waste from Parks Township ROD 63FR3629, 65FR82985, 69FR39446 amended 27 February 2008 Point of Contact William Spurgeon

Waste Stream ID: **IN-BN-539**

Appendix B

Waste Profile Report

Site	Idaho National Laboratory	**Summary Category**	S5000	**Defense Determination**	Defense-Related	**Handling**	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	**Waste Matrix Code Group**	Heterogeneous Debris Waste			**Inventory Date**	12/31/2018
Stream Name	TRU Radioactive - Only Debris Waste					**Activity Concentrations as of CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
SLB2 Dir Ld	51.7	0.0	51.7
Final Form Total	51.7	0.0	51.7

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	0.00
Packaging Material, Rubber	0.11
Packaging Material, Steel	165.09
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	4.31E-03
Np-237	3.40E-08
Pu-238	1.13E-02
Pu-239	2.72E-02
Pu-240	6.06E-03
Pu-241	3.54E-02
Pu-242	8.05E-07

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

Waste Stream Description

Heterogeneous debris waste generated in WMF-676 from the treatment of RCRA-empty containers including shredded boxes.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

Waste Stream ID: **IN-DD-001**

Appendix B

Waste Profile Report

Site	Idaho National Laboratory	**Summary Category**	S9000	**Defense Determination**	Defense-Related	**Handling**	CH
Source Cat.	Remediation/D&D Waste	**Waste Matrix Code Group**	Unknown			**Inventory Date**	12/31/2018
Stream Name	To Be Determined					**Activity Concentrations as of CY**	N/A

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
SWB Dir Ld w/ Liner	0.0	4000.6	4000.6
Final Form Total	0.0	4000.6	4000.6

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	1.21
Packaging Material, Rubber	0.19
Packaging Material, Steel	154.26
Packaging Material, Lead	0.00

No Final Form Radionuclides Provided

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

Waste Stream Description

Waste generated during D&D of AMWTP

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

Waste Stream ID: **IN-ID-TRU-RHNH**

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**	12/31/2018
Stream Name	Newly Generated Secondary TRU Waste from Repackaging of MFC RH-TRU					**Activity Concentrations as of CY**	2017

Waste Volume Detail (m^3)

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	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	8.62
Packaging Material, Rubber	0.56
Packaging Material, Steel	922.22
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	6.24E-02
Cs-137	4.02E+00
Pu-238	2.04E-02
Pu-239	1.02E-01
Pu-240	2.41E-02
Pu-241	4.28E-01
Pu-242	3.14E-05
Sr-90	2.55E+00
U-233	5.69E-04
U-234	3.51E-04
U-235	1.94E-05
U-238	5.31E-06

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

Waste Stream Description

This waste stream was generated at CPP-659 and CPP-666 hot cell facilities secondary waste during the repackaging of MFC RH-TRU debris. Waste is debris, consisting of plastic, wipes, chop saws, empty containers, and tools.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	SBW Treatment - Steam Reforming - Carbonate Waste Form					**Activity Concentrations as of CY**	2006

Waste Volume Detail (m^3)

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.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	SBW Treatment - Steam Reforming Process - Debris					**Activity Concentrations as of CY**	2019

Waste Volume Detail (m^3)

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.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

Waste Stream ID: **RL170-08**

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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**	12/31/2018
Stream Name	1706-KEL facility TRU RH Mixed Debris					**Activity Concentrations as of CY**	2010

Waste Volume Detail (m^3)

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	68.28
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	522.78
Cellulose	17.07
Rubber	0.00
Plastic	4.27
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	86.55
Packaging Material, Rubber	1.07
Packaging Material, Steel	3718.18
Packaging Material, Lead	3918.18

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	2.73E-02
Cs-137	1.21E-02
Pu-238	5.24E-03
Pu-239	2.09E-02
Pu-240	1.18E-02
Pu-241	3.48E-01
Pu-242	4.73E-07
Sr-90	1.10E-02

Haz. Waste No(s).

D008

No TRUCON Codes Provided

Waste Stream Description

RH 1706-KEL Facility waste originated from the laboratory portion. The containers are likely from a small-scale cleanout of the 1706-KEL developmental laboratory after various studies (e.g., corrosion, decontamination, etc.).Piping, Tubing, Test equipment components, mineral sorbent and lead shielding - metal 85% other absorbent 15%.

Waste Stream ID: **RL200-10**

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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**	12/31/2018
Stream Name	Groundwater TRU RH Soils					**Activity Concentrations as of CY**	2015

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
RH Lead Shielded Cntr w/ 1 - 30 gal 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	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	86.55
Packaging Material, Rubber	1.07
Packaging Material, Steel	3718.18
Packaging Material, Lead	3918.18

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	1.71E-03
Cs-137	5.64E-04
Pu-239	7.73E-03
Pu-240	7.73E-03
Sr-90	2.27E-03
U-234	8.82E-07
U-235	3.58E-08
U-236	1.85E-08
U-238	8.64E-07

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

Waste Stream Description

RH soils from Groundwater projects.

Waste Stream ID: **RL300-11**

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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**	12/31/2018
Stream Name	300 Area TRU RH Non-Mixed Debris					**Activity Concentrations as of CY**	2001

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
RH Can w/ Remov Lid w/ 3 - 55-gal w/ 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	86.17
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	659.78
Cellulose	21.54
Rubber	0.00
Plastic	5.39
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	45.24
Packaging Material, Rubber	0.56
Packaging Material, Steel	922.22
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	7.28E-01
Am-243	3.30E-01
Cs-137	5.27E+05
Np-237	2.30E-06
Pu-238	8.12E-01
Pu-239	3.19E-01
Pu-240	1.22E-01
Pu-241	5.37E+00
Pu-242	2.15E-04
Sr-90	3.81E+05
Th-232	1.23E-05
U-234	4.59E-05
U-235	7.01E-07
U-236	1.70E-06
U-238	1.24E-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.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

Waste Stream ID: **RLALPHA-08**

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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**	12/31/2018
Stream Name	Alpha Caissons TRU RH Debris					**Activity Concentrations as of CY**	N/A

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
RH Lead Shielded Cntr w/ 1 - 30 gal w/ Liner	1075.1	0.0	1075.1
Final Form Total	1075.1	0.0	1075.1

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	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	86.55
Packaging Material, Rubber	1.07
Packaging Material, Steel	3718.18
Packaging Material, Lead	3918.18

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.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

Waste Stream ID: **RLCH2-08**

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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**	12/31/2018
Stream Name	Tank Farms TRU RH Mixed Debris					**Activity Concentrations as of CY**	2001

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
RH Lead Shielded Cntr w/ 1 - 30 gal w/ Liner	3.5	0.0	3.5
Final Form Total	3.5	0.0	3.5

Waste Material Parameters

Material Parameter	Average Density (kg/m^3)
Iron-based Metal/Alloys	2.19
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	265.75
Other Inorganic Materials	5.24
Cellulose	0.00
Rubber	32.64
Plastic	9.07
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	86.55
Packaging Material, Rubber	1.07
Packaging Material, Steel	3718.18
Packaging Material, Lead	3918.18

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	4.12E-02
Cs-137	3.26E+00
Pu-238	1.12E-03
Pu-239	3.57E-02
Pu-240	7.18E-03
Pu-241	1.07E-02
Sr-90	1.45E+02
U-233	4.49E-04
U-235	1.29E-05
U-238	3.00E-04

Haz. Waste No(s).

D030, D032, F001, F002, F003, F004, F005

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.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

Waste Stream ID: **RLDD-01**

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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**	12/31/2018
Stream Name	Future D&D and CERCLA waste projects TRU Debris					**Activity Concentrations as of CY**	N/A

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum Dir Ld w/ Liner	0.0	176.4	176.4
SWB Dir Ld w/ Liner	0.0	526.4	526.4
Final Form Total	0.0	702.8	702.8

Waste Material Parameters

Material Parameter	**Average Density (kg/m^3)**
Iron-based Metal/Alloys	0.00
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	0.00
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	10.12
Packaging Material, Rubber	0.29
Packaging Material, Steel	148.05
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-08**

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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**	12/31/2018
Stream Name	Future D&D and CERCLA waste projects TRU RH Debris					**Activity Concentrations as of CY**	N/A

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
RH Lead Shielded Cntr w/ 1 - 30 gal w/ Liner	0.0	71.8	71.8
Final Form Total	0.0	71.8	71.8

Waste Material Parameters

Material Parameter	**Average Density (kg/m^3)**
Iron-based Metal/Alloys	0.00
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	0.00
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	86.55
Packaging Material, Rubber	1.07
Packaging Material, Steel	3718.18
Packaging Material, Lead	3918.18

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].

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

Waste Stream ID: **RLN622FD-01**

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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**	12/31/2018
Stream Name	Weather station radiological sources					**Activity Concentrations as of CY**	2007

Waste Volume Detail (m^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	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	36.71
Packaging Material, Rubber	0.56
Packaging Material, Steel	129.52
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	3.39E-01
Np-237	3.36E-06
Pu-238	2.50E-04
Pu-239	1.02E-02
Pu-240	2.33E-03
Pu-241	1.70E-02
Pu-242	2.00E-07

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

Waste Stream Description

Source facility is the weather station, Radiological Sources

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

Waste Stream ID: **RLPFP-02**

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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**	12/31/2018
Stream Name	PFP CH-TRU Contaminated Soil					**Activity Concentrations as of CY**	2010

Waste Volume Detail (m^3)

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

Waste Material Parameters

Material Parameter	Average Density (kg/m^3)
Iron-based Metal/Alloys	0.00
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	0.00
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	36.71
Packaging Material, Rubber	0.56
Packaging Material, Steel	129.52
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	2.48E-02
Cs-137	9.52E-07
Pu-238	9.39E-04
Pu-239	7.28E-02
Pu-240	1.60E-02
Pu-241	1.21E-01
Pu-242	1.28E-06
Sr-90	8.65E-07

No Hazardous Waste Numbers Provided

TRUCON Code(s)

125/225

Waste Stream Description

Soil remediation wastes in PFP Zone.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

Waste Stream ID: **RLPRC-01**

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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**	12/31/2018
Stream Name	CUPRC TRU Non-Mixed Debris					**Activity Concentrations as of CY**	1987

Waste Volume Detail (m^3)

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	46.69
Other Inorganic Materials	665.11
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	1.21
Packaging Material, Rubber	0.19
Packaging Material, Steel	154.26
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	4.91E-02
Pu-238	2.00E-02
Pu-239	1.83E-01
Pu-240	4.67E-02
Pu-241	1.28E+00
Pu-242	3.13E-06
Th-232	5.53E-05
U-234	6.27E-07
U-235	2.84E-08
U-238	6.10E-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**	12/31/2018
Stream Name	Contaminated Soil from vicinity of PUREX					**Activity Concentrations as of CY**	2011

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
SWB Dir Ld w/ Liner	0.0	376.0	376.0
Final Form Total	0.0	376.0	376.0

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	1.21
Packaging Material, Rubber	0.19
Packaging Material, Steel	154.26
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

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	Bismuth Phosphate Process TRU Solids					**Activity Concentrations as of CY**	2004

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum Dir Ld w/o Liner	446.9	0.0	446.9
Final Form Total	446.9	0.0	446.9

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	1080.83
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.56
Packaging Material, Steel	129.52
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	7.23E-02
Cs-137	6.00E-01
Np-237	1.20E-05
Pu-238	6.48E-03
Pu-239	5.07E-01
Pu-240	6.12E-02
Pu-241	1.86E-01
Pu-242	3.02E-06
Sr-90	7.83E+00
U-233	1.08E-09
U-234	1.65E-03
U-235	5.32E-05
U-236	1.59E-05
U-238	1.22E-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

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	224 Waste					**Activity Concentrations as of CY**	2004

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum Dir Ld w/o Liner	329.3	0.0	329.3
Final Form Total	329.3	0.0	329.3

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	1053.81
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.56
Packaging Material, Steel	129.52
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	1.18E-01
Cs-137	1.63E-01
Np-237	1.59E-06
Pu-238	1.09E-02
Pu-239	1.52E+00
Pu-240	1.27E-01
Pu-241	2.12E-01
Pu-242	4.82E-06
Sr-90	3.30E+00
U-233	1.22E-10
U-234	1.76E-04
U-235	7.12E-06
U-236	1.72E-06
U-238	1.61E-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.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	Bismuth Phosphate Process TRU Solids					**Activity Concentrations as of CY**	2004

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum Dir Ld w/o Liner	809.1	0.0	809.1
Final Form Total	809.1	0.0	809.1

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	1085.12
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.56
Packaging Material, Steel	129.52
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	1.38E-01
Cs-137	3.26E-01
Np-237	7.88E-05
Pu-238	2.91E-03
Pu-239	5.30E-01
Pu-240	4.30E-02
Pu-241	6.69E-02
Pu-242	5.40E-07
Sr-90	1.18E+01
U-233	3.05E-09
U-234	3.54E-03
U-235	1.57E-04
U-236	2.84E-05
U-238	3.60E-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

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

Waste Stream ID: **SR-KAC-HET-1**

Appendix B

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**	12/31/2018
Stream Name	CH TRU Heterogeneous debris from the K-Area downblend of 7.1 MT material					**Activity Concentrations as of CY**	2020

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum Dir Ld w/o Liner	0.0	161.5	161.5
Final Form Total	0.0	161.5	161.5

Waste Material Parameters

Material Parameter	Average Density (kg/m^3)
Iron-based Metal/Alloys	24.37
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	2.25
Rubber	20.87
Plastic	157.14
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	0.00
Packaging Material, Rubber	0.56
Packaging Material, Steel	129.52
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	7.25E-01
Np-237	4.78E-06
Pu-238	2.43E-01
Pu-239	2.01E+00
Pu-240	5.20E-01
Pu-241	5.56E+00
Pu-242	1.71E-04
U-235	3.81E-06
U-238	1.34E-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 downblend and packaging Pu oxide

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

Waste Stream ID: **SR-KAC-PuOx-1**

Appendix B

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**	12/31/2018
Stream Name	K-Area Pu Oxide waste associated with 7.1 MT material					**Activity Concentrations as of CY**	2020

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal CCO w/ Liner	0.0	204.3	204.3
Final Form Total	0.0	204.3	204.3

Waste Material Parameters

Material Parameter	Average Density (kg/m^3)
Iron-based Metal/Alloys	520.31
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	86.72
Other Inorganic Materials	216.80
Cellulose	0.00
Rubber	0.00
Plastic	34.69
Cement	8.67
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	1804.69
Packaging Material, Plastic	602.34
Packaging Material, Rubber	9.22
Packaging Material, Steel	6328.13
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	1.03E+03
Np-237	1.72E-02
Pu-238	2.63E+02
Pu-239	1.03E+03
Pu-240	5.00E+02
Pu-241	5.19E+03
Pu-242	2.32E-01
U-233	9.67E-04
U-234	7.05E-01
U-235	6.61E-03
U-238	2.60E-03

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.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	TRU Spent Absorbents CH					**Activity Concentrations as of CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum Dir Ld w/o Liner	0.2	0.0	0.2
SLB2 Dir Ld	29.6	0.0	29.6
Final Form Total	29.8	0.0	29.8

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	193.15
Cellulose	0.00
Rubber	0.00
Plastic	0.00
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	64.49
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.11
Packaging Material, Steel	164.84
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	9.16E-02
Am-243	4.30E-03
Cs-137	5.60E-03
Np-237	1.96E-06
Pu-238	3.21E-02
Pu-239	3.61E-02
Pu-240	2.76E-02
Pu-241	3.99E-01
Pu-242	1.42E-03
Sr-90	4.09E-03
U-233	2.45E-05
U-234	1.17E-05
U-235	2.58E-06
U-238	2.10E-05

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

Waste Stream Description

This waste stream consists of spent absorbents (not cement) generated from site operations. The media absorbed is an organic liquid for this waste stream. This does not contain hazardous waste.

Waste Stream ID: **WV-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**	12/31/2018
Stream Name	CH TRU Liquids/Absorbed Liquids					**Activity Concentrations as of CY**	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum Dir Ld w/o Liner	4.8	0.0	4.8
Final Form Total	4.8	0.0	4.8

Waste Material Parameters

Material Parameter	Average Density (kg/m^3)
Iron-based Metal/Alloys	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	40.58
Solidified Inorganic Material	273.29
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.56
Packaging Material, Steel	129.52
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	1.54E+00
Am-243	7.20E-04
Cm-244	2.37E-03
Cs-137	1.69E-01
Np-237	1.42E-05
Pu-238	2.58E+00
Pu-239	1.15E+00
Pu-240	8.85E-01
Pu-241	6.82E+00
Pu-242	2.23E-04
Sr-90	1.86E-01
U-233	7.98E-04
U-234	3.79E-04
U-235	1.88E-05
U-238	1.94E-04

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

Waste Stream Description

This waste stream consists of liquid, absorbed liquid, and/or solidified liquid waste with associated fissile material generated from decontamination and decommissioning activities.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	RH TRU Liquids					**Activity Concentrations as of CY**	2015

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
RH Can w/ Remov Lid w/ 3 - 55-gal w/o Liner	3.2	0.0	3.2
Final Form Total	3.2	0.0	3.2

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	679.37
Solidified Inorganic Material	339.68
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	8.62
Packaging Material, Rubber	0.56
Packaging Material, Steel	922.22
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	3.78E-01
Am-243	8.60E-03
Cm-244	2.05E-03
Cs-137	9.08E-01
Np-237	8.63E-05
Pu-238	1.72E-01
Pu-239	1.17E-01
Pu-240	8.32E-02
Pu-241	1.77E+00
Pu-242	3.17E-03
Sr-90	2.46E+00
U-233	1.07E-03
U-234	4.98E-04
U-235	3.30E-06
U-238	7.21E-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 decontamination and decommissioning activities.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	CH TRU General Waste					**Activity Concentrations as of CY**	2010

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum Dir Ld w/o Liner	104.8	10.7	115.5
SWB Dir Ld w/o Liner	120.3	5.6	126.0
Final Form Total	225.1	16.4	241.5

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	54.64
Other Inorganic Materials	56.86
Cellulose	52.42
Rubber	21.81
Plastic	32.74
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.37
Packaging Material, Steel	142.43
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	**Typical Concentration (Ci/m^3)**
Am-241	3.72E-01
Am-243	5.52E-03
Cm-244	1.39E-03
Cs-137	6.62E-03
Np-237	5.02E-06
Pu-238	2.23E-01
Pu-239	9.61E-02
Pu-240	7.87E-02
Pu-241	1.92E+00
Pu-242	3.06E-03
Sr-90	1.93E-02
U-233	1.69E-04
U-234	9.97E-05
U-235	2.72E-06
U-238	2.22E-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**	12/31/2018
Stream Name	RH TRU General Waste					**Activity Concentrations as of CY**	2004

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
RH Can w/ Remov Lid w/ 3 - 55-gal w/o Liner	265.2	4.4	269.6
Final Form Total	265.2	4.4	269.6

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	112.36
Other Inorganic Materials	111.60
Cellulose	111.60
Rubber	44.87
Plastic	67.49
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	8.62
Packaging Material, Rubber	0.56
Packaging Material, Steel	922.22
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	1.31E+00
Am-243	5.85E-03
Cm-244	2.61E-02
Cs-137	1.31E+01
Np-237	4.09E-04
Pu-238	5.04E-01
Pu-239	3.11E-01
Pu-240	2.35E-01
Pu-241	3.64E+00
Pu-242	8.35E-04
Sr-90	1.46E+01
U-233	3.52E-03
U-234	1.64E-03
U-235	4.81E-05
U-238	3.27E-04

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

Waste Stream Description

This waste stream consists of radiologically contaminated solid waste generated from various site activities. The specific contents include but are not limited to Anti-C clothing, hoses, glovebags, tools, pre-filters, HEPA filters, Roughing filters, other filters, sweeping compound, glove boxes, tools, evaporators, dissolver tanks, condensers, piping DAW, plastic bags, bottles, and cell floor debris etc.

Waste Stream ID: **WV-T017b**

Appendix B

Waste Profile Report

Site	West Valley Demonstration Project	**Summary Category**	S5000	**Defense Determination**	Pending Determination	**Handling**	RH
Source Cat.	Remediation/D&D Waste	**Waste Matrix Code Group**	Heterogeneous Debris Waste			**Inventory Date**	12/31/2018
Stream Name	RH TRU Spent Filter Media					**Activity Concentrations as of CY**	2008

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
RH Can w/ Remov Lid w/ 3 - 55-gal 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	0.00
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	248.68
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	8.62
Packaging Material, Rubber	0.56
Packaging Material, Steel	922.22
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	3.76E-02
Cs-137	1.78E+01
Np-237	7.38E-05
Pu-238	1.69E-02
Pu-239	4.06E-02
Pu-240	3.11E-02
Pu-241	3.04E-01
Sr-90	5.87E-01
U-235	9.15E-05
U-238	1.44E-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.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

Waste Stream ID: **WV-W024a**

Appendix B

Waste Profile Report

Site	West Valley Demonstration Project	**Summary Category**	S5000	**Defense Determination**	Pending Determination
Source Cat.	Remediation/D&D Waste	**Waste Matrix Code Group**	Heterogeneous Debris Waste		
Stream Name	CH TRU Mixed Waste				

Handling	CH
Inventory Date	12/31/2018
Activity Concentrations as of CY	2018

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum Dir Ld w/o Liner	2.7	0.0	2.7
SLB2 Dir Ld	7.4	0.0	7.4
SWB Dir Ld w/o Liner	5.6	0.0	5.6
Final Form Total	15.8	0.0	15.8

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	118.65
Cellulose	118.65
Rubber	47.40
Plastic	71.07
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	0.22
Packaging Material, Steel	155.05
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	**Typical Concentration (Ci/m^3)**
Am-241	1.06E-01
Am-243	1.94E-03
Cm-244	1.18E-03
Cs-137	5.15E-02
Np-237	9.01E-07
Pu-238	1.70E-01
Pu-239	4.64E-02
Pu-240	3.55E-02
Pu-241	8.11E-01
Pu-242	5.85E-03
Sr-90	8.84E-01
U-233	3.78E-03
U-234	1.80E-03
U-235	9.61E-06
U-238	7.46E-05

Haz. Waste No(s).

D006, D007, D008, D009, D010

No TRUCON Codes Provided

Waste Stream Description

Contains hazardous constituents from D&D activities and Laboratory Waste generated onsite in solid forms such as filters, vacuum cans, glove box debris, piping, hoses, pumps, anti C clothing, bags, wipes, and floor debris. If any liquids are found, then the liquid would be solidified and not expected to be TRU.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	RH TRU Mixed Waste					**Activity Concentrations as of CY**	2004

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
RH Can w/ Remov Lid w/ 3 - 55-gal w/o Liner	31.5	0.0	31.5
Final Form Total	31.5	0.0	31.5

Waste Material Parameters

Material Parameter	Average Density (kg/m^3)
Iron-based Metal/Alloys	161.59
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	202.22
Cellulose	0.00
Rubber	40.32
Plastic	60.63
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	8.62
Packaging Material, Rubber	0.56
Packaging Material, Steel	922.22
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	1.35E+01
Am-243	4.42E-02
Cm-244	2.21E-01
Cs-137	2.55E+02
Np-237	3.51E-03
Pu-238	4.92E+00
Pu-239	4.16E+00
Pu-240	3.17E+00
Pu-241	4.94E+01
Pu-242	2.06E-02
Sr-90	1.67E+02
U-233	3.12E-02
U-234	1.49E-02
U-235	2.32E-03
U-238	9.49E-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.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	CH TRU Mixed Liquids					**Activity Concentrations as of CY**	2017

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum Dir Ld w/o Liner	3.4	0.0	3.4
Final Form Total	3.4	0.0	3.4

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	875.00
Solidified Inorganic Material	437.50
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.56
Packaging Material, Steel	129.52
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	1.08E-01
Am-243	1.13E-03
Cm-244	2.61E-03
Cs-137	3.77E-01
Np-237	3.90E-03
Pu-238	1.51E-01
Pu-239	4.78E-02
Pu-240	3.64E-02
Pu-241	5.42E-01
Pu-242	2.20E-04
Sr-90	1.10E+01
U-233	3.08E-02
U-234	1.47E-02
U-235	7.18E-04
U-238	3.46E-03

Haz. Waste No(s).

D007, D009

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.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

Waste Stream ID: **WV-W050b**

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**	12/31/2018
Stream Name	RH TRU Mixed Liquids					**Activity Concentrations as of CY**	2017

Waste Volume Detail (m^3)

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

Waste Material Parameters

Material Parameter	Average Density (kg/m^3)
Iron-based Metal/Alloys	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	1115.08
Solidified Inorganic Material	557.54
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	8.62
Packaging Material, Rubber	0.56
Packaging Material, Steel	922.22
Packaging Material, Lead	0.00

Final Form Radionuclides

Isotope	Typical Concentration (Ci/m^3)
Am-241	1.41E-01
Am-243	1.68E-03
Cm-244	3.42E-03
Cs-137	5.77E-01
Np-237	4.92E-03
Pu-238	1.92E-01
Pu-239	6.15E-02
Pu-240	4.68E-02
Pu-241	7.02E-01
Pu-242	3.20E-04
Sr-90	1.40E+01
U-233	3.90E-02
U-234	1.86E-02
U-235	9.08E-04
U-238	4.40E-03

Haz. Waste No(s).

D007, D009

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.

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

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**	12/31/2018
Stream Name	West Valley Buried TRU Waste					**Activity Concentrations as of CY**	N/A

Waste Volume Detail (m^3)

Final Form Volumes			
Container Type	**Stored**	**Proj.**	**Total**
55-gal Drum Dir Ld w/o Liner	0.0	4300.2	4300.2
Final Form Total	0.0	4300.2	4300.2

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	251.15
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	0.56
Packaging Material, Steel	129.52
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

Comprehensive Inventory Database ver. ***2.03*** *Data ver.* ***D.18.00.33***

NOTE: Actual numerical values have been rounded for presentation purposes

APPENDIX C 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 LLW). This appendix contains a crosswalk that maps current ATWIR-2019 TRU waste generator site waste streams to the Adjusted ATWIR-2018 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-2019 waste stream to its respective Adjusted ATWIR-2018 waste stream(s). Waste streams that are newly reported in the ATWIR-2019 and that do not map to a previous waste stream from Adjusted ATWIR-2018 are indicated as *New Waste Stream*.

Table C-2 shows the inverse of Table C-1. Table C-2 displays the association of each Adjusted ATWIR-2018 waste stream to its respective ATWIR-2019 waste stream(s). Waste streams that were previously reported in the Adjusted ATWIR-2018 and that do not map to a current ATWIR-2019 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-2019 to Adjusted ATWIR-2018 Waste Streams

Site Code	ATWIR-2019 Waste Streams	Adjusted ATWIR-2018 Waste Streams
AE	AE-T001	AE-T001
AE	AE-T003	AE-T003
AE	AE-T009	AE-T009
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-AE-102
IN	IN-AE-105	IN-AE-105
IN	IN-AE-AGHC-02	IN-AE-AGHC-02
IN	IN-BC-203	IN-BC-203
IN	IN-BN-501	IN-BN-501
IN	IN-BN-522	IN-BN-522
IN	IN-BN-529	IN-BN-529
IN	IN-BN-538	IN-BN-538
IN	IN-BN-539	IN-BN-539
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-AE-105, IN-BC-203, IN-BN510.4, IN-BN-523, IN-BN-525, IN-BN-527, IN-BN-529, IN-IC-605, IN-ID-AMWTP-Hot Silver, IN-ID-AMWTP-U232, IN-IT-152, IN-JH-826, IN-JH-827, IN-MX-142
IN	IN-BN600	IN-BN600
IN	IN-BN650	IN-BN650, IN-RF-361, IN-RF-421, IN-UN-00C
IN	IN-BN835	IN-BN835
IN	IN-BN836	IN-BN836
IN	IN-BNINW216	IN-BNINW216
IN	IN-BNINW218	IN-BNINW218
IN	IN-BW-515	IN-BW-515
IN	IN-BW-516	IN-BW-516
IN	IN-BW-517	IN-BW-517
IN	IN-DD-001	*New Waste Stream*
IN	IN-ID-ANLE-BIN	IN-ID-ANLE-BIN
IN	IN-ID-ANLW-W269-RH	IN-ID-ANLW-W269-RH

Table C-1. Crosswalk of ATWIR-2019 to Adjusted ATWIR-2018 Waste Streams
Continued

Site Code	ATWIR-2019 Waste Streams	Adjusted ATWIR-2018 Waste Streams
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-S3000-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-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	IN-ID-RF-S5100-A
IN	IN-ID-RF-S5126	IN-ID-RF-S5126
IN	IN-ID-RF-S5300-A	IN-ID-RF-S5300-A
IN	IN-ID-Sample Fuel	IN-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-ID-TRU-RHNH	IN-ID-TRU-RHNH
IN	IN-IW-608	IN-IW-608
IN	IN-MD-842	IN-MD-842
IN	IN-MO-530	IN-MO-530
IN	IN-MO-535	IN-MO-535
IN	IN-MO-540	IN-MO-540
IN	IN-MO-545	*New Waste Stream*
IN	IN-MX-142	IN-MX-142
IN	IN-NRF-SPC-103	IN-NRF-SPC-103
IN	IN-RF-005	IN-RF-005
IN	IN-RF-090	IN-RF-090
IN	IN-RF-311	IN-RF-311
IN	IN-RF-393	IN-RF-393
IN	IN-RF-409	IN-RF-409
IN	IN-RF-410	IN-RF-410
IN	IN-RF-411	IN-RF-411
IN	IN-RF-412	IN-RF-412
IN	IN-RF-414	IN-RF-414
IN	IN-RF-420	IN-RF-420
IN	IN-RF-422	IN-RF-422
IN	IN-RF-697	IN-RF-697

Table C-1. Crosswalk of ATWIR-2019 to Adjusted ATWIR-2018 Waste Streams
Continued

Site Code	ATWIR-2019 Waste Streams	Adjusted ATWIR-2018 Waste Streams
IN	IN-RF-745	IN-RF-745
IN	IN-RF-753	IN-RF-753
IN	IN-RF-823	IN-RF-823
IN	IN-RF-990	IN-RF-990
IN	IN-SBW-01A	IN-SBW-01A
IN	IN-SBW-01B	IN-SBW-01B
IN	IN-SD-178	IN-SD-178
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-CIN01.001, LA-MHD01.001, LA-MIN02-V.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-MHD03.001, LA-MIN05-V.001
LA	LA-MIN06-NS.001	LA-MIN02-V.001
LA	LA-MSG04.001	LA-MSG04.001
LA	LA-NCD01	*New Waste Stream*
LA	LA-OS-00-01.001	LA-MHD01.001, 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-03-10	LA-TA-03-10
LA	LA-TA-03-14	LA-TA-03-14

Table C-1. Crosswalk of ATWIR-2019 to Adjusted ATWIR-2018 Waste Streams
Continued

Site Code	ATWIR-2019 Waste Streams	Adjusted ATWIR-2018 Waste Streams
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-C&NC	LA-TA-03-CVD-C&NC
LA	LA-TA-21-01	*New Waste Stream*
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-55-14	*New Waste Stream*
LA	LA-TA-55-19	LA-TA-55-19
LA	LA-TA-55-20	*New Waste Stream*
LA	LA-TA-55-21	LA-TA-55-21
LA	LA-TA-55-30	LA-MHD01.001, LA-TA-55-30
LA	LA-TA-55-32	*New Waste Stream*
LA	LA-TA-55-38	LA-TA-55-38
LA	LA-TA-55-54	*New Waste Stream*
LA	LA-TRU-Empty-110	LA-TRU-Empty-110
LA	LA-TRU-Empty-55	LA-TA-55-30, 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-CHEM-RH-HET

Table C-1. Crosswalk of ATWIR-2019 to Adjusted ATWIR-2018 Waste Streams
Continued

Site Code	ATWIR-2019 Waste Streams	Adjusted ATWIR-2018 Waste Streams
OR	OR-CRF-CH-HET	OR-CRF-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-IFEL-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-MRF-RH-HET	OR-TBD-RH-HET
OR	OR-NBL-CH-HET	OR-NBL-CH-HET
OR	OR-NFS-CH-HET	OR-NFS-CH-HET
OR	OR-NFS-CH-HOM	OR-NFS-CH-HOM
OR	OR-NFS-CH-SOIL	OR-NFS-CH-SOIL
OR	OR-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-RH-HET	OR-REDC-RH-HET
OR	OR-RF-CH-HET	OR-RF-CH-HET
OR	OR-RF-CH-HOM	OR-RF-CH-HOM
OR	OR-RF-RH-HET	OR-RF-RH-HET
OR	OR-SWSA-CH-HET	OR-SWSA-CH-HET
OR	OR-SWSA-CH-SOIL	OR-SWSA-CH-SOIL
OR	OR-TBD-CH-HET	OR-TBD-CH-HET
OR	OR-TBD-RH-HET	OR-TBD-RH-HET
OR	OR-W1A-CH-SOIL	OR-W213-RH-SOILS
OR	OR-W1A-RH-SOIL	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	RL170-08	RL170-08
RL	RL200-01	RL200-01
RL	RL200-02	RL200-02
RL	RL200-10	RL200-10
RL	RL201-03	RL201-03
RL	RL202S-01	RL202S-01
RL	RL209E-01	RL209E-01

Table C-1. Crosswalk of ATWIR-2019 to Adjusted ATWIR-2018 Waste Streams
Continued

Site Code	ATWIR-2019 Waste Streams	Adjusted ATWIR-2018 Waste Streams
RL	RL209E-08	RL209E-08
RL	RL216Z-02	RL216Z-02
RL	RL221U-03	RL221U-03
RL	RL221U-08	RL221U-08
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	RL300-07	RL300-07
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	RL325-05	RL325-05
RL	RL325-07	RL325-07
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	RLALPHA-08
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

Table C-1. Crosswalk of ATWIR-2019 to Adjusted ATWIR-2018 Waste Streams
Continued

Site Code	ATWIR-2019 Waste Streams	Adjusted ATWIR-2018 Waste Streams
RL	RLDD-01	RLDD-01
RL	RLDD-02	RLDD-02
RL	RLDD-08	RLDD-08
RL	RLDD-10	RLDD-10
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	RLN622FD-01	RLN622FD-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-05	RLPFP-05
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	RLSWO-05	RLSWO-05
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

Table C-1. Crosswalk of ATWIR-2019 to Adjusted ATWIR-2018 Waste Streams
Continued

Site Code	ATWIR-2019 Waste Streams	Adjusted ATWIR-2018 Waste Streams
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
SA	SA-W139	SA-W139
SP	SP-CHHD	SP-CHHD
SP	SP-RHHD	SP-RHHD
SP	SP-RHIN	SP-RHIN
SR	SR-221H-EUOx	SR-221H-EUOx
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-HET-1	*New Waste Stream*
SR	SR-KAC-HET-A	SR-KAC-HET
SR	SR-KAC-PuOx	SR-KAC-PuOx
SR	SR-KAC-PuOx-1	*New Waste Stream*
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-DWPF-HET	*New Waste Stream*
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

Table C-1. Crosswalk of ATWIR-2019 to Adjusted ATWIR-2018 Waste Streams
Continued

Site Code	ATWIR-2019 Waste Streams	Adjusted ATWIR-2018 Waste Streams
SR	SR-SWMF-HET-B	SR-SWMF-HET-B
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-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-W027-235F-IR	SR-W027-235F-IR
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-W050b	WV-W050b
WV	WV-Z001	WV-Z001

Data Source: CID Data Version D.18.00.33 (LANL-CO 2019b). Note: This table contains data for WIPP-bound and potential waste streams only.

Table C-2. Crosswalk of Adjusted ATWIR-2018 to ATWIR-2019 Waste Streams

Site Code	Adjusted ATWIR-2018 Waste Streams	ATWIR-2019 Waste Streams
AE	AE-T001	AE-T001
AE	AE-T003	AE-T003
AE	AE-T009	AE-T009
AW	AW-5410N	*Depleted Waste Stream – Repackaged as non-TRU*
AW	AW-5649N	*Depleted Waste Stream – Repackaged as non-TRU*
AW	AW-5882N	*Depleted Waste Stream – Repackaged as non-TRU*
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-AE-102
IN	IN-AE-105	IN-AE-105, IN-BN510.4
IN	IN-AE-AGHC-02	IN-AE-AGHC-02
IN	IN-BC-203	IN-BC-203, IN-BN510.4
IN	IN-BN-501	IN-BN-501
IN	IN-BN-522	IN-BN-522
IN	IN-BN-523	IN-BN510.4
IN	IN-BN-525	IN-BN510.4
IN	IN-BN-527	IN-BN510.4
IN	IN-BN-529	IN-BN510.4, IN-BN-529
IN	IN-BN-538	IN-BN-538
IN	IN-BN-539	IN-BN-539
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-BN510.4
IN	IN-BN600	IN-BN600
IN	IN-BN650	IN-BN650
IN	IN-BN835	IN-BN835
IN	IN-BN836	IN-BN836
IN	IN-BNINW216	IN-BNINW216
IN	IN-BNINW218	IN-BNINW218
IN	IN-BW-515	IN-BW-515
IN	IN-BW-516	IN-BW-516
IN	IN-BW-517	IN-BW-517

Table C-2. Crosswalk of Adjusted ATWIR-2018 to ATWIR-2019 Waste Streams
Continued

Site Code	Adjusted ATWIR-2018 Waste Streams	ATWIR-2019 Waste Streams
IN	IN-IC-605	IN-BN510.4
IN	IN-ID-AMWTP-Hot Silver	IN-BN510.4
IN	IN-ID-AMWTP-U232	IN-BN510.4
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-S3000-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	*Depleted Waste Stream – Determined to be LLW*
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	IN-ID-RF-S5100-A
IN	IN-ID-RF-S5126	IN-ID-RF-S5126
IN	IN-ID-RF-S5300-A	IN-ID-RF-S5300-A
IN	IN-ID-Sample Fuel	IN-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-ID-TRU-RHNH	IN-ID-TRU-RHNH
IN	IN-IT-152	IN-BN510.4
IN	IN-IW-608	IN-IW-608
IN	IN-JH-826	IN-BN510.4
IN	IN-JH-827	IN-BN510.4
IN	IN-MD-842	IN-MD-842
IN	IN-MO-530	IN-MO-530
IN	IN-MO-535	IN-MO-535
IN	IN-MO-540	IN-MO-540
IN	IN-MX-142	IN-BN510.4, IN-MX-142
IN	IN-NRF-SPC-103	IN-NRF-SPC-103

Table C-2. Crosswalk of Adjusted ATWIR-2018 to ATWIR-2019 Waste Streams
Continued

Site Code	Adjusted ATWIR-2018 Waste Streams	ATWIR-2019 Waste Streams
IN	IN-RF-005	IN-RF-005
IN	IN-RF-090	IN-RF-090
IN	IN-RF-311	IN-RF-311
IN	IN-RF-361	IN-BN650
IN	IN-RF-393	IN-RF-393
IN	IN-RF-409	IN-RF-409
IN	IN-RF-410	IN-RF-410
IN	IN-RF-411	IN-RF-411
IN	IN-RF-412	IN-RF-412
IN	IN-RF-414	IN-RF-414
IN	IN-RF-420	IN-RF-420
IN	IN-RF-421	IN-BN650
IN	IN-RF-422	IN-RF-422
IN	IN-RF-697	IN-RF-697
IN	IN-RF-745	IN-RF-745
IN	IN-RF-753	IN-RF-753
IN	IN-RF-823	IN-RF-823
IN	IN-RF-990	IN-RF-990
IN	IN-SBW-01A	IN-SBW-01A
IN	IN-SBW-01B	IN-SBW-01B
IN	IN-SD-178	IN-SD-178
IN	IN-UN-00C	IN-BN650
IN	IN-UNDETERMINED	*Depleted Waste Stream – Determined to be LLW*
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-MHD01.001
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-MHD01.001, LA-OS-00-01.001, LA-TA-55-30
LA	LA-MHD03.001	LA-MHD03.001, LA-MIN05-V.001
LA	LA-MHD04.001	LA-MHD04.001

Table C-2. Crosswalk of Adjusted ATWIR-2018 to ATWIR-2019 Waste Streams
Continued

Site Code	Adjusted ATWIR-2018 Waste Streams	ATWIR-2019 Waste Streams
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-MHD01.001, LA-MIN02-V.001, LA-MIN06-NS.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-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-C&NC	LA-TA-03-CVD-C&NC
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-TRU-Empty-55
LA	LA-TA-55-38	LA-TA-55-38
LA	LA-TRU-Empty-110	LA-TRU-Empty-110
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

Table C-2. Crosswalk of Adjusted ATWIR-2018 to ATWIR-2019 Waste Streams
Continued

Site Code	Adjusted ATWIR-2018 Waste Streams	ATWIR-2019 Waste Streams
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-CHEM-RH-HET
OR	OR-CRF-CH-HET	OR-CRF-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-IFEL-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
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-RH-HET	OR-REDC-RH-HET
OR	OR-RF-CH-HET	OR-RF-CH-HET
OR	OR-RF-CH-HOM	OR-RF-CH-HOM
OR	OR-RF-RH-HET	OR-RF-RH-HET
OR	OR-SWSA-CH-HET	OR-SWSA-CH-HET
OR	OR-SWSA-CH-SOIL	OR-SWSA-CH-SOIL
OR	OR-TBD-CH-HET	OR-TBD-CH-HET
OR	OR-TBD-RH-HET	OR-MRF-RH-HET, OR-TBD-RH-HET
OR	OR-W213-RH-SOILS	OR-W1A-CH-SOIL, OR-W1A-RH-SOIL
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

Table C-2. Crosswalk of Adjusted ATWIR-2018 to ATWIR-2019 Waste Streams
Continued

Site Code	Adjusted ATWIR-2018 Waste Streams	ATWIR-2019 Waste Streams
RL	RL105-08	RL105-08
RL	RL105-09	RL105-09
RL	RL170-08	RL170-08
RL	RL200-01	RL200-01
RL	RL200-02	RL200-02
RL	RL200-10	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-08	RL221U-08
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	RL300-07	RL300-07
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	RL325-05	RL325-05
RL	RL325-07	RL325-07
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	RLALPHA-08
RL	RLARG-01	RLARG-01
RL	RLBART-08	RLBART-08
RL	RLBAT-01	RLBAT-01
RL	RLBAT-08	RLBAT-08

Table C-2. Crosswalk of Adjusted ATWIR-2018 to ATWIR-2019 Waste Streams
Continued

Site Code	Adjusted ATWIR-2018 Waste Streams	ATWIR-2019 Waste Streams
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	RLDD-01
RL	RLDD-02	RLDD-02
RL	RLDD-08	RLDD-08
RL	RLDD-10	RLDD-10
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	RLN622FD-01	RLN622FD-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-05	RLPFP-05
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

Table C-2. Crosswalk of Adjusted ATWIR-2018 to ATWIR-2019 Waste Streams
Continued

Site Code	Adjusted ATWIR-2018 Waste Streams	ATWIR-2019 Waste Streams
RL	RLSAN-01	RLSAN-01
RL	RLSWO-01	RLSWO-01
RL	RLSWO-05	RLSWO-05
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
SA	SA-W139	SA-W139
SP	SP-CHHD	SP-CHHD
SP	SP-RHHD	SP-RHHD
SP	SP-RHIN	SP-RHIN
SR	SR-221H-EUOx	SR-221H-EUOx
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-KAC-HET-A
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

Table C-2. Crosswalk of Adjusted ATWIR-2018 to ATWIR-2019 Waste Streams
Continued

Site Code	Adjusted ATWIR-2018 Waste Streams	ATWIR-2019 Waste Streams
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	*Depleted Waste Stream – Project canceled*
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	*Depleted Waste Stream – Project canceled*
SR	SR-W026-WSB-2	*Depleted Waste Stream – Project canceled*
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-W027-235F-IR	SR-W027-235F-IR
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

Table C-2. Crosswalk of Adjusted ATWIR-2018 to ATWIR-2019 Waste Streams
Continued

Site Code	Adjusted ATWIR-2018 Waste Streams	ATWIR-2019 Waste Streams
WV	WV-W050a	WV-W050a
WV	WV-W050b	WV-W050b
WV	WV-Z001	WV-Z001

Data Source: CID Data Version D.18.00.33 (LANL-CO 2019b). Note: This table contains data for WIPP-bound and potential waste streams only.