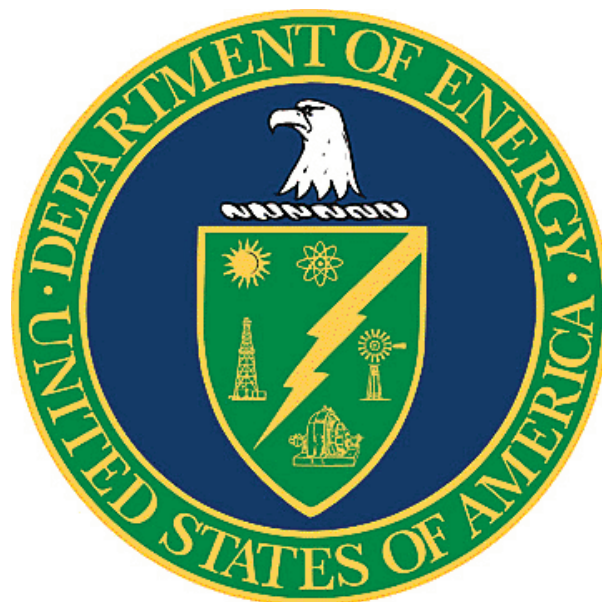


ANNUAL TRANSURANIC WASTE INVENTORY REPORT – 2016  
(Data Cutoff Date 12/31/2015)

DOE/TRU-16-3425

Revision 0

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## ACRONYMS AND ABBREVIATIONS

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

AK	acceptable knowledge
ANL	Argonne National Laboratory
ATWIR	Annual Transuranic Waste Inventory Report
BAPL	Bettis Atomic Power Laboratory
BL	Babcock and Wilcox Nuclear Energy Services
CBFO	Carlsbad Field Office
CFR	Code of Federal Regulations
CH	contact-handled
Ci	curie(s)
CID	Comprehensive Inventory Database
CIT	CID Import Template
CPR	cellulose, plastic, and rubber
CY	calendar year
D&D	decontamination and decommissioning
DOE	U.S. Department of Energy
DT	data template
EDTA	ethylenediaminetetraacetic acid
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
l	liter
LBNL	Lawrence Berkeley National Laboratory
LLNL	Lawrence Livermore National Laboratory
LQS	large quantity site
LWA	Land Withdrawal Act
m <sup>3</sup>	cubic meter(s)
MFC	Material and Fuels Complex
NNSS	Nevada National Security Site
NRD	Nuclear Radiation Development
ORIGEN-S	Oak Ridge Isotope Generation and Depletion Code (a module of SCALE version 6)

ORNL	Oak Ridge National Laboratory
OSRP	Offsite Source Recovery Program
PA	performance assessment
PAIR	Performance Assessment Inventory Report
PM	packaging material
Pu	plutonium
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
SWB	standard waste box
TRU	transuranic
WAC	Waste Acceptance Criteria
WAP	Waste Analysis Plan
WCS	Waste Control Specialists
WDS	Waste Data System
WIPP	Waste Isolation Pilot Plant
WMP	waste material parameter
WPR	Waste Profile Report
WV	West Valley Demonstration Project

## EXECUTIVE SUMMARY

The purpose of this *Annual Transuranic Waste Inventory Report – 2016* (ATWIR-2016), using a cutoff date of December 31, 2015, is to document the updated inventory estimate of transuranic (TRU) waste reported by the TRU waste generator sites in the *Annual Transuranic Waste Inventory Report – 2015* (ATWIR-2015) (DOE 2015a) that had a cutoff date of December 31, 2014. This updated inventory information is provided to the U.S. Department of Energy (DOE) Carlsbad Field Office (CBFO) and is available to the DOE TRU waste complex, Waste Isolation Pilot Plant (WIPP) stakeholders, and regulators. The TRU waste inventory information is used for strategic planning, and supports DOE/CBFO's input into documents (e.g., WIPP Documented Safety Analysis and National Environmental Policy Act analyses), the development of new containers or shipping packages, planned change requests, and other design changes that may take place in the repository. Furthermore, if requested by DOE/CBFO, this report will provide the basis for the Performance Assessment Inventory Report for performance assessment (PA) modeling. This report focuses on the TRU waste stored or projected to be generated (up through calendar year [CY] 2050) at the TRU waste generator sites.

This ATWIR-2016 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 last published report. This inventory report includes estimates for TRU waste volumes, waste material parameters, packaging materials, complexing agents, oxyanions, and radionuclides (decayed to common years 2015 and 2033; see section 2.2.3). Changes to these parameters from the ATWIR-2015 are also presented.

Waste receipt and emplacement operations are still suspended since the events in February 2014 (the salt-haul-truck fire and the radiological release in Room 7, Panel 7). Consequently, no shipments were received and no waste was emplaced during CY 2015.

Subsequent to the events in February 2014, Los Alamos National Laboratory and Idaho National Laboratory shipped a small volume of TRU waste to Waste Control Specialists (WCS) near Andrews, Texas, for temporary storage. The waste temporarily stored at WCS is reported separately based on a query of the WIPP Waste Data System (WDS). The WCS waste is not disposed of at the WIPP, and is only reported to provide a comprehensive TRU waste inventory. Specific information on the waste temporarily stored at WCS may be obtained from the DOE/CBFO WDS administrator.

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

The body of this report presents updated data for volume, activity, waste material mass and chemical constituents. Table ES-1 presents an overview of the changes in the data that have occurred since the data reported in the ATWIR-2015. Specific details of these changes are discussed in section 3.0 of this report.



**Table ES-1. Summary of Parameter Changes**

<b>Parameter</b>	<b>ATWIR-2015 Total</b>	<b>ATWIR-2016 Total</b>	<b>Net Change</b>
Volume (m <sup>3</sup> ) <sup>1</sup>	1.52E+05	1.71E+05	1.82E+04
Waste and Packaging Material Mass (kg) <sup>1</sup>	8.48E+07	9.92E+07	1.44E+07
Radionuclide Activity (Ci) <sup>1,2</sup>	3.38E+06	5.19E+06	1.81E+06
Complexing Agents Mass (kg) <sup>3</sup>	1.90E+04	2.24E+04	3.38E+03
Oxyanions Mass (kg) <sup>3</sup>	8.20E+05	9.00E+05	8.08E+04

Data Source: CID Data Versions D.14.00 (LANL-CO 2015a) and D.15.00 (LANL-CO 2016a); Offner 2015; and INV-SAR-39 (Van Soest 2016). Note: Actual numerical values in this table are rounded to three significant figures for presentation within this report.

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

<sup>2</sup>Data decay-corrected through CY 2033.

<sup>3</sup>Data only includes WIPP-bound waste streams at the TRU waste generator sites.

## 1.0 INTRODUCTION

Each year, transuranic (TRU) waste inventory information is updated, reported in an annual transuranic waste inventory report, and provided to the U.S. Department of Energy (DOE) complex, Waste Isolation Pilot Plant (WIPP) stakeholders, and regulators. The ATWIR-2016 also provides the Carlsbad Field Office (CBFO) with an accurate, complete, and consistent TRU waste inventory to facilitate achieving national TRU waste disposal objectives and commitments. This report documents the updated total inventory of TRU waste as reported by the TRU waste generator sites. The inventory data used to develop this report support numerous tasks such as planned change requests, National Environmental Policy Act activities, design changes, identifying waste containing oxyanions and complexing agents, and various analyses such as the WIPP Documented Safety Analysis. In addition, this report provides the basis for the Performance Assessment Inventory Report (PAIR) for performance assessment (PA) modeling purposes, when requested by the DOE/CBFO.

Section 1.0 introduces the TRU waste inventory updates, the generator sites, the sources and the uses of the inventory information. Section 2.0 describes the methodology used to develop and compile the inventory information. Section 3.0 discusses the TRU waste updated inventory estimates and the changes in the data since the last published report, the *Annual Transuranic Waste Inventory Report – 2015* (ATWIR-2015) (DOE 2015a), with a data cutoff of December 31, 2014. Section 4.0 discusses potential TRU waste streams. Section 5.0 presents a summary of this report, section 6.0 provides a glossary, and section 7.0 provides references used for this report. This report contains four appendices. Appendix A presents the WIPP-bound waste profile reports (WPRs), Appendix B presents the WPRs for potential waste streams, Appendix C presents the historic crosswalk of waste streams, and Appendix D contains the potential waste stream screening memorandum (Patterson 2010).

This ATWIR-2016 was prepared by the Los Alamos National Laboratory – Carlsbad Operations (LANL-CO) TRU Waste Inventory Team for the DOE/CBFO. The work for this report was performed under the DOE/CBFO *Quality Assurance Program Document* (QAPD) (DOE 2015b). 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. LANL-CO software QA is documented in LCO-QPD-02, *LANL-CO Software Quality Assurance Plan* (LANL-CO 2015b), and LCO-QP19-1, *Software Quality Assurance* (LANL-CO 2015c).

### 1.1 Annual TRU Waste Inventory Updates

TRU waste inventory information changes frequently at the TRU waste generator sites; therefore, the inventory is updated on an annual basis. This report is an update based on the sites' estimated inventory as of December 31, 2015.

Since the ATWIR-2015, a number of changes and improvements have occurred that affected the volume, non-radiological, and radiological characteristics of TRU waste streams. These changes were based on:

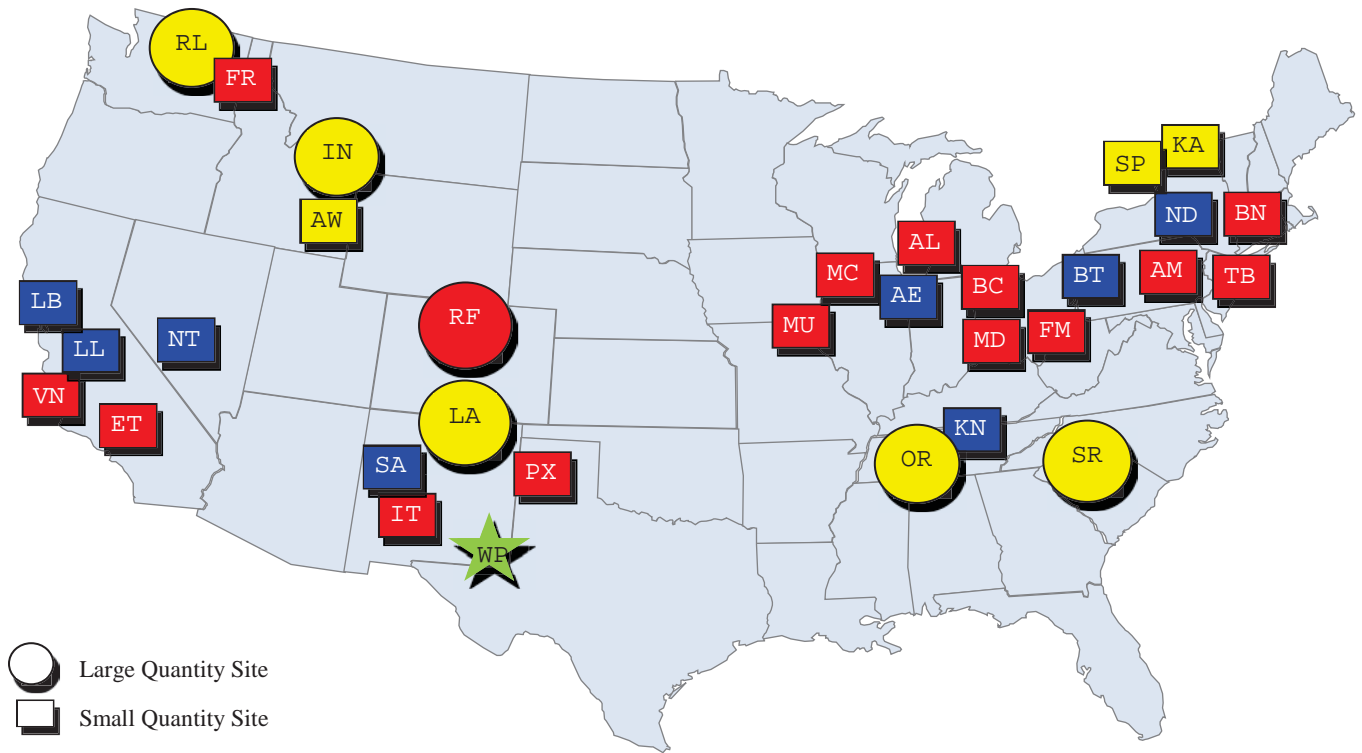
- Addition of 32 new waste streams
- Addition of a TRU waste generator site
- Addition of approximately 5,010 cubic meters (m<sup>3</sup>) of projected waste (6 metric tons of plutonium [Pu] oxide) to the inventory as directed by DOE in response to a Record of Decision.
- Increase of about 7,960 m<sup>3</sup> of projected soil remediation and decontamination and decommissioning (D&D) waste
- Projected TRU waste generation estimates reported through 2050 instead of 2033
- Addition of about 2,200 100-gallon drums that were inadvertently omitted by a TRU waste generator site
- Updated fill factors for final waste containers

## 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, which are divided into three categories, as of December 31, 2015: active TRU waste generator sites (yellow), sites de-inventoried of all TRU waste (red), and sites that were de-inventoried of their legacy TRU waste but continue to manage additional defense TRU waste (blue). One site, the Separations Process Research Unit (SPRU) has been re-introduced as an active site since some TRU waste was discovered on the site during D&D.

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

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



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

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

### **1.3 Temporary Storage of TRU Waste**

Waste receipt and emplacement operations are still suspended since the events in February 2014 (the salt-haul-truck fire and the radiological release in Room 7, Panel 7). Consequently, no shipments were received and no waste was emplaced during calendar year (CY) 2015. The TRU waste generator sites continued to characterize and certify TRU waste using the existing certification program, and built backlogs of TRU waste so that there will be sufficient certified waste ready to ship when WIPP reopens.

Subsequent to the events described above, Los Alamos National Laboratory (LANL) shipped TRU waste to Waste Control Specialist, LLC (WCS) near Andrews, Texas, to meet LANL's cleanup commitment to the State of New Mexico to remove 3,706 m<sup>3</sup> of TRU waste stored above ground at Area G. In addition, Idaho National Laboratory (INL) shipped a small volume of TRU waste to WCS. All shipments to WCS were suspended in 2014; however, the waste that remained at WCS is accounted for in this report. Since the inventory parameters for the waste temporarily stored at WCS can be directly provided by the WIPP Waste Data System (WDS), the waste temporarily stored at WCS is reported separately in Table 3-3, Table 3-5, and Table 3-11. These values are based on a query of the WDS. The WCS waste is not disposed of at WIPP, and is only reported to provide a comprehensive TRU waste inventory. Specific information on the waste temporarily stored at WCS may be obtained from the DOE/CBFO WDS administrator.

### **1.4 Sources of Transuranic Waste Inventory Information**

The sources of TRU waste inventory information are: 1) the ATWIR-2015, 2) updated information provided by the TRU waste generator sites, 3) Acceptable Knowledge (AK) reports, and 4) WDS, the official database of record for waste emplaced in WIPP. Each year, the sites updated their data from the previous year. For ATWIR-2016, the TRU waste generator sites began with the inventory data from the ATWIR-2015, and they updated the information using data obtained from their site-specific databases and AK reports which provide information, such as chemical lists and radionuclides, pertaining to waste streams being characterized.

### **1.5 Uses of Transuranic Waste Inventory Information**

Waste stream volumes are accounted for in both "current form" (current packaging) and "final form" (planned WIPP-compliant packaging) configurations. These configurations are useful in various waste management scenarios. In past years, DOE/CBFO management has used this inventory information to support strategic decisions related to waste retrieval, treatment, repackaging, characterization, shipment, and disposal for both stored and projected waste initiatives. Also, site-specific project plans and schedules, which detail approaches for moving TRU waste to WIPP, were developed and are updated, as requested, based on current TRU waste inventory information. When inventory data are needed for PA modeling, DOE/CBFO will request a PAIR that provides the latest inventory data that are scaled to model a full repository.

In addition to radiological information, DOE has many reasons for obtaining and tracking non-radiological information about the TRU waste destined for WIPP. For example, DOE tracks the waste materials that go into the WIPP repository, such as cellulose, plastic, and rubber

(CPR), which may affect gas generation and the amount of magnesium oxide emplaced in the repository (EPA 1996).

## 2.0 METHODOLOGY

This report was generated using documented processes and methods that are qualified under the LANL-CO QA Program (see section 1.0). The following steps were completed to generate this report (see Figure 2-1):

1. Collected TRU waste stream information from the TRU waste generator sites.
2. Performed a thorough review of all data to check for accuracy, consistency, and completeness.
3. Performed analyses, where appropriate.
4. Entered the updated information in the CID and verified it.
5. Obtained the validation of the updated CID information from the DOE TRU waste generator site representatives.
6. Generated the required data tables by decaying the radionuclides and performing necessary calculations in the CID.

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

The process used to collect TRU waste inventory from the generator sites and to enter the data into the CID is documented in LANL-CO procedure INV-SP-01, *Data Collection and Entry for the Comprehensive Inventory* (LANL-CO 2016b). On December 22, 2015, in accordance with this procedure, a letter was sent from DOE/CBFO (Patterson 2015) to TRU waste generator sites requesting the annual TRU waste inventory update. The Inventory Team then sent each site a notification of the update with an attached Microsoft<sup>®</sup> Excel data template (DT) workbook file containing last year's validated data along with guidance explaining the steps required to update the DT information.

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

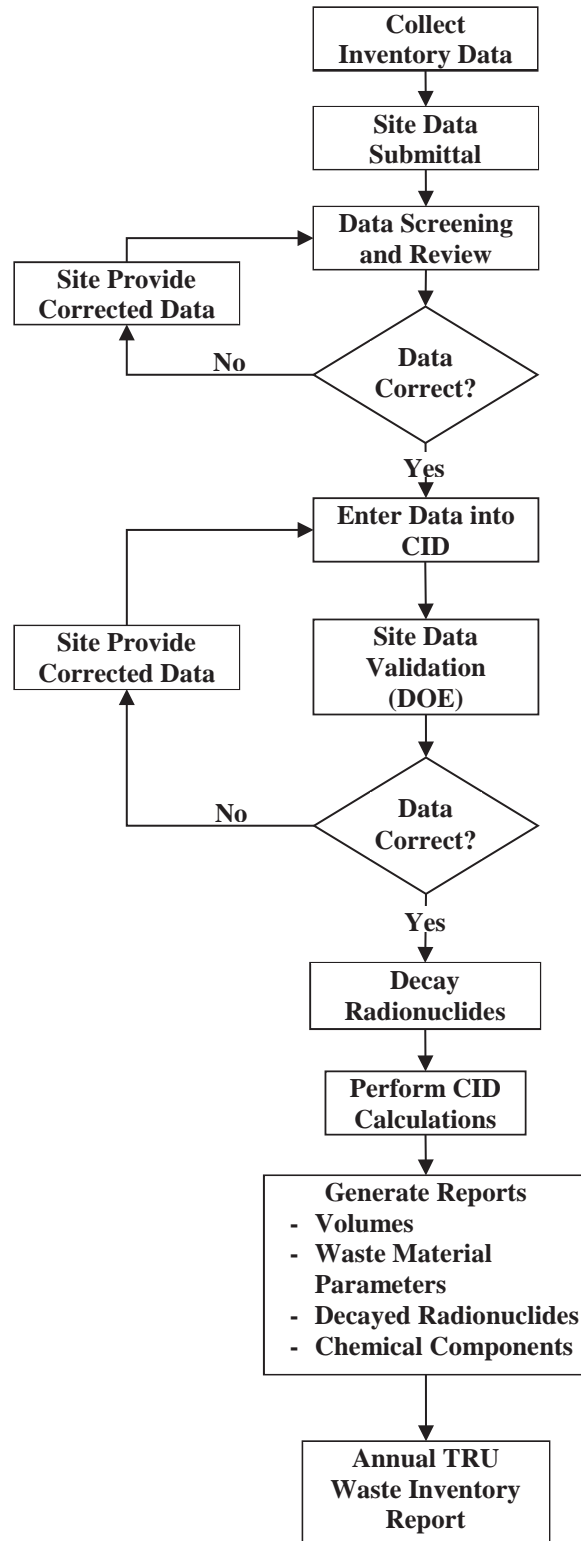
The Inventory Team worked with personnel from every generator site to assist in the updating process and to resolve issues. After the DTs were completed, the team checked them for accuracy and consistency. During these data checks, the Inventory Team verified that the

inventory updates included all of the available information. The Inventory Team contacted the sites if there were any completeness, accuracy, or consistency issues. The data checks included, but were not limited to:

- Verification that WIPP-bound waste streams contain all required information, and potential waste streams meet the screening memo criteria as discussed in section 4.0;
- Verification of radionuclide isotopic inputs (e.g., confirm TRU alpha concentration is greater than 100 nanocuries per gram);
- Verification of radionuclide threshold limits to determine if the waste stream appears to be 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., sites report less than 23 curies per liter [Ci/l] averaged over the volume of the RH-TRU canister);
- Verification that waste does not exceed mass limits for reported final form container types;
- Verification that complexing agents and oxyanions identified in AK are reported during data update;
- Verification that the waste matrix code group is consistent with the waste material parameters (WMPs) reported;
- Comparison of the ATWIR-2016 waste stream data to the ATWIR-2015 waste stream data to identify and understand any significant differences.

Once all issues were resolved, the TRU waste inventory information was uploaded from the Microsoft® Excel DT or entered manually into the CID. Once the data were entered and verified, waste stream data reports were prepared and sent to the DOE TRU waste generator site representative (manager or designee). A validation letter signed by the DOE TRU waste generator site representative and site contractor (contractor signature optional) documented the correctness of the information as reported in the CID. Hard copies of the waste stream data reports and signed validation letters were then submitted to the LANL-CO Record Center. The CID data were then labeled as data version D.15.00 and protected from further revision. Figure 2-1 presents a flow chart of the TRU waste inventory process.

Figure 2-1. TRU Waste Inventory Process Flowchart





## 2.2 Data Generated from CID Reports

Data tables included in this report were generated from the CID. The CID is a DOE/CBFO database developed by LANL-CO and qualified in accordance with the LANL-CO QA Program, which is in compliance with the DOE/CBFO QAPD. The LANL-CO software QA Program is documented in LCO-QPD-02, *LANL-CO Software Quality Assurance Plan* (LANL-CO 2015b), and LCO-QP19-1, *Software Quality Assurance* (LANL-CO 2015c). The CID is used to manage, maintain, and perform specific qualified calculations using inventory data. The data are then used to generate qualified data reports and tables.

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

Information for waste emplaced at WIPP and in temporary storage at WCS was obtained from the DOE/CBFO WDS administrator (see section 2.3). After this information was transformed for use in the CID (Van Soest 2016), the WIPP and WCS data were then imported into the CID.

### 2.2.1 Volume Reporting

The waste stream volume information collected from the TRU waste generator sites includes stored and projected waste. The sites also report both current form and final form waste container information for their waste streams. The current form represents the waste in its current packaging configuration. The final form represents estimates of the WIPP-compliant container type(s) that will ultimately be used to ship the waste to WIPP. Each final form container type's stored and projected counts are calculated from the waste's current form volume, taking into account other factors such as repackaging, treatment, and regulatory limits, when available.

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

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

## 2.2.2 Waste Material Parameter and Packaging Materials Reporting

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

- Aluminum-based Metal/Alloys – Aluminum or aluminum-based alloys in the waste materials.
- Cellulose – Material generally derived from high-polymer plant carbohydrates (e.g., paper, cardboard, Kimwipes<sup>®</sup>, wood, cellophane, 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. Also includes an iron-based metallic phase associated with any vitrification process, if applicable.
- Other Inorganic Materials – All other inorganic non-metal waste materials (e.g., concrete, glass, firebrick, ceramics, graphite, 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, often derived from petroleum feedstock (e.g., polyethylene, polyvinyl chloride, Lucite<sup>®</sup>, and Teflon<sup>®</sup>).
- Rubber – Natural or man-made elastic latex materials, such as Hypalon<sup>®</sup>, neoprene, surgical gloves, and leaded-rubber gloves (rubber portion only).
- Solidified Inorganic Material – Any homogeneous material consisting of sludge or aqueous-based liquid that has been solidified (e.g., wastewater treatment sludge and inorganic particulates).
- Solidified Organic Material – Organic resin, solidified organic liquid, and sludge.
- Soil – Generally consists of naturally occurring soil that has been contaminated with radioactive waste materials at a high enough level to be considered TRU waste.
- Vitrified – Waste that was melted or fused at high temperatures with glass-forming additives (e.g., soil or silica), in appropriate proportions to result in a homogeneous

glass-like matrix. (Unoxidized metallic phases, if present, are included in the Iron-based Metal/Alloys category.)

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

Appendices A and B present a list of average WMP and PM densities expressed as kilograms/cubic meter ( $\text{kg/m}^3$ ) for each waste stream. These densities were calculated by dividing the total mass of each material by the total final form volume for each waste stream.

### 2.2.3 Radionuclide Reporting

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

The sites provided radionuclide data, which may or may not have included the complete set of associated daughters. Since the site data consisted of radionuclide activities at the date of assay, which varied for each waste stream, they were decay-corrected to common dates for reporting purposes, with these results being reported for the end of CY 2015 and CY 2033 (see section 3.3). Radionuclides are decayed through 2015 to bring all sites' radionuclides to the common collection year. Radionuclides are also decayed through 2033, which allows the current reported activity to be compared to previously reported activity. The CID automates the radionuclide decay process by using the *Oak Ridge Isotope Generation and Depletion Code* (a module of *Standardized Computer Analysis for Licensing Evaluation* [SCALE] 6) (ORIGEN-S) (ORNL 2009), which is a depletion and decay library that has been qualified for use under the LANL-CO QA Program, in accordance with LCO-QPD-02 and LCO-QP19-1. The CID first exports the radionuclide activities reported by the TRU waste generator sites in the form of ORIGEN-S input files for each waste stream. Next, the CID executes ORIGEN-S in a sequential fashion for each input file, where the radionuclide decay and buildup calculations are performed and written to an output file. Finally, each output file is read and imported back into the CID, resulting in decay-corrected radionuclide tables generated for this report.

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

## 2.2.4 Chemical Component Reporting

The TRU waste generator sites reported stored and projected mass separately for each waste stream's complexing agents (acetic acid, citric acid, oxalic acid, acetate, citrate, oxalate, and ethylenediaminetetraacetic acid [EDTA]), oxyanions (nitrates, phosphates, and sulfates), and other chemical components (e.g., asbestos, beryllium, and graphite). Because of the February 14, 2014, radiological release at WIPP, it is important to re-emphasize that chemicals, along with other waste components identified in this report, must meet all WIPP requirements before the waste can be shipped for disposal at WIPP.

## 2.3 Analyses Supporting the Annual Transuranic Waste Inventory Report

In addition to collecting and processing information from the DOE TRU waste generator sites and securing the site information in a qualified database for future use, an analysis was performed and documented in accordance with LANL-CO QA procedure LCO-QP9-1, *Analyses* (LANL-CO 2013), to support the preparation of this report.

To update the TRU waste emplaced inventory data within the CID, a documented request was made of the DOE/CBFO WDS database administrator to supply data for the waste emplaced in the WIPP repository, en route to WIPP, or in above-ground storage at WIPP or other designated storage location (WCS), as of December 31, 2015. The WDS data were migrated into a standardized CID Import Template (CIT) file, which required that the original WDS data undergo various transformations including, but not limited to, calculations, aggregations, and data mapping. These activities and calculations are documented in INV-SAR-39, *WDS Data Transformation for Insertion in the 2015 Inventory CID Import Template* (Van Soest 2016). The CIT file was subsequently imported into the CID to update the emplaced TRU waste information. Additional transformations were developed and included in this analysis for waste streams with waste containers residing in more than one location (WIPP underground, WIPP above ground, or WCS). By using different waste stream identification prefixes, these waste streams were separately transformed and tracked in the CIT file for each location reported. The ability to attain better emplaced waste stream data for waste streams with containers residing in multiple locations resulted in negligible differences when compared to last year's emplaced PM mass and activity reported for containers located at the WIPP and WCS, which are described in detail in sections 3.2.2 and 3.3.2, respectively.

## 3.0 TRANSURANIC WASTE INVENTORY ESTIMATES AND CHANGES

This section presents the TRU waste inventory data that were collected using the methodology discussed in section 2.0. These data were labeled and secured as CID data version D.15.00 (LANL-CO 2016a). Actual numerical values in this section are rounded to three significant figures for presentation purposes within this report.

The emplaced and temporary storage inventory totals reported from the WDS are presented as summations under WIPP (Emplaced) and WCS (Temporary Storage), respectively, under the specific component subsections (e.g., volumes, WMPs and PMs, and radionuclides) and are not included in the data reported by the sites. Chemical components are not reported in the

emplaced or temporary storage inventory because the WDS does not track these components. More specific information on the waste emplaced or temporarily stored at WCS can be obtained from the DOE/CBFO WDS administrator at the WIPP Information Center at 1-800-336-WIPP (9477) or at [infocntr@wipp.ws](mailto: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-2015.

#### 3.1.1 TRU Waste Inventory Total Volumes by Site

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

Table 3-1 shows the total CH-TRU stored, projected, and anticipated waste volumes. An estimated anticipated final form total of 76,000 m<sup>3</sup> of CH-TRU waste is currently being reported at the sites and could be shipped to WIPP in the future, provided all WIPP requirements are met. Approximately 97% of the anticipated CH-TRU waste is stored or will be generated at LQs: Hanford (Richland) Site (RL), INL, LANL, Oak Ridge National Laboratory (ORNL), and the Savannah River Site (SRS).

Table 3-2 shows the total RH-TRU stored, projected, and anticipated waste volumes. An estimated anticipated final form total of 3,160 m<sup>3</sup> of RH-TRU waste is currently being reported by the sites and could be shipped to WIPP in the future, provided all WIPP requirements are met. Approximately 92% of the anticipated RH-TRU waste is stored or will be generated at LQs: RL, INL, LANL, ORNL, and SRS.

**Table 3-1. CH Waste Inventory Total Volumes**

TRU Waste Generator Site	Stored Volumes (m <sup>3</sup> )	Projected Volumes (m <sup>3</sup> )	Anticipated Volumes (m <sup>3</sup> )
Argonne National Laboratory	5.14E+01	1.16E+02	1.68E+02
Hanford (Richland) Site	1.59E+04	1.15E+04	2.75E+04
Idaho National Laboratory	2.17E+04	6.57E+01	2.17E+04
Knolls Atomic Power Laboratory - Nuclear Fuel Services	8.96E+01	6.08E+02	6.98E+02
Lawrence Berkeley National Laboratory	4.16E-01	4.16E-01	8.32E-01
Lawrence Livermore National Laboratory	2.63E+02	6.17E+02	8.80E+02
Los Alamos National Laboratory	3.45E+03	5.26E+03	8.71E+03
Material and Fuels Complex	2.50E+00	5.10E+01	5.35E+01
Nevada National Security Site	6.02E+01	6.80E+01	1.28E+02

**Table 3-1. CH Waste Inventory Total Volumes**  
Continued

TRU Waste Generator Site	Stored Volumes (m <sup>3</sup> )	Projected Volumes (m <sup>3</sup> )	Anticipated Volumes (m <sup>3</sup> )
Nuclear Radiation Development Site	2.08E+00	--	2.08E+00
Oak Ridge National Laboratory	1.26E+03	6.66E+02	1.93E+03
Sandia National Laboratories	1.11E+01	4.73E+01	5.84E+01
Savannah River Site	7.42E+02	1.34E+04	1.41E+04
Separations Process Research Unit	6.29E+00	--	6.29E+00
<b>Grand Total</b>	<b>4.35E+04</b>	<b>3.24E+04</b>	<b>7.60E+04</b>

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

**Table 3-2. RH Waste Inventory Total Volumes**

TRU Waste Generator Site	Stored Volumes (m <sup>3</sup> )	Projected Volumes (m <sup>3</sup> )	Anticipated Volumes (m <sup>3</sup> )
Argonne National Laboratory	3.50E+01	3.71E+01	7.21E+01
Bettis Atomic Power Laboratory	--	1.50E+01	1.50E+01
Hanford (Richland) Site	1.79E+03	1.18E+02	1.91E+03
Idaho National Laboratory	2.75E+02	--	2.75E+02
Knolls Atomic Power Laboratory - Schenectady	--	1.50E+01	1.50E+01
Los Alamos National Laboratory	8.01E+01	--	8.01E+01
Material and Fuels Complex	6.86E+00	1.42E+02	1.49E+02
Oak Ridge National Laboratory	1.33E+02	4.58E+02	5.91E+02
Sandia National Laboratories	5.62E+00	--	5.62E+00
Savannah River Site	3.37E+01	1.06E+01	4.43E+01
Separations Process Research Unit	2.50E+00	--	2.50E+00
<b>Grand Total</b>	<b>2.36E+03</b>	<b>7.96E+02</b>	<b>3.16E+03</b>

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

### 3.1.2 Changes to TRU Waste Volumes

Table 3-3 shows the net changes for final form total volumes (anticipated) of the combined CH- and RH-TRU waste between the ATWIR-2015 and this report. The net change column includes both increases and decreases in waste streams as reported by the sites and the volume of emplaced waste and waste in temporary storage taken from the WDS. The net anticipated volume reported by the sites overall increased 18,200 m<sup>3</sup>. The largest contributors to the volume increase are from Hanford, SRS and LANL. The estimated projected volume for Hanford's RL200-02 waste stream increased approximately 6,960 m<sup>3</sup>, based on a remedial design and action work plan addressing projected soil remediation and D&D activities. As directed by DOE in response to a Record of Decision, SRS added the new waste stream, SR-KAC-PuOx, which

contributed approximately 5,010 m<sup>3</sup> of projected waste (6 metric tons of Pu oxide) from K-Area. LANL's projected volume increased by approximately 2,580 m<sup>3</sup>. LANL's increase included the adjustments based on reporting projected waste through 2050.

**Table 3-3. CH/RH Waste Volume Changes**

TRU Waste Generator Site	ATWIR-2015 Total (m <sup>3</sup> )	ATWIR-2016 Total (m <sup>3</sup> )	Net Change (m <sup>3</sup> )
Hanford (Richland) Site	2.19E+04	2.94E+04	7.51E+03
Idaho National Laboratory	2.08E+04	2.20E+04	1.17E+03
Los Alamos National Laboratory	6.21E+03	8.79E+03	2.58E+03
Oak Ridge National Laboratory	1.63E+03	2.52E+03	8.88E+02
Savannah River Site	8.25E+03	1.42E+04	5.94E+03
Small Quantity Sites	2.16E+03	2.25E+03	9.34E+01
<b>Anticipated Total</b>	<b>6.09E+04</b>	<b>7.91E+04</b>	<b>1.82E+04</b>
WIPP (Emplaced)	9.11E+04	9.11E+04	0.00E+00
WCS (Temporary Storage)	3.85E+02	3.85E+02	0.00E+00
<b>Emplaced/Temporary Storage Total</b>	<b>9.15E+04</b>	<b>9.15E+04</b>	<b>0.00E+00</b>
<b>Grand Total</b>	<b>1.52E+05</b>	<b>1.71E+05</b>	<b>1.82E+04</b>

Data Source: CID Data Versions D.14.00 (LANL-CO 2015a) and D.15.00 (LANL-CO 2016a); Offner 2015.

### 3.2 Non-Radiological Material Estimates

This section presents the non-radiological properties (WMPs, PMs, and chemical components) of the TRU waste inventory as reported by the TRU waste generator sites, and a discussion of changes to the data since the ATWIR-2015.

#### 3.2.1 Waste Material Parameters and Packaging Materials

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

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

Waste Material	CH Mass (kg)	RH Mass (kg)	Total Mass (kg)
Iron-based Metal/Alloys	4.55E+06	4.08E+05	<b>4.96E+06</b>
Aluminum-based Metal/Alloys	3.42E+05	1.70E+04	<b>3.59E+05</b>
Other Metal/Alloys	3.41E+05	3.47E+05	<b>6.87E+05</b>
Other Inorganic Materials	5.95E+06	8.70E+05	<b>6.82E+06</b>
Cellulose	1.08E+06	8.40E+04	<b>1.16E+06</b>

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

Waste Material	CH Mass (kg)	RH Mass (kg)	Total Mass (kg)
Rubber	6.03E+05	6.06E+04	<b>6.63E+05</b>
Plastic	2.13E+06	1.62E+05	<b>2.30E+06</b>
Cement	2.00E+06	1.20E+05	<b>2.12E+06</b>
Solidified Inorganic Material	3.14E+06	1.81E+05	<b>3.32E+06</b>
Solidified Organic Material	2.89E+06	2.17E+03	<b>2.89E+06</b>
Soil	6.61E+06	1.28E+05	<b>6.74E+06</b>
Vitrified	--	--	--
Packaging Material, Cellulose	5.80E+05	--	<b>5.80E+05</b>
Packaging Material, Plastic	1.38E+06	1.70E+05	<b>1.55E+06</b>
Packaging Material, Rubber	3.37E+04	1.73E+03	<b>3.54E+04</b>
Packaging Material, Steel	1.30E+07	2.98E+06	<b>1.60E+07</b>
Packaging Material, Lead	--	1.21E+04	<b>1.21E+04</b>
<b>Grand Total</b>	<b>4.47E+07</b>	<b>5.54E+06</b>	<b>5.02E+07</b>

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

### 3.2.2 Waste and Packaging Material Parameter Changes

The changes in WMP and PM data between the ATWIR-2015 and this report are presented in Table 3-5. Data for the WMPs and PMs improve as additional waste is characterized and the sites apply the information to estimate the WMPs remaining in that waste stream at the site. The net change column includes both increases and decreases in waste streams as reported by the TRU waste generator sites. Since no waste was shipped or received at WCS during CY 2015, the waste in temporary storage at WCS reported from the WDS did not change.

As shown in Table 3-5, the total change in anticipated WMP mass increased by approximately 9.61 million kg and anticipated PM mass increased by approximately 4.83 million kg. The increase in anticipated WMPs and in anticipated PMs can be attributed primarily to Hanford's RL200-02 and SRS's newly added SR-KAC-PuOx waste streams. Hanford's RL200-02 waste stream was the largest WMP mass increase contributor by approximately 7.68 million kg based on an estimated increase from projected soil remediation and D&D activities. SRS's newly added SR-KAC-PuOx waste stream accounted for the largest PM mass increase with approximately 2.70 million kg, which represents the projected packaging associated with the 6 metric tons of Pu oxide in K-Area.

For waste emplaced at WIPP and in temporary storage, the WMP mass increased 0.18 kg and the PM mass decreased 30.8 kg. These negligible changes are a byproduct of an inventory methodology change in which the WCS and WIPP above-ground wastes were assigned to separate waste streams from their WIPP underground counterparts (Van Soest 2016). Previously, the WCS, WIPP aboveground, and WIPP underground waste streams were combined. In implementing this methodology change, a portion of WIPP's inventory of SWBs



changed to include liners and a portion of WCS's inventory of standard waste boxes (SWBs) changed to not include liners, netting one less liner than previously reported. This effectively reduced the plastic PM mass by approximately 30.8 kg.

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

Waste Material Parameter	ATWIR-2015 Total (kg)	ATWIR-2016 Total (kg)	Net Change (kg)
Iron-based Metal/Alloys	4.62E+06	4.96E+06	3.47E+05
Aluminum-based Metal/Alloys	3.29E+05	3.59E+05	3.03E+04
Other Metal/Alloys	6.39E+05	6.87E+05	4.78E+04
Other Inorganic Materials	2.85E+06	6.82E+06	3.97E+06
Cellulose	1.04E+06	1.16E+06	1.17E+05
Rubber	5.81E+05	6.63E+05	8.24E+04
Plastic	1.95E+06	2.30E+06	3.49E+05
Cement	1.90E+06	2.12E+06	2.15E+05
Solidified Inorganic Material	3.09E+06	3.32E+06	2.33E+05
Solidified Organic Material	2.51E+06	2.89E+06	3.87E+05
Soil	2.91E+06	6.74E+06	3.83E+06
Vitrified	--	--	--
<b>Anticipated Waste Total</b>	<b>2.24E+07</b>	<b>3.20E+07</b>	<b>9.61E+06</b>
WIPP (Emplaced) Waste Total	2.84E+07	2.84E+07	1.80E-01
WCS (Temporary Storage) Waste Total	8.29E+04	8.29E+04	--
<b>Emplaced/Temporary Storage Waste Total</b>	<b>2.85E+07</b>	<b>2.85E+07</b>	<b>1.80E-01</b>
<b>Package Material</b>			
Packaging Material, Cellulose	2.00E+04	5.80E+05	5.60E+05
Packaging Material, Plastic	9.96E+05	1.55E+06	5.50E+05
Packaging Material, Rubber	2.56E+04	3.54E+04	9.85E+03
Packaging Material, Steel	1.23E+07	1.60E+07	3.71E+06
Packaging Material, Lead	1.21E+04	1.21E+04	--
<b>Anticipated Packaging Total</b>	<b>1.33E+07</b>	<b>1.82E+07</b>	<b>4.83E+06</b>
WIPP (Emplaced) Packaging Total	2.04E+07	2.04E+07	1.19E+03
WCS (Temporary Storage) Packaging Total	7.68E+04	7.56E+04	-1.22E+03
<b>Emplaced/Temporary Storage Packaging Total</b>	<b>2.05E+07</b>	<b>2.05E+07</b>	<b>-3.08E+01</b>
<b>Grand Total</b>	<b>8.48E+07</b>	<b>9.92E+07</b>	<b>1.44E+07</b>

Data Source: CID Data Versions D.14.00 (LANL-CO 2015a) and D.15.00 (LANL-CO 2016a); Offner 2015; INV-SAR-39 (Van Soest 2016).

### 3.2.3 Chemical Components

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

#### 3.2.3.1 Complexing Agents and Oxyanions

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

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

Chemical Component	ANL	Hanford	INL	LANL	LBNL	LLNL	ORNL	SNL	Grand Total
<b>Complexing Agents</b>									
Acetate	--	7.94E+03	4.24E+02	--	--	--	3.38E+01	--	<b>8.40E+03</b>
Acetic Acid	4.65E+02	3.71E+03	2.02E+03	8.56E-01	--	7.28E+00	3.38E+01	2.00E-09	<b>6.23E+03</b>
Citrate	--	2.69E+02	1.48E+02	--	--	--	3.38E+01	--	<b>4.51E+02</b>
Citric Acid	4.33E+02	1.07E+03	3.87E+01	9.43E+01	--	7.28E+00	3.38E+01	2.00E-09	<b>1.68E+03</b>
EDTA	4.33E+02	7.81E+01	1.99E+00	--	--	1.99E+00	3.38E+01	--	<b>5.48E+02</b>
Oxalate	4.33E+02	4.54E+02	2.16E-03	--	--	--	3.38E+01	--	<b>9.20E+02</b>
Oxalic Acid	4.74E+02	3.49E+03	7.35E+01	4.77E+01	--	7.28E+00	3.38E+01	--	<b>4.13E+03</b>
<b>Oxyanions</b>									
Nitrate	6.65E+02	1.49E+05	2.38E+05	2.06E+05	1.20E-01	7.28E+00	2.96E+04	1.00E-06	<b>6.24E+05</b>
Phosphate	4.01E+02	1.37E+05	1.89E+04	--	--	7.28E+00	3.27E+03	--	<b>1.60E+05</b>
Sulfate	4.01E+02	2.11E+04	6.03E+04	3.51E+04	--	7.28E+00	3.38E+01	--	<b>1.17E+05</b>

Data Source: CID Data Version D.15.00 (LANL-CO 2016a). 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 agents and oxyanions between the ATWIR-2015 and this report. These data represent only the complexing agents and oxyanions that are currently being reported by the TRU waste generator sites and do not include complexing agents or oxyanions emplaced at the WIPP or in temporary storage since they are not reported in WDS.

As shown in Table 3-7, the total change in anticipated complexing agent mass was an increase of 3,380 kg and the total change in anticipated oxyanion mass was an increase of 80,800 kg.

The largest increase in complexing agents is primarily attributed to Hanford's RLPFP-01 waste stream. Hanford's complexing agent increase is based on revised waste projections from ongoing D&D efforts.

The largest increases in oxyanions are primarily attributed to Hanford and ORNL waste streams. Hanford's RLPFP-01 added approximately 43,700 kg (22,700 kg nitrate, 19,700 kg phosphate, and 1,300 kg sulfate) from newly projected estimates based on ongoing D&D efforts. ORNL's newly projected waste stream OR-REDC-RH-HOM contributed 29,600 kg nitrate.

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

<b>Chemical Component</b>	<b>ATWIR-2015 Total (kg)</b>	<b>ATWIR-2016 Total (kg)</b>	<b>Net Change (kg)</b>
<b>Complexing Agents</b>			
Acetate	6.69E+03	8.40E+03	1.71E+03
Acetic Acid	5.51E+03	6.23E+03	7.22E+02
Citrate	2.00E+02	4.51E+02	2.51E+02
Citric Acid	1.60E+03	1.68E+03	7.75E+01
EDTA	4.56E+02	5.48E+02	9.19E+01
Oxalate	4.67E+02	9.20E+02	4.54E+02
Oxalic Acid	4.05E+03	4.13E+03	7.56E+01
<b>Grand Total</b>	<b>1.90E+04</b>	<b>2.24E+04</b>	<b>3.38E+03</b>
<b>Oxyanions</b>			
Nitrate	5.69E+05	6.24E+05	5.46E+04
Phosphate	1.37E+05	1.60E+05	2.33E+04
Sulfate	1.14E+05	1.17E+05	2.90E+03
<b>Grand Total</b>	<b>8.20E+05</b>	<b>9.00E+05</b>	<b>8.08E+04</b>

Data Source: CID Data Versions D.14.00 (LANL-CO 2015a) and D.15.00 (LANL-CO 2016a). Note: This table only contains data for WIPP-bound waste streams at the TRU waste generator sites.

### 3.3 TRU Waste Radionuclide Estimates

This section presents the updated TRU waste radionuclide activity inventory collected from the TRU waste generator sites. The sites' waste stream radionuclide activities, shown in Table 3-8, Table 3-9, and Table 3-10, are decay-corrected through the end of CY 2015 (as described in section 2.2). Table 3-11 shows a comparison between ATWIR-2015 and ATWIR-2016 activity totals. The values in Table 3-11 are decay-corrected through the end of CY 2033 so that a comparison can be presented.

#### 3.3.1 Radionuclide Inventory by Site

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

**Table 3-8. Total CH Radionuclide Activity (Ci) on a Site Basis Decayed through 2015**

Radionuclide	ANL	Hanford	INL	KAPL-NFS	LANL	LBNL	LLNL	MFC	NNSS	NRD	ORNL	SNL	SPRU	SRS	Grand Total
Ac-225	7.70E-05	7.29E-04	1.05E-05	1.25E-03	1.31E-01	5.13E-14	5.10E-04	2.90E-11	3.28E-12	5.48E-14	3.13E-02	2.26E-14	9.84E-24	3.03E-02	1.95E-01
Ac-227	1.43E-05	3.19E-07	5.65E-03	5.89E-06	1.46E+00	4.98E-18	2.18E-02	5.51E-11	4.08E-10	--	1.09E+01	1.66E-14	4.41E-13	6.93E-03	1.24E+01
Ac-228	1.14E-04	5.16E-03	1.53E-05	5.95E-02	8.22E-06	4.29E-07	1.94E-07	6.86E-17	1.15E-15	--	1.76E-04	4.31E-20	--	4.69E-04	6.54E-02
Ag-108	4.11E-05	--	--	--	5.04E-07	--	--	--	--	--	--	--	--	--	4.16E-05
Ag-108m	4.73E-04	--	--	--	5.79E-06	--	--	--	--	--	--	--	--	--	4.78E-04
Ag-109m	2.61E-07	--	--	--	--	--	5.04E-04	--	--	--	3.53E-05	3.01E-07	--	--	5.40E-04
Ag-110	--	--	--	--	--	--	--	--	--	--	1.41E-02	--	--	--	1.41E-02
Ag-110m	--	--	--	--	--	--	--	--	--	--	1.04E+00	--	--	--	1.04E+00
Am-241	2.51E+01	4.84E+04	4.70E+04	1.60E+02	4.70E+04	1.04E-02	1.58E+03	2.66E+02	1.64E+01	3.33E+01	2.72E+03	7.37E+02	2.79E-02	4.22E+05	5.70E+05
Am-242	2.99E-04	1.53E-02	--	--	--	--	4.36E+00	--	--	--	2.41E-04	--	--	1.07E-02	4.39E+00
Am-242m	3.00E-04	1.53E-02	--	--	--	--	4.38E+00	--	--	--	2.42E-04	--	--	1.07E-02	4.41E+00
Am-243	8.99E+00	8.02E-01	3.24E-01	--	1.51E+00	1.80E-03	1.52E-01	3.88E-02	--	--	9.34E+00	--	--	7.29E-01	2.19E+01
Am-245	1.16E-09	--	--	--	1.43E-03	--	--	--	--	--	1.73E-04	--	--	--	1.61E-03
Am-246	1.72E-09	--	--	--	--	--	--	--	--	--	2.02E-09	--	--	--	3.74E-09
At-217	7.70E-05	7.29E-04	1.05E-05	1.25E-03	1.31E-01	5.13E-14	5.10E-04	2.90E-11	3.28E-12	5.48E-14	3.13E-02	2.26E-14	9.84E-24	3.03E-02	1.95E-01
Ba-133	2.32E-05	4.94E-04	--	--	9.74E-06	--	--	--	--	--	4.65E-03	--	--	9.82E-06	5.18E-03
Ba-137m	1.50E+00	1.04E+04	2.40E+00	--	3.31E+00	1.52E-07	4.25E-01	3.97E+00	--	--	5.08E+01	3.22E-01	3.07E+00	1.40E+00	1.05E+04
Bi-210	3.27E-04	6.51E-04	2.68E-05	9.61E-05	2.20E-03	3.12E-09	6.60E-12	1.11E-13	1.86E-11	--	4.08E-01	1.31E-06	1.62E-17	3.70E-06	4.11E-01
Bi-211	1.43E-05	3.19E-07	2.94E-03	5.89E-06	1.46E+00	4.98E-18	1.11E-02	5.51E-11	4.08E-10	--	6.26E+00	2.78E-15	5.96E-14	6.94E-03	7.74E+00
Bi-212	2.78E-04	4.17E+03	5.26E-04	1.24E-01	1.03E+01	2.15E-07	7.95E-04	7.63E-18	6.55E-16	--	9.79E-02	3.70E-21	--	8.16E-02	4.18E+03
Bi-213	7.70E-05	7.29E-04	1.05E-05	1.25E-03	1.31E-01	5.13E-14	5.10E-04	2.90E-11	3.28E-12	5.47E-14	3.13E-02	2.26E-14	9.84E-24	3.03E-02	1.95E-01
Bi-214	1.90E-04	5.19E-03	6.91E-03	9.50E-04	7.27E-02	2.67E-08	5.69E-09	1.10E-11	3.63E-10	--	1.03E+00	2.44E-15	3.09E-14	1.21E-04	1.11E+00
Bk-249	7.98E-05	--	--	--	9.88E+01	--	--	--	--	--	1.20E+01	--	--	--	1.11E+02
Bk-250	9.64E-10	--	--	--	--	--	--	--	--	--	1.26E-09	--	--	--	2.22E-09
C-14	3.45E-03	6.00E-04	--	--	--	--	--	--	--	--	2.93E-05	--	1.39E-06	1.81E-03	5.89E-03
Ca-45	3.34E-09	--	--	--	--	--	--	--	--	--	--	--	--	--	3.34E-09
Cd-109	2.61E-07	--	--	--	--	--	5.04E-04	--	--	--	3.53E-05	3.01E-07	--	--	5.40E-04
Cd-113	7.06E-23	--	--	--	--	--	--	--	--	--	--	--	--	--	7.06E-23
Cd-113m	1.53E-04	--	--	--	--	--	--	--	--	--	--	--	--	--	1.53E-04
Ce-139	--	--	--	--	--	--	--	--	--	--	1.08E-04	4.34E-11	--	--	1.08E-04
Ce-141	--	--	--	--	--	--	--	--	--	--	4.11E+00	--	--	--	4.11E+00
Ce-144	1.03E-04	--	--	--	6.29E-06	--	--	3.02E-01	--	--	2.76E+00	--	--	--	3.06E+00
Cf-249	8.41E-02	1.81E-02	1.09E-01	--	3.04E-01	4.29E-03	7.25E+00	--	--	--	1.19E+00	--	--	1.60E-03	8.95E+00
Cf-250	3.79E-03	--	--	--	--	9.77E-08	--	--	--	--	1.66E+00	--	--	7.86E-11	1.66E+00
Cf-251	6.47E-04	--	2.85E-04	--	--	--	1.44E-04	--	--	--	1.39E-02	--	--	7.14E-04	1.57E-02
Cf-252	3.15E-04	--	--	--	--	--	3.02E-03	--	--	--	7.06E+01	--	--	2.59E+00	7.32E+01
Cf-253	--	--	--	--	--	--	--	--	--	--	3.98E-03	--	--	--	3.98E-03
Cf-254	--	--	--	--	--	--	--	--	--	--	3.16E-03	--	--	--	3.16E-03
Cl-36	1.89E-07	--	--	--	--	--	--	--	--	--	--	--	--	--	1.89E-07
Cm-242	2.48E-04	1.26E-02	--	--	2.17E-04	--	5.05E-01	--	--	--	3.17E+00	--	--	8.43E-03	3.70E+00
Cm-243	1.81E-02	4.97E-01	2.10E-02	--	2.29E-01	7.49E-05	8.45E-02	1.28E-01	--	--	1.42E+00	--	--	5.03E-02	2.45E+00
Cm-244	7.05E+02	6.09E+01	4.86E+00	--	5.42E+02	1.50E-03	4.78E+02	3.52E+00	--	--	8.09E+03	--	--	6.78E+01	9.95E+03
Cm-245	1.11E-04	1.24E+04	2.24E-04	--	3.16E-04	1.40E-06	2.61E-02	--	--	--	1.11E+00	--	--	9.87E-03	1.24E+04
Cm-246	5.66E-03	--	--	--	2.13E-02	6.37E-11	--	--	--	--	6.01E+01	--	--	6.78E-03	6.01E+01
Cm-247	1.25E-09	--	1.23E-12	--	--	--	1.92E-06	--	--	--	1.91E-01	--	--	7.53E-03	1.98E-01
Cm-248	2.21E-04	--	--	--	--	1.69E-07	9.62E-03	--	--	--	2.09E-01	--	--	6.00E-06	2.19E-01
Cm-249	--	--	--	--	--	--	--	--	--	--	1.24E-05	--	--	--	1.24E-05

**Table 3-8. Total CH Radionuclide Activity (Ci) on a Site Basis Decayed through 2015**  
Continued

Radionuclide	ANL	Hanford	INL	KAPL- NFS	LANL	LBNL	LLNL	MFC	NNSS	NRD	ORNL	SNL	SPRU	SRS	Grand Total
Cm-250	6.88E-09	--	--	--	--	--	--	--	--	--	8.98E-09	--	--	--	1.59E-08
Co-58	--	--	--	--	--	--	--	--	--	--	5.37E-03	--	--	--	5.37E-03
Co-60	7.04E-03	1.58E-01	9.47E-04	--	6.28E-04	--	1.02E-03	4.43E-02	--	--	9.22E-01	2.20E-07	--	3.34E-03	1.14E+00
Cr-51	--	--	--	--	--	--	--	--	--	--	--	1.91E-22	--	--	1.91E-22
Cs-134	1.69E-02	2.16E-01	--	--	--	--	--	8.81E-02	--	--	2.03E+00	--	--	1.56E-05	2.35E+00
Cs-135	3.71E-07	--	--	--	--	--	--	--	--	--	--	--	--	--	3.71E-07
Cs-137	1.58E+00	1.10E+04	2.54E+00	--	3.50E+00	1.61E-07	4.50E-01	4.21E+00	--	--	5.38E+01	3.41E-01	3.25E+00	1.48E+00	1.11E+04
Es-253	--	--	--	--	--	--	--	--	--	--	5.40E-03	--	--	--	5.40E-03
Eu-152	1.03E-04	7.22E-01	1.04E-04	--	9.18E-04	--	2.49E-04	--	--	--	2.04E+00	8.20E-06	--	1.82E-04	2.77E+00
Eu-154	2.67E-02	3.57E+00	--	--	4.65E-04	--	2.73E-03	1.90E-02	--	--	4.20E+00	3.56E-05	--	6.23E-03	7.83E+00
Eu-155	3.35E-03	1.94E-06	--	--	3.41E-05	--	--	4.23E-02	--	--	2.69E+00	--	--	2.44E-02	2.76E+00
Fe-55	4.78E-03	--	--	--	--	--	--	--	--	--	8.16E-04	--	--	--	5.59E-03
Fe-59	1.41E-15	--	--	--	--	--	--	--	--	--	4.47E-04	--	--	--	4.47E-04
Fr-221	7.70E-05	7.29E-04	1.05E-05	1.25E-03	1.31E-01	5.13E-14	5.10E-04	2.90E-11	3.28E-12	5.48E-14	3.13E-02	2.26E-14	9.84E-24	3.03E-02	1.95E-01
Fr-223	1.97E-07	4.41E-09	7.80E-05	8.13E-08	2.01E-02	6.87E-20	3.01E-04	7.60E-13	5.63E-12	--	1.51E-01	2.29E-16	6.08E-15	9.56E-05	1.71E-01
Gd-152	8.25E-19	5.76E-15	1.87E-20	--	1.21E-18	--	4.48E-20	--	--	--	1.26E-15	6.54E-20	--	4.62E-19	7.02E-15
H-3	1.13E-02	9.25E-05	--	--	5.46E+04	--	--	--	--	--	1.21E-02	--	--	3.13E-04	5.46E+04
Hg-203	--	--	--	--	--	--	--	--	--	--	--	5.67E-17	--	--	5.67E-17
Ho-166m	1.11E-09	--	--	--	--	--	--	--	--	--	2.01E-03	--	--	3.30E-07	2.01E-03
I-129	2.26E-07	1.58E-06	--	--	--	--	--	--	--	--	1.32E-04	--	--	3.93E-03	4.06E-03
I-131	--	--	--	--	--	--	--	--	--	--	2.52E-06	--	--	--	2.52E-06
In-113m	--	--	--	--	--	--	--	--	--	--	--	3.36E-11	--	--	3.36E-11
K-40	3.00E-04	8.53E-01	--	--	--	--	3.71E-08	--	--	--	9.13E-04	4.98E-10	--	1.19E-06	8.54E-01
Kr-85	1.67E-02	1.10E+00	--	--	5.92E-02	--	--	--	--	--	--	--	--	1.92E-06	1.18E+00
Mn-54	3.66E-05	1.91E-09	--	--	3.86E-07	--	--	2.68E-03	--	--	5.20E-03	--	--	--	7.92E-03
Na-22	5.58E-03	3.95E+04	--	--	1.46E-03	--	1.39E-04	--	--	--	6.61E-08	--	--	1.76E-03	3.95E+04
Na-24	--	--	--	--	4.26E-24	--	--	--	--	--	--	--	--	--	4.26E-24
Nb-93m	1.02E-03	--	--	--	--	--	--	--	--	--	--	--	--	--	1.02E-03
Nb-94	3.04E-06	1.12E-03	--	--	1.69E-05	--	1.16E-06	--	--	--	1.49E-04	--	--	1.91E-07	1.29E-03
Nb-95	1.12E-12	--	--	--	--	--	--	--	--	--	1.70E+00	--	--	--	1.70E+00
Nb-95m	5.98E-15	--	--	--	--	--	--	--	--	--	1.84E-02	--	--	--	1.84E-02
Nd-144	1.31E-18	--	--	--	1.97E-19	--	--	4.70E-17	--	--	9.57E-17	--	--	--	1.44E-16
Ni-59	--	--	--	--	--	--	--	--	--	--	2.53E-02	--	--	6.34E-10	2.53E-02
Ni-63	1.21E-05	--	--	--	--	--	--	--	--	--	9.01E+00	--	--	--	9.01E+00
Np-237	4.62E-02	5.82E-01	9.16E-01	3.55E-04	2.73E-01	1.72E-05	3.13E-02	1.51E-01	1.17E-04	4.57E-05	1.43E+00	2.39E-04	9.05E-10	5.10E+00	8.53E+00
Np-238	1.35E-06	6.90E-05	--	--	--	--	1.97E-02	--	--	--	1.09E-06	--	--	4.82E-05	1.98E-02
Np-239	8.99E+00	8.02E-01	3.24E-01	--	1.51E+00	1.80E-03	1.52E-01	3.88E-02	--	--	9.34E+00	--	--	7.29E-01	2.19E+01
Np-240	2.37E-08	2.72E-14	--	--	7.23E-09	6.42E-18	9.17E-15	--	--	--	9.21E-07	--	--	3.20E-17	9.52E-07
Np-240m	1.98E-05	2.27E-11	--	--	6.02E-06	5.35E-15	7.64E-12	--	--	--	7.68E-04	--	--	2.67E-14	7.93E-04
Pa-231	7.18E-08	4.86E-06	1.59E-06	5.68E-05	1.08E-02	1.21E-16	3.84E-02	3.50E-09	5.29E-09	--	4.44E-01	1.01E-11	2.77E-10	3.33E-03	4.96E-01
Pa-233	4.62E-02	5.82E-01	7.17E-01	3.55E-04	1.86E-01	1.72E-05	1.92E-02	1.51E-01	1.17E-04	4.57E-05	8.99E-01	2.39E-04	3.18E-10	3.34E+00	5.94E+00
Pa-234	9.61E-06	9.85E-04	8.51E-03	6.45E-05	2.50E-04	1.01E-12	1.23E-05	2.03E-07	3.22E-06	--	5.51E-05	1.46E-09	1.91E-06	6.64E-04	1.06E-02
Pa-234m	7.39E-03	7.58E-01	6.55E+00	4.96E-02	1.93E-01	7.80E-10	9.45E-03	1.56E-04	2.48E-03	--	4.24E-02	1.13E-06	1.47E-03	5.11E-01	8.12E+00
Pb-209	7.70E-05	7.29E-04	1.05E-05	1.25E-03	1.31E-01	5.13E-14	5.10E-04	2.90E-11	3.28E-12	5.47E-14	3.13E-02	2.26E-14	9.84E-24	3.03E-02	1.95E-01
Pb-210	3.26E-04	6.51E-04	3.07E-05	9.61E-05	2.20E-03	3.12E-09	9.29E-12	1.11E-13	1.86E-11	--	4.08E-01	1.31E-06	2.85E-17	3.70E-06	4.11E-01
Pb-211	1.43E-05	3.19E-07	2.94E-03	5.89E-06	1.46E+00	4.98E-18	1.11E-02	5.51E-11	4.08E-10	--	6.26E+00	2.78E-15	5.96E-14	6.94E-03	7.74E+00
Pb-212	2.78E-04	4.17E+03	5.26E-04	1.24E-01	1.03E+01	2.15E-07	7.95E-04	7.63E-18	6.55E-16	--	9.79E-02	3.70E-21	--	8.16E-02	4.18E+03

**Table 3-8. Total CH Radionuclide Activity (Ci) on a Site Basis Decayed through 2015**  
Continued

Radionuclide	ANL	Hanford	INL	KAPL- NFS	LANL	LBNL	LLNL	MFC	NNSS	NRD	ORNL	SNL	SPRU	SRS	Grand Total
Pb-214	1.90E-04	5.19E-03	6.91E-03	9.50E-04	7.27E-02	2.67E-08	5.69E-09	1.10E-11	3.63E-10	--	1.03E+00	2.44E-15	3.09E-14	1.21E-04	1.11E+00
Pd-107	1.19E-06	--	--	--	--	--	--	--	--	--	--	--	--	--	1.19E-06
Pm-147	1.97E-01	5.24E+00	--	--	--	--	--	--	--	--	9.02E-01	--	--	--	6.34E+00
Po-210	3.27E-04	6.51E-04	8.10E-06	9.61E-05	1.17E-03	3.12E-09	1.82E-12	3.61E-14	1.86E-11	--	4.07E-01	1.31E-06	5.77E-19	2.00E-06	4.09E-01
Po-211	3.93E-08	8.78E-10	8.07E-06	1.62E-08	4.01E-03	1.37E-20	3.07E-05	1.51E-13	1.12E-12	--	1.72E-02	7.65E-18	1.64E-16	1.91E-05	2.13E-02
Po-212	1.78E-04	2.67E+03	3.37E-04	7.96E-02	6.61E+00	1.38E-07	5.09E-04	4.89E-18	4.20E-16	--	6.27E-02	2.37E-21	--	5.23E-02	2.68E+03
Po-213	7.53E-05	7.14E-04	1.03E-05	1.22E-03	1.28E-01	5.02E-14	4.99E-04	2.84E-11	3.21E-12	5.36E-14	3.07E-02	2.21E-14	9.64E-24	2.96E-02	1.91E-01
Po-214	1.90E-04	5.19E-03	6.91E-03	9.50E-04	7.27E-02	2.67E-08	5.69E-09	1.10E-11	3.63E-10	--	1.03E+00	2.44E-15	3.09E-14	1.21E-04	1.11E+00
Po-215	1.43E-05	3.19E-07	2.94E-03	5.89E-06	1.46E+00	4.98E-18	1.11E-02	5.51E-11	4.08E-10	--	6.26E+00	2.78E-15	5.96E-14	6.94E-03	7.74E+00
Po-216	2.78E-04	4.17E+03	5.26E-04	1.24E-01	1.03E+01	2.15E-07	7.95E-04	7.63E-18	6.55E-16	--	9.79E-02	3.70E-21	--	8.16E-02	4.18E+03
Po-218	1.90E-04	5.19E-03	6.91E-03	9.50E-04	7.27E-02	2.68E-08	5.69E-09	1.10E-11	3.63E-10	--	1.03E+00	2.44E-15	3.09E-14	1.21E-04	1.11E+00
Pr-144	1.03E-04	--	--	--	6.29E-06	--	--	3.02E-01	--	--	2.76E+00	--	--	--	3.06E+00
Pr-144m	1.44E-06	--	--	--	8.81E-08	--	--	4.23E-03	--	--	3.87E-02	--	--	--	4.29E-02
Pu-236	7.28E-10	--	--	--	--	--	--	--	--	--	--	--	--	--	7.28E-10
Pu-238	5.96E+00	1.57E+04	1.03E+04	1.78E+01	2.86E+05	6.59E-03	1.93E+03	8.09E+00	5.55E+00	--	5.42E+03	1.99E-01	2.84E-03	1.02E+05	4.22E+05
Pu-239	1.11E+01	5.66E+04	1.55E+04	5.65E+02	2.97E+04	7.26E-04	2.67E+03	1.96E+01	1.85E+02	--	6.66E+02	5.65E+00	2.58E-01	2.78E+05	3.84E+05
Pu-240	1.37E+01	2.27E+04	3.57E+03	5.65E+02	7.96E+03	2.07E-05	7.78E+02	6.03E+00	4.22E+01	--	8.19E+02	1.54E+00	--	1.33E+05	1.69E+05
Pu-241	3.80E+01	3.55E+05	2.34E+04	5.99E+02	1.22E+05	3.25E-04	5.80E+03	8.49E+01	2.09E+02	--	1.07E+04	1.09E+01	3.49E-02	1.53E+06	2.05E+06
Pu-242	6.87E-02	1.90E+02	5.03E-01	--	9.14E+00	2.45E-16	3.94E-01	1.42E-03	2.74E-03	--	4.02E+00	1.50E-04	4.50E-05	6.16E+01	2.65E+02
Pu-243	1.25E-09	--	1.23E-12	--	--	--	1.92E-06	--	--	--	1.91E-01	--	--	7.53E-03	1.98E-01
Pu-244	1.98E-05	2.27E-11	--	--	6.03E-06	5.36E-15	7.65E-12	--	--	--	7.69E-04	--	--	2.67E-14	7.94E-04
Pu-246	1.72E-09	--	--	--	--	--	--	--	--	--	2.02E-09	--	--	--	3.74E-09
Ra-223	1.43E-05	3.19E-07	2.94E-03	5.89E-06	1.46E+00	4.98E-18	1.11E-02	5.51E-11	4.08E-10	--	6.26E+00	2.78E-15	5.96E-14	6.94E-03	7.74E+00
Ra-224	2.78E-04	4.17E+03	5.26E-04	1.24E-01	1.03E+01	2.15E-07	7.95E-04	7.63E-18	6.55E-16	--	9.79E-02	3.70E-21	--	8.16E-02	4.18E+03
Ra-225	7.70E-05	7.29E-04	1.35E-05	1.25E-03	1.31E-01	5.13E-14	6.90E-04	2.90E-11	3.28E-12	5.48E-14	3.47E-02	2.88E-14	3.07E-23	3.03E-02	1.99E-01
Ra-226	1.90E-04	5.19E-03	6.92E-03	9.50E-04	7.27E-02	2.68E-08	6.70E-09	1.10E-11	3.63E-10	--	1.03E+00	3.16E-15	4.16E-14	1.21E-04	1.11E+00
Ra-228	1.14E-04	5.16E-03	1.53E-05	5.95E-02	8.22E-06	4.29E-07	1.94E-07	6.86E-17	1.15E-15	--	1.75E-04	4.31E-20	--	4.69E-04	6.54E-02
Rb-87	2.00E-10	--	--	--	--	--	--	--	--	--	--	--	--	--	2.00E-10
Rh-103m	--	--	--	--	--	--	--	--	--	--	2.16E+00	--	--	--	2.16E+00
Rh-106	4.58E-04	--	--	--	7.71E-05	--	--	2.49E-01	--	--	1.84E+03	--	--	1.59E-06	1.84E+03
Rn-219	1.43E-05	3.19E-07	2.94E-03	5.89E-06	1.46E+00	4.98E-18	1.11E-02	5.51E-11	4.08E-10	--	6.26E+00	2.78E-15	5.96E-14	6.94E-03	7.74E+00
Rn-220	2.78E-04	4.17E+03	5.26E-04	1.24E-01	1.03E+01	2.15E-07	7.95E-04	7.63E-18	6.55E-16	--	9.79E-02	3.70E-21	--	8.16E-02	4.18E+03
Rn-222	1.90E-04	5.19E-03	6.91E-03	9.50E-04	7.27E-02	2.68E-08	5.69E-09	1.10E-11	3.63E-10	--	1.03E+00	2.44E-15	3.09E-14	1.21E-04	1.11E+00
Ru-103	--	--	--	--	--	--	--	--	--	--	2.17E+00	--	--	--	2.17E+00
Ru-106	4.58E-04	--	--	--	7.71E-05	--	--	2.49E-01	--	--	1.84E+03	--	--	1.58E-06	1.84E+03
S-35	7.04E-08	--	--	--	--	--	--	--	--	--	--	--	--	--	7.04E-08
Sb-125	3.86E-04	3.54E-01	--	--	1.81E-05	--	4.58E-06	4.08E-02	--	--	1.01E+00	--	--	1.92E-03	1.41E+00
Sb-126	1.18E-06	1.14E-01	--	--	1.03E-06	--	--	--	--	--	2.82E-07	--	--	--	1.14E-01
Sb-126m	8.41E-06	8.13E-01	--	--	7.39E-06	--	--	--	--	--	--	--	--	--	8.13E-01
Se-79	2.72E-06	--	--	--	--	--	--	--	--	--	--	--	--	--	2.72E-06
Sm-147	9.15E-12	5.04E-10	--	--	--	--	--	--	--	--	5.98E-13	--	--	--	5.13E-10
Sm-148	1.49E-34	1.04E-30	8.20E-38	--	5.13E-35	--	1.96E-37	--	--	--	1.47E-30	1.18E-35	--	3.16E-35	2.51E-30
Sm-151	3.57E-04	2.18E+00	--	--	2.91E-06	--	--	--	--	--	1.46E+01	--	--	--	1.67E+01
Sn-113	--	--	--	--	--	--	--	--	--	--	--	3.36E-11	--	--	3.36E-11
Sn-121	--	--	--	--	9.41E-05	--	--	--	--	--	--	--	--	--	9.41E-05
Sn-121m	--	--	--	--	1.21E-04	--	--	--	--	--	--	--	--	--	1.21E-04
Sn-126	8.41E-06	8.13E-01	--	--	7.39E-06	--	--	--	--	--	--	--	--	--	8.13E-01

**Table 3-8. Total CH Radionuclide Activity (Ci) on a Site Basis Decayed through 2015**  
Continued

Radionuclide	ANL	Hanford	INL	KAPL- NFS	LANL	LBNL	LLNL	MFC	NNSS	NRD	ORNL	SNL	SPRU	SRS	Grand Total
Sr-85	8.80E-12	--	--	--	--	--	--	--	--	--	--	2.81E-14	--	--	<b>8.83E-12</b>
Sr-89	--	--	--	--	--	--	--	--	--	--	6.38E-02	--	--	--	<b>6.38E-02</b>
Sr-90	1.25E+00	9.50E+02	2.79E+00	--	3.17E+00	--	5.06E-01	4.36E+00	--	--	3.37E+02	7.92E-06	1.29E-01	8.89E-01	<b>1.30E+03</b>
Tc-99	1.37E-02	1.63E+00	--	3.49E+00	--	--	--	--	--	--	6.09E+01	--	1.46E-04	1.76E-05	<b>6.61E+01</b>
Te-123	--	--	--	--	--	--	--	--	--	--	--	6.97E-22	--	--	<b>6.97E-22</b>
Te-123m	--	--	--	--	--	--	--	--	--	--	--	5.58E-12	--	--	<b>5.58E-12</b>
Te-125m	9.43E-05	8.65E-02	--	--	4.41E-06	--	3.77E-07	7.42E-03	--	--	8.33E-02	--	--	4.66E-04	<b>1.78E-01</b>
Th-227	1.41E-05	3.15E-07	4.16E-03	5.81E-06	1.44E+00	4.91E-18	1.59E-02	5.43E-11	4.02E-10	--	8.44E+00	5.84E-15	1.44E-13	6.85E-03	<b>9.91E+00</b>
Th-228	2.78E-04	4.17E+03	5.90E-04	1.24E-01	1.20E+01	2.15E-07	8.06E-04	7.63E-18	6.55E-16	--	9.84E-02	3.70E-21	--	8.14E-02	<b>4.19E+03</b>
Th-229	7.70E-05	7.29E-04	1.96E-05	1.25E-03	1.31E-01	5.13E-14	8.50E-04	2.90E-11	3.28E-12	5.48E-14	3.76E-02	4.12E-14	1.14E-22	3.03E-02	<b>2.02E-01</b>
Th-230	3.94E-04	6.89E-02	1.37E-05	3.14E-01	2.29E-03	1.40E-12	1.54E-04	5.21E-08	3.30E-07	--	1.16E-03	1.32E-10	1.92E-09	6.26E-03	<b>3.93E-01</b>
Th-231	1.56E-04	5.46E-02	1.06E-01	3.84E-01	4.45E-02	2.86E-12	5.14E-03	1.68E-04	4.98E-05	--	4.44E-03	4.75E-06	1.31E-04	2.77E+00	<b>3.37E+00</b>
Th-232	2.96E-04	1.35E-02	1.28E-03	1.04E-01	6.86E-04	1.12E-06	1.62E-05	1.22E-15	3.42E-15	--	1.03E-03	1.10E-18	--	2.41E-03	<b>1.23E-01</b>
Th-234	7.39E-03	7.58E-01	6.55E+00	4.96E-02	1.93E-01	7.80E-10	9.45E-03	1.56E-04	2.48E-03	--	4.24E-02	1.13E-06	1.47E-03	5.11E-01	<b>8.12E+00</b>
Tl-206	4.31E-10	8.59E-10	3.53E-11	1.27E-10	2.90E-09	4.12E-15	8.71E-18	1.47E-19	2.45E-17	--	5.38E-07	1.73E-12	2.14E-23	4.88E-12	<b>5.43E-07</b>
Tl-207	1.43E-05	3.18E-07	2.93E-03	5.87E-06	1.46E+00	4.97E-18	1.11E-02	5.49E-11	4.07E-10	--	6.24E+00	2.77E-15	5.94E-14	6.92E-03	<b>7.72E+00</b>
Tl-208	1.00E-04	1.50E+03	1.89E-04	4.46E-02	3.71E+00	7.72E-08	2.86E-04	2.74E-18	2.35E-16	--	3.52E-02	1.33E-21	--	2.93E-02	<b>1.50E+03</b>
Tl-209	1.62E-06	1.53E-05	2.20E-07	2.62E-05	2.75E-03	1.08E-15	1.07E-05	6.08E-13	6.89E-14	1.15E-15	6.58E-04	4.75E-16	2.07E-25	6.36E-04	<b>4.10E-03</b>
Tm-171	4.46E-10	--	--	--	--	--	--	--	--	--	--	--	--	--	<b>4.46E-10</b>
U-232	1.24E-04	5.37E+03	1.28E-02	--	3.38E+02	--	2.70E-03	--	--	--	1.97E-01	--	--	8.85E-02	<b>5.71E+03</b>
U-233	1.70E-02	2.06E+00	1.52E+00	2.02E+00	4.17E+01	2.92E-10	2.54E+00	6.59E-07	6.90E-09	4.20E-10	3.75E+01	3.46E-09	4.95E-17	7.97E+00	<b>9.53E+01</b>
U-234	7.10E-03	1.87E+03	1.80E+00	2.02E+00	3.58E+01	7.55E-08	2.53E-02	6.89E-03	7.16E-03	--	8.61E-01	1.42E-04	2.09E-03	2.06E+02	<b>2.12E+03</b>
U-235	1.56E-04	5.46E-02	1.06E-01	3.84E-01	4.45E-02	2.86E-12	5.14E-03	1.68E-04	4.98E-05	--	4.44E-03	4.75E-06	1.31E-04	2.77E+00	<b>3.37E+00</b>
U-236	1.40E-05	3.64E-03	7.89E-05	3.84E-01	4.71E-03	2.41E-12	3.57E-06	3.18E-05	1.26E-05	--	9.91E-03	4.47E-08	--	6.25E-03	<b>4.09E-01</b>
U-237	9.08E-04	8.50E+00	5.52E-01	1.43E-02	2.85E+00	7.77E-09	1.36E-01	2.03E-03	5.00E-03	--	2.54E-01	2.60E-04	8.15E-07	3.59E+01	<b>4.82E+01</b>
U-238	7.39E-03	7.58E-01	6.93E+00	4.96E-02	2.84E-01	7.80E-10	1.45E-02	1.93E-04	2.48E-03	--	6.25E-02	1.73E-06	2.26E-03	7.48E-01	<b>8.86E+00</b>
U-240	1.98E-05	2.27E-11	--	--	6.02E-06	5.35E-15	7.64E-12	--	--	--	7.68E-04	--	--	2.67E-14	<b>7.93E-04</b>
Xe-131m	--	--	--	--	--	--	--	--	--	--	1.01E-07	--	--	--	<b>1.01E-07</b>
Y-89m	--	--	--	--	--	--	--	--	--	--	5.94E-06	--	--	--	<b>5.94E-06</b>
Y-90	1.25E+00	9.50E+02	2.79E+00	--	3.17E+00	--	5.06E-01	4.36E+00	--	--	3.37E+02	2.62E-05	1.29E-01	8.90E-01	<b>1.30E+03</b>
Zn-65	--	--	--	--	--	--	--	--	--	--	3.26E-04	--	--	--	<b>3.26E-04</b>
Zr-93	5.19E-06	--	--	--	--	--	--	--	--	--	--	--	--	--	<b>5.19E-06</b>
Zr-95	5.08E-13	--	--	--	--	--	--	--	--	--	1.57E+00	--	--	--	<b>1.57E+00</b>
<b>Grand Total</b>	<b>8.23E+02</b>	<b>6.10E+05</b>	<b>9.98E+04</b>	<b>1.92E+03</b>	<b>5.48E+05</b>	<b>2.75E-02</b>	<b>1.33E+04</b>	<b>4.07E+02</b>	<b>4.58E+02</b>	<b>3.33E+01</b>	<b>3.33E+04</b>	<b>7.56E+02</b>	<b>6.91E+00</b>	<b>2.47E+06</b>	<b>3.78E+06</b>

Data Source: CID Data Version D.15.00 (LANL-CO 2016a). 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 2015**

Radionuclide	ANL	BAPL	Hanford	INL	KAPL-S	LANL	MFC	ORNL	SNL	SPRU	SRS	Grand Total
Ac-225	5.71E-03	6.19E-05	4.37E-04	3.18E-03	7.99E-07	2.10E-16	1.20E-09	8.84E-01	2.72E-12	5.37E-23	1.15E-05	8.93E-01
Ac-227	2.87E-01	3.20E-11	8.46E-03	6.34E-07	5.77E-09	2.79E-09	3.92E-06	8.44E+00	7.17E-12	3.65E-12	4.47E-05	8.74E+00
Ac-228	3.54E-02	3.04E-15	3.03E-05	4.57E-05	1.08E-04	1.65E-17	2.22E-13	1.15E-02	3.51E-22	--	2.06E-15	4.71E-02
Ag-108	1.21E-03	--	--	--	--	--	2.32E-06	--	--	--	--	1.21E-03
Ag-108m	1.39E-02	--	--	--	--	--	2.67E-05	--	--	--	--	1.40E-02
Ag-109m	1.44E+00	--	--	--	--	--	--	6.31E-09	--	--	--	1.44E+00
Ag-110	8.91E-03	--	4.58E-09	--	6.57E-08	--	1.41E-11	1.52E-02	--	--	--	2.41E-02
Ag-110m	6.55E-01	--	3.37E-07	--	4.83E-06	--	1.03E-09	1.12E+00	--	--	--	1.77E+00
Am-241	2.14E+02	4.42E-02	4.54E+03	2.31E+02	5.49E-02	2.74E+00	3.81E+02	3.09E+02	1.35E+01	1.53E-01	1.20E+02	5.81E+03
Am-242	4.65E+00	--	1.20E+00	8.16E-10	--	--	1.20E-04	1.04E-02	--	--	3.29E-02	5.90E+00
Am-242m	4.67E+00	--	1.21E+00	8.20E-10	--	--	1.21E-04	1.05E-02	--	--	3.30E-02	5.93E+00
Am-243	2.72E+00	1.78E-04	4.02E+00	8.98E-10	2.49E-06	--	7.81E-03	7.11E+00	--	--	1.44E+00	1.53E+01
Am-245	1.47E-11	--	--	--	--	--	--	9.34E-05	--	--	1.41E-09	9.34E-05
Am-246	--	--	--	--	--	--	--	1.81E-08	--	--	--	1.81E-08
Ar-37	1.20E-03	--	--	--	--	--	--	--	--	--	--	1.20E-03
Ar-39	9.62E-03	--	--	--	--	--	2.02E-03	--	--	--	--	1.16E-02
Ar-42	2.65E-02	--	--	--	--	--	--	--	--	--	--	2.65E-02
At-217	5.71E-03	6.19E-05	4.37E-04	3.18E-03	7.99E-07	2.10E-16	1.20E-09	8.84E-01	2.72E-12	5.37E-23	1.15E-05	8.93E-01
Ba-133	2.39E+00	--	--	--	--	--	--	--	--	--	--	2.39E+00
Ba-137m	1.75E+03	8.43E+01	2.01E+05	3.07E+04	4.83E+01	1.45E+03	1.96E+04	2.60E+04	1.55E+02	1.83E+01	2.42E+01	2.81E+05
Ba-140	--	--	--	--	--	--	--	8.08E+01	--	--	--	8.08E+01
Bi-210	1.00E+00	6.11E-13	1.70E-02	9.93E-09	7.57E-08	3.46E-14	2.59E-10	1.34E+01	5.12E-16	8.90E-17	2.25E-09	1.45E+01
Bi-211	2.89E-01	3.20E-11	8.48E-03	6.34E-07	5.41E-09	2.79E-09	3.92E-06	4.85E+00	9.69E-13	4.94E-13	4.47E-05	5.14E+00
Bi-212	5.58E+00	1.43E-02	7.98E-04	7.22E-03	7.19E-05	1.84E-18	4.60E-05	1.83E+00	1.91E-24	--	1.27E-15	7.44E+00
Bi-213	5.70E-03	6.19E-05	4.37E-04	3.18E-03	7.98E-07	2.10E-16	1.20E-09	8.83E-01	2.72E-12	5.37E-23	1.15E-05	8.93E-01
Bi-214	4.50E-02	1.53E-11	6.98E-02	1.42E-07	1.03E-06	3.42E-12	6.83E-09	2.21E+01	9.79E-13	1.70E-13	2.39E-08	2.22E+01
Bk-249	1.01E-06	--	--	--	--	--	--	6.44E+00	--	--	9.76E-05	6.44E+00
Bk-250	--	--	--	--	--	--	--	1.01E-08	--	--	--	1.01E-08
C-14	--	2.48E-03	4.45E-04	5.18E+01	1.48E-01	--	9.61E-02	2.70E-03	--	2.73E-05	8.03E-04	5.21E+01
Ca-45	1.08E-01	--	--	--	--	--	--	--	--	--	--	1.08E-01
Cd-109	1.44E+00	--	--	--	--	--	--	6.31E-09	--	--	--	1.44E+00
Cd-113	1.11E-20	--	8.33E-19	--	--	--	5.97E-20	--	--	--	--	9.04E-19
Cd-113m	1.07E+00	--	1.41E+00	--	--	--	1.29E-01	--	--	--	--	2.60E+00
Cd-115m	5.91E-02	--	--	--	--	--	--	--	--	--	--	5.91E-02
Ce-139	1.12E+00	--	--	--	--	--	--	--	--	--	--	1.12E+00
Ce-141	1.97E-01	--	--	1.27E+00	--	--	6.15E-14	4.02E+03	--	--	--	4.02E+03
Ce-144	5.56E+01	--	2.85E-04	1.36E+04	--	1.68E+00	2.72E+02	1.94E+04	--	--	1.32E-05	3.33E+04
Cf-249	7.21E-01	--	--	--	1.88E-13	--	--	9.72E-01	--	--	1.28E-03	1.69E+00
Cf-250	3.89E-02	--	--	--	--	--	--	1.51E+01	--	--	2.20E-05	1.51E+01
Cf-251	8.73E-09	--	--	--	2.38E-15	--	--	2.35E-01	--	--	8.28E-07	2.35E-01
Cf-252	1.00E-03	--	--	--	6.38E-17	--	--	1.04E+02	--	--	1.49E-02	1.04E+02
Cm-242	3.80E+00	--	9.97E-01	6.75E-10	8.28E-07	--	9.97E-05	1.88E+02	--	--	2.72E-02	1.93E+02
Cm-243	1.86E+00	--	2.66E+01	--	2.52E-03	--	--	1.78E-01	--	--	2.59E-03	2.87E+01
Cm-244	7.20E+01	--	6.74E+02	2.25E+02	8.27E-03	--	1.67E+00	7.24E+03	--	--	1.14E+02	8.32E+03
Cm-245	1.85E-03	--	8.82E-02	6.60E-02	2.30E-08	--	--	7.89E-01	--	--	1.78E-02	9.63E-01
Cm-246	5.71E-07	--	3.94E-02	1.34E-16	3.00E-09	--	--	5.11E+01	--	--	2.38E-02	5.12E+01



**Table 3-9. Total RH Radionuclide Activity (Ci) on a Site Basis Decayed through 2015**  
Continued

Radionuclide	ANL	BAPL	Hanford	INL	KAPL-S	LANL	MFC	ORNL	SNL	SPRU	SRS	Grand Total
Cm-247	6.76E-10	--	1.24E-10	--	7.07E-15	--	--	5.71E-05	--	--	4.49E-08	5.71E-05
Cm-248	2.01E-10	--	1.88E-06	--	1.40E-14	--	--	8.60E-02	--	--	8.56E-06	8.60E-02
Cm-250	--	--	--	--	--	--	--	7.24E-08	--	--	--	7.24E-08
Co-58	4.38E-01	--	--	2.73E+02	--	--	--	--	--	--	--	2.73E+02
Co-60	4.74E+01	8.15E-01	8.65E+01	3.17E+03	1.77E+00	3.01E-01	2.73E+02	1.15E+02	--	--	5.21E-11	3.70E+03
Cr-51	3.52E-02	--	--	4.09E-03	--	--	--	--	--	--	--	3.93E-02
Cs-134	3.56E+01	4.64E-02	3.07E+02	4.57E+02	--	--	2.33E+02	1.00E+03	--	--	5.74E-02	2.03E+03
Cs-135	9.06E-08	--	6.32E-04	1.92E-03	1.90E-05	--	5.33E-03	--	--	--	--	7.90E-03
Cs-137	1.86E+03	8.93E+01	2.13E+05	3.25E+04	5.12E+01	1.54E+03	2.07E+04	2.75E+04	1.64E+02	1.94E+01	2.56E+01	2.97E+05
Dy-159	1.27E-01	--	--	--	--	--	--	--	--	--	--	1.27E-01
Es-254	--	--	--	--	--	--	--	1.09E-15	--	--	--	1.09E-15
Eu-149	8.02E-02	--	--	--	--	--	--	--	--	--	--	8.02E-02
Eu-152	1.03E+00	8.12E+00	2.02E+00	1.53E-01	--	--	2.83E-02	2.48E+01	--	--	--	3.62E+01
Eu-154	1.38E+03	3.32E+00	6.48E+02	4.14E+00	4.53E-02	7.35E-02	3.36E+02	6.18E+02	--	--	5.11E-01	2.99E+03
Eu-155	5.30E+00	7.47E-02	3.36E+02	4.57E+00	--	4.73E-01	1.22E+02	1.56E+03	--	--	8.58E-03	2.03E+03
Fe-55	7.39E+01	4.20E-02	1.86E-02	1.62E+02	6.44E+00	--	5.45E+01	2.12E+03	--	--	--	2.42E+03
Fe-59	1.94E-02	--	--	2.73E-02	--	--	--	--	--	--	--	4.66E-02
Fr-221	5.71E-03	6.19E-05	4.37E-04	3.18E-03	7.99E-07	2.10E-16	1.20E-09	8.84E-01	2.72E-12	5.37E-23	1.15E-05	8.93E-01
Fr-223	3.97E-03	4.42E-13	1.17E-04	8.75E-09	7.97E-11	3.86E-11	5.40E-08	1.17E-01	9.89E-14	5.04E-14	6.17E-07	1.21E-01
Gd-152	1.84E-16	6.47E-14	2.49E-14	5.79E-16	--	--	2.25E-16	2.91E-12	--	--	--	3.00E-12
Gd-153	2.91E-01	--	2.96E-09	--	--	--	--	--	--	--	--	2.91E-01
H-3	1.85E+01	2.16E-01	8.03E+02	1.06E+02	7.26E-02	--	6.12E-01	--	--	--	6.12E-02	9.29E+02
Hf-175	4.00E-02	--	--	--	--	--	--	--	--	--	--	4.00E-02
Hf-181	1.31E-03	--	--	--	--	--	--	--	--	--	--	1.31E-03
I-125	1.89E-01	--	--	--	--	--	--	--	--	--	--	1.89E-01
I-129	5.32E-07	3.12E-05	2.42E-03	2.46E-05	1.51E-05	--	3.09E-01	2.71E-06	--	--	--	3.12E-01
In-113m	1.69E-01	--	--	--	--	--	--	--	--	--	--	1.69E-01
In-114	1.35E-02	--	--	--	--	--	--	--	--	--	--	1.35E-02
In-114m	1.41E-02	--	--	--	--	--	--	--	--	--	--	1.41E-02
In-115	1.25E-17	--	--	--	--	--	--	--	--	--	--	1.25E-17
In-115m	6.53E-06	--	--	--	--	--	--	--	--	--	--	6.53E-06
Ir-194	1.38E-02	--	--	--	--	--	--	--	--	--	--	1.38E-02
K-42	2.65E-02	--	--	--	--	--	--	--	--	--	--	2.65E-02
Kr-85	5.01E+01	3.71E+00	3.70E+02	8.59E+00	8.76E-01	5.85E+02	7.42E+00	--	--	--	8.03E-01	1.03E+03
La-140	--	--	--	--	--	--	--	9.30E+01	--	--	--	9.30E+01
Lu-177	4.13E-04	--	--	--	--	--	--	--	--	--	--	4.13E-04
Lu-177m	1.94E-03	--	--	--	--	--	--	--	--	--	--	1.94E-03
Mn-54	1.00E+01	--	1.88E+00	1.98E+03	--	--	3.90E+00	--	--	--	--	1.99E+03
Mo-93	--	--	1.25E-04	3.65E-01	--	--	1.60E-01	--	--	--	--	5.25E-01
Na-22	3.83E-02	--	4.62E-05	--	--	--	--	3.21E-09	--	--	--	3.84E-02
Nb-91	1.57E-02	--	--	--	--	--	--	--	--	--	--	1.57E-02
Nb-93m	5.37E-01	3.67E-03	3.92E-04	1.62E-01	1.31E-05	--	5.30E-02	--	--	--	--	7.56E-01
Nb-94	--	--	8.46E-02	7.99E-02	4.62E-02	--	1.14E+00	--	--	--	--	1.35E+00
Nb-95	1.29E+01	--	8.49E-10	7.20E-01	--	--	4.73E-14	3.66E+03	--	--	--	3.68E+03
Nb-95m	7.14E-02	--	4.53E-12	2.95E-04	--	--	2.52E-16	6.98E+01	--	--	--	6.99E+01
Nd-144	1.93E-15	5.61E-45	1.74E-14	1.51E-12	--	8.97E-16	6.13E-13	6.73E-13	--	--	3.66E-16	2.82E-12
Ni-59	1.27E-02	1.62E-01	8.45E-04	5.15E+02	8.91E-02	--	1.14E+00	--	--	--	2.88E-10	5.17E+02
Ni-63	3.05E+01	1.29E+01	2.96E-02	9.71E+01	1.22E+01	--	1.85E+02	3.07E+02	--	--	--	6.45E+02

**Table 3-9. Total RH Radionuclide Activity (Ci) on a Site Basis Decayed through 2015**  
Continued

Radionuclide	ANL	BAPL	Hanford	INL	KAPL-S	LANL	MFC	ORNL	SNL	SPRU	SRS	Grand Total
Np-235	1.44E+00	--	--	--	--	--	--	--	--	--	--	1.44E+00
Np-237	2.56E-03	2.55E-04	2.79E-01	5.39E-03	8.71E-05	1.68E-06	3.37E-01	3.81E+00	4.38E-07	4.94E-09	2.48E+00	6.90E+00
Np-238	2.10E-02	--	5.44E-03	3.69E-12	--	--	5.43E-07	4.70E-05	--	--	1.49E-04	2.67E-02
Np-239	2.72E+00	1.78E-04	4.02E+00	8.98E-10	2.49E-06	--	7.81E-03	7.11E+00	--	--	1.44E+00	1.53E+01
Np-240	9.18E-13	--	2.79E-09	--	9.71E-17	--	--	9.38E-09	--	--	8.39E-16	1.22E-08
Np-240m	7.65E-10	--	2.32E-06	--	8.09E-14	--	--	7.82E-06	--	--	6.99E-13	1.01E-05
Os-185	1.81E-03	--	--	--	--	--	--	--	--	--	--	1.81E-03
Os-194	1.38E-02	--	--	--	--	--	--	--	--	--	--	1.38E-02
Pa-231	1.74E-08	5.24E-10	2.26E-05	6.87E-06	4.92E-08	1.75E-07	3.37E-07	7.22E-03	4.51E-09	2.30E-09	3.11E-04	7.56E-03
Pa-233	8.48E-03	2.55E-04	2.79E-01	5.39E-03	8.66E-05	1.68E-06	3.37E-01	2.32E+00	1.54E-07	1.74E-09	2.48E+00	5.43E+00
Pa-234	7.86E-05	3.85E-11	1.47E-03	1.71E-03	6.04E-11	5.30E-08	1.45E-05	3.33E-05	6.02E-07	1.09E-05	9.60E-05	3.42E-03
Pa-234m	6.04E-02	2.96E-08	1.13E+00	1.32E+00	4.65E-08	4.07E-05	1.11E-02	2.56E-02	4.63E-04	8.36E-03	7.39E-02	2.63E+00
Pb-209	5.70E-03	6.19E-05	4.37E-04	3.18E-03	7.98E-07	2.10E-16	1.20E-09	8.83E-01	2.72E-12	5.37E-23	1.15E-05	8.93E-01
Pb-210	1.00E+00	6.11E-13	1.70E-02	9.93E-09	7.57E-08	3.46E-14	2.59E-10	1.34E+01	9.04E-16	1.57E-16	2.25E-09	1.45E+01
Pb-211	2.89E-01	3.20E-11	8.48E-03	6.34E-07	5.41E-09	2.79E-09	3.92E-06	4.85E+00	9.69E-13	4.94E-13	4.47E-05	5.14E+00
Pb-212	5.58E+00	1.43E-02	7.98E-04	7.22E-03	7.19E-05	1.84E-18	4.60E-05	1.83E+00	1.91E-24	--	1.27E-15	7.44E+00
Pb-214	4.50E-02	1.53E-11	6.98E-02	1.42E-07	1.03E-06	3.42E-12	6.83E-09	2.21E+01	9.79E-13	1.70E-13	2.39E-08	2.22E+01
Pd-107	2.76E-06	--	8.64E-05	--	7.97E-07	--	1.43E-04	--	--	--	--	2.33E-04
Pm-145	6.33E-01	--	--	--	--	--	--	--	--	--	--	6.33E-01
Pm-146	8.32E-01	--	--	--	--	--	3.49E-03	--	--	--	--	8.35E-01
Pm-147	8.71E+01	4.21E-01	1.74E+01	4.13E+01	5.50E-02	3.11E-04	5.24E+00	1.25E-02	--	--	1.17E-01	1.52E+02
Pm-148	2.16E-04	--	--	--	--	--	--	--	--	--	--	2.16E-04
Pm-148m	4.15E-03	--	--	--	--	--	--	--	--	--	--	4.15E-03
Po-210	1.75E+00	6.11E-13	1.70E-02	9.93E-09	7.57E-08	1.12E-14	2.55E-10	1.34E+01	1.83E-17	3.17E-18	2.25E-09	1.52E+01
Po-211	7.95E-04	8.80E-14	2.33E-05	1.74E-09	1.49E-11	7.69E-12	1.08E-08	1.33E-02	2.66E-15	1.36E-15	1.23E-07	1.41E-02
Po-212	3.58E+00	9.19E-03	5.11E-04	4.62E-03	4.61E-05	1.18E-18	2.95E-05	1.18E+00	1.22E-24	--	8.11E-16	4.77E+00
Po-213	5.58E-03	6.06E-05	4.27E-04	3.12E-03	7.82E-07	2.05E-16	1.17E-09	8.65E-01	2.66E-12	5.26E-23	1.13E-05	8.74E-01
Po-214	4.50E-02	1.53E-11	6.97E-02	1.42E-07	1.03E-06	3.42E-12	6.83E-09	2.21E+01	9.79E-13	1.70E-13	2.39E-08	2.22E+01
Po-215	2.89E-01	3.20E-11	8.48E-03	6.34E-07	5.41E-09	2.79E-09	3.92E-06	4.85E+00	9.69E-13	4.94E-13	4.47E-05	5.14E+00
Po-216	5.58E+00	1.43E-02	7.98E-04	7.22E-03	7.19E-05	1.84E-18	4.60E-05	1.83E+00	1.91E-24	--	1.27E-15	7.44E+00
Po-218	4.50E-02	1.53E-11	6.98E-02	1.42E-07	1.03E-06	3.42E-12	6.83E-09	2.21E+01	9.79E-13	1.70E-13	2.39E-08	2.22E+01
Pr-144	5.56E+01	--	2.85E-04	1.36E+04	--	1.68E+00	2.72E+02	1.94E+04	--	--	1.32E-05	3.33E+04
Pr-144m	7.78E-01	--	3.98E-06	1.90E+02	--	2.35E-02	3.81E+00	2.72E+02	--	--	1.85E-07	4.66E+02
Pu-236	6.19E-01	--	3.56E-06	1.56E-03	--	--	1.35E-06	--	--	--	--	6.21E-01
Pu-238	2.39E+02	2.01E+00	1.79E+03	7.00E+02	1.23E+00	1.56E+00	6.97E+01	1.50E+04	7.09E+00	1.44E-02	4.36E+03	2.22E+04
Pu-239	1.11E+02	1.62E-03	1.82E+03	5.61E+02	1.31E-02	9.26E+01	2.18E+02	4.43E+01	1.88E+01	1.10E+00	1.13E+01	2.88E+03
Pu-240	6.61E+01	--	5.55E+03	2.84E+02	1.30E-02	2.51E+00	1.62E+01	5.82E+01	1.20E+01	--	6.18E+00	5.99E+03
Pu-241	1.01E+03	2.98E-01	1.55E+04	2.74E+02	2.64E-01	8.49E+01	2.95E+02	6.25E+02	1.63E+02	1.76E-01	5.53E+03	2.35E+04
Pu-242	5.11E-02	2.93E-05	6.44E+03	7.91E-02	3.94E-06	1.52E-03	4.06E-02	3.05E-01	5.63E-03	7.07E-03	5.21E-01	6.44E+03
Pu-243	6.76E-10	--	1.24E-10	--	7.07E-15	--	--	5.71E-05	--	--	4.49E-08	5.71E-05
Pu-244	7.66E-10	--	2.33E-06	--	8.10E-14	--	--	7.83E-06	--	--	7.00E-13	1.02E-05
Pu-246	--	--	--	--	--	--	--	1.81E-08	--	--	--	1.81E-08
Ra-223	2.89E-01	3.20E-11	8.48E-03	6.34E-07	5.41E-09	2.79E-09	3.92E-06	4.85E+00	9.69E-13	4.94E-13	4.47E-05	5.14E+00
Ra-224	5.58E+00	1.43E-02	7.98E-04	7.22E-03	7.19E-05	1.84E-18	4.60E-05	1.83E+00	1.91E-24	--	1.27E-15	7.44E+00
Ra-225	5.71E-03	6.19E-05	4.37E-04	3.18E-03	7.99E-07	2.10E-16	1.20E-09	9.05E-01	5.04E-12	1.68E-22	1.15E-05	9.14E-01
Ra-226	4.51E-02	1.53E-11	6.98E-02	1.42E-07	1.03E-06	3.42E-12	6.83E-09	2.21E+01	1.32E-12	2.29E-13	2.39E-08	2.22E+01
Ra-228	3.54E-02	3.04E-15	3.03E-05	4.57E-05	1.08E-04	1.65E-17	2.22E-13	1.15E-02	3.51E-22	--	2.06E-15	4.71E-02
Re-188	2.25E-03	--	--	--	--	--	--	--	--	--	--	2.25E-03

**Table 3-9. Total RH Radionuclide Activity (Ci) on a Site Basis Decayed through 2015**  
Continued

Radionuclide	ANL	BAPL	Hanford	INL	KAPL-S	LANL	MFC	ORNL	SNL	SPRU	SRS	Grand Total
Rh-102	7.73E-01	--	--	--	--	--	--	--	--	--	--	7.73E-01
Rh-103m	7.10E-01	--	--	--	--	--	--	7.27E+03	--	--	--	7.28E+03
Rh-106	6.27E+01	--	9.71E-03	1.48E+01	2.78E-03	9.00E+00	2.90E+02	2.75E+04	--	--	9.11E-05	2.79E+04
Rn-219	2.89E-01	3.20E-11	8.48E-03	6.34E-07	5.41E-09	2.79E-09	3.92E-06	4.85E+00	9.69E-13	4.94E-13	4.47E-05	5.14E+00
Rn-220	5.58E+00	1.43E-02	7.98E-04	7.22E-03	7.19E-05	1.84E-18	4.60E-05	1.83E+00	1.91E-24	--	1.27E-15	7.44E+00
Rn-222	4.50E-02	1.53E-11	6.98E-02	1.42E-07	1.03E-06	3.42E-12	6.83E-09	2.21E+01	9.79E-13	1.70E-13	2.39E-08	2.22E+01
Ru-103	7.11E-01	--	--	--	--	--	--	7.29E+03	--	--	--	7.29E+03
Ru-106	6.27E+01	--	9.71E-03	1.48E+01	2.78E-03	9.00E+00	2.90E+02	2.75E+04	--	--	9.11E-05	2.79E+04
S-35	1.31E-02	--	--	--	--	--	--	--	--	--	--	1.31E-02
Sb-124	1.95E-01	--	--	1.73E+02	--	--	6.65E-07	--	--	--	--	1.73E+02
Sb-125	6.45E+01	8.37E-03	9.41E+01	2.09E+01	2.34E-04	3.81E-01	1.47E+01	1.41E+03	--	--	--	1.60E+03
Sb-126	1.07E-09	--	1.16E-01	--	2.13E-06	7.90E-03	1.06E-03	--	--	--	--	1.25E-01
Sb-126m	4.74E-05	--	8.28E-01	--	1.59E-05	5.64E-02	7.59E-03	--	--	--	--	8.92E-01
Sc-46	9.61E-02	--	--	--	--	--	--	--	--	--	--	9.61E-02
Se-75	8.97E-02	--	--	5.70E-02	--	--	--	--	--	--	--	1.47E-01
Se-79	6.38E-06	--	1.38E-01	--	4.88E-06	--	1.59E-03	--	--	--	1.07E-02	1.50E-01
Sm-145	3.25E-01	--	--	--	--	--	--	--	--	--	--	3.25E-01
Sm-146	1.91E-10	--	--	--	--	--	4.14E-11	--	--	--	--	2.32E-10
Sm-147	5.77E-11	1.95E-11	2.16E-09	5.26E-09	3.64E-12	2.33E-15	2.44E-10	8.54E-10	--	--	4.99E-11	8.65E-09
Sm-148	4.97E-20	1.17E-29	6.82E-30	5.16E-32	--	--	4.08E-32	4.77E-27	--	--	--	4.97E-20
Sm-151	2.06E+00	2.52E-01	3.35E+01	5.89E+00	5.39E-02	2.29E-02	1.04E+01	--	--	--	2.89E-01	5.25E+01
Sn-113	1.69E-01	--	--	--	--	--	--	--	--	--	--	1.69E-01
Sn-119m	1.09E+00	--	2.69E-08	--	--	--	--	--	--	--	--	1.09E+00
Sn-121	4.31E-01	--	2.92E-04	--	1.08E-04	7.55E-01	7.95E-04	--	--	--	--	1.19E+00
Sn-121m	5.55E-01	--	3.76E-04	--	1.39E-04	9.73E-01	1.02E-03	--	--	--	--	1.53E+00
Sn-123	1.02E+00	--	--	--	--	--	--	--	--	--	--	1.02E+00
Sn-126	4.74E-05	--	8.28E-01	--	1.59E-05	5.64E-02	7.59E-03	--	--	--	--	8.92E-01
Sr-85	5.41E-02	--	--	--	--	--	--	--	--	--	--	5.41E-02
Sr-89	1.65E+00	--	--	--	--	--	--	1.97E-01	--	--	--	1.84E+00
Sr-90	1.30E+03	8.86E+01	1.34E+05	4.32E+04	4.57E+01	1.08E+03	7.86E+03	1.21E+04	1.23E+02	2.95E+00	1.90E+01	2.00E+05
Ta-182	3.14E+02	--	--	1.07E-19	--	--	--	--	--	--	--	3.14E+02
Tb-157	4.30E-02	--	--	--	--	--	--	--	--	--	--	4.30E-02
Tb-160	2.57E-02	--	--	--	--	--	--	--	--	--	--	2.57E-02
Tc-97	3.43E-09	--	--	--	--	--	--	--	--	--	--	3.43E-09
Tc-97m	1.11E-01	--	--	--	--	--	--	--	--	--	--	1.11E-01
Tc-99	6.74E-03	2.10E-02	7.23E+00	3.62E-02	1.43E-02	--	3.25E+02	3.43E-02	--	3.51E-03	1.12E-03	3.32E+02
Te-121	1.94E-01	--	--	--	--	--	--	--	--	--	--	1.94E-01
Te-121m	1.96E-01	--	--	--	--	--	--	--	--	--	--	1.96E-01
Te-123	1.41E-15	--	--	--	--	--	--	--	--	--	--	1.41E-15
Te-123m	2.27E-01	--	--	--	--	--	--	--	--	--	--	2.27E-01
Te-125m	1.39E+01	2.04E-03	2.30E+01	2.33E+00	5.71E-05	9.15E-02	3.55E+00	1.16E+02	--	--	2.58E-09	1.59E+02
Te-127	2.21E+00	--	--	--	--	--	--	--	--	--	--	2.21E+00
Te-127m	2.25E+00	--	--	--	--	--	--	--	--	--	--	2.25E+00
Te-129	2.21E-02	--	--	--	--	--	--	--	--	--	--	2.21E-02
Te-129m	3.45E-02	--	--	--	--	--	--	--	--	--	--	3.45E-02
Th-227	2.84E-01	3.16E-11	8.37E-03	6.25E-07	5.51E-09	2.76E-09	3.87E-06	6.53E+00	2.35E-12	1.20E-12	4.41E-05	6.82E+00
Th-228	5.56E+00	1.43E-02	7.94E-04	7.22E-03	7.19E-05	1.84E-18	4.58E-05	1.83E+00	3.13E-24	--	1.27E-15	7.42E+00
Th-229	5.71E-03	6.19E-05	4.37E-04	3.18E-03	7.99E-07	2.10E-16	1.20E-09	9.48E-01	9.68E-12	6.20E-22	1.15E-05	9.57E-01

**Table 3-9. Total RH Radionuclide Activity (Ci) on a Site Basis Decayed through 2015**  
Continued

Radionuclide	ANL	BAPL	Hanford	INL	KAPL-S	LANL	MFC	ORNL	SNL	SPRU	SRS	Grand Total
Th-230	1.95E-05	1.78E-08	1.20E-04	9.34E-05	4.75E-04	1.58E-08	9.58E-06	1.55E-01	6.08E-08	1.06E-08	1.18E-05	<b>1.55E-01</b>
Th-231	8.20E-03	6.18E-06	5.23E-02	1.40E-01	4.25E-04	8.25E-03	9.71E-03	1.05E-01	2.13E-03	1.09E-03	1.47E+00	<b>1.80E+00</b>
Th-232	2.25E-10	1.47E-14	6.83E-05	1.65E-04	2.39E-04	2.86E-16	1.28E-12	1.42E-02	8.76E-20	--	5.70E-15	<b>1.47E-02</b>
Th-234	6.04E-02	2.96E-08	1.13E+00	1.32E+00	4.65E-08	4.07E-05	1.11E-02	2.56E-02	4.63E-04	8.36E-03	7.39E-02	<b>2.63E+00</b>
Tl-206	1.32E-06	8.06E-19	2.24E-08	1.31E-14	9.99E-14	4.57E-20	3.42E-16	1.78E-05	6.76E-22	1.17E-22	2.97E-15	<b>1.91E-05</b>
Tl-207	2.88E-01	3.19E-11	8.46E-03	6.32E-07	5.40E-09	2.79E-09	3.91E-06	4.83E+00	9.66E-13	4.92E-13	4.46E-05	<b>5.13E+00</b>
Tl-208	2.01E+00	5.16E-03	2.87E-04	2.59E-03	2.59E-05	6.62E-19	1.65E-05	6.59E-01	6.87E-25	--	4.55E-16	<b>2.67E+00</b>
Tl-209	1.20E-04	1.30E-06	9.17E-06	6.68E-05	1.68E-08	4.41E-18	2.51E-11	1.86E-02	5.70E-14	1.13E-24	2.42E-07	<b>1.88E-02</b>
Tm-170	3.42E-02	--	--	--	--	--	--	--	--	--	--	<b>3.42E-02</b>
Tm-171	4.97E-01	--	--	--	--	--	--	--	--	--	--	<b>4.97E-01</b>
U-232	1.67E+00	1.40E-02	2.30E-04	7.11E-03	1.59E-06	--	1.05E-06	1.78E+00	--	--	--	<b>3.48E+00</b>
U-233	1.52E-04	1.61E-02	6.40E-01	5.22E+00	1.82E-03	5.40E-12	6.17E-06	1.01E+04	1.10E-06	2.70E-16	1.31E-02	<b>1.01E+04</b>
U-234	4.58E-02	4.96E-04	1.60E+00	1.47E+00	2.41E-03	1.72E-03	4.45E-01	1.67E+05	6.61E-02	1.15E-02	1.77E-01	<b>1.67E+05</b>
U-235	8.20E-03	6.18E-06	5.23E-02	1.40E-01	4.25E-04	8.25E-03	9.71E-03	1.05E-01	2.13E-03	1.09E-03	1.47E+00	<b>1.80E+00</b>
U-236	3.02E-06	7.45E-05	1.75E-01	7.90E-05	5.30E-04	5.83E-06	1.09E-02	1.40E+00	3.55E-08	--	2.73E-05	<b>1.59E+00</b>
U-237	2.37E-02	7.12E-06	3.71E-01	6.55E-03	6.31E-06	2.03E-03	7.06E-03	1.48E-02	3.81E-03	4.12E-06	1.32E-01	<b>5.61E-01</b>
U-238	6.16E-02	2.96E-08	1.13E+00	1.33E+00	4.65E-08	4.07E-05	1.11E-02	2.58E-02	7.12E-04	1.29E-02	7.39E-02	<b>2.65E+00</b>
U-240	7.65E-10	--	2.32E-06	--	8.09E-14	--	--	7.82E-06	--	--	6.99E-13	<b>1.01E-05</b>
V-49	4.07E+00	--	--	--	--	--	--	--	--	--	--	<b>4.07E+00</b>
W-181	1.03E-02	--	--	--	--	--	--	--	--	--	--	<b>1.03E-02</b>
W-185	1.10E-02	--	--	--	--	--	--	--	--	--	--	<b>1.10E-02</b>
W-188	2.23E-03	--	--	--	--	--	--	--	--	--	--	<b>2.23E-03</b>
Xe-127	1.11E-02	--	--	--	--	--	--	--	--	--	--	<b>1.11E-02</b>
Y-89m	1.53E-04	--	--	--	--	--	--	1.83E-05	--	--	--	<b>1.72E-04</b>
Y-90	1.30E+03	8.86E+01	1.34E+05	4.32E+04	4.57E+01	1.08E+03	7.86E+03	1.21E+04	1.23E+02	2.95E+00	1.90E+01	<b>2.00E+05</b>
Y-91	3.66E+00	--	--	--	--	--	--	--	--	--	--	<b>3.66E+00</b>
Zn-65	8.09E-02	--	1.32E-04	--	--	--	--	1.69E-16	--	--	--	<b>8.11E-02</b>
Zr-93	5.21E-05	4.90E-03	6.73E-04	--	1.22E-04	--	6.64E-03	--	--	--	--	<b>1.24E-02</b>
Zr-95	6.06E+00	--	3.85E-10	2.51E-02	--	--	2.15E-14	5.94E+03	--	--	--	<b>5.94E+03</b>
<b>Grand Total</b>	<b>1.04E+04</b>	<b>3.83E+02</b>	<b>7.22E+05</b>	<b>1.86E+05</b>	<b>2.14E+02</b>	<b>5.95E+03</b>	<b>5.97E+04</b>	<b>4.08E+05</b>	<b>7.78E+02</b>	<b>4.51E+01</b>	<b>1.02E+04</b>	<b>1.40E+06</b>

Data Source: CID Data Version D.15.00 (LANL-CO 2016a). 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 2015**

<b>TRU Waste Generator Site</b>	<b>CH Activity (Ci)</b>	<b>RH Activity (Ci)</b>	<b>Total Activity (Ci)</b>
Argonne National Laboratory	8.23E+02	1.04E+04	<b>1.12E+04</b>
Bettis Atomic Power Laboratory	--	3.83E+02	<b>3.83E+02</b>
Hanford (Richland) Site	6.10E+05	7.22E+05	<b>1.33E+06</b>
Idaho National Laboratory	9.98E+04	1.86E+05	<b>2.86E+05</b>
Knolls Atomic Power Laboratory - Nuclear Fuel Services	1.92E+03	--	<b>1.92E+03</b>
Knolls Atomic Power Laboratory - Schenectady	--	2.14E+02	<b>2.14E+02</b>
Lawrence Berkeley National Laboratory	2.75E-02	--	<b>2.75E-02</b>
Lawrence Livermore National Laboratory	1.33E+04	--	<b>1.33E+04</b>
Los Alamos National Laboratory	5.48E+05	5.95E+03	<b>5.54E+05</b>
Material and Fuels Complex	4.07E+02	5.97E+04	<b>6.01E+04</b>
Nevada National Security Site	4.58E+02	--	<b>4.58E+02</b>
Nuclear Radiation Development Site	3.33E+01	--	<b>3.33E+01</b>
Oak Ridge National Laboratory	3.33E+04	4.08E+05	<b>4.42E+05</b>
Sandia National Laboratories	7.56E+02	7.78E+02	<b>1.53E+03</b>
Savannah River Site	2.47E+06	1.02E+04	<b>2.48E+06</b>
Separations Process Research Unit	6.91E+00	4.51E+01	<b>5.20E+01</b>
<b>Grand Total</b>	<b>3.78E+06</b>	<b>1.40E+06</b>	<b>5.18E+06</b>

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

### 3.3.2 Radionuclide Changes

Radionuclide activity estimates improve as additional waste is characterized. Table 3-11 presents the changes in the total activity between the ATWIR-2015 and this report. For comparison, the activities reported in this table were decay-corrected to the common calendar year of 2033.

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

As shown in Table 3-11, the total anticipated CH- and RH-TRU waste activity reported by the sites has increased by 1.82 million Ci. The majority of this increase, 1.39 million Ci, is attributed to the addition of a projected waste stream, SR-KAC-PuOx, which represents the K-Area packaging of the projected 6 metric tons of Pu oxide.

There was a negligible decrease of 3,270 Ci for the activity emplaced at the WIPP and temporarily stored at WCS. This is a byproduct of an inventory methodology change for this report. Previously, the “emplaced” waste streams in the CID represented the WIPP above-ground and underground wastes, and WCS waste combined. To report the WCS activity separately from the WIPP emplaced activity, a new query was obtained from the WDS administrators which segregated the WCS activities. These activities were decay-corrected as a

combined set, and documented in analysis report INV-SAR-36, *Calculations for WCS Inventory - 2014* (Van Soest 2015). The resulting activity was then deducted from the total of the CID “emplaced” waste streams for publication in the ATWIR-2015.

This year, the WCS and WIPP above-ground wastes were segregated into separate waste streams from their WIPP underground counterparts, and imported to the CID for normal inventory processing. This task was documented in INV-SAR-39, *WDS Data Transformation for Insertion in the 2015 Inventory CID Import Template* (Van Soest 2016). This change resulted in the assignment of earlier assay years used as a basis for decay for each affected WIPP underground waste stream. Following the decay-correction through CY 2033, described in section 2.2.3, the WCS waste stream activities were tallied separately from the WIPP above-ground and underground waste stream activities. The earlier basis assay years for the underground waste streams necessitated a longer decay term to CY 2033, thus decreasing the resulting activity.

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

TRU Waste Generator Site	ATWIR-2015 Total (Ci)	ATWIR-2016 Total (Ci)	Net Change (Ci)
Hanford (Richland) Site	8.06E+05	8.43E+05	3.69E+04
Idaho National Laboratory	1.59E+05	1.84E+05	2.56E+04
Los Alamos National Laboratory	2.60E+05	4.12E+05	1.52E+05
Oak Ridge National Laboratory	1.93E+04	2.74E+05	2.54E+05
Savannah River Site	2.79E+05	1.70E+06	1.42E+06
Small Quantity Sites	1.31E+05	5.75E+04	-7.35E+04
<b>Anticipated Total</b>	<b>1.65E+06</b>	<b>3.47E+06</b>	<b>1.82E+06</b>
WIPP (Emplaced)	1.72E+06	1.71E+06	-3.27E+03
WCS (Temporary Storage)	8.39E+03	8.39E+03	-2.08E-02
<b>Emplaced/Temporary Storage Total</b>	<b>1.73E+06</b>	<b>1.72E+06</b>	<b>-3.27E+03</b>
<b>Grand Total</b>	<b>3.38E+06</b>	<b>5.19E+06</b>	<b>1.81E+06</b>

Data Source: CID Data Versions D.14.00 (LANL-CO 2015a) and D.15.00 (LANL-CO 2016a); INV-SAR-36 (Van Soest 2015b)

#### 4.0 POTENTIAL TRU WASTE

As described in section 2.1, a waste stream is designated either WIPP-bound or potential. Approximately 9% of the final form TRU waste volume reported by the TRU waste generator sites during this year’s data collection was identified as potential TRU waste. While a site may designate waste streams as potential for many different reasons, it is usually because of regulatory or physical constraints, such as the lack of characterization data.

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

- TRU Determination – Waste that is categorized as “undetermined” will remain potential until the waste stream is officially determined to be TRU. If the waste stream is determined to be non-TRU, it will be removed from the inventory.
- Defense Determination – 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 WIPP. Examples include limits on curies and dose rates on RH canisters, limits for total emplacement curies on RH waste, prohibited Resource Conservation and Recovery Act hazardous waste, etc. Sites must treat, repackage, or remove any restricted items before such waste can be accepted for disposal at WIPP.
- Incomplete Data – Waste that has missing or incomplete data, such as radionuclide activities, WMP mass, final form container data, or unknown waste stream information, is deemed potential until required data are obtained.
- Directed by DOE to Move to Potential – Waste will be moved to potential at the direction of DOE.

Table 4-1 identifies the current potential CH- and RH-TRU waste streams. All values discussed in this section are presented to three significant figures.

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

Waste Stream ID <sup>1</sup>	Handling	Final Form Anticipated Volume (m <sup>3</sup> )	Categories of Potential WIPP CH/RH-TRU Waste
BL-Parks	CH	9.62E+00	Incomplete Data
BL-Parks-A	RH	6.24E-01	Incomplete Data
IN-BN534	CH	3.74E+00	Incomplete Data
IN-BN538	CH	4.08E+01	Incomplete Data
IN-BN539	CH	2.50E+00	Incomplete Data
IN-IC605	CH	4.16E-01	Incomplete Data
IN-JH826CH	CH	8.32E-01	Incomplete Data
IN-SBW-01A	RH	9.79E+02	Directed by DOE to Move to Potential
IN-SBW-01B	RH	8.90E+01	Directed by DOE to Move to Potential
IN-W139	CH	8.32E-01	Incomplete Data
LA-TA-00-04	CH	2.08E-01	Regulatory Restrictions
RL300-11	RH	7.49E+00	Regulatory Restrictions
RLCH2-08	RH	2.50E+00	TRU Waste Determination

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

Waste Stream ID <sup>1</sup>	Handling	Final Form Anticipated Volume (m <sup>3</sup> )	Categories of Potential WIPP CH/RH-TRU Waste
RLPFP-02	CH	1.51E+01	Incomplete Data
RLPRC-01	CH	1.89E+00	Defense Determination
RLPURX-02	CH	3.72E+02	Incomplete Data
RP-TFC001	CH	4.43E+02	Directed by DOE to Move to Potential
RP-W754	CH	3.26E+02	Directed by DOE to Move to Potential
RP-W755	CH	8.01E+02	Directed by DOE to Move to Potential
WV-M010a	CH	9.66E+00	Directed by DOE to Move to Potential
WV-T004a	CH	6.24E-01	Directed by DOE to Move to Potential
WV-T004b	RH	3.12E+00	Directed by DOE to Move to Potential
WV-T006a	CH	2.07E+02	Directed by DOE to Move to Potential
WV-T006b	RH	2.67E+02	Directed by DOE to Move to Potential
WV-T017b	RH	7.49E+00	Directed by DOE to Move to Potential
WV-W024a	CH	8.37E+00	Directed by DOE to Move to Potential
WV-W024b	RH	4.68E+01	Directed by DOE to Move to Potential
WV-W050a	CH	5.82E+00	Directed by DOE to Move to Potential
WV-Z001	CH	4.30E+03	Directed by DOE to Move to Potential
<b>Grand Total</b>		<b>7.95E+03</b>	

<sup>1</sup>See Figure 1-1 for site designators. Sites with potential TRU Waste Only are: WV, RP, and BL. Data Source: CID Data Version D.15.00 (LANL-CO 2016a).

Waste streams categorized as potential may become eligible for disposal at WIPP if all requirements, as noted above, are met and the waste meets all WIPP requirements (e.g., WIPP WAC and WAP). As shown in Table 4-2, one potential waste stream from LANL was reassigned to a WIPP-bound waste stream during CY 2015.

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

Waste Stream ID <sup>1</sup>	Reason
LA-LAMHD02238	Added new radionuclide data

<sup>1</sup>See Figure 1-1 for site designators; Data Source: CID Data Version D.15.00 (LANL-CO 2016a).

## 5.0 SUMMARY

Waste receipt and emplacement operations are still suspended since the occurrence of the two events in February 2014; therefore, no shipments were received and no waste was emplaced during CY 2015.

This report is an update to the data found in the ATWIR-2015 (DOE 2015a) and focuses on data changes resulting from characterization, improved estimations, and continued waste generation at the TRU waste generator sites. This report provides the most current TRU waste inventory



information available to DOE/CBFO, the DOE complex, WIPP stakeholders, and regulators, as of December 31, 2015.

As a result of the events in February 2014 at WIPP, a small volume of TRU waste continues to be temporarily stored at WCS during CY 2015. Even though WIPP is shut down, the TRU waste generator sites continue to characterize and certify TRU waste, using the existing certification program, and are building a backlog of waste ready for shipment.

TRU waste generator sites continue to report better inventory estimates using known characterization data for their stored and projected waste. The most significant changes in this update are due to adding 32 new waste streams, reporting over 2,200 containers that had been inadvertently left out by the generator site, reporting estimated projections through 2050, and identifying increases in projected waste.

## 6.0 GLOSSARY

**Acceptable Knowledge** – Any information about the process used to generate waste, material inputs to the process, and the time period during which the waste was generated, as well as data resulting from the analysis of waste, conducted prior to or separate from the waste certification process.

**Anticipated Inventory** – The sum of the total stored and total projected inventory reported by the TRU waste generator sites.

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

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

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

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

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

**Depleted Waste Stream** – An existing waste stream from which all containers have been dispositioned. Waste containers from other waste streams that fit the waste stream description may be added back into a depleted waste stream, thus converting it to active status.

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

**Emplaced Inventory** – Waste that is in above ground storage or disposed underground at the WIPP.

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

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

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

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

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

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

**Projected Inventory** – That part of the inventory that has not been generated (does not physically exist) but is estimated to be generated at some time in the future by the TRU waste generator sites (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 cutoff date for this report, as well as waste from ongoing projects and D&D waste that has not yet been packaged.

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

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

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

**Stored Inventory** – That part of the TRU waste inventory that currently exists (already generated, but not yet shipped) as of the data cutoff date. Stored inventory can be “current form waste” or “final form waste.”

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

**Transuranic Waste** – The LWA definition of transuranic waste is: Transuranic waste is radioactive waste containing more than 100 nanocuries (3,700 becquerels) of alpha-emitting transuranic isotopes per gram of waste, with half-lives greater than 20 years, except for: (1) high-level radioactive waste; (2) waste that the Secretary of Energy has determined, with the concurrence of the Administration of the Environmental Protection Agency, does not need the degree of isolation required by 40 Code of Federal Regulations (CFR) Part 191 disposal regulations; (3) waste that the Nuclear Regulatory Commission has approved for disposal on a case-by-case basis in accordance with 10 CFR Part 61.

**TRU Waste Generator Sites** – The five major active DOE facilities and several smaller sites throughout the United States that generate and store TRU waste. These may be referred to as “sites.”

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

**Waste Control Specialists, LLC** – WCS, located in Andrews County, Texas, is a licensed radioactive waste disposal facility. Currently, transuranic waste destined for WIPP, is temporarily stored there until WIPP reopens.

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

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

**Waste Material Parameter**– A non-radiological material that is found in TRU waste (e.g., CPR materials are monitored as contributors to the generation of gas at WIPP).

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

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

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

## 7.0 REFERENCES

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**APPENDIX A WIPP-BOUND TRU WASTE PROFILE REPORTS**

The following waste profile reports contain information on waste streams that are placed in the WIPP-bound category as of the inventory date, December 31, 2015.

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	12/31/2015	
Stream Name	ANL-E Contact-Handled Mixed Heterogeneous Debris			Activity Concentrations Decayed to CY	2015		

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
30-gal Drum	2.8	0.0	2.8
55-gal Drum Dir Ld w/ Liner	0.0	111.1	111.1
55-gal Drum Dir Ld w/o Liner	17.3	0.0	17.3
85-gal Drum	4.5	0.0	4.5
Box - Misc	3.5	0.0	3.5
<b>Current Form Total</b>	<b>28.1</b>	<b>111.1</b>	<b>139.2</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	42.6	111.1	153.7
<b>Final Form Total</b>	<b>42.6</b>	<b>111.1</b>	<b>153.7</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	39.70
Aluminum-based Metal/Alloys	0.70
Other Metal/Alloys	3.19
Other Inorganic Materials	3.34
Cellulose	2.87
Rubber	5.67
Plastic	20.74
Cement	0.00
Solidified Inorganic Material	1.40
Solidified Organic Material	0.08
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.55E-01
Am-243	5.81E-02
Cm-244	4.59E+00
Cs-137	8.22E-03
Np-237	2.82E-04
Pu-238	6.32E-03
Pu-239	5.68E-02
Pu-240	7.55E-02
Pu-241	1.26E-01
Pu-242	4.13E-04
Pu-244	1.27E-07
Sr-90	7.35E-03
Th-229	5.00E-07
Th-230	2.06E-06
Th-232	1.91E-06
U-233	1.10E-04
U-234	4.53E-05
U-235	9.83E-07
U-236	6.23E-08
U-238	4.67E-05

**Haz. Waste No(s).**

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

**TRUCON Code(s)**

116/216, 125/225, 127/227, 133/233

**Waste Stream Description**

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



Waste Stream ID: **AE-T003**

**Appendix A**  
**Waste Profile Report**

Site	Argonne National Laboratory	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	R&D/R&D Laboratory Waste	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2015	
Stream Name	ANL-E Contact-Handled Solidified Organic and Inorganic Homogenous Solids				Activity Concentrations Decayed to CY	2015	

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
30-gal Drum	1.0	0.0	1.0
55-gal Drum Dir Ld w/ Liner	0.0	5.4	5.4
55-gal Drum Dir Ld w/o Liner	2.3	0.0	2.3
85-gal Drum	0.3	0.0	0.3
Box - Misc	0.5	0.0	0.5
<b>Current Form Total</b>	<b>4.1</b>	<b>5.4</b>	<b>9.5</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	8.7	5.4	14.1
<b>Final Form Total</b>	<b>8.7</b>	<b>5.4</b>	<b>14.1</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	0.00
Aluminum-based Metal/Alloys	1.35
Other Metal/Alloys	0.00
Other Inorganic Materials	1.35
Cellulose	0.00
Rubber	0.00
Plastic	0.00
Cement	0.00
Solidified Inorganic Material	118.97
Solidified Organic Material	13.37
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	9.11E-02
Am-243	4.00E-03
Cm-244	7.46E-04
Cs-137	2.28E-02
Np-237	2.03E-04
Pu-238	3.53E-01
Pu-239	1.65E-01
Pu-240	1.50E-01
Pu-241	1.31E+00
Pu-242	3.72E-04
Pu-244	1.65E-08
Sr-90	8.24E-03
Th-229	3.07E-09
Th-230	5.46E-06
Th-232	1.14E-07
U-233	8.36E-06
U-234	9.26E-06
U-235	3.77E-07
U-236	3.15E-07
U-238	1.52E-05

**Haz. Waste No(s).**

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

**TRUCON Code(s)**

111/211, 113/213, 129/229, 132/232

**Waste Stream Description**

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

Waste Stream ID: **AE-T009**

**Appendix A**  
**Waste Profile Report**

Site	Argonne National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	RH
Source Cat.	R&D/R&D Laboratory Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2015	
Stream Name	RH TRU			Activity Concentrations Decayed to CY	2015		

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
110-gal Drum	0.8	0.0	0.8
30-gal Drum	14.2	15.0	29.3
55-gal Drum Dir Ld w/o Liner	7.7	21.4	29.1
85-gal Drum	1.3	0.0	1.3
Miscellaneous	0.4	0.0	0.4
<b>Current Form Total</b>	<b>24.4</b>	<b>36.5</b>	<b>60.9</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 30-gal w/o Liner	9.5	15.3	24.7
RH Can w/ Remov Lid w/ 3 - 55-gal w/o Liner	22.5	21.8	44.3
RH Lead Shielded Cntr w/ 1 - 30 gal w/o Liner	3.1	0.0	3.1
<b>Final Form Total</b>	<b>35.0</b>	<b>37.1</b>	<b>72.1</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	60.18
Aluminum-based Metal/Alloys	29.01
Other Metal/Alloys	26.85
Other Inorganic Materials	36.92
Cellulose	47.47
Rubber	13.19
Plastic	23.50
Cement	0.00
Solidified Inorganic Material	2.40
Solidified Organic Material	0.24
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	10.91
Packaging Material, Rubber	0.75
Packaging Material, Steel	1280.10
Packaging Material, Lead	161.40

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.97E+00
Am-243	3.77E-02
Cm-244	9.99E-01
Cs-137	2.57E+01
Np-237	3.55E-05
Pu-238	3.31E+00
Pu-239	1.53E+00
Pu-240	9.17E-01
Pu-241	1.41E+01
Pu-242	7.08E-04
Pu-244	1.06E-11
Sr-90	1.80E+01
Th-229	7.91E-05
Th-230	2.71E-07
Th-232	3.11E-12
U-233	2.11E-06
U-234	6.35E-04
U-235	1.14E-04
U-236	4.18E-08
U-238	8.54E-04

**Haz. Waste No(s).**

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

**TRUCON Code(s)**

125/225, 321, 322,  
325

**Waste Stream Description**

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

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

**Appendix A**  
**Waste Profile Report**

Site	Material and Fuels Complex	Summary Category	S5000	Defense Determination	Pending Determination	Handling	RH
Source Cat.	R&D/R&D Laboratory Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2015	
Stream Name	RH TRU ATR Complex Legacy from Hot-Cell Cleanup				Activity Concentrations Decayed to CY	2015	

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

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

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
<b>Final Form Total</b>	<b>0.6</b>	<b>0.0</b>	<b>0.6</b>

**Waste Material Parameters**

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

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	7.26E-02
Am-243	3.14E-04
Cm-244	2.55E-06
Cs-137	4.03E-01
Np-237	7.97E-06
Pu-238	3.42E-02
Pu-239	9.63E-03
Pu-240	1.45E-02
Pu-241	4.45E-01
Pu-242	3.93E-05
Sr-90	8.47E-01
Th-229	5.34E-14
Th-230	1.64E-10
Th-232	3.81E-19
U-233	2.03E-10
U-234	3.27E-06
U-235	4.97E-07
U-236	2.57E-09
U-238	9.86E-06

No Hazardous Waste Numbers Provided

TRUCON Code(s)

325

**Waste Stream Description**

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

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

**Appendix A**  
**Waste Profile Report**

Site	Material and Fuels Complex	Summary Category	S3000	Defense Determination	Pending Determination	Handling	CH
Source Cat.	R&D/R&D Laboratory Waste	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2015	
Stream Name	CH TRU ATR Complex				Activity Concentrations Decayed to CY	2015	

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

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

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

**Waste Material Parameters**

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

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.13E-03
Np-237	4.06E-09
Pu-238	3.32E-05
Pu-239	1.48E-02
Pu-240	2.88E-03
Pu-241	5.59E-02
Th-229	1.12E-17
Th-230	2.19E-14
Th-232	1.03E-19
U-233	5.68E-14
U-234	6.73E-10
U-235	1.02E-10
U-236	5.97E-10

No Hazardous Waste Numbers Provided

TRUCON Code(s)  
113/213

**Waste Stream Description**

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

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

**Appendix A**  
**Waste Profile Report**

Site	Material and Fuels Complex	Summary Category	S5000	Defense Determination	Pending Determination	Handling	RH
Source Cat.	R&D/R&D Laboratory Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2015	
Stream Name	RH TRU INL ATR Complex ARMF Capsules				Activity Concentrations Decayed to CY	2015	

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

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

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

**Waste Material Parameters**

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

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.99E-01
Cs-137	3.22E-01
Np-237	7.17E-07
Sr-90	3.17E-01
Th-229	5.50E-15
Th-230	2.77E-13
U-233	1.70E-11
U-234	5.47E-09
U-235	2.29E-04
U-238	1.78E-04

No Hazardous Waste Numbers Provided

TRUCON Code(s)  
325

**Waste Stream Description**

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

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

**Appendix A**  
**Waste Profile Report**

Site	Material and Fuels Complex	Summary Category	S5000	Defense Determination	Pending Determination	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2015		
Stream Name	MFC CH-MTRU Due to RCRA Metals			Activity Concentrations Decayed to CY	2015		

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	0.8	7.3	8.1
<b>Current Form Total</b>	<b>0.8</b>	<b>7.3</b>	<b>8.1</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	0.8	7.3	8.1
<b>Final Form Total</b>	<b>0.8</b>	<b>7.3</b>	<b>8.1</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	0.00
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	23.56
Other Inorganic Materials	70.19
Cellulose	22.38
Rubber	0.00
Plastic	3.85
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	21.78
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.00E-01
Am-243	8.33E-05
Cm-244	1.88E-02
Cs-137	1.11E-01
Np-237	3.22E-06
Pu-238	1.17E-01
Pu-239	3.21E-01
Pu-240	3.62E-02
Pu-241	9.19E-01
Pu-242	6.48E-06
Sr-90	1.19E-01
Th-229	1.54E-18
Th-230	1.54E-10
Th-232	4.72E-18
U-233	4.91E-13
U-234	1.67E-04
U-235	3.21E-07
U-236	9.57E-07
U-238	1.32E-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. The specific Waste Material Parameter's types and masses for currently stored containers are reflected on the WMP tab.

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

**Appendix A**  
**Waste Profile Report**

Site	Material and Fuels Complex	Summary Category	S5000	Defense Determination	Pending Determination	Handling	RH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2015		
Stream Name	RH TRU Hot Cell Waste			Activity Concentrations Decayed to CY	2015		

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	0.0	86.5	86.5
Canister - (MFC) o/p 45-gal Drums	2.0	0.0	2.0
Canister - (SL-type)	0.9	0.0	0.9
Liner - RSWF	0.2	0.0	0.2
<b>Current Form Total</b>	<b>3.1</b>	<b>86.5</b>	<b>89.6</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/o Liner	3.7	87.4	91.1
<b>Final Form Total</b>	<b>3.7</b>	<b>87.4</b>	<b>91.1</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	56.38
Aluminum-based Metal/Alloys	60.75
Other Metal/Alloys	50.11
Other Inorganic Materials	1.77
Cellulose	15.72
Rubber	0.00
Plastic	23.08
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	8.70
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.85E+00
Am-243	3.90E-10
Cm-244	1.05E-07
Cs-137	4.55E+01
Np-237	3.48E-03
Pu-238	6.75E-02
Pu-239	9.16E-01
Pu-240	3.58E-02
Pu-241	1.54E-01
Pu-242	3.47E-04
Sr-90	7.35E+01
Th-229	1.31E-11
Th-230	8.04E-08
Th-232	1.09E-14
U-233	6.66E-08
U-234	2.19E-03
U-235	1.74E-05
U-236	5.53E-05
U-238	1.51E-05

No Hazardous Waste Numbers Provided

TRUCON Code(s)

325

**Waste Stream Description**

This waste stream is remote-handled (RH) transuranic debris waste generated in the hot-cells of the Fuel Conditioning Facility (FCF), Hot Fuel Examination Facility (HFEF), and Analytical Lab (AL). The specific Waste Material Parameter's types and masses for currently stored containers will be reflected on the WMP tab.

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	12/31/2015	
Stream Name	MFC CH-TRU Waste					Activity Concentrations Decayed to CY	2015

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
30-gal Drum	0.1	0.0	0.1
55-gal Drum Dir Ld w/o Liner	1.2	43.7	44.9
<b>Current Form Total</b>	<b>1.4</b>	<b>43.7</b>	<b>45.0</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	1.5	43.7	45.1
<b>Final Form Total</b>	<b>1.5</b>	<b>43.7</b>	<b>45.1</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	2.40
Aluminum-based Metal/Alloys	5.87
Other Metal/Alloys	37.96
Other Inorganic Materials	40.70
Cellulose	20.34
Rubber	0.00
Plastic	38.52
Cement	0.00
Solidified Inorganic Material	9.66
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	5.87E+00
Am-243	8.45E-04
Cm-244	7.47E-02
Cs-137	7.32E-02
Np-237	3.35E-03
Pu-238	1.58E-01
Pu-239	3.77E-01
Pu-240	1.27E-01
Pu-241	1.71E+00
Pu-242	3.03E-05
Sr-90	7.51E-02
Th-229	6.42E-13
Th-230	1.13E-09
Th-232	2.62E-17
U-233	1.46E-08
U-234	1.23E-04
U-235	3.66E-06
U-236	5.33E-07
U-238	1.91E-06

No Hazardous Waste Numbers Provided

TRUCON Code(s)  
125/225

**Waste Stream Description**

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



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

**Appendix A**  
**Waste Profile Report**

Site	Material and Fuels Complex	Summary Category	S5000	Defense Determination	Pending Determination	Handling	RH
Source Cat.	R&D/R&D Laboratory Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2015	
Stream Name	RH MTRU Hot Cell Waste			Activity Concentrations Decayed to CY		2015	

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	0.6	54.9	55.5
Canister - (MFC) o/p 45-gal Drums	1.3	0.0	1.3
Liner - RSWF	0.1	0.0	0.1
<b>Current Form Total</b>	<b>2.0</b>	<b>54.9</b>	<b>57.0</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/o Liner	1.9	54.9	56.8
<b>Final Form Total</b>	<b>1.9</b>	<b>54.9</b>	<b>56.8</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	3.13
Aluminum-based Metal/Alloys	4.10
Other Metal/Alloys	183.73
Other Inorganic Materials	19.34
Cellulose	77.29
Rubber	0.00
Plastic	70.57
Cement	0.00
Solidified Inorganic Material	3.68
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	8.70
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.13E+00
Am-243	1.34E-04
Cm-244	2.94E-02
Cs-137	2.92E+02
Np-237	3.54E-04
Pu-238	1.12E+00
Pu-239	2.37E+00
Pu-240	2.28E-01
Pu-241	4.94E+00
Pu-242	1.57E-04
Sr-90	2.04E+01
Th-229	8.06E-14
Th-230	3.98E-08
Th-232	5.09E-15
U-233	1.69E-09
U-234	4.32E-03
U-235	1.40E-04
U-236	1.03E-04
U-238	1.70E-04

**Haz. Waste No(s).**

D006, D007, D008, D009

**TRUCON Code(s)**

325

**Waste Stream Description**

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

Waste Stream ID: **BT-T001**

**Appendix A**  
**Waste Profile Report**

Site	Bettis Atomic Power Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	RH
Source Cat.	R&D/R&D Laboratory Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2015		
Stream Name	Irradiated TRU material waste			Activity Concentrations Decayed to CY	2015		

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
Hot Cell	0.0	4.8	4.8
<b>Current Form Total</b>	<b>0.0</b>	<b>4.8</b>	<b>4.8</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/o Liner	0.0	15.0	15.0
<b>Final Form Total</b>	<b>0.0</b>	<b>15.0</b>	<b>15.0</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	0.00
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	89.61
Other Inorganic Materials	0.00
Cellulose	14.96
Rubber	0.00
Plastic	44.81
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	8.70
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.95E-03
Am-243	1.19E-05
Cs-137	5.96E+00
Np-237	1.70E-05
Pu-238	1.34E-01
Pu-239	1.08E-04
Pu-241	1.99E-02
Pu-242	1.96E-06
Sr-90	5.92E+00
Th-229	4.14E-06
Th-230	1.19E-09
Th-232	9.82E-16
U-233	1.08E-03
U-234	3.31E-05
U-235	4.13E-07
U-236	4.97E-06
U-238	1.98E-09

No Hazardous Waste Numbers Provided

TRUCON Code(s)

322

**Waste Stream Description**

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

Waste Stream ID: **IN-AE-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	12/31/2015		
Stream Name	MFC Retrievable ANL-E RH TRU Containers - Stage 2			Activity Concentrations Decayed to CY	2015		

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum	30.8	0.0	30.8
Canister - (ANL-E)	0.8	0.0	0.8
<b>Current Form Total</b>	<b>31.6</b>	<b>0.0</b>	<b>31.6</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/o Liner	76.1	0.0	76.1
<b>Final Form Total</b>	<b>76.1</b>	<b>0.0</b>	<b>76.1</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	90.83
Aluminum-based Metal/Alloys	8.54
Other Metal/Alloys	7.44
Other Inorganic Materials	3.73
Cellulose	4.25
Rubber	2.16
Plastic	10.52
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	8.70
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.31E-03
Cm-244	1.48E-07
Cs-137	2.68E+02
Np-237	7.47E-11
Pu-238	6.86E-04
Pu-239	5.65E+00
Pu-240	2.96E+00
Pu-241	1.20E-02
Pu-242	6.40E-07
Sr-90	4.21E+02
Th-229	1.15E-15
Th-230	1.43E-11
Th-232	6.95E-08
U-233	1.31E-10
U-234	1.56E-05
U-235	5.36E-04
U-236	8.75E-09
U-238	7.29E-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.

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	12/31/2015	
Stream Name	Special Setups Waste				Activity Concentrations Decayed to CY	2015	

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

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

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

**Waste Material Parameters**

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

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	5.23E-01
Cm-244	1.93E-03
Cs-137	6.50E-09
Np-237	1.97E-05
Pu-238	3.43E-02
Pu-239	8.89E-01
Pu-240	2.00E-01
Pu-241	1.11E+00
Pu-242	1.97E-05
Sr-90	7.15E-09
Th-229	9.48E-18
Th-230	1.00E-11
Th-232	1.46E-21
U-233	3.01E-12
U-234	1.09E-05
U-235	1.92E-06
U-236	5.93E-10
U-238	7.86E-05

**Haz. Waste No(s).**

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

**TRUCON Code(s)**

111/211

**Waste Stream Description**

IN-BN004 waste was generated in support of plutonium operations at Rocky Flats from a waste treatment process that solidified process waste.

Waste Stream ID: **IN-BN050**

**Appendix A**  
**Waste Profile Report**

Site	Idaho National Laboratory	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Source Information Not Compiled	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2015	
Stream Name	Solidified Solutions			Activity Concentrations Decayed to CY	2015		

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

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

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

**Waste Material Parameters**

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

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Np-237	3.33E-04
Pu-239	1.20E-01
Th-229	4.28E-11
U-233	3.75E-08
U-235	3.07E-09

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

**Waste Stream Description**

This waste stream is from Bettis Atomic Power Laboratory. No more information is available, but the waste is thought to be solidified inorganic solutions.

Waste Stream ID: **IN-BN090**

**Appendix A**  
**Waste Profile Report**

Site	Idaho National Laboratory	Summary Category	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	12/31/2015	
Stream Name	Dirt				Activity Concentrations Decayed to CY	2015	

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	224.8	0.0	224.8
<b>Current Form Total</b>	<b>224.8</b>	<b>0.0</b>	<b>224.8</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
SWB w/ 4 - 55-gal Drums w/ Liners	538.7	0.0	538.7
<b>Final Form Total</b>	<b>538.7</b>	<b>0.0</b>	<b>538.7</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	0.85
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	6.61
Cellulose	3.43
Rubber	0.00
Plastic	0.36
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.24
Soil	460.12
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	16.30
Packaging Material, Rubber	0.44
Packaging Material, Steel	211.11
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.31E-03
Cs-137	1.01E-08
Np-237	2.67E-08
Pu-238	1.05E-04
Pu-239	2.18E-03
Pu-240	4.24E-04
Pu-241	2.30E-03
Pu-242	4.26E-08
Sr-90	1.11E-08
Th-229	1.28E-20
Th-230	2.87E-12
Th-232	3.10E-24
U-233	4.07E-15
U-234	3.12E-06
U-235	3.92E-07
U-236	1.26E-12
U-238	3.05E-05

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

**Waste Stream Description**

This waste generated at the Rocky Flats Plant consists of dry dirt or soil generated from cleanup of spills, leaks, etc. Waste may be damp and may include evaporator pond sludge.

Waste Stream ID: **IN-BN203**

**Appendix A**  
**Waste Profile Report**

Site	Idaho National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Remediation/D&D Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2015	
Stream Name	Paper, Metal, Glass				Activity Concentrations Decayed to CY	2015	

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

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

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

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	81.79
Aluminum-based Metal/Alloys	0.05
Other Metal/Alloys	6.78
Other Inorganic Materials	0.99
Cellulose	8.74
Rubber	8.13
Plastic	13.42
Cement	0.00
Solidified Inorganic Material	1.67
Solidified Organic Material	0.67
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	17.13
Packaging Material, Rubber	0.44
Packaging Material, Steel	231.11
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.43E-01
Np-237	3.71E-06
Pu-238	3.49E-02
Pu-239	3.60E-01
Pu-240	8.53E-02
Pu-241	6.80E-01
Pu-242	9.63E-06
Th-229	7.04E-16
Th-230	3.63E-10
Th-232	6.23E-20
U-233	1.61E-11
U-234	3.95E-05
U-235	1.23E-05
U-236	2.53E-09
U-238	2.08E-05

**Haz. Waste No(s).**

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

**No TRUCON  
Codes Provided**

**Waste Stream Description**

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

Waste Stream ID: **IN-BN204**

**Appendix A**  
**Waste Profile Report**

Site	Idaho National Laboratory	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Remediation/D&D Waste	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2015	
Stream Name	Solidified Solutions			Activity Concentrations Decayed to CY	2015		

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

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

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

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	0.00
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	8.53
Cellulose	0.00
Rubber	0.00
Plastic	0.00
Cement	0.00
Solidified Inorganic Material	199.14
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	16.30
Packaging Material, Rubber	0.44
Packaging Material, Steel	211.11
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.22E-01
Cs-137	9.38E-08
Np-237	7.13E-06
Pu-238	1.75E+00
Pu-239	1.00E-01
Pu-240	2.89E-02
Pu-241	2.57E-01
Pu-242	1.80E-05
Sr-90	1.03E-07
Th-229	1.36E-15
Th-230	5.68E-11
Th-232	2.11E-20
U-233	3.10E-11
U-234	8.65E-06
U-235	1.12E-06
U-236	8.57E-10
U-238	2.79E-15

**Haz. Waste No(s).**

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

**No TRUCON  
Codes Provided**

**Waste Stream Description**

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



Waste Stream ID: **IN-BN222**

**Appendix A**  
**Waste Profile Report**

Site	Idaho National Laboratory	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Pollution Control or Waste Treatment Process	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2015	
Stream Name	Solidified Plutonium Recovery Incinerator Waste				Activity Concentrations Decayed to CY	2015	

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

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

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

**Waste Material Parameters**

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

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	7.97E-01
Np-237	4.59E-05
Pu-238	1.58E-01
Pu-239	4.10E+00
Pu-240	9.35E-01
Pu-241	7.07E+00
Pu-242	7.32E-05
Th-229	8.75E-15
Th-230	7.41E-12
Th-232	6.82E-19
U-233	1.99E-10
U-234	1.03E-06
U-235	1.37E-07
U-236	2.77E-08
U-238	2.26E-07

**Haz. Waste No(s).**

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

**TRUCON Code(s)**

111/211, 114/214

**Waste Stream Description**

The waste is comprised of plutonium recovery incinerator waste. This waste stream includes solidified ash from the incinerator burn chamber and solidified soot and scrubber sludge from the incinerator off-gas system of the plutonium recovery incinerator.

Waste Stream ID: **IN-BN290**

**Appendix A**  
**Waste Profile Report**

Site	Idaho National Laboratory	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Materials Production/Recovery Effluents	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2015	
Stream Name	Filter Sludge					Activity Concentrations Decayed to CY	2015

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

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

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

**Waste Material Parameters**

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

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	3.72E-01
Np-237	4.29E-06
Pu-238	7.74E-02
Pu-239	1.92E+00
Pu-240	4.25E-01
Pu-241	1.55E+00
Pu-242	3.16E-05
Th-229	1.82E-14
Th-230	2.58E-11
Th-232	7.76E-18
U-233	8.50E-11
U-234	1.11E-06
U-235	9.45E-09
U-236	6.29E-08
U-238	2.45E-14

**Haz. Waste No(s).**

D006, D008, F001, F002

**No TRUCON  
Codes Provided**

**Waste Stream Description**

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

Waste Stream ID: **IN-BN311**

**Appendix A**  
**Waste Profile Report**

Site	Idaho National Laboratory	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Other/Multiple Sources	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2015	
Stream Name	Process Heels					Activity Concentrations Decayed to CY	2015

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

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

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

**Waste Material Parameters**

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

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.88E+00
Np-237	2.08E-05
Pu-238	5.94E-01
Pu-239	1.05E+01
Pu-240	2.47E+00
Pu-241	1.53E+01
Pu-242	1.95E-04
Th-229	3.92E-15
Th-230	7.75E-12
Th-232	1.80E-18
U-233	8.95E-11
U-234	1.68E-06
U-235	1.03E-08
U-236	7.30E-08
U-238	3.03E-14

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

**Waste Stream Description**

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

Waste Stream ID: **IN-BN375**

**Appendix A**  
**Waste Profile Report**

Site	Idaho National Laboratory	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Materials Production/Recovery Effluents	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2015	
Stream Name	Oil-Dri-Residue From Incinerator			Activity Concentrations Decayed to CY	2015		

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

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

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

**Waste Material Parameters**

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

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.77E-01
Np-237	2.93E-06
Pu-238	1.84E-02
Pu-239	4.89E-01
Pu-240	1.15E-01
Pu-241	7.34E-01
Pu-242	1.05E-05
Th-229	5.50E-16
Th-230	4.40E-11
Th-232	8.37E-20
U-233	1.26E-11
U-234	4.81E-06
U-235	4.04E-07
U-236	3.39E-09
U-238	5.69E-05

**Haz. Waste No(s).**

F001, F002

**TRUCON Code(s)**

122/222

**Waste Stream Description**

This waste, from the Rocky Flats Plant, consists of spent clay materials such as oil-dri, floor dry, vermiculite, and sorbent booms.

Waste Stream ID: **IN-BN409**

**Appendix A**  
**Waste Profile Report**

Site	Idaho National Laboratory	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Materials Production/Recovery Effluents	Waste Matrix Code Group	Salt Waste	Inventory Date	12/31/2015		
Stream Name	Chloride Salts	Activity Concentrations Decayed to CY			2015		

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

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

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

**Waste Material Parameters**

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

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.31E+01
Np-237	1.07E-04
Pu-238	3.78E-01
Pu-239	1.02E+01
Pu-240	2.32E+00
Pu-241	1.51E+01
Pu-242	3.37E-04
Th-229	1.99E-14
Th-230	5.28E-12
Th-232	1.69E-18
U-233	4.56E-10
U-234	1.11E-06
U-235	1.90E-08
U-236	6.87E-08
U-238	5.23E-14

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

**Waste Stream Description**

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

Waste Stream ID: **IN-BN421**

**Appendix A**  
**Waste Profile Report**

Site	Idaho National Laboratory	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Materials Production/Recovery Effluents	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2015	
Stream Name	Uncemented Ash/Soot			Activity Concentrations Decayed to CY	2015		

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

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

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

**Waste Material Parameters**

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

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	4.07E+00
Np-237	5.92E-05
Pu-238	6.61E-01
Pu-239	1.61E+01
Pu-240	3.68E+00
Pu-241	1.96E+01
Pu-242	3.33E-04
Th-229	1.12E-14
Th-230	1.63E-11
Th-232	2.69E-18
U-233	2.55E-10
U-234	2.71E-06
U-235	2.31E-07
U-236	1.09E-07
U-238	2.84E-07

**Haz. Waste No(s).**

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

**TRUCON Code(s)**

114/214

**Waste Stream Description**

This waste generated at the Rocky Flats Plant includes ash heels and soot from the plutonium recovery incinerator. The ash heels consist of insoluble materials from dissolution of plutonium-containing materials. Soot is the airborne fly ash that accumulated in the off-gas system of the plutonium recovery.

Waste Stream ID: **IN-BN425**

**Appendix A**  
**Waste Profile Report**

Site	Idaho National Laboratory	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	R&D/R&D Laboratory Waste	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2015	
Stream Name	Fluid Bed Ash					Activity Concentrations Decayed to CY	2015

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

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

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

**Waste Material Parameters**

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

**Final Form Radionuclides**

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

**Haz. Waste No(s).**

D007, F005

**TRUCON Code(s)**

114/214

**Waste Stream Description**

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

Waste Stream ID: **IN-BN432**

**Appendix A**  
**Waste Profile Report**

Site	Idaho National Laboratory	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Other/Multiple Sources	Waste Matrix Code Group	Solidified Organics		Inventory Date	12/31/2015	
Stream Name	Solidified Ion Exchange Resin from Actinide Recovery				Activity Concentrations Decayed to CY	2015	

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

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

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

**Waste Material Parameters**

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

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	4.82E+00
Cs-137	3.32E-06
Np-237	4.23E-05
Pu-238	1.42E-01
Pu-239	3.04E+00
Pu-240	6.94E-01
Pu-241	4.82E+00
Pu-242	5.85E-05
Sr-90	3.65E-06
Th-229	7.89E-15
Th-230	4.89E-12
Th-232	5.07E-19
U-233	1.81E-10
U-234	7.32E-07
U-235	1.06E-07
U-236	2.06E-08
U-238	9.08E-15

**Haz. Waste No(s).**

D007, D008, D022,  
D029, F001, F002,  
F005

**TRUCON Code(s)**

126/226

**Waste Stream Description**

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



Waste Stream ID: **IN-BN501**

**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	12/31/2015	
Stream Name	AMWTP PCB Soil				Activity Concentrations Decayed to CY	2015	

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

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

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

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	4.38
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	3.71
Rubber	0.13
Plastic	5.36
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	1.35
Soil	749.31
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	3.87E-02
Am-243	1.05E-06
Cs-137	6.09E-06
Np-237	9.39E-07
Pu-238	2.07E-04
Pu-239	7.58E-03
Pu-240	1.68E-03
Pu-241	1.10E-02
Pu-242	2.21E-07
Sr-90	6.71E-06
Th-229	4.51E-19
Th-230	1.23E-12
Th-232	1.23E-23
U-233	1.43E-13
U-234	1.34E-06
U-235	4.33E-07
U-236	4.98E-12
U-238	3.43E-18

**Haz. Waste No(s).**

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

**No TRUCON  
Codes Provided**

**Waste Stream Description**

Soil generated in the retrieval process 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. activities. It also may include soils generated by AMWTP as a result of repackaging loose soil from breached containers that is suspected to being PCB contaminated. 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-BN505**

**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	12/31/2015	
Stream Name	Inorganic Homogeneous Solids			Activity Concentrations Decayed to CY		2015	

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	8.3	0.0	8.3
<b>Current Form Total</b>	<b>8.3</b>	<b>0.0</b>	<b>8.3</b>

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

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	8.90
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	40.91
Cellulose	2.35
Rubber	0.02
Plastic	4.85
Cement	0.00
Solidified Inorganic Material	118.89
Solidified Organic Material	0.00
Soil	7.35
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	5.08E-01
Cs-137	2.39E-06
Np-237	6.98E-06
Pu-238	3.53E-01
Pu-239	2.09E+00
Pu-240	5.02E-01
Pu-241	2.29E+00
Pu-242	4.14E-05
Sr-90	2.63E-06
Th-229	3.35E-18
Th-230	1.32E-13
Th-232	3.66E-21
U-233	1.07E-12
U-234	1.93E-07
U-235	9.59E-08
U-236	1.48E-09
U-238	6.43E-16

**Haz. Waste No(s).**

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

**No TRUCON  
Codes Provided**

**Waste Stream Description**

Loose or cross-contaminated inorganic homogeneous solids derived from historically stored waste (e.g., sludge's, salts, ash, heels, special setups, or other process residual solids including absorbents) from WIPP acceptable generators RF, MD, AE, SD, ID, and AW. Also may include inorganic homogeneous solids generated by AMWTP as a result of repackaging loose homogeneous solids from breached containers. Waste may include repackaged or intact containers of historically stored inorganic homogeneous solids waste with insufficient AK information to assign a legacy IDC.

Waste Stream ID: **IN-BN507**

**Appendix A**  
**Waste Profile Report**

Site	Idaho National Laboratory	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Other/Multiple Sources	Waste Matrix Code Group	Solidified Organics		Inventory Date	12/31/2015	
Stream Name	Absorbed Aqueous Squeezants			Activity Concentrations Decayed to CY		2015	

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	57.4	0.0	57.4
<b>Current Form Total</b>	<b>57.4</b>	<b>0.0</b>	<b>57.4</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	57.4	0.0	57.4
<b>Final Form Total</b>	<b>57.4</b>	<b>0.0</b>	<b>57.4</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	1.75
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	0.03
Rubber	0.00
Plastic	56.25
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	478.28
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	7.69E-02
Cs-137	3.06E-08
Np-237	1.62E-06
Pu-238	4.10E-02
Pu-239	1.61E-01
Pu-240	3.29E-02
Pu-241	2.52E-01
Pu-242	3.66E-06
Sr-90	3.37E-08
Th-229	7.76E-19
Th-230	3.03E-12
Th-232	2.40E-22
U-233	2.47E-13
U-234	3.30E-06
U-235	9.92E-07
U-236	9.73E-11
U-238	6.47E-07

**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**

Aqueous squeezants from the Supercompactor that have been absorbed onto inorganic particulate absorbent materials (e.g., Aquaset, Aquaset II-G, or other approved inorganic absorbents).

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	12/31/2015		
Stream Name	Supercompacted Debris Waste	Activity Concentrations Decayed to CY			2015		

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
100-gal Drum Dir Ld w/o Liner	36.4	0.0	36.4
<b>Current Form Total</b>	<b>36.4</b>	<b>0.0</b>	<b>36.4</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
100-gal Drum Dir Ld w/o Liner	36.4	0.0	36.4
<b>Final Form Total</b>	<b>36.4</b>	<b>0.0</b>	<b>36.4</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	317.53
Aluminum-based Metal/Alloys	2.50
Other Metal/Alloys	4.70
Other Inorganic Materials	26.67
Cellulose	205.92
Rubber	7.59
Plastic	112.86
Cement	0.00
Solidified Inorganic Material	0.11
Solidified Organic Material	0.01
Soil	0.11
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.31
Packaging Material, Steel	113.72
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.83E-01
Am-243	2.76E-07
Cs-137	2.92E-08
Np-237	7.13E-05
Pu-238	4.14E+00
Pu-239	1.19E+00
Pu-240	2.67E-01
Pu-241	1.45E+00
Pu-242	2.47E-05
Sr-90	3.19E-08
Th-229	3.33E-13
Th-230	1.65E-09
Th-232	4.88E-18
U-233	1.51E-09
U-234	6.54E-05
U-235	1.78E-06
U-236	3.96E-08
U-238	4.87E-06

**Haz. Waste No(s).**

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

**TRUCON Code(s)**

121/221

**Waste Stream Description**

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

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

**Appendix A**  
**Waste Profile Report**

Site	Idaho National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Other/Multiple Sources	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2015	
Stream Name	Supercompacted Debris Waste				Activity Concentrations Decayed to CY	2015	

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
100-gal Drum Dir Ld w/o Liner	15.9	0.0	15.9
<b>Current Form Total</b>	<b>15.9</b>	<b>0.0</b>	<b>15.9</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
100-gal Drum Dir Ld w/o Liner	15.9	0.0	15.9
<b>Final Form Total</b>	<b>15.9</b>	<b>0.0</b>	<b>15.9</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	623.38
Aluminum-based Metal/Alloys	10.76
Other Metal/Alloys	5.07
Other Inorganic Materials	25.72
Cellulose	106.09
Rubber	10.02
Plastic	79.77
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	3.34
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.31
Packaging Material, Steel	113.72
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.58E+00
Am-243	2.28E-04
Cs-137	1.18E-04
Np-237	4.97E-05
Pu-238	1.93E-01
Pu-239	1.16E+00
Pu-240	2.92E-01
Pu-241	1.63E+00
Pu-242	4.52E-05
Sr-90	1.29E-04
Th-229	3.76E-14
Th-230	3.25E-10
Th-232	8.54E-19
U-233	4.28E-10
U-234	1.82E-05
U-235	3.04E-06
U-236	1.73E-08
U-238	1.08E-04

**Haz. Waste No(s).**

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

**TRUCON Code(s)**

121/221

**Waste Stream Description**

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

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

**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	12/31/2015	
Stream Name	Supercompacted Debris Waste			Activity Concentrations Decayed to CY		2015	

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
100-gal Drum Dir Ld w/o Liner	11.4	0.0	11.4
<b>Current Form Total</b>	<b>11.4</b>	<b>0.0</b>	<b>11.4</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
100-gal Drum Dir Ld w/o Liner	11.4	0.0	11.4
<b>Final Form Total</b>	<b>11.4</b>	<b>0.0</b>	<b>11.4</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	434.84
Aluminum-based Metal/Alloys	0.61
Other Metal/Alloys	17.46
Other Inorganic Materials	42.01
Cellulose	86.44
Rubber	3.40
Plastic	158.15
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.68
Soil	0.78
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.31
Packaging Material, Steel	113.72
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	3.41E+00
Am-243	4.93E-05
Cs-137	1.68E-03
Np-237	2.70E-04
Pu-238	4.44E-01
Pu-239	3.86E+00
Pu-240	1.54E+00
Pu-241	1.52E+01
Pu-242	2.28E-04
Sr-90	1.85E-03
Th-229	5.15E-14
Th-230	1.14E-09
Th-232	1.13E-18
U-233	1.17E-09
U-234	1.25E-04
U-235	2.18E-04
U-236	4.57E-08
U-238	4.74E-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 newly-generated debris waste stream from supercompaction of 55-gallon containers.

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

**Appendix A**  
**Waste Profile Report**

Site	Idaho National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Other/Multiple Sources	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2015	
Stream Name	Supercompacted Debris Waste				Activity Concentrations Decayed to CY	2015	

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
100-gal Drum Dir Ld w/o Liner	408.2	0.0	408.2
<b>Current Form Total</b>	<b>408.2</b>	<b>0.0</b>	<b>408.2</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
100-gal Drum Dir Ld w/o Liner	408.2	0.0	408.2
<b>Final Form Total</b>	<b>408.2</b>	<b>0.0</b>	<b>408.2</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	519.82
Aluminum-based Metal/Alloys	4.02
Other Metal/Alloys	6.63
Other Inorganic Materials	28.86
Cellulose	109.67
Rubber	8.00
Plastic	94.68
Cement	0.00
Solidified Inorganic Material	0.11
Solidified Organic Material	0.01
Soil	0.12
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.31
Packaging Material, Steel	113.72
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	7.17E-01
Am-243	1.14E-04
Cs-137	3.33E-04
Np-237	3.60E-05
Pu-238	8.73E+00
Pu-239	9.99E-01
Pu-240	2.43E-01
Pu-241	1.46E+00
Pu-242	3.75E-05
Sr-90	3.66E-04
Th-229	4.43E-09
Th-230	2.51E-10
Th-232	1.77E-19
U-233	5.04E-05
U-234	3.96E-05
U-235	5.18E-06
U-236	7.19E-09
U-238	2.18E-05

**Haz. Waste No(s).**

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

121/221

**Waste Stream Description**

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

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

**Appendix A**  
**Waste Profile Report**

Site	Idaho National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Other/Multiple Sources	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2015		
Stream Name	Supercompacted Debris Waste	Activity Concentrations Decayed to CY			2015		

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
100-gal Drum Dir Ld w/o Liner	838.0	0.0	838.0
55-gal Drum Dir Ld w/ Liner	2807.6	0.0	2807.6
Bin - Misc	1088.5	0.0	1088.5
Box - Misc	60.2	0.0	60.2
<b>Current Form Total</b>	<b>4794.3</b>	<b>0.0</b>	<b>4794.3</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
100-gal Drum Dir Ld w/o Liner	2617.4	0.0	2617.4
<b>Final Form Total</b>	<b>2617.4</b>	<b>0.0</b>	<b>2617.4</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	616.95
Aluminum-based Metal/Alloys	1.12
Other Metal/Alloys	5.84
Other Inorganic Materials	25.16
Cellulose	96.15
Rubber	10.50
Plastic	80.94
Cement	0.00
Solidified Inorganic Material	0.04
Solidified Organic Material	0.16
Soil	0.50
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.31
Packaging Material, Steel	113.72
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	3.83E+00
Am-243	1.04E-04
Cm-244	1.44E-03
Cs-137	8.77E-04
Np-237	4.40E-05
Pu-238	2.26E+00
Pu-239	1.79E+00
Pu-240	3.93E-01
Pu-241	1.97E+00
Pu-242	4.43E-05
Sr-90	9.65E-04
Th-229	3.28E-09
Th-230	1.29E-11
Th-232	4.71E-07
U-233	3.72E-04
U-234	1.44E-05
U-235	3.76E-06
U-236	1.16E-09
U-238	6.62E-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, P030, P098, P099, P106, U003, U103, U108, U134, U151
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**TRUCON Code(s)**

121/221

**Waste Stream Description**

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



Waste Stream ID: **IN-BN511**

**Appendix A**  
**Waste Profile Report**

Site	Idaho National Laboratory	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Other/Multiple Sources	Waste Matrix Code Group	Solidified Organics		Inventory Date	12/31/2015	
Stream Name	PCB Organic Homogeneous Solids			Activity Concentrations Decayed to CY	2015		

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	117.7	0.0	117.7
Box - Misc	6.3	0.0	6.3
<b>Current Form Total</b>	<b>124.1</b>	<b>0.0</b>	<b>124.1</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	119.4	0.0	119.4
<b>Final Form Total</b>	<b>119.4</b>	<b>0.0</b>	<b>119.4</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	9.35
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	1.98
Other Inorganic Materials	1.88
Cellulose	0.65
Rubber	0.01
Plastic	4.43
Cement	0.00
Solidified Inorganic Material	1.25
Solidified Organic Material	972.82
Soil	0.16
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	4.45E+00
Am-243	8.37E-09
Cs-137	1.61E-07
Np-237	7.24E-05
Pu-238	2.74E-02
Pu-239	5.31E-01
Pu-240	1.27E-01
Pu-241	1.11E+00
Pu-242	3.10E-05
Sr-90	1.77E-07
Th-229	3.48E-17
Th-230	3.05E-11
Th-232	3.43E-09
U-233	1.11E-11
U-234	3.32E-05
U-235	6.47E-06
U-236	3.75E-10
U-238	2.09E-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

**No TRUCON  
Codes Provided**

**Waste Stream Description**

Loose or cross-contaminated organic homogeneous solids derived from historically stored waste (e.g., organic setups IDCs RF-003 or RF-743). This may include organic homogeneous solids generated by the AMWTP as a result of repackaging loose homogeneous solids from breached containers that are suspected of being PCB contaminated. It also includes repackaged or intact containers of historically stored homogeneous solids waste with insufficient AK information to assign a legacy IDC.

Waste Stream ID: **IN-BN513**

**Appendix A**  
**Waste Profile Report**

Site	Idaho National Laboratory	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Other/Multiple Sources	Waste Matrix Code Group	Solidified Organics		Inventory Date	12/31/2015	
Stream Name	Non-PCB Organic Homogeneous Solids				Activity Concentrations Decayed to CY	2015	

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	2.1	0.0	2.1
<b>Current Form Total</b>	<b>2.1</b>	<b>0.0</b>	<b>2.1</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	2.1	0.0	2.1
<b>Final Form Total</b>	<b>2.1</b>	<b>0.0</b>	<b>2.1</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	177.14
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	9.41
Cellulose	0.00
Rubber	0.00
Plastic	52.40
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	442.17
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.53E-01
Cs-137	4.03E-08
Np-237	1.37E-06
Pu-238	2.78E-02
Pu-239	6.11E-01
Pu-240	1.40E-01
Pu-241	8.38E-01
Pu-242	1.13E-05
Sr-90	4.43E-08
Th-229	6.59E-19
Th-230	3.61E-15
Th-232	1.02E-21
U-233	2.09E-13
U-234	7.86E-09
U-235	6.02E-11
U-236	4.13E-10
U-238	1.75E-16

**Haz. Waste No(s).**

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

**No TRUCON  
Codes Provided**

**Waste Stream Description**

Loose or cross-contaminated organic homogeneous solids derived from historically stored waste (e.g., organic sludge's). Also may include homogeneous solids generated by AMWTP as a result of repackaging loose organic homogeneous solids from breached containers. Waste may include repackaged or intact containers of historically stored organic homogeneous solids waste with insufficient AK information to assign a legacy IDC.

Waste Stream ID: **IN-BN514**

**Appendix A**  
**Waste Profile Report**

Site	Idaho National Laboratory	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Other/Multiple Sources	Waste Matrix Code Group	Solidified Organics		Inventory Date	12/31/2015	
Stream Name	Absorbed Organic Squeezants				Activity Concentrations Decayed to CY	2015	

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

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

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

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	0.44
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	44.05
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	224.04
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	9.54E-03
Np-237	2.10E-07
Pu-238	1.25E-01
Pu-239	3.47E-02
Pu-240	8.13E-03
Pu-241	7.24E-02
Pu-242	9.78E-07
Th-229	3.98E-17
Th-230	2.21E-11
Th-232	5.93E-21
U-233	9.08E-13
U-234	2.59E-06
U-235	7.20E-07
U-236	2.41E-10
U-238	1.52E-16

**Haz. Waste No(s).**

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

**No TRUCON  
Codes Provided**

**Waste Stream Description**

Organic squeezants from the Supercompactor that have been absorbed onto particulate absorbent materials (e.g., Micro-Cel E, Petroset II-G, Aquaset, Aquaset II-G, or other approved absorbents)

Waste Stream ID: **IN-BN516**

**Appendix A**  
**Waste Profile Report**

Site	Idaho National Laboratory	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2015	
Stream Name	Inorganic Homogeneous Solids			Activity Concentrations Decayed to CY		2015	

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	16.8	0.0	16.8
<b>Current Form Total</b>	<b>16.8</b>	<b>0.0</b>	<b>16.8</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	16.8	0.0	16.8
<b>Final Form Total</b>	<b>16.8</b>	<b>0.0</b>	<b>16.8</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	16.14
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.17
Other Inorganic Materials	28.36
Cellulose	0.93
Rubber	0.56
Plastic	18.00
Cement	0.00
Solidified Inorganic Material	58.00
Solidified Organic Material	0.00
Soil	0.15
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.60E-01
Am-243	6.17E-06
Cs-137	4.73E-05
Np-237	1.14E-06
Pu-238	2.58E-01
Pu-239	1.02E-01
Pu-240	2.51E-02
Pu-241	1.73E-01
Pu-242	4.14E-06
Sr-90	5.20E-05
Th-229	2.33E-08
Th-230	1.85E-12
Th-232	4.17E-07
U-233	2.65E-03
U-234	2.05E-06
U-235	6.28E-07
U-236	7.44E-11
U-238	6.42E-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**

Inorganic homogeneous solids generated in WMF-676 that is directly related to the Supercompactor operations from processing containers assigned IDCs listed in RPT-TRUW-83 as approved feedstock. The waste consists of dust buildup material on the 1st floor and a mixture of paint flakes, solid waste, and dried squeezants material at the Supercompactor. Solids are also generated as metal oxides from plasma cutting operations and collected during cleanup of the Brokk pedestal area.

Waste Stream ID: **IN-BN517**

**Appendix A**  
**Waste Profile Report**

Site	Idaho National Laboratory	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2015	
Stream Name	TRU Supercompactor Squeezants (P/U listed)				Activity Concentrations Decayed to CY	2015	

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	4.4	0.0	4.4
<b>Current Form Total</b>	<b>4.4</b>	<b>0.0</b>	<b>4.4</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	4.4	0.0	4.4
<b>Final Form Total</b>	<b>4.4</b>	<b>0.0</b>	<b>4.4</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	0.00
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	35.72
Cellulose	0.00
Rubber	0.00
Plastic	37.11
Cement	0.00
Solidified Inorganic Material	91.11
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	3.73E-01
Cs-137	2.11E-05
Np-237	1.52E-07
Pu-238	4.15E-03
Pu-239	1.28E-02
Pu-240	2.79E-03
Pu-241	1.89E-02
Pu-242	3.46E-07
Sr-90	2.32E-05
Th-229	6.88E-20
Th-230	1.33E-12
Th-232	2.03E-23
U-233	2.21E-14
U-234	1.45E-06
U-235	4.65E-07
U-236	8.25E-12
U-238	5.37E-18

**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**

Liquid (inorganic and organic liquids) expressed/squeezed during compaction of the RPT-TRUW-83 feedstock drums. All squeezants generated since October 2014 will be P/U listed due to processing of ID wastes contaminated with P-/U-listed constituents

Waste Stream ID: **IN-BN518**

**Appendix A**  
**Waste Profile Report**

Site	Idaho National Laboratory	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2015	
Stream Name	TRU Supercompactor Squeezants				Activity Concentrations Decayed to CY	2015	

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	49.5	0.0	49.5
<b>Current Form Total</b>	<b>49.5</b>	<b>0.0</b>	<b>49.5</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	49.5	0.0	49.5
<b>Final Form Total</b>	<b>49.5</b>	<b>0.0</b>	<b>49.5</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	0.00
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	16.46
Cellulose	0.09
Rubber	0.00
Plastic	58.70
Cement	0.00
Solidified Inorganic Material	153.99
Solidified Organic Material	0.01
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.42E-01
Am-243	2.81E-05
Cs-137	4.19E-05
Np-237	1.26E-06
Pu-238	4.63E-02
Pu-239	1.40E-01
Pu-240	2.95E-02
Pu-241	1.78E-01
Pu-242	3.00E-06
Sr-90	4.60E-05
Th-229	1.31E-08
Th-230	1.92E-12
Th-232	7.21E-07
U-233	1.49E-03
U-234	2.10E-06
U-235	6.71E-07
U-236	8.74E-11
U-238	4.38E-08

**Haz. Waste No(s).**

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

**No TRUCON  
Codes Provided**

**Waste Stream Description**

Liquid (inorganic and organic liquids) expressed/squeezed during compaction of the RPT-TRUW-83 feedstock drums.

Waste Stream ID: **IN-BN520**

**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	12/31/2015		
Stream Name	TRU PCB Secondary Debris Generated from Offsite Waste			Activity Concentrations Decayed to CY	2015		

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	5.4	0.0	5.4
Box - Misc	19.0	0.0	19.0
<b>Current Form Total</b>	<b>24.4</b>	<b>0.0</b>	<b>24.4</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	10.4	0.0	10.4
<b>Final Form Total</b>	<b>10.4</b>	<b>0.0</b>	<b>10.4</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	38.10
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.05
Cellulose	12.56
Rubber	24.31
Plastic	0.00
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.39E-04
Cs-137	1.11E-07
Np-237	1.84E-08
Pu-238	1.39E-05
Pu-239	5.01E-04
Pu-240	1.11E-04
Pu-241	7.99E-04
Pu-242	1.45E-08
Sr-90	1.22E-07
Th-229	8.84E-21
Th-230	1.80E-18
Th-232	8.14E-25
U-233	2.81E-15
U-234	3.91E-12
U-235	4.94E-14
U-236	3.30E-13
U-238	2.25E-19

**Haz. Waste No(s).**

D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D021, D022, D026, D027, D028, D029, D030, D032, D033, D034, D035, D036, D037, D038, D039, D040, D043, F001, F002, F004, F005, F006, F007, F009, U133, U151

**No TRUCON  
Codes Provided**

**Waste Stream Description**

PCB-contaminated secondary debris generated from characterization, treatment, storage conducted at the AMWTP of offsite wastes that are not profiled by AMWTP for shipment to WIPP.

Waste Stream ID: **IN-BN522**

**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	12/31/2015	
Stream Name	AMWTP Non-PCB Soil			Activity Concentrations Decayed to CY		2015	

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	16.4	0.0	16.4
Box - Misc	38.0	0.0	38.0
<b>Current Form Total</b>	<b>54.5</b>	<b>0.0</b>	<b>54.5</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	26.4	0.0	26.4
<b>Final Form Total</b>	<b>26.4</b>	<b>0.0</b>	<b>26.4</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	20.46
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	5.20
Cellulose	3.87
Rubber	0.00
Plastic	3.56
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.55
Soil	1545.99
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	8.76E-03
Cs-137	1.90E-07
Np-237	4.28E-08
Pu-238	5.34E-03
Pu-239	5.10E-03
Pu-240	1.11E-03
Pu-241	7.23E-03
Pu-242	1.32E-07
Sr-90	2.09E-07
Th-229	2.05E-20
Th-230	5.29E-12
Th-232	8.09E-24
U-233	6.51E-15
U-234	5.75E-06
U-235	7.63E-07
U-236	3.28E-12
U-238	5.43E-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 in the retrieval process 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. activities. It also may include soils generated by AMWTP as a result of repackaging loose soil from breached containers. 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-BN525**

**Appendix A**  
**Waste Profile Report**

Site	Idaho National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Analytical Laboratory Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2015		
Stream Name	P-/U-listed Lab Non-PCB Debris Waste			Activity Concentrations Decayed to CY	2015		

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

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

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

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	1.88
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.11
Other Inorganic Materials	94.25
Cellulose	15.05
Rubber	0.00
Plastic	17.01
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	3.39E-02
Cs-137	1.87E-06
Np-237	1.29E-06
Pu-238	1.59E-02
Pu-239	2.44E-01
Pu-240	5.44E-02
Pu-241	3.84E-01
Pu-242	3.80E-06
Sr-90	2.05E-06
Th-229	9.75E-16
Th-230	8.33E-13
Th-232	1.59E-19
U-233	1.11E-11
U-234	9.03E-08
U-235	4.81E-10
U-236	3.22E-09
U-238	1.18E-15

**Haz. Waste No(s).**

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

**No TRUCON  
Codes Provided**

**Waste Stream Description**

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

Waste Stream ID: **IN-BN527**

**Appendix A**  
**Waste Profile Report**

Site	Idaho National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Analytical Laboratory Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2015		
Stream Name	Lab Non-PCB Debris Waste (not P/U listed)			Activity Concentrations Decayed to CY	2015		

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	2.7	0.0	2.7
<b>Current Form Total</b>	<b>2.7</b>	<b>0.0</b>	<b>2.7</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	2.7	0.0	2.7
<b>Final Form Total</b>	<b>2.7</b>	<b>0.0</b>	<b>2.7</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	9.32
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	80.55
Cellulose	4.30
Rubber	0.00
Plastic	20.01
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.30E-01
Cs-137	6.97E-04
Np-237	7.16E-07
Pu-238	8.95E-05
Pu-239	3.25E-03
Pu-240	7.21E-04
Pu-241	5.00E-03
Pu-242	9.47E-08
Sr-90	7.66E-04
Th-229	1.28E-16
Th-230	1.17E-15
Th-232	5.27E-22
U-233	2.96E-12
U-234	2.54E-10
U-235	3.20E-12
U-236	2.13E-11
U-238	1.47E-17

**Haz. Waste No(s).**

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

**No TRUCON  
Codes Provided**

**Waste Stream Description**

Secondary waste from analyzing TRU waste samples. This waste includes debris waste (e.g., beakers, vials) that is not contaminated with PCBs. This waste was generated at the ACL when operated by AMWTP from 6/2011 thru 9/2014.

Waste Stream ID: **IN-BN529**

**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	12/31/2015	
Stream Name	TRU non-PCB Liquids			Activity Concentrations Decayed to CY	2015		

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

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

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

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	1.18
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	14.79
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	11.49
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	6.26E-06
Np-237	4.04E-12
Pu-238	2.47E-02
Pu-239	3.99E-05
Pu-240	2.73E-05
Pu-241	2.26E-05
Pu-242	3.15E-08
Th-229	1.03E-21
Th-230	1.30E-12
Th-232	7.96E-23
U-233	1.76E-17
U-234	1.40E-07
U-235	7.85E-14
U-236	1.61E-12
U-238	9.79E-18

**Haz. Waste No(s).**

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

**No TRUCON  
Codes Provided**

**Waste Stream Description**

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

Waste Stream ID: **IN-BN599**

**Appendix A**  
**Waste Profile Report**

Site	Idaho National Laboratory	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Analytical Laboratory Waste	Waste Matrix Code Group	Solidified Organics		Inventory Date	12/31/2015	
Stream Name	Lab Non-PCB Homogenous Solids Waste (not P/U listed)				Activity Concentrations Decayed to CY	2015	

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

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

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

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	1.09
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	34.57
Cellulose	0.36
Rubber	0.00
Plastic	20.83
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	369.70
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	8.89E-02
Cs-137	2.17E-04
Np-237	2.87E-08
Pu-238	6.83E-03
Pu-239	2.48E-01
Pu-240	5.52E-02
Pu-241	3.84E-01
Pu-242	7.19E-06
Sr-90	2.38E-04
Th-229	1.83E-18
Th-230	8.91E-14
Th-232	4.03E-20
U-233	6.25E-14
U-234	1.94E-08
U-235	2.45E-10
U-236	1.63E-09
U-238	1.12E-15

**Haz. Waste No(s).**

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

**No TRUCON  
Codes Provided**

**Waste Stream Description**

The waste is comprised of analytical liquids (e.g., extraction liquids) that have been absorbed or solidified with imbibor beads, Acid Bond 660, or other absorbent/solidification agents, and that is not contaminated with PCBs. The waste may contain sample residues (leached solids remaining after extraction) and returned unused sample material.

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	12/31/2015	
Stream Name	AMWTP WMF-676 PCB Contaminated Debris				Activity Concentrations Decayed to CY	2015	

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	75.1	65.7	140.8
<b>Current Form Total</b>	<b>75.1</b>	<b>65.7</b>	<b>140.8</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	75.1	65.7	140.8
<b>Final Form Total</b>	<b>75.1</b>	<b>65.7</b>	<b>140.8</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	162.20
Aluminum-based Metal/Alloys	0.21
Other Metal/Alloys	22.31
Other Inorganic Materials	5.34
Cellulose	16.64
Rubber	1.82
Plastic	27.66
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.74
Soil	0.11
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	8.44E-02
Cs-137	2.53E-04
Np-237	1.38E-06
Pu-238	1.80E-02
Pu-239	2.89E-01
Pu-240	6.57E-02
Pu-241	3.11E-01
Pu-242	5.56E-06
Sr-90	2.78E-04
Th-229	6.61E-19
Th-230	5.67E-13
Th-232	4.80E-22
U-233	2.10E-13
U-234	6.20E-07
U-235	7.13E-08
U-236	1.95E-10
U-238	6.31E-06

**Haz. Waste No(s).**

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

**TRUCON Code(s)**

125/225

**Waste Stream Description**

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

Waste Stream ID: **IN-BN602**

**Appendix A**  
**Waste Profile Report**

Site	Idaho National Laboratory	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Analytical Laboratory Waste	Waste Matrix Code Group	Solidified Organics		Inventory Date	12/31/2015	
Stream Name	P-/U-listed Lab Non-PCB Homogeneous Solids Waste				Activity Concentrations Decayed to CY	2015	

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

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

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

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	0.00
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	8.18
Cellulose	0.00
Rubber	0.00
Plastic	22.49
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	482.18
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.23E+00
Cs-137	1.35E-05
Np-237	1.24E-06
Pu-238	4.40E-03
Pu-239	1.16E-01
Pu-240	2.23E-02
Pu-241	1.81E-01
Pu-242	1.89E-06
Sr-90	1.48E-05
Th-229	5.43E-16
Th-230	2.31E-13
Th-232	6.50E-20
U-233	7.34E-12
U-234	2.50E-08
U-235	2.28E-10
U-236	1.32E-09
U-238	5.87E-16

**Haz. Waste No(s).**

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

**No TRUCON  
Codes Provided**

**Waste Stream Description**

Secondary waste generated in the laboratory from analyzing TRU waste samples that are characterized with P and/or U-listed HWNs that is not PCB contaminated. The waste is comprised of analytical liquids (e.g., extraction liquids) that have been absorbed or solidified with imbibor beads, Acid Bond 660, or other absorbent/solidification agents. The waste may contain sample residues (leached solids remaining after extraction) and returned unused sample material. This waste was generated at the ACL, located at RWMC when operated by AMWTP.

Waste Stream ID: **IN-BN604**

**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	12/31/2015	
Stream Name	Debris TSCA/PCB			Activity Concentrations Decayed to CY		2015	

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	29.5	0.0	29.5
Box - Misc	107.8	0.0	107.8
<b>Current Form Total</b>	<b>137.3</b>	<b>0.0</b>	<b>137.3</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	57.8	0.0	57.8
<b>Final Form Total</b>	<b>57.8</b>	<b>0.0</b>	<b>57.8</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	129.52
Aluminum-based Metal/Alloys	0.19
Other Metal/Alloys	20.31
Other Inorganic Materials	8.90
Cellulose	12.46
Rubber	0.31
Plastic	22.51
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.67
Soil	2.28
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	6.20E-03
Cs-137	2.28E-08
Np-237	3.54E-08
Pu-238	1.59E-04
Pu-239	5.27E-03
Pu-240	1.17E-03
Pu-241	7.98E-03
Pu-242	1.20E-07
Sr-90	2.50E-08
Th-229	1.70E-20
Th-230	2.07E-17
Th-232	8.58E-24
U-233	5.40E-15
U-234	4.50E-11
U-235	5.19E-13
U-236	3.48E-12
U-238	1.87E-18

**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**

Heterogeneous PCB debris waste generated by AMWTP during handling of TSCA PCB-contaminated waste or waste that contains PCB items other than PCB debris waste generated in WMF-676. Waste also includes loose debris that is PCB-contaminated or commingled with other PCB waste and debris generated during the cleanup of spills or leaks from waste containers that are PCB waste or are suspected to be PCB-contaminated or contain PCB items (e.g., SDA IDCs). The waste may also include intact containers of debris known or suspected to be commingled with PCB waste.

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	12/31/2015	
Stream Name	AMWTP Sludge Repackaging Project (SRP) Combined Sludge Waste				Activity Concentrations Decayed to CY	2015	

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	563.9	0.0	563.9
<b>Current Form Total</b>	<b>563.9</b>	<b>0.0</b>	<b>563.9</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
SWB w/ 4 - 55-gal Drums w/ Liners	1349.5	0.0	1349.5
<b>Final Form Total</b>	<b>1349.5</b>	<b>0.0</b>	<b>1349.5</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	1.95
Aluminum-based Metal/Alloys	0.06
Other Metal/Alloys	1.95
Other Inorganic Materials	8.56
Cellulose	0.06
Rubber	0.06
Plastic	2.72
Cement	0.00
Solidified Inorganic Material	274.35
Solidified Organic Material	77.81
Soil	0.06
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	16.30
Packaging Material, Rubber	0.44
Packaging Material, Steel	211.11
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	5.30E-01
Cs-137	6.98E-09
Np-237	6.11E-06
Pu-238	4.90E-03
Pu-239	1.04E-01
Pu-240	2.15E-02
Pu-241	1.87E-01
Pu-242	4.01E-06
Sr-90	7.68E-09
Th-229	2.93E-18
Th-230	7.12E-11
Th-232	1.57E-22
U-233	9.32E-13
U-234	7.74E-05
U-235	2.45E-06
U-236	6.37E-11
U-238	1.71E-04

**Haz. Waste No(s).**

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

**TRUCON Code(s)**

111/211, 112/212,  
132/232

**Waste Stream Description**

This waste stream consists of sludge generated from repackaging of Rocky Flats inorganic and organic wastes at the SRP.



Waste Stream ID: **IN-BN806**

**Appendix A**  
**Waste Profile Report**

Site	Idaho National Laboratory	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Materials Production/Recovery Effluents	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2015	
Stream Name	Solidified Process Solids			Activity Concentrations Decayed to CY	2015		

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

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

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

**Waste Material Parameters**

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

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.64E-01
Cs-137	2.38E-08
Np-237	2.93E-06
Pu-238	5.92E-02
Pu-239	1.37E+00
Pu-240	3.14E-01
Pu-241	2.71E+00
Pu-242	2.25E-05
Sr-90	2.61E-08
Th-229	5.53E-16
Th-230	7.71E-13
Th-232	2.29E-19
U-233	1.26E-11
U-234	1.68E-07
U-235	1.35E-09
U-236	9.29E-09
U-238	3.49E-15

**Haz. Waste No(s).**D008, F001, F002,  
F003, F005

**No TRUCON  
Codes Provided**

**Waste Stream Description**

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

Waste Stream ID: **IN-BN811**

**Appendix A**  
**Waste Profile Report**

Site	Idaho National Laboratory	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Pollution Control or Waste Treatment Process	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2015	
Stream Name	Evaporator and Dissolver Sludge			Activity Concentrations Decayed to CY	2015		

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

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

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

**Waste Material Parameters**

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

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.82E-02
Np-237	8.79E-07
Pu-238	9.82E+00
Pu-239	2.54E-02
Pu-240	1.25E-02
Pu-241	1.87E-01
Pu-242	1.20E-05
Th-229	1.27E-14
Th-230	1.09E-08
Th-232	7.41E-19
U-233	3.25E-11
U-234	2.59E-04
U-235	2.25E-10
U-236	3.34E-09
U-238	1.05E-05

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

**Waste Stream Description**

This waste stream, generated at Mound Laboratory, consists of dry evaporator and dissolver sludge in the form of powder or sand-like particles.

Waste Stream ID: **IN-BN817**

**Appendix A**  
**Waste Profile Report**

Site	Idaho National Laboratory	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Materials Production/Recovery Effluents	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2015	
Stream Name	Cemented Sand, Slag, Crucible Heels				Activity Concentrations Decayed to CY	2015	

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

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

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

**Waste Material Parameters**

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

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.56E-01
Np-237	2.77E-06
Pu-238	5.06E-02
Pu-239	1.15E+00
Pu-240	2.62E-01
Pu-241	1.62E+00
Pu-242	1.85E-05
Th-229	3.81E-14
Th-230	5.57E-11
Th-232	1.55E-17
U-233	9.89E-11
U-234	1.33E-06
U-235	1.02E-08
U-236	6.99E-08
U-238	2.58E-14

**Haz. Waste No(s).**

D007

**No TRUCON  
Codes Provided**

**Waste Stream Description**

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

Waste Stream ID: **IN-BN823**

**Appendix A**  
**Waste Profile Report**

Site	Idaho National Laboratory	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Materials Production/Recovery Effluents	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2015	
Stream Name	Cemented Miscellaneous Sludge				Activity Concentrations Decayed to CY	2015	

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

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

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

**Waste Material Parameters**

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

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	3.33E-03
Np-237	2.87E-02
Pu-238	1.36E-03
Pu-239	2.53E-02
Pu-240	5.79E-03
Pu-241	3.61E-02
Pu-242	6.35E-07
Th-229	5.43E-10
Th-230	1.87E-12
Th-232	4.23E-19
U-233	1.24E-06
U-234	4.01E-08
U-235	2.49E-10
U-236	1.71E-09
U-238	9.85E-16

**Haz. Waste No(s).**

D008, F001, F002, F003

**No TRUCON  
Codes Provided**

**Waste Stream Description**

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

Waste Stream ID: **IN-BN835**

**Appendix A**  
**Waste Profile Report**

Site	Idaho National Laboratory	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Materials Production/Recovery Effluents	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2015	
Stream Name	Solidified Acid/Caustic Waste				Activity Concentrations Decayed to CY	2015	

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

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

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

**Waste Material Parameters**

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

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	3.07E-02
Cs-137	2.09E-08
Np-237	8.62E-06
Pu-238	2.19E+00
Pu-239	3.59E-03
Pu-240	2.31E-03
Pu-241	1.04E-02
Pu-242	2.59E-06
Sr-90	2.30E-08
Th-229	1.65E-15
Th-230	2.93E-11
Th-232	1.69E-21
U-233	3.75E-11
U-234	6.29E-06
U-235	2.61E-09
U-236	6.83E-11
U-238	1.11E-06

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

111/211

**Waste Stream Description**

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

Waste Stream ID: **IN-BN836**

**Appendix A**  
**Waste Profile Report**

Site	Idaho National Laboratory	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Pollution Control or Waste Treatment Process	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2015	
Stream Name	Cemented Sludge				Activity Concentrations Decayed to CY	2015	

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

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

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

**Waste Material Parameters**

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

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.95E-04
Cs-137	6.13E-06
Np-237	3.82E-07
Pu-238	6.97E-02
Pu-239	1.07E-04
Pu-240	7.34E-05
Pu-241	8.12E-05
Pu-242	8.42E-08
Sr-90	6.73E-06
Th-229	7.32E-17
Th-230	9.08E-13
Th-232	5.36E-23
U-233	1.66E-12
U-234	1.97E-07
U-235	1.06E-13
U-236	2.17E-12
U-238	1.31E-17

**Haz. Waste No(s).**

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

**TRUCON Code(s)**

111/211

**Waste Stream Description**

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

Waste Stream ID: **IN-BN842**

**Appendix A**  
**Waste Profile Report**

Site	Idaho National Laboratory	Summary Category	S4000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Remediation/D&D Waste	Waste Matrix Code Group	Contaminated Soil/Debris Waste		Inventory Date	12/31/2015	
Stream Name	Contaminated Soil			Activity Concentrations Decayed to CY		2015	

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

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

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

**Waste Material Parameters**

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

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.88E-05
Np-237	3.15E-11
Pu-238	2.06E-02
Pu-239	6.24E-04
Pu-240	1.54E-04
Pu-241	8.03E-04
Pu-242	4.31E-08
Th-229	7.83E-20
Th-230	1.36E-11
Th-232	5.51E-21
U-233	4.13E-16
U-234	4.17E-07
U-235	4.31E-12
U-236	3.19E-11
U-238	4.68E-17

**Haz. Waste No(s).**D006, D007, D008,  
D009, D010, D011

**No TRUCON  
Codes Provided**

**Waste Stream Description**

This waste, generated at Mound Laboratories, consists of soil, including small rocks and pebbles, generated from spill cleanup. All soil waste was dry when packaged.

Waste Stream ID: **IN-BN976**

**Appendix A**  
**Waste Profile Report**

Site	Idaho National Laboratory	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2015	
Stream Name	Bldg. 776 Process Sludge			Activity Concentrations Decayed to CY	2015		

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

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

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

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	0.00
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	1.24
Cellulose	0.00
Rubber	0.00
Plastic	0.26
Cement	84.89
Solidified Inorganic Material	321.58
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	16.30
Packaging Material, Rubber	0.44
Packaging Material, Steel	211.11
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.17E+00
Cs-137	2.53E-07
Np-237	3.04E-05
Pu-238	3.29E-01
Pu-239	8.70E+00
Pu-240	2.01E+00
Pu-241	8.69E+00
Pu-242	1.65E-04
Sr-90	2.75E-07
Th-229	1.87E-13
Th-230	8.90E-10
Th-232	5.28E-17
U-233	7.28E-10
U-234	1.90E-05
U-235	2.41E-06
U-236	3.57E-07
U-238	6.83E-05

**Haz. Waste No(s).**

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

**No TRUCON  
Codes Provided**

**Waste Stream Description**

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



Waste Stream ID: **IN-BN978**

**Appendix A**  
**Waste Profile Report**

Site	Idaho National Laboratory	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2015	
Stream Name	Laundry Sludge				Activity Concentrations Decayed to CY	2015	

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

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

Final Form Volumes			
Container Type	Stored	Proj.	Total
TDOP w/ 10 - 55-gal Drums w/ Liners	45.0	0.0	45.0
<b>Final Form Total</b>	<b>45.0</b>	<b>0.0</b>	<b>45.0</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	0.00
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	1.48
Other Inorganic Materials	15.13
Cellulose	15.13
Rubber	20.05
Plastic	4.09
Cement	134.23
Solidified Inorganic Material	201.34
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	17.13
Packaging Material, Rubber	0.44
Packaging Material, Steel	231.11
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.39E-03
Np-237	1.53E-09
Pu-238	2.99E-04
Pu-239	1.08E-02
Pu-240	2.39E-03
Pu-241	1.77E-02
Pu-242	3.10E-07
Th-229	3.89E-19
Th-230	6.63E-11
Th-232	6.98E-21
U-233	6.65E-15
U-234	3.61E-06
U-235	7.63E-07
U-236	1.41E-10
U-238	2.00E-05

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

**Waste Stream Description**

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

Waste Stream ID: **IN-BNINW216**

**Appendix A**  
**Waste Profile Report**

Site	Idaho National Laboratory	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Pollution Control or Waste Treatment Process	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2015	
Stream Name	First/Second Stage Sludge				Activity Concentrations Decayed to CY	2015	

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	1565.0	0.0	1565.0
<b>Current Form Total</b>	<b>1565.0</b>	<b>0.0</b>	<b>1565.0</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
SWB w/ 4 - 55-gal Drums w/ Liners	3757.3	0.0	3757.3
<b>Final Form Total</b>	<b>3757.3</b>	<b>0.0</b>	<b>3757.3</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	0.05
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.07
Other Inorganic Materials	3.73
Cellulose	0.03
Rubber	0.02
Plastic	0.33
Cement	45.83
Solidified Inorganic Material	338.40
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	16.30
Packaging Material, Rubber	0.44
Packaging Material, Steel	211.11
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	7.28E+00
Am-243	2.39E-08
Cs-137	4.79E-08
Np-237	9.39E-05
Pu-238	3.82E-02
Pu-239	5.62E-01
Pu-240	1.42E-01
Pu-241	1.48E+00
Pu-242	4.14E-05
Sr-90	5.28E-08
Th-229	8.27E-10
Th-230	2.02E-11
Th-232	1.04E-21
U-233	9.40E-05
U-234	2.19E-05
U-235	4.62E-06
U-236	4.20E-10
U-238	1.19E-04

**Haz. Waste No(s).**

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

**TRUCON Code(s)**

111/211, 132/232

**Waste Stream Description**

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

Waste Stream ID: **IN-BNINW218**

**Appendix A**  
**Waste Profile Report**

Site	Idaho National Laboratory	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Materials Production/Recovery Effluents	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2015	
Stream Name	Building 374 Sludge			Activity Concentrations Decayed to CY	2015		

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

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

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

**Waste Material Parameters**

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

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.56E-02
Cs-137	1.41E-09
Np-237	2.03E-05
Pu-238	7.09E-04
Pu-239	1.63E-02
Pu-240	3.45E-03
Pu-241	3.04E-02
Pu-242	5.06E-07
Sr-90	1.55E-09
Th-229	3.90E-15
Th-230	2.68E-09
Th-232	2.52E-21
U-233	8.86E-11
U-234	2.92E-04
U-235	2.65E-05
U-236	1.02E-10
U-238	3.48E-03

**Haz. Waste No(s).**

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

**TRUCON Code(s)**

111/211

**Waste Stream Description**

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

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

**Appendix A**  
**Waste Profile Report**

Site	Idaho National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	RH
Source Cat.	R&D/R&D Laboratory Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2015	
Stream Name	RH TRU Debris Waste from ANL-E stored at INL				Activity Concentrations Decayed to CY	2015	

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum	2.5	0.0	2.5
<b>Current Form Total</b>	<b>2.5</b>	<b>0.0</b>	<b>2.5</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/o Liner	2.5	0.0	2.5
<b>Final Form Total</b>	<b>2.5</b>	<b>0.0</b>	<b>2.5</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	120.19
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	11.15
Other Inorganic Materials	5.25
Cellulose	2.84
Rubber	0.00
Plastic	5.14
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	8.70
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Pu-239	4.81E-01
U-235	9.47E-10

**Haz. Waste No(s).**

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

321, 325
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**Waste Stream Description**

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

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

**Appendix A**  
**Waste Profile Report**

Site	Idaho National Laboratory	Summary Category	S3000	Defense Determination	Defense-Related	Handling	RH
Source Cat.	R&D/R&D Laboratory Waste	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2015	
Stream Name	RH Laboratory Waste from INL			Activity Concentrations Decayed to CY		2015	

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum	0.6	0.0	0.6
<b>Current Form Total</b>	<b>0.6</b>	<b>0.0</b>	<b>0.6</b>

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

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	59.58
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	5.24
Rubber	0.22
Plastic	15.98
Cement	0.00
Solidified Inorganic Material	11.54
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	8.70
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	5.36E+00
Cs-137	3.60E-01
Np-237	1.74E-06
Pu-238	5.28E-01
Pu-239	2.82E+01
Pu-240	5.93E+00
Pu-242	6.51E-02
Sr-90	9.43E-02
Th-229	5.84E-11
Th-230	6.20E-10
Th-232	4.33E-18
U-233	6.63E-07
U-234	6.82E-05
U-235	1.12E-06
U-236	1.75E-07
U-238	2.23E-08

**Haz. Waste No(s).**

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

**TRUCON Code(s)**

327

**Waste Stream Description**

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

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

**Appendix A**  
**Waste Profile Report**

Site	Idaho National Laboratory	Summary Category	S3000	Defense Determination	Defense-Related	Handling	RH
Source Cat.	R&D/R&D Laboratory Waste	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2015	
Stream Name	Solidified Waste Sludge from Bettis Atomic Power Lab.				Activity Concentrations Decayed to CY	2015	

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum	0.8	0.0	0.8
<b>Current Form Total</b>	<b>0.8</b>	<b>0.0</b>	<b>0.8</b>

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

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	166.67
Aluminum-based Metal/Alloys	25.64
Other Metal/Alloys	0.00
Other Inorganic Materials	0.80
Cellulose	3.54
Rubber	1.50
Plastic	7.34
Cement	53.53
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	8.70
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.22E-02
Cs-137	9.82E+00
Np-237	3.96E-09
Pu-238	2.95E-01
Pu-239	1.59E-01
Pu-240	3.35E-03
Pu-242	5.76E-04
Sr-90	1.61E+01
Th-229	1.64E-07
Th-230	1.49E-08
Th-232	2.45E-21
U-233	1.86E-03
U-234	1.62E-03
U-235	3.66E-05
U-236	9.93E-11
U-238	2.53E-05

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

327

**Waste Stream Description**

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

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

**Appendix A**  
**Waste Profile Report**

Site	Idaho National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	RH
Source Cat.	Remediation/D&D Waste	Waste Matrix Code Group	Uncategorized Metal Waste	Inventory Date	12/31/2015		
Stream Name	RH-TRU Debris Waste From Experimental Breeder Reactor			Activity Concentrations Decayed to CY	2015		

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum	4.2	0.0	4.2
<b>Current Form Total</b>	<b>4.2</b>	<b>0.0</b>	<b>4.2</b>

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

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	114.70
Aluminum-based Metal/Alloys	13.75
Other Metal/Alloys	817.31
Other Inorganic Materials	0.00
Cellulose	0.46
Rubber	0.46
Plastic	10.26
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.02
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	8.70
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.26E-06
Cs-137	3.07E+01
Np-237	4.06E-13
Pu-238	1.77E-04
Pu-239	3.36E+00
Pu-240	1.22E-03
Pu-241	4.04E-06
Pu-242	5.95E-14
Sr-90	2.84E+00
Th-229	1.62E-12
Th-230	3.90E-10
Th-232	8.93E-22
U-233	1.84E-08
U-234	4.28E-05
U-235	1.33E-02
U-236	3.62E-11
U-238	2.87E-01

No Hazardous Waste Numbers Provided

TRUCON Code(s)  
321, 322, 325

**Waste Stream Description**

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

Waste Stream ID: **IN-ID-HFEF-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	12/31/2015	
Stream Name	Sodium contaminated RH TRU Waste from Materials and Fuels Complex at INL.				Activity Concentrations Decayed to CY	2015	

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum	21.0	0.0	21.0
HFEF-5 RH canister	0.1	0.0	0.1
<b>Current Form Total</b>	<b>21.1</b>	<b>0.0</b>	<b>21.1</b>

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

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	248.75
Aluminum-based Metal/Alloys	2.12
Other Metal/Alloys	42.35
Other Inorganic Materials	4.23
Cellulose	5.49
Rubber	0.21
Plastic	7.57
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	31.73
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	8.70
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	4.18E-04
Cs-137	6.66E+01
Np-237	2.91E-06
Pu-238	1.29E-02
Pu-239	2.92E+00
Pu-240	1.47E+00
Sr-90	6.24E+01
Th-229	6.18E-15
Th-230	1.60E-12
Th-232	9.98E-18
U-233	4.24E-11
U-234	1.16E-07
U-235	2.64E-04
U-236	1.33E-07
U-238	6.23E-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 1 HFEF canister, and 101 55-gallon drums.



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	12/31/2015	
Stream Name	RH-TRU Debris Waste From Materials and Fuels Complex Hot Fuel Examination Facility at the INL.				Activity Concentrations Decayed to CY	2015	

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum	22.5	0.0	22.5
HFEF-5 RH canister	0.1	0.0	0.1
<b>Current Form Total</b>	<b>22.6</b>	<b>0.0</b>	<b>22.6</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/o Liner	23.7	0.0	23.7
<b>Final Form Total</b>	<b>23.7</b>	<b>0.0</b>	<b>23.7</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	128.21
Aluminum-based Metal/Alloys	9.36
Other Metal/Alloys	2.80
Other Inorganic Materials	11.22
Cellulose	12.15
Rubber	9.36
Plastic	24.38
Cement	0.00
Solidified Inorganic Material	0.39
Solidified Organic Material	9.36
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	8.70
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	3.64E-01
Am-243	3.79E-11
Cm-244	4.26E-03
Cs-137	4.45E+01
Np-237	8.95E-05
Pu-238	1.52E-01
Pu-239	4.19E-01
Pu-240	8.02E-02
Pu-241	1.96E-02
Pu-242	5.31E-07
Sr-90	4.68E+01
Th-229	2.32E-08
Th-230	1.73E-08
Th-232	7.11E-07
U-233	1.39E-05
U-234	1.04E-04
U-235	4.49E-05
U-236	3.06E-06
U-238	1.12E-04

**Haz. Waste No(s).**

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

**TRUCON Code(s)**

321, 322, 325

**Waste Stream Description**

This waste stream consists of 1 HFEF canister (12 in. Dia. x 6 ft. tall) and 108 55-gallon drums. Three 55-gallon will be placed in a RH TRU Removable Lid Canister for transport to WIPP. Some of the containers in this waste stream have hazardous waste codes applied by the generator.

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

**Appendix A**  
**Waste Profile Report**

Site	Idaho National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	RH
Source Cat.	Analytical Laboratory Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2015	
Stream Name	RH-TRU Waste From Materials and Fuels Complex at the INL.				Activity Concentrations Decayed to CY	2015	

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum	1.0	0.0	1.0
<b>Current Form Total</b>	<b>1.0</b>	<b>0.0</b>	<b>1.0</b>

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

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	91.65
Aluminum-based Metal/Alloys	1.07
Other Metal/Alloys	0.21
Other Inorganic Materials	0.21
Cellulose	3.08
Rubber	0.26
Plastic	9.62
Cement	0.00
Solidified Inorganic Material	1.50
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	8.70
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	7.82E-02
Cs-137	1.38E+01
Np-237	2.53E-09
Pu-238	2.45E-02
Pu-239	1.38E-01
Pu-240	3.53E-02
Pu-242	6.60E-04
Sr-90	1.54E+01
Th-229	9.90E-11
Th-230	1.29E-08
Th-232	2.58E-22
U-233	1.13E-05
U-234	1.41E-02
U-235	8.16E-04
U-236	1.05E-10
U-238	1.09E-04

**Haz. Waste No(s).**

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

**TRUCON Code(s)**

321, 325

**Waste Stream Description**

This waste stream consists of 5 55-gallon drums of repackaged waste from Four 24-inch diameter by 148-inch long carbon steel liners each containing 2 to 3 1-liter bottle of solidified sample solution and debris from Analytical Laboratory hot cells.

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

**Appendix A**  
**Waste Profile Report**

Site	Idaho National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	RH
Source Cat.	R&D/R&D Laboratory Waste	Waste Matrix Code Group	Uncategorized Metal Waste	Inventory Date	12/31/2015		
Stream Name	AMWTP Suspect RH TRU Sources			Activity Concentrations Decayed to CY	2015		

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum	0.2	0.0	0.2
Box - Misc	3.4	0.0	3.4
<b>Current Form Total</b>	<b>3.6</b>	<b>0.0</b>	<b>3.6</b>

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

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	135.42
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	16.03
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	33.81
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	8.70
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Pu-238	5.71E+02
Pu-239	2.79E-01
Th-230	7.41E-11
U-234	1.61E-04
U-235	2.75E-11

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

**Waste Stream Description**

This waste stream consists of 1 55 gallon drums and one non-standard box that contains one source in each.

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	12/31/2015		
Stream Name	Analytical Laboratory waste from MFC (formerly know as ANL-W)			Activity Concentrations Decayed to CY	2015		

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

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

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

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	160.26
Aluminum-based Metal/Alloys	48.72
Other Metal/Alloys	0.00
Other Inorganic Materials	6.09
Cellulose	1.41
Rubber	3.04
Plastic	68.59
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	48.72
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	8.70
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	3.35E-01
Cs-137	1.10E+00
Np-237	2.16E-07
Pu-238	2.45E-02
Pu-239	8.85E-01
Pu-240	1.95E-01
Pu-241	1.36E+00
Pu-242	2.58E-05
Sr-90	1.22E+00
Th-229	5.50E-17
Th-230	1.28E-12
Th-232	5.71E-19
U-233	9.39E-13
U-234	1.39E-07
U-235	1.74E-09
U-236	1.16E-08
U-238	8.01E-15

**Haz. Waste No(s).**

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

**TRUCON Code(s)**

321, 325

**Waste Stream Description**

This waste stream consists of one drum that contains sample holder, Nalgene bottles, sample solution absorbed in vermiculite and debris from analytical laboratory.

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

**Appendix A**  
**Waste Profile Report**

Site	Idaho National Laboratory	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Solidified Organics		Inventory Date	12/31/2015	
Stream Name	Organic Setups				Activity Concentrations Decayed to CY	2015	

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	1508.0	0.0	1508.0
<b>Current Form Total</b>	<b>1508.0</b>	<b>0.0</b>	<b>1508.0</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
SWB w/ 4 - 55-gal Drums w/ Liners	190.9	0.0	190.9
TDOP w/ 10 - 55-gal Drums w/ Liners	3456.0	0.0	3456.0
<b>Final Form Total</b>	<b>3646.9</b>	<b>0.0</b>	<b>3646.9</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	2.00
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	7.41
Cellulose	0.08
Rubber	0.02
Plastic	3.17
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	365.04
Soil	0.02
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	17.09
Packaging Material, Rubber	0.44
Packaging Material, Steel	230.06
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.35E-02
Np-237	1.85E-06
Pu-238	3.25E-03
Pu-239	6.33E-02
Pu-240	1.41E-02
Pu-241	9.23E-02
Pu-242	1.40E-06
Th-229	8.88E-19
Th-230	2.05E-12
Th-232	1.03E-22
U-233	2.82E-13
U-234	2.23E-06
U-235	3.99E-07
U-236	4.18E-11
U-238	1.59E-05

**Haz. Waste No(s).**

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

**TRUCON Code(s)**

112/212

**Waste Stream Description**

This waste, generated at Rocky Flats, consists of various organic liquids transferred to Building 774 for immobilization. This process was shutdown in 1985 and replaced by the Organic and Sludge Immobilization System (OASIS) process.

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

**Appendix A**  
**Waste Profile Report**

Site	Idaho National Laboratory	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Solidified Organics		Inventory Date	12/31/2015	
Stream Name	Organic and Sludge Immobilization System Waste				Activity Concentrations Decayed to CY	2015	

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

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

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

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	0.03
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	1.99
Cellulose	0.03
Rubber	0.00
Plastic	1.99
Cement	333.59
Solidified Inorganic Material	0.00
Solidified Organic Material	282.66
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	23.87
Packaging Material, Rubber	0.49
Packaging Material, Steel	184.92
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	4.24E-02
Np-237	2.30E-06
Pu-238	1.70E-02
Pu-239	3.86E-01
Pu-240	8.42E-02
Pu-241	7.76E-01
Pu-242	6.92E-06
Th-229	4.38E-16
Th-230	3.83E-12
Th-232	6.15E-20
U-233	9.96E-12
U-234	4.40E-07
U-235	9.27E-08
U-236	2.49E-09
U-238	1.07E-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.

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

**Appendix A**  
**Waste Profile Report**

<b>Site</b>	Idaho National Laboratory	<b>Summary Category</b>	S5000	<b>Defense Determination</b>	Defense-Related	<b>Handling</b>	RH
<b>Source Cat.</b>	Facility/Equipment Operation and Maintenance Waste	<b>Waste Matrix Code Group</b>	Heterogeneous Debris Waste	<b>Inventory Date</b>	12/31/2015		
<b>Stream Name</b>	Rocky Flats Generated Suspect RH TRU waste received from AMWTP			<b>Activity Concentrations Decayed to CY</b>	2015		

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum	1.0	0.0	1.0
<b>Current Form Total</b>	<b>1.0</b>	<b>0.0</b>	<b>1.0</b>

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

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	95.83
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	22.21
Cellulose	38.96
Rubber	0.35
Plastic	7.72
Cement	117.79
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	8.70
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	8.14E+01
Cs-137	6.87E-02
Np-237	2.64E-05
Pu-238	2.66E-02
Pu-239	1.30E+00
Pu-240	2.85E-01
Pu-242	5.64E-04
Sr-90	4.22E-03
Th-229	2.16E-08
Th-230	1.27E-08
Th-232	2.08E-19
U-233	2.46E-04
U-234	1.38E-03
U-235	4.57E-04
U-236	8.44E-09
U-238	3.39E-04

**Haz. Waste No(s).**

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

**TRUCON Code(s)**

321, 322

**Waste Stream Description**

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

Waste Stream ID: **IN-ID-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	12/31/2015	
Stream Name	RH TRU Waste from INL.				Activity Concentrations Decayed to CY	2015	

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum	2.5	0.0	2.5
<b>Current Form Total</b>	<b>2.5</b>	<b>0.0</b>	<b>2.5</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/o Liner	2.5	0.0	2.5
<b>Final Form Total</b>	<b>2.5</b>	<b>0.0</b>	<b>2.5</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	207.13
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	97.36
Other Inorganic Materials	10.88
Cellulose	0.84
Rubber	0.84
Plastic	14.31
Cement	0.00
Solidified Inorganic Material	38.84
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	8.70
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Cs-137	8.94E-02
Np-237	1.18E-03
Pu-239	3.48E+00
Pu-240	2.56E+00
Th-229	4.73E-06
Th-230	5.29E-14
Th-232	5.71E-05
U-233	2.69E-02
U-234	5.75E-09
U-235	2.16E-04
U-236	1.51E-07
U-238	1.07E-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



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	12/31/2015	
Stream Name	ICP Retrieved Debris Waste (Filters/Graphite)			Activity Concentrations Decayed to CY		2015	

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	193.6	0.0	193.6
55-gal Drum Equivalent	424.7	0.0	424.7
<b>Current Form Total</b>	<b>618.4</b>	<b>0.0</b>	<b>618.4</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	724.7	0.0	724.7
<b>Final Form Total</b>	<b>724.7</b>	<b>0.0</b>	<b>724.7</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	1.38
Aluminum-based Metal/Alloys	0.21
Other Metal/Alloys	0.20
Other Inorganic Materials	223.64
Cellulose	76.42
Rubber	0.90
Plastic	7.82
Cement	0.97
Solidified Inorganic Material	9.50
Solidified Organic Material	0.87
Soil	18.80
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	6.99E-01
Cs-137	1.40E-06
Np-237	1.09E-05
Pu-238	5.83E-02
Pu-239	1.62E+00
Pu-240	3.62E-01
Pu-241	1.85E+00
Pu-242	3.75E-05
Sr-90	1.54E-06
Th-229	8.16E-10
Th-230	2.94E-09
Th-232	5.18E-13
U-233	9.27E-06
U-234	3.20E-04
U-235	8.22E-06
U-236	1.07E-08
U-238	4.81E-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
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**TRUCON Code(s)**

112/212, 119/219, 122/222, 127/227, 154
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**Waste Stream Description**

Pre-1970 buried waste retrieved for the Idaho Completion Project

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

**Appendix A**  
**Waste Profile Report**

Site	Idaho National Laboratory	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Remediation/D&D Waste	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2015	
Stream Name	ICP Retrieved Sludge Waste (Inorganic/Organic Sludge/Roaster Oxide)				Activity Concentrations Decayed to CY	2015	

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	962.6	0.0	962.6
55-gal Drum Equivalent	1383.6	0.0	1383.6
<b>Current Form Total</b>	<b>2346.2</b>	<b>0.0</b>	<b>2346.2</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	2857.9	0.0	2857.9
<b>Final Form Total</b>	<b>2857.9</b>	<b>0.0</b>	<b>2857.9</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	0.20
Aluminum-based Metal/Alloys	0.01
Other Metal/Alloys	0.01
Other Inorganic Materials	37.59
Cellulose	0.38
Rubber	0.13
Plastic	0.46
Cement	0.12
Solidified Inorganic Material	169.75
Solidified Organic Material	301.25
Soil	20.52
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.48E+00
Cm-244	2.46E-05
Cs-137	1.24E-05
Np-237	2.27E-05
Pu-238	2.02E-02
Pu-239	4.71E-01
Pu-240	1.06E-01
Pu-241	8.50E-01
Pu-242	1.86E-05
Sr-90	1.36E-05
Th-229	1.53E-09
Th-230	2.93E-09
Th-232	7.71E-20
U-233	1.74E-05
U-234	3.19E-04
U-235	8.42E-06
U-236	3.13E-09
U-238	1.23E-03

**Haz. Waste No(s).**

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

**TRUCON Code(s)**

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

**Waste Stream Description**

Pre-1970 buried waste retrieved for the Idaho Completion Project

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

**Appendix A**  
**Waste Profile Report**

Site	Idaho National Laboratory	Summary Category	S4000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Remediation/D&D Waste	Waste Matrix Code Group	Contaminated Soil/Debris Waste		Inventory Date	12/31/2015	
Stream Name	ICP Retrieved Soils			Activity Concentrations Decayed to CY		2015	

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	190.1	0.0	190.1
55-gal Drum Equivalent	269.2	0.0	269.2
<b>Current Form Total</b>	<b>459.3</b>	<b>0.0</b>	<b>459.3</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	535.2	0.0	535.2
<b>Final Form Total</b>	<b>535.2</b>	<b>0.0</b>	<b>535.2</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	0.53
Aluminum-based Metal/Alloys	0.02
Other Metal/Alloys	0.10
Other Inorganic Materials	19.11
Cellulose	12.03
Rubber	0.32
Plastic	5.37
Cement	0.34
Solidified Inorganic Material	14.63
Solidified Organic Material	5.58
Soil	497.50
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	8.22E-01
Cs-137	1.45E-05
Np-237	1.24E-05
Pu-238	2.33E-02
Pu-239	6.03E-01
Pu-240	1.34E-01
Pu-241	8.64E-01
Pu-242	1.94E-05
Sr-90	1.59E-05
Th-229	2.39E-10
Th-230	2.58E-09
Th-232	3.54E-10
U-233	2.72E-06
U-234	2.81E-04
U-235	4.04E-05
U-236	3.97E-09
U-238	8.57E-04

**Haz. Waste No(s).**

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

**TRUCON Code(s)**

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

**Waste Stream Description**

Pre-1970 buried waste retrieved for the Idaho Completion Project

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

**Appendix A**  
**Waste Profile Report**

Site	Idaho National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	RH
Source Cat.	R&D/R&D Laboratory Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2015		
Stream Name	Miscellaneous Source Material	Activity Concentrations Decayed to CY			2015		

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

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

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

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	72.12
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	1.60
Other Inorganic Materials	16.03
Cellulose	0.00
Rubber	0.00
Plastic	8.01
Cement	0.00
Solidified Inorganic Material	30.45
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	8.70
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.96E+01
Np-237	1.92E-05
Pu-239	1.99E+00
Th-229	4.90E-15
U-233	8.35E-11
U-235	3.91E-09

No Hazardous Waste Numbers Provided

TRUCON Code(s)  
320

**Waste Stream Description**

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

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

**Appendix A**  
**Waste Profile Report**

Site	Idaho National Laboratory	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Remediation/D&D Waste	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2015	
Stream Name	INL Sludge Repackage Project Combined Sludge Waste				Activity Concentrations Decayed to CY	2015	

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

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

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

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	0.55
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.03
Other Inorganic Materials	3.86
Cellulose	0.08
Rubber	0.21
Plastic	2.07
Cement	0.00
Solidified Inorganic Material	159.68
Solidified Organic Material	95.80
Soil	0.05
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	16.30
Packaging Material, Rubber	0.44
Packaging Material, Steel	211.11
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	7.69E-02
Cs-137	1.61E-09
Np-237	1.24E-06
Pu-238	9.42E-04
Pu-239	2.24E-02
Pu-240	4.98E-03
Pu-241	3.85E-02
Pu-242	8.59E-07
Sr-90	1.77E-09
Th-229	5.94E-19
Th-230	3.86E-11
Th-232	3.63E-23
U-233	1.89E-13
U-234	4.20E-05
U-235	1.33E-06
U-236	1.47E-11
U-238	3.84E-05

**Haz. Waste No(s).**

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

**TRUCON Code(s)**

111/211, 112/212, 132/232

**Waste Stream Description**

This waste stream consists of sludge generated from repackaging of Rocky Flats inorganic and organic wastes at the SRP.

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

**Appendix A**  
**Waste Profile Report**

Site	Idaho National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	RH
Source Cat.	R&D/R&D Laboratory Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2015	
Stream Name	RH-TRU Debris from TRA at the INL				Activity Concentrations Decayed to CY	2015	

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

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

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

**Waste Material Parameters**

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

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	4.03E-06
Cm-244	3.61E+02
Np-237	4.56E-13
Pu-240	5.13E+00
Pu-241	4.99E-03
Th-229	9.01E-24
Th-232	3.73E-18
U-233	5.04E-19
U-236	1.51E-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

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	12/31/2015		
Stream Name	RH-TRU Debris Waste from the Naval Nuclear Propulsion Program (NNPP)			Activity Concentrations Decayed to CY	2015		

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
Can	0.8	0.0	0.8
<b>Current Form Total</b>	<b>0.8</b>	<b>0.0</b>	<b>0.8</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/o Liner	137.3	0.0	137.3
<b>Final Form Total</b>	<b>137.3</b>	<b>0.0</b>	<b>137.3</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	67.82
Aluminum-based Metal/Alloys	9.91
Other Metal/Alloys	0.06
Other Inorganic Materials	2.32
Cellulose	1.35
Rubber	0.05
Plastic	1.71
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	8.70
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	7.21E-01
Cs-137	6.88E+01
Np-237	1.62E-06
Pu-238	2.47E+00
Pu-239	8.01E-02
Pu-240	8.08E-02
Pu-241	1.98E+00
Pu-242	2.64E-04
Sr-90	6.25E+01
Th-229	2.31E-05
Th-230	6.77E-07
Th-232	2.89E-18
U-233	3.75E-02
U-234	1.05E-02
U-235	2.32E-04
U-236	1.67E-08
U-238	5.70E-05

**Haz. Waste No(s).**

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

**No TRUCON  
Codes Provided**

**Waste Stream Description**

This waste stream was generated at NNPP facilities and consists of 108 containers in storage at the INL. Waste was generated during the same or similar process that generated the SPC waste. AK information is being collected to assure the waste stream meets WIPP requirements. Waste stream includes debris waste generated during analysis of post-irradiated nuclear fuel from Naval Reactors programs using destructive examination methods.

Waste Stream ID: **IN-W347**

**Appendix A**  
**Waste Profile Report**

Site	Idaho National Laboratory	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Other/Multiple Sources	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2015	
Stream Name	Absorbed Liquids				Activity Concentrations Decayed to CY	2015	

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	21.8	0.0	21.8
Bin - Misc	45.5	0.0	45.5
<b>Current Form Total</b>	<b>67.3</b>	<b>0.0</b>	<b>67.3</b>

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

**Waste Material Parameters**

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

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.65E+00
Cs-137	4.16E-06
Np-237	3.58E-05
Pu-238	2.00E-01
Pu-239	3.05E+00
Pu-240	9.76E-01
Pu-241	6.14E+00
Pu-242	1.08E-04
Sr-90	4.53E-06
Th-229	2.28E-13
Th-230	2.24E-09
Th-232	2.57E-17
U-233	8.77E-10
U-234	4.22E-05
U-235	9.34E-06
U-236	1.73E-07
U-238	1.59E-04

**Haz. Waste No(s).**

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

**No TRUCON  
Codes Provided**

**Waste Stream Description**

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



Waste Stream ID: **IN-W351**

**Appendix A**  
**Waste Profile Report**

Site	Idaho National Laboratory	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	R&D/R&D Laboratory Waste	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2015	
Stream Name	Empty Bottles and Absorbent				Activity Concentrations Decayed to CY	2015	

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

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

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

**Waste Material Parameters**

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

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.45E+00
Np-237	1.59E-05
Pu-238	1.69E-01
Pu-239	1.66E+00
Pu-240	8.69E-01
Pu-241	6.78E+00
Pu-242	2.90E-04
Th-229	9.51E-14
Th-230	8.14E-11
Th-232	2.29E-17
U-233	3.72E-10
U-234	2.93E-06
U-235	9.82E-09
U-236	1.54E-07
U-238	2.70E-13

**Haz. Waste No(s).**

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

**No TRUCON  
Codes Provided**

**Waste Stream Description**

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

Waste Stream ID: **KA-T001**

**Appendix A**  
**Waste Profile Report**

Site	Knolls Atomic Power Laboratory - Schenectady	Summary Category	S5000	Defense Determination	Defense-Related	Handling	RH
Source Cat.	Remediation/D&D Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2015	
Stream Name	Transuranic Debris			Activity Concentrations Decayed to CY		2015	

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

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

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

**Waste Material Parameters**

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

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	9.83E-04
Am-243	1.34E-07
Cm-244	4.70E-04
Cs-137	2.16E+00
Np-237	6.86E-06
Pu-238	3.82E-02
Pu-239	6.11E-05
Pu-240	4.94E-05
Pu-241	1.30E-02
Pu-242	3.10E-07
Pu-244	4.34E-15
Sr-90	2.14E+00
Th-229	2.70E-12
Th-230	5.08E-09
Th-232	1.06E-13
U-233	1.09E-09
U-234	4.58E-05
U-235	9.54E-07
U-236	9.21E-06
U-238	3.66E-09

No Hazardous Waste Numbers Provided

TRUCON Code(s)

325

**Waste Stream Description**

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

Waste Stream ID: **KA-T002**

**Appendix A**  
**Waste Profile Report**

Site	Knolls Atomic Power Laboratory - Schenectady	Summary Category	S3000	Defense Determination	Defense-Related	Handling	RH
Source Cat.	Remediation/D&D Waste	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2015	
Stream Name	Transuranic Sludge			Activity Concentrations Decayed to CY	2015		

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
Tank(s)	0.0	1.0	1.0
<b>Current Form Total</b>	<b>0.0</b>	<b>1.0</b>	<b>1.0</b>

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

**Waste Material Parameters**

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

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.27E-02
Am-243	1.57E-09
Cm-244	1.22E-03
Cs-137	1.27E+01
Np-237	3.65E-08
Pu-238	3.99E-01
Pu-239	6.61E-03
Pu-240	6.61E-03
Pu-241	5.24E-02
Sr-90	9.86E+00
Th-229	4.27E-07
Th-230	2.53E-04
Th-232	1.28E-04
U-233	9.70E-04
U-234	9.76E-04
U-235	2.21E-04
U-236	2.21E-04

No Hazardous Waste Numbers Provided

TRUCON Code(s)  
325

**Waste Stream Description**

This waste stream consists of organic and inorganic particulate and sludge.

Waste Stream ID: **KA-W016**

**Appendix A**  
**Waste Profile Report**

Site	Knolls Atomic Power Laboratory - Schenectady	Summary Category	S5000	Defense Determination	Defense-Related	Handling	RH
Source Cat.	Remediation/D&D Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2015	
Stream Name	Transuranic Debris			Activity Concentrations Decayed to CY		2015	

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

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

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

**Waste Material Parameters**

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

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	3.04E-04
Am-243	1.32E-06
Cm-244	1.85E-04
Cs-137	7.99E-01
Np-237	2.32E-06
Pu-238	1.34E-02
Pu-239	2.07E-05
Pu-240	1.67E-05
Pu-241	5.31E-03
Pu-242	1.05E-07
Pu-244	4.30E-14
Sr-90	7.99E-01
Th-229	2.33E-11
Th-230	3.38E-08
Th-232	1.04E-12
U-233	9.67E-09
U-234	1.54E-05
U-235	3.22E-07
U-236	3.11E-06
U-238	1.24E-09

**Haz. Waste No(s).**

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

**TRUCON Code(s)**

325

**Waste Stream Description**

This transuranic mixed waste has not yet been generated. Details of waste characteristics will be developed upon generation.

Waste Stream ID: **KN-B234TRU**

**Appendix A**  
**Waste Profile Report**

Site	Knolls Atomic Power Laboratory - Nuclear Fuel Services	Summary Category	S4000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Remediation/D&D Waste	Waste Matrix Code Group	Contaminated Soil/Debris Waste		Inventory Date	12/31/2015	
Stream Name	Building 234 TRU Waste			Activity Concentrations Decayed to CY	2015		

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

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

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

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	19.97
Aluminum-based Metal/Alloys	2.60
Other Metal/Alloys	0.00
Other Inorganic Materials	33.58
Cellulose	5.10
Rubber	0.30
Plastic	31.46
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	156.17
Soil	1438.96
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.29E-01
Np-237	5.09E-07
Pu-238	2.55E-02
Pu-239	8.10E-01
Pu-240	8.09E-01
Pu-241	8.59E-01
Th-229	1.79E-06
Th-230	4.50E-04
Th-232	1.49E-04
U-233	2.90E-03
U-234	2.90E-03
U-235	5.50E-04
U-236	5.50E-04
U-238	7.11E-05

**Haz. Waste No(s).**

F002

**TRUCON Code(s)**

111/211, 127/227

**Waste Stream Description**

This waste is non-hazardous soil and debris from Building 234 decommissioning. The majority of the waste to be generated, estimated 90%, will be soil. All process equipment and glove boxes were removed in the early 1990s and are not part of this waste stream. The remaining debris consists of concrete block, metal, PPE, plywood, plexiglass, plastic, HEPA filters, piping, duct work, glass, cheese cloth, paper, rubber and small tools.

Waste Stream ID: **LA-CIN01.001**

**Appendix A**  
**Waste Profile Report**

Site	Los Alamos National Laboratory	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2015	
Stream Name	Cemented TRU Waste				Activity Concentrations Decayed to CY	2015	

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
110-gal Drum w/ 1 - 55-gal Drum w/ Liner	17.6	0.0	17.6
55-gal Drum Dir Ld w/ Liner	74.9	145.6	220.5
55-gal POC - 12" w/ Liner	2.1	0.0	2.1
85-gal Drum w/ 1 - 55-gal Drum w/ Liner	229.9	0.0	229.9
Cask - Misc w/ 1 - 30-gal Drum	4.4	0.0	4.4
Cask - Misc w/ 2 - 30-gal Drums	0.8	0.0	0.8
SWB Dir Ld w/ Liner	11.4	0.0	11.4
SWB w/ 4 - 55-gal Drums w/ Liners	15.2	0.0	15.2
<b>Current Form Total</b>	<b>356.3</b>	<b>145.6</b>	<b>501.9</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	245.4	145.6	391.0
55-gal POC - 12" w/ Liner	2.1	0.0	2.1
SWB Dir Ld w/ Liner	11.3	0.0	11.3
SWB w/ 4 - 55-gal Drums w/ Liners	13.2	0.0	13.2
<b>Final Form Total</b>	<b>272.1</b>	<b>145.6</b>	<b>417.7</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	32.00
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	5.69
Cement	895.30
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.67
Packaging Material, Plastic	35.44
Packaging Material, Rubber	0.55
Packaging Material, Steel	135.91
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	6.40E+01
Am-243	2.64E-03
Cs-137	3.25E-06
Np-237	3.29E-04
Pu-238	8.31E+00
Pu-239	1.36E+01
Pu-240	3.64E+00
Pu-241	7.42E+01
Pu-242	4.35E-03
Pu-244	2.64E-09
Sr-90	3.25E-06
Th-229	1.59E-09
Th-230	1.12E-09
Th-232	1.64E-06
U-233	1.80E-04
U-234	1.22E-03
U-235	1.44E-05
U-236	7.23E-06
U-238	5.35E-04

**Haz. Waste No(s).**

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

**TRUCON Code(s)**

114/214, 125/225, 126/226

**Waste Stream Description**

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

Waste Stream ID: LA-CIN02.001

**Appendix A**  
**Waste Profile Report**

Site	Los Alamos National Laboratory	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2015	
Stream Name	Cemented TRU Waste				Activity Concentrations Decayed to CY	2015	

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
110-gal Drum w/ 1 - 55-gal Drum w/ Liner	4.6	0.0	4.6
55-gal Drum Dir Ld w/ Liner	12.1	109.2	121.3
85-gal Drum w/ 1 - 55-gal Drum w/ Liner	7.1	0.0	7.1
SWB w/ 4 - 55-gal Drums w/ Liners	102.6	0.0	102.6
<b>Current Form Total</b>	<b>126.3</b>	<b>109.2</b>	<b>235.5</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	19.3	109.2	128.5
SWB w/ 4 - 55-gal Drums w/ Liners	102.1	0.0	102.1
<b>Final Form Total</b>	<b>121.4</b>	<b>109.2</b>	<b>230.6</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	0.00
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	0.59
Cement	591.36
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	27.87
Packaging Material, Rubber	0.51
Packaging Material, Steel	166.33
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.42E+00
Am-243	9.84E-06
Cs-137	4.05E-07
Np-237	1.15E-05
Pu-238	2.35E-01
Pu-239	3.08E+00
Pu-240	1.20E-01
Pu-241	9.23E-01
Pu-242	1.78E-05
Sr-90	3.49E-07
Th-229	9.31E-08
Th-230	2.21E-10
Th-232	8.77E-20
U-233	3.77E-09
U-234	2.44E-05
U-235	6.37E-06
U-236	3.56E-09
U-238	3.99E-07

**Haz. Waste No(s).**

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

**TRUCON Code(s)**

111/211, 114/214,  
125/225

**Waste Stream Description**

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

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

**Appendix A**  
**Waste Profile Report**

Site	Los Alamos National Laboratory	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2015	
Stream Name	Cemented TRU Waste					Activity Concentrations Decayed to CY	2015

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

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

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

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	0.00
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	1.94
Cement	646.02
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	9.89E-03
Am-243	7.55E-06
Cs-137	4.17E-05
Np-237	4.63E-06
Pu-238	4.21E-02
Pu-239	2.09E-01
Pu-240	9.40E-03
Pu-241	7.03E-02
Pu-242	3.55E-07
Sr-90	4.16E-05
Th-229	2.05E-07
Th-230	1.35E-09
Th-232	6.86E-21
U-233	2.01E-11
U-234	1.47E-04
U-235	3.50E-06
U-236	2.78E-10
U-238	1.73E-04

**Haz. Waste No(s).**

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

**TRUCON Code(s)**

114/214, 126/226

**Waste Stream Description**

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



Waste Stream ID: LA-LA225D

**Appendix A**  
**Waste Profile Report**

Site	Los Alamos National Laboratory	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2015	
Stream Name	Cemented TRU Waste					Activity Concentrations Decayed to CY	2015

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	2.7	0.0	2.7
85-gal Drum w/ 1 - 55-gal Drum w/ Liner	2.6	0.0	2.6
<b>Current Form Total</b>	<b>5.3</b>	<b>0.0</b>	<b>5.3</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	4.4	0.0	4.4
<b>Final Form Total</b>	<b>4.4</b>	<b>0.0</b>	<b>4.4</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	3.36
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	0.60
Cement	93.98
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	8.44E-02
Am-243	7.93E-05
Cs-137	6.33E-06
Np-237	7.88E-06
Pu-238	6.60E-02
Pu-239	1.89E-01
Pu-240	3.61E-02
Pu-241	3.20E-01
Pu-242	2.54E-06
Sr-90	6.32E-06
Th-229	4.13E-07
Th-230	1.18E-10
Th-232	4.17E-19
U-233	3.42E-11
U-234	1.29E-05
U-235	8.22E-08
U-236	8.99E-09
U-238	2.26E-07

**Haz. Waste No(s).**

D004, D006, D007, D008, D009, D022, D035, D040, D043, F001, F002, F005, F007, F009

**No TRUCON  
Codes Provided**

**Waste Stream Description**

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

Waste Stream ID: LA-LA238HONR

**Appendix A**  
**Waste Profile Report**

Site	Los Alamos National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	R&D/R&D Laboratory Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2015		
Stream Name	Heterogeneous Debris			Activity Concentrations Decayed to CY	2015		

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

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

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

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	25.73
Aluminum-based Metal/Alloys	0.10
Other Metal/Alloys	3.08
Other Inorganic Materials	16.69
Cellulose	2.13
Rubber	3.19
Plastic	9.85
Cement	0.00
Solidified Inorganic Material	0.41
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	1.20
Packaging Material, Rubber	0.19
Packaging Material, Steel	153.44
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	6.39E-02
Np-237	2.02E-08
Pu-238	8.44E+01
Pu-239	5.07E-02
Pu-240	2.55E-02
Pu-241	1.87E+00
Pu-242	2.10E-05
Th-229	1.28E-18
Th-230	8.92E-08
Th-232	1.86E-20
U-233	4.37E-14
U-234	9.82E-03
U-235	2.61E-09
U-236	7.55E-10
U-238	3.26E-15

No Hazardous Waste Numbers Provided

TRUCON Code(s)  
122/222

**Waste Stream Description**

Mixed heterogeneous debris waste generated in TA-55.

Waste Stream ID: LA-LA238HOR

**Appendix A**  
**Waste Profile Report**

Site	Los Alamos National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	R&D/R&D Laboratory Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2015		
Stream Name	Heterogeneous Debris				Activity Concentrations Decayed to CY	2015	

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal POC - 12" w/ Liner	0.2	0.0	0.2
85-gal Drum w/ 1 - 55-gal Drum w/ Liner	0.3	0.0	0.3
<b>Current Form Total</b>	<b>0.5</b>	<b>0.0</b>	<b>0.5</b>

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

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	160.75
Aluminum-based Metal/Alloys	0.65
Other Metal/Alloys	19.27
Other Inorganic Materials	104.25
Cellulose	13.30
Rubber	19.96
Plastic	61.55
Cement	0.00
Solidified Inorganic Material	2.56
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	67.55
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	329.81
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.33E-01
Np-237	7.55E-09
Pu-238	3.24E+02
Pu-239	1.93E-01
Pu-240	9.73E-02
Pu-241	7.43E+00
Pu-242	8.00E-05
Th-229	9.45E-22
Th-230	3.36E-08
Th-232	7.10E-22
U-233	4.12E-16
U-234	3.66E-02
U-235	9.77E-09
U-236	2.88E-10
U-238	1.24E-15

**Haz. Waste No(s).**D005, D006, D007,  
D008, D009, D010,  
D011**TRUCON Code(s)**

122/222

**Waste Stream Description**

Mixed heterogeneous debris waste generated in TA-55.

Waste Stream ID: **LA-LAMHD02238**

**Appendix A**  
**Waste Profile Report**

Site	Los Alamos National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	R&D/R&D Laboratory Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2015	
Stream Name	MIXED COMBUSTIBLE/NONCOMBUSTIBLE WASTE				Activity Concentrations Decayed to CY	2015	

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

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

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

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	29.23
Aluminum-based Metal/Alloys	0.12
Other Metal/Alloys	3.50
Other Inorganic Materials	18.96
Cellulose	2.42
Rubber	3.63
Plastic	11.19
Cement	0.00
Solidified Inorganic Material	0.47
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	135.10
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	528.85
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	6.18E-03
Np-237	2.00E-10
Pu-238	8.91E+00
Pu-239	5.25E-03
Pu-240	2.60E-03
Pu-241	1.96E-01
Pu-242	2.12E-06
Th-229	2.50E-23
Th-230	9.25E-10
Th-232	1.90E-23
U-233	1.09E-17
U-234	1.01E-03
U-235	2.63E-10
U-236	7.70E-12
U-238	3.30E-17

**Haz. Waste No(s).**

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

**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

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	12/31/2015		
Stream Name	COMBINED COMBUSTIBLE AND NON-COMBUSTIBLE WASTE			Activity Concentrations Decayed to CY	2015		

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal POC - 12" w/ Liner	0.8	0.0	0.8
<b>Current Form Total</b>	<b>0.8</b>	<b>0.0</b>	<b>0.8</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal POC - 12" w/ Liner	0.8	0.0	0.8
<b>Final Form Total</b>	<b>0.8</b>	<b>0.0</b>	<b>0.8</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	3.37
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.21
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	1.76
Cement	0.00
Solidified Inorganic Material	10.69
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	135.10
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	528.85
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.45E+01
Np-237	7.92E-07
Pu-238	3.56E+00
Pu-239	2.97E+01
Pu-240	1.27E+01
Pu-241	3.80E+02
Pu-242	3.80E-03
Th-229	9.93E-20
Th-230	2.58E-10
Th-232	9.27E-20
U-233	4.33E-14
U-234	2.82E-04
U-235	1.08E-06
U-236	3.76E-08
U-238	5.90E-14

**Haz. Waste No(s).**D005, D006, D007,  
D008, D009, D010,  
D011**TRUCON Code(s)**

124/224

**Waste Stream Description**

INORGANIC HOMOGENEOUS TRU WASTE FROM TA55-PF4

Waste Stream ID: **LA-LANHD01**

**Appendix A**  
**Waste Profile Report**

Site	Los Alamos National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	R&D/R&D Laboratory Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2015	
Stream Name	TRU METAL WASTE				Activity Concentrations Decayed to CY	2015	

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
Other - Sphere	13.9	0.0	13.9
<b>Current Form Total</b>	<b>13.9</b>	<b>0.0</b>	<b>13.9</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
SWB Dir Ld w/ Liner	15.1	0.0	15.1
<b>Final Form Total</b>	<b>15.1</b>	<b>0.0</b>	<b>15.1</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	746.73
Aluminum-based Metal/Alloys	3.02
Other Metal/Alloys	89.50
Other Inorganic Materials	484.27
Cellulose	61.80
Rubber	92.70
Plastic	285.91
Cement	0.00
Solidified Inorganic Material	11.90
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	1.20
Packaging Material, Rubber	0.19
Packaging Material, Steel	153.44
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.00E-01
Np-237	3.20E-08
Pu-238	1.54E-02
Pu-239	1.58E+00
Pu-240	1.23E-01
Pu-241	1.79E+00
Pu-242	7.14E-06
Th-229	2.03E-18
Th-230	1.06E-11
Th-232	9.01E-20
U-233	6.94E-14
U-234	1.17E-06
U-235	2.11E-08
U-236	3.65E-09
U-238	5.94E-06

No Hazardous  
Waste Numbers  
Provided

No TRUCON  
Codes Provided

**Waste Stream Description**

ALL OTHER NON-COMBUSTIBLE WASTE

Waste Stream ID: **LA-LANHD02238**

**Appendix A**  
**Waste Profile Report**

Site	Los Alamos National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	R&D/R&D Laboratory Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2015		
Stream Name	COMBINED COMBUSTIBLE AND NON-COMBUSTIBLE WASTE			Activity Concentrations Decayed to CY	2015		

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal POC - 12" w/ Liner	4.8	0.0	4.8
SWB Dir Ld w/ Liner	5.7	0.0	5.7
<b>Current Form Total</b>	<b>10.5</b>	<b>0.0</b>	<b>10.5</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal POC - 12" w/ Liner	4.8	0.0	4.8
SWB Dir Ld w/ Liner	5.7	0.0	5.7
<b>Final Form Total</b>	<b>10.5</b>	<b>0.0</b>	<b>10.5</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	19.98
Aluminum-based Metal/Alloys	0.08
Other Metal/Alloys	2.39
Other Inorganic Materials	12.96
Cellulose	1.65
Rubber	2.48
Plastic	7.65
Cement	0.00
Solidified Inorganic Material	0.32
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	61.82
Packaging Material, Plastic	17.61
Packaging Material, Rubber	0.36
Packaging Material, Steel	325.23
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	4.85E-02
Np-237	1.57E-09
Pu-238	6.73E+01
Pu-239	4.01E-02
Pu-240	2.02E-02
Pu-241	1.54E+00
Pu-242	1.66E-05
Th-229	1.96E-22
Th-230	6.98E-09
Th-232	1.48E-22
U-233	8.56E-17
U-234	7.60E-03
U-235	2.03E-09
U-236	5.98E-11
U-238	2.58E-16

No Hazardous Waste Numbers Provided

TRUCON Code(s)  
125/225

**Waste Stream Description**

PF4 TRU Packaged Waste

Waste Stream ID: **LA-LANIN03NC**

**Appendix A**  
**Waste Profile Report**

Site	Los Alamos National Laboratory	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2015	
Stream Name	Homogeneous Inorganic Solids				Activity Concentrations Decayed to CY	2015	

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal POC - 12" w/ Liner	0.4	0.0	0.4
<b>Current Form Total</b>	<b>0.4</b>	<b>0.0</b>	<b>0.4</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal POC - 12" w/ Liner	0.4	0.0	0.4
<b>Final Form Total</b>	<b>0.4</b>	<b>0.0</b>	<b>0.4</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	0.00
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	0.14
Cement	0.00
Solidified Inorganic Material	26.46
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	135.10
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	528.85
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.24E+02
Np-237	4.03E-06
Pu-238	4.95E+00
Pu-239	2.51E+01
Pu-240	1.61E+01
Pu-241	5.11E+02
Pu-242	5.77E-03
Th-229	5.05E-19
Th-230	5.52E-10
Th-232	1.18E-19
U-233	2.20E-13
U-234	6.01E-04
U-235	9.40E-07
U-236	4.77E-08
U-238	8.96E-14

No Hazardous Waste Numbers Provided

TRUCON Code(s)  
124/224

**Waste Stream Description**

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



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

**Appendix A**  
**Waste Profile Report**

Site	Los Alamos National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	R&D/R&D Laboratory Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2015	
Stream Name	Heterogeneous Debris			Activity Concentrations Decayed to CY		2015	

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	52.8	4692.5	4745.3
55-gal POC - 12" w/ Liner	14.6	0.0	14.6
85-gal Drum w/ 1 - 55-gal Drum w/ Liner	8.1	0.0	8.1
Box - Crate	7.2	0.0	7.2
Cask - Misc w/ 1 - 30-gal Drum	65.6	0.0	65.6
Cask - Misc w/ 2 - 30-gal Drums	4.0	0.0	4.0
Other - Sphere	26.7	0.0	26.7
Other - Tritium Torpedo	3.7	0.0	3.7
SWB Dir Ld w/ Liner	45.6	96.9	142.5
SWB w/ 4 - 55-gal Drums w/ Liners	55.1	0.0	55.1
<b>Current Form Total</b>	<b>283.3</b>	<b>4789.4</b>	<b>5072.7</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	216.1	4692.5	4908.6
55-gal POC - 12" w/ Liner	14.6	0.0	14.6
SWB Dir Ld w/ Liner	85.1	96.4	181.4
SWB w/ 4 - 55-gal Drums w/ Liners	41.6	0.0	41.6
<b>Final Form Total</b>	<b>357.3</b>	<b>4788.9</b>	<b>5146.2</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	98.98
Aluminum-based Metal/Alloys	0.40
Other Metal/Alloys	11.86
Other Inorganic Materials	64.19
Cellulose	8.19
Rubber	12.29
Plastic	37.90
Cement	0.00
Solidified Inorganic Material	1.58
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.38
Packaging Material, Plastic	35.63
Packaging Material, Rubber	0.55
Packaging Material, Steel	133.34
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.46E+00
Am-243	5.31E-05
Cs-137	2.95E-06
Np-237	1.54E-05
Pu-238	4.12E+01
Pu-239	4.05E+00
Pu-240	1.10E+00
Pu-241	1.50E+01
Pu-242	1.34E-03
Pu-244	9.54E-10
Sr-90	2.98E-06
Th-229	2.09E-10
Th-230	4.32E-09
Th-232	4.90E-19
U-233	2.38E-05
U-234	4.70E-03
U-235	4.73E-07
U-236	1.01E-07
U-238	7.08E-06

**Haz. Waste No(s).**

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

**TRUCON Code(s)**

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

**Waste Stream Description**

Mixed heterogeneous debris waste generated in TA-55.

Waste Stream ID: LA-MHD03.001

**Appendix A**  
**Waste Profile Report**

Site	Los Alamos National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH	
Source Cat.	Remediation/D&D Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2015			
Stream Name	Heterogeneous Debris	Activity Concentrations Decayed to CY				2015		

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
30-gal Drum	4.6	0.0	4.6
55-gal Drum Dir Ld w/ Liner	73.8	218.4	292.2
55-gal POC - 12" w/ Liner	0.4	0.0	0.4
85-gal Drum w/ 1 - 55-gal Drum w/ Liner	1.3	0.0	1.3
Cask - Misc w/ 1 - 30-gal Drum	0.8	0.0	0.8
SWB Dir Ld w/ Liner	9.5	0.0	9.5
<b>Current Form Total</b>	<b>90.5</b>	<b>218.4</b>	<b>308.9</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	80.7	218.4	299.1
55-gal POC - 12" w/ Liner	0.4	0.0	0.4
SWB Dir Ld w/ Liner	9.5	0.0	9.5
<b>Final Form Total</b>	<b>90.6</b>	<b>218.4</b>	<b>309.0</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	19.22
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	6.29
Other Inorganic Materials	30.49
Cellulose	24.56
Rubber	2.49
Plastic	72.12
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.48
Vitrified	0.00
Packaging Material, Cellulose	0.18
Packaging Material, Plastic	35.97
Packaging Material, Rubber	0.56
Packaging Material, Steel	132.00
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	9.10E-02
Am-243	5.33E-05
Cm-244	1.74E+00
Cs-137	7.01E-03
Np-237	4.44E-05
Pu-238	9.71E-01
Pu-239	2.30E-01
Pu-240	6.07E-02
Pu-241	6.96E-01
Pu-242	1.69E-05
Sr-90	9.77E-03
Th-229	8.51E-15
Th-230	1.08E-09
Th-232	3.90E-19
U-233	1.93E-10
U-234	1.19E-04
U-235	6.11E-07
U-236	8.80E-09
U-238	1.83E-07

**Haz. Waste No(s).**

D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D021, D022, D026, D027, D028, D029, D030, D035, D036, D037, D038, D039, D040, D043, F001, F002, F003, F004, F005
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**TRUCON Code(s)**

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

Mixed heterogeneous combustible and non-combustible debris.

Waste Stream ID: LA-MHD04.001

**Appendix A**  
**Waste Profile Report**

Site	Los Alamos National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2015		
Stream Name	Heterogeneous Debris	Activity Concentrations Decayed to CY				2015	

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
30-gal Drum	0.1	0.0	0.1
55-gal Drum Dir Ld w/ Liner	1.2	0.0	1.2
SWB Dir Ld w/ Liner	74.1	0.0	74.1
SWB w/ 4 - 55-gal Drums w/ Liners	1.9	0.0	1.9
TDOP Dir Ld	22.5	0.0	22.5
<b>Current Form Total</b>	<b>99.8</b>	<b>0.0</b>	<b>99.8</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	1.5	0.0	1.5
SWB Dir Ld w/ Liner	73.7	0.0	73.7
SWB w/ 4 - 55-gal Drums w/ Liners	1.9	0.0	1.9
TDOP Dir Ld	22.5	0.0	22.5
<b>Final Form Total</b>	<b>99.6</b>	<b>0.0</b>	<b>99.6</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	31.92
Aluminum-based Metal/Alloys	12.17
Other Metal/Alloys	24.46
Other Inorganic Materials	6.95
Cellulose	20.74
Rubber	16.02
Plastic	11.92
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	1.74
Packaging Material, Rubber	0.20
Packaging Material, Steel	158.25
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	4.39E-01
Am-243	2.61E-06
Cs-137	1.73E-07
Np-237	6.83E-06
Pu-238	2.21E+00
Pu-239	1.14E+00
Pu-240	3.70E-01
Pu-241	2.17E+00
Pu-242	5.60E-05
Sr-90	1.73E-07
Th-229	2.19E-09
Th-230	3.01E-09
Th-232	2.75E-19
U-233	2.49E-05
U-234	3.30E-04
U-235	2.08E-07
U-236	1.11E-08
U-238	1.64E-09

**Haz. Waste No(s).**

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

**TRUCON Code(s)**

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

**Waste Stream Description**

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

Waste Stream ID: LA-MHD05-ITRI.001

**Appendix A**  
**Waste Profile Report**

Site	Los Alamos National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2015		
Stream Name	Heterogeneous Debris Waste			Activity Concentrations Decayed to CY	2015		

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	2.9	0.0	2.9
<b>Current Form Total</b>	<b>2.9</b>	<b>0.0</b>	<b>2.9</b>

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

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	125.01
Aluminum-based Metal/Alloys	3.86
Other Metal/Alloys	7.50
Other Inorganic Materials	18.64
Cellulose	3.86
Rubber	6.14
Plastic	6.14
Cement	0.00
Solidified Inorganic Material	50.00
Solidified Organic Material	6.14
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	6.68E+00
Am-243	1.40E-05
Cm-244	1.25E+00
Cs-137	1.92E-07
Np-237	4.28E-05
Pu-238	1.26E-02
Pu-239	2.66E-01
Pu-240	5.16E-02
Pu-241	4.84E-01
Pu-242	2.99E-06
Sr-90	1.91E-07
Th-229	1.18E-07
Th-230	1.64E-13
Th-232	3.76E-20
U-233	1.82E-10
U-234	3.56E-08
U-235	2.62E-10
U-236	1.53E-09
U-238	4.65E-16

**Haz. Waste No(s).**

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

**TRUCON Code(s)**

125/225, 154

**Waste Stream Description**

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

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

**Appendix A**  
**Waste Profile Report**

Site	Los Alamos National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	R&D/R&D Laboratory Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2015	
Stream Name	Heterogeneous Debris Waste				Activity Concentrations Decayed to CY	2015	

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

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

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

**Waste Material Parameters**

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

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	6.86E-01
Am-243	2.37E-02
Cs-137	8.37E-05
Np-237	5.29E-05
Pu-238	3.23E-02
Pu-239	2.57E-02
Pu-240	1.40E-02
Pu-241	3.80E-01
Pu-242	4.03E-04
Sr-90	8.36E-05
Th-229	1.01E-14
Th-230	2.32E-11
Th-232	1.02E-20
U-233	2.30E-10
U-234	2.57E-06
U-235	2.54E-11
U-236	4.14E-10
U-238	6.25E-14

**Haz. Waste No(s).**

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

**TRUCON Code(s)**

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

**Waste Stream Description**

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

Waste Stream ID: **LA-MHD09.001**

**Appendix A**  
**Waste Profile Report**

<b>Site</b>	Los Alamos National Laboratory	<b>Summary Category</b>	S5000	<b>Defense Determination</b>	Defense-Related	<b>Handling</b>	CH
<b>Source Cat.</b>	Facility/Equipment Operation and Maintenance Waste	<b>Waste Matrix Code Group</b>	Heterogeneous Debris Waste		<b>Inventory Date</b>	12/31/2015	
<b>Stream Name</b>	Heterogeneous Debris			<b>Activity Concentrations Decayed to CY</b> 2015			

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	3.3	0.0	3.3
85-gal Drum w/ 1 - 55-gal Drum w/ Liner	0.3	0.0	0.3
Other - Tank	7.6	0.0	7.6
SWB Dir Ld w/ Liner	5.7	0.0	5.7
TDOP Dir Ld	4.5	0.0	4.5
<b>Current Form Total</b>	<b>21.5</b>	<b>0.0</b>	<b>21.5</b>

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

**Waste Material Parameters**

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

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.40E-01
Am-243	1.20E-06
Cs-137	2.59E-07
Np-237	3.28E-06
Pu-238	1.58E-01
Pu-239	5.94E-02
Pu-240	2.20E-02
Pu-241	4.27E-01
Pu-242	1.98E-05
Sr-90	2.59E-07
Th-229	6.22E-16
Th-230	2.13E-10
Th-232	1.61E-20
U-233	1.42E-11
U-234	2.34E-05
U-235	1.84E-07
U-236	6.51E-10
U-238	3.07E-15

**Haz. Waste No(s).**

D004, D005, D006, D007, D008, D009, D010, D011, D022, D027, D028, D029, D030, D037, D043, F001, F002, F004, F005, F006, F007, F009
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**TRUCON Code(s)**

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

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

Waste Stream ID: **LA-MIN02-V.001**

**Appendix A**  
**Waste Profile Report**

<b>Site</b>	Los Alamos National Laboratory	<b>Summary Category</b>	S3000	<b>Defense Determination</b>	Defense-Related	<b>Handling</b>	CH
<b>Source Cat.</b>	Facility/Equipment Operation and Maintenance Waste	<b>Waste Matrix Code Group</b>	Solidified Inorganics		<b>Inventory Date</b>	12/31/2015	
<b>Stream Name</b>	Absorbed Waste					<b>Activity Concentrations Decayed to CY</b>	2015

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	5.6	0.0	5.6
85-gal Drum w/ 1 - 55-gal Drum w/ Liner	2.3	0.0	2.3
SWB Dir Ld w/ Liner	3.8	0.0	3.8
SWB w/ 4 - 55-gal Drums w/ Liners	62.7	0.0	62.7
<b>Current Form Total</b>	<b>74.4</b>	<b>0.0</b>	<b>74.4</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	27.7	0.0	27.7
SWB Dir Ld w/ Liner	3.8	0.0	3.8
<b>Final Form Total</b>	<b>31.4</b>	<b>0.0</b>	<b>31.4</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	17.07
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	16.78
Cement	0.00
Solidified Inorganic Material	294.56
Solidified Organic Material	38.78
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	32.76
Packaging Material, Rubber	0.52
Packaging Material, Steel	133.49
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.25E+01
Am-243	1.53E-03
Cs-137	2.16E-06
Np-237	1.49E-04
Pu-238	1.75E+00
Pu-239	4.45E+00
Pu-240	1.02E+00
Pu-241	1.03E+01
Pu-242	1.03E-04
Sr-90	2.18E-06
Th-229	7.15E-17
Th-230	3.11E-10
Th-232	7.47E-21
U-233	2.27E-11
U-234	3.39E-04
U-235	2.66E-06
U-236	3.03E-09
U-238	3.35E-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.

Waste Stream ID: **LA-MIN03-NC.001**

**Appendix A**  
**Waste Profile Report**

<b>Site</b>	Los Alamos National Laboratory	<b>Summary Category</b>	S3000	<b>Defense Determination</b>	Defense-Related	<b>Handling</b>	CH
<b>Source Cat.</b>	Facility/Equipment Operation and Maintenance Waste	<b>Waste Matrix Code Group</b>	Solidified Inorganics		<b>Inventory Date</b>	12/31/2015	
<b>Stream Name</b>	Homogeneous Inorganic Solids			<b>Activity Concentrations Decayed to CY</b>		2015	

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
110-gal Drum w/ 1 - 55-gal Drum w/ Liner	2.0	0.0	2.0
55-gal Drum Dir Ld w/ Liner	16.3	0.0	16.3
85-gal Drum w/ 1 - 55-gal Drum w/ Liner	61.2	0.0	61.2
SWB w/ 4 - 55-gal Drums w/ Liners	3.8	0.0	3.8
<b>Current Form Total</b>	<b>83.3</b>	<b>0.0</b>	<b>83.3</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	57.0	0.0	57.0
SWB w/ 4 - 55-gal Drums w/ Liners	3.8	0.0	3.8
<b>Final Form Total</b>	<b>60.8</b>	<b>0.0</b>	<b>60.8</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
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	4.21
Cement	0.00
Solidified Inorganic Material	790.06
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	35.78
Packaging Material, Rubber	0.56
Packaging Material, Steel	135.77
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	5.50E-01
Am-243	1.66E-06
Cs-137	1.08E-05
Np-237	1.31E-06
Pu-238	1.19E-01
Pu-239	3.20E-01
Pu-240	4.49E-03
Pu-241	6.82E-02
Pu-242	1.26E-06
Sr-90	1.05E-05
Th-229	8.01E-08
Th-230	1.33E-10
Th-232	3.87E-19
U-233	5.30E-12
U-234	1.47E-05
U-235	1.03E-06
U-236	7.91E-09
U-238	1.97E-06

**Haz. Waste No(s).**

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

**TRUCON Code(s)**

111/211, 125/225

**Waste Stream Description**

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



Waste Stream ID: LA-MIN04-S.001

**Appendix A**  
**Waste Profile Report**

Site	Los Alamos National Laboratory	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Salt Waste	Inventory Date	12/31/2015		
Stream Name	Salt Waste				Activity Concentrations Decayed to CY	2015	

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	1.2	0.0	1.2
55-gal POC - 12" w/ Liner	0.8	0.0	0.8
SWB w/ 4 - 55-gal Drums w/ Liners	1.9	0.0	1.9
<b>Current Form Total</b>	<b>4.0</b>	<b>0.0</b>	<b>4.0</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	1.2	0.0	1.2
55-gal POC - 12" w/ Liner	0.8	0.0	0.8
SWB w/ 4 - 55-gal Drums w/ Liners	1.9	0.0	1.9
<b>Final Form Total</b>	<b>4.0</b>	<b>0.0</b>	<b>4.0</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	26.78
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	1.66
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	14.03
Cement	0.00
Solidified Inorganic Material	85.04
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	28.31
Packaging Material, Plastic	27.18
Packaging Material, Rubber	0.51
Packaging Material, Steel	252.44
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.39E+01
Am-243	5.89E-03
Cs-137	6.97E-05
Np-237	1.10E-04
Pu-238	5.70E-01
Pu-239	1.62E+01
Pu-240	4.02E+00
Pu-241	3.25E+01
Pu-242	2.67E-03
Sr-90	7.04E-05
Th-229	7.99E-14
Th-230	2.25E-09
Th-232	1.18E-17
U-233	9.21E-10
U-234	1.24E-04
U-235	2.98E-06
U-236	2.38E-07
U-238	1.64E-04

**Haz. Waste No(s).**

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

**TRUCON Code(s)**

124/224, 125/225

**Waste Stream Description**

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

Waste Stream ID: LA-MIN05-V.001

**Appendix A**  
**Waste Profile Report**

Site	Los Alamos National Laboratory	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Remediation/D&D Waste	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2015	
Stream Name	Absorbed TRU Waste					Activity Concentrations Decayed to CY	2015

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

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

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

**Waste Material Parameters**

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

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.96E-01
Am-243	5.44E-06
Cs-137	1.65E-06
Np-237	2.10E-03
Pu-238	9.29E-02
Pu-239	1.59E+00
Pu-240	3.72E-01
Pu-241	3.03E+00
Pu-242	2.54E-05
Sr-90	1.65E-06
Th-229	4.02E-13
Th-230	1.59E-09
Th-232	2.72E-19
U-233	9.15E-09
U-234	1.73E-04
U-235	4.30E-06
U-236	1.10E-08
U-238	3.95E-15

**Haz. Waste No(s).**

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

**TRUCON Code(s)**

125/225

**Waste Stream Description**

Mixed homogeneous solids

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

**Appendix A**  
**Waste Profile Report**

Site	Los Alamos National Laboratory	Summary Category	S4000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Spill Clean-ups/Emergency Response Actions	Waste Matrix Code Group	Contaminated Soil/Debris Waste		Inventory Date	12/31/2015	
Stream Name	Contaminated Soil				Activity Concentrations Decayed to CY	2015	

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

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

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

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	29.58
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	5.11
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	539.63
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	5.72
Packaging Material, Rubber	0.24
Packaging Material, Steel	150.58
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	7.66E-03
Am-243	4.13E-07
Cs-137	4.57E-05
Np-237	1.14E-07
Pu-238	1.98E-03
Pu-239	1.00E-01
Pu-240	1.47E-02
Pu-241	1.78E-01
Pu-242	8.57E-07
Sr-90	6.77E-06
Th-229	2.16E-17
Th-230	3.90E-10
Th-232	1.07E-20
U-233	4.92E-13
U-234	4.25E-05
U-235	1.16E-06
U-236	4.35E-10
U-238	1.11E-05

**Haz. Waste No(s).**

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

**TRUCON Code(s)**

111/211

**Waste Stream Description**

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

Waste Stream ID: **LA-OS-00-01.001**

**Appendix A**  
**Waste Profile Report**

Site	Los Alamos National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Discarding Excess/Expired Materials	Waste Matrix Code Group	Uncategorized Metal Waste	Inventory Date	12/31/2015		
Stream Name	Defense Sealed Sources			Activity Concentrations Decayed to CY	2015		

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal POC - 12" w/ Liner	3.7	0.0	3.7
55-gal POC - 6" w/ Liner	7.9	0.0	7.9
<b>Current Form Total</b>	<b>11.6</b>	<b>0.0</b>	<b>11.6</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal POC - 12" w/ Liner	3.7	0.0	3.7
55-gal POC - 6" w/ Liner	7.9	0.0	7.9
<b>Final Form Total</b>	<b>11.6</b>	<b>0.0</b>	<b>11.6</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	36.96
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	6.52
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	0.00
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	189.25
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	387.59
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	3.94E+01
Cs-137	9.72E-02
Np-237	1.28E-05
Pu-238	7.16E+00
Pu-239	9.31E+00
Pu-240	1.53E+00
Pu-241	2.99E+00
Pu-242	1.15E-02
Sr-90	3.91E-06
Th-229	1.21E-12
Th-230	8.10E-09
Th-232	1.11E-18
U-233	1.37E-08
U-234	8.91E-04
U-235	9.52E-09
U-236	4.52E-08
U-238	4.15E-11

No Hazardous Waste Numbers Provided

TRUCON Code(s)  
120/220

**Waste Stream Description**

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

Waste Stream ID: LA-OS-00-04

**Appendix A**  
**Waste Profile Report**

Site	Los Alamos National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Discarding Excess/Expired Materials	Waste Matrix Code Group	Uncategorized Metal Waste	Inventory Date	12/31/2015		
Stream Name	Mixed Waste Sealed Sources	Activity Concentrations Decayed to CY			2015		

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal POC - 6" w/ Liner	0.2	0.0	0.2
<b>Current Form Total</b>	<b>0.2</b>	<b>0.0</b>	<b>0.2</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal POC - 6" w/ Liner	0.2	0.0	0.2
<b>Final Form Total</b>	<b>0.2</b>	<b>0.0</b>	<b>0.2</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	29.42
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	5.19
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	0.00
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	214.90
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	320.67
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.02E+00
Np-237	6.59E-07
Pu-239	1.39E-04
Pu-240	8.84E-05
Pu-241	1.96E-04
Th-229	1.85E-13
Th-232	2.58E-22
U-233	1.05E-09
U-235	5.42E-12
U-236	5.24E-12

**Haz. Waste No(s).**

D006, D008

**TRUCON Code(s)**

120/220

**Waste Stream Description**

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

Waste Stream ID: LA-TA-00-01

**Appendix A**  
**Waste Profile Report**

Site	Los Alamos National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	R&D/R&D Laboratory Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2015	
Stream Name	TA-39 Heterogeneous Debris			Activity Concentrations Decayed to CY		2015	

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	8.3	0.0	8.3
85-gal Drum w/ 1 - 55-gal Drum w/ Liner	0.3	0.0	0.3
Box - Crate	68.7	0.0	68.7
Other - Tritium Torpedo	3.0	0.0	3.0
<b>Current Form Total</b>	<b>80.3</b>	<b>0.0</b>	<b>80.3</b>

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

**Waste Material Parameters**

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

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	9.15E-03
Np-237	2.57E-05
Pu-238	1.81E-02
Pu-239	1.53E-02
Pu-240	5.20E-04
Pu-241	5.38E-03
Pu-242	3.01E-08
Th-229	3.11E-13
Th-230	1.57E-11
Th-232	2.43E-20
U-233	8.83E-10
U-234	4.22E-07
U-235	1.20E-10
U-236	1.23E-10
U-238	3.74E-17

**Haz. Waste No(s).**

D008, F001

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

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

Waste Stream ID: **LA-TA-00-03**

**Appendix A**  
**Waste Profile Report**

Site	Los Alamos National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	RH
Source Cat.	Other/Multiple Sources	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2015		
Stream Name	NON-PN EQUIPMENT			Activity Concentrations Decayed to CY	2015		

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

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

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid - Dir Ld	2.7	0.0	2.7
<b>Final Form Total</b>	<b>2.7</b>	<b>0.0</b>	<b>2.7</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based 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 <sup>3</sup> )
Pu-239	4.65E+00
U-235	1.60E-07

**Haz. Waste No(s).**

D008

No TRUCON  
Codes Provided

**Waste Stream Description**

LAMPRE REACTOR VESSEL SEALED IN CASK VESSEL

Waste Stream ID: LA-TA-03-10

**Appendix A**  
**Waste Profile Report**

Site	Los Alamos National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Remediation/D&D Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2015		
Stream Name	Combined Combustible and NonCombustible			Activity Concentrations Decayed to CY	2015		

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.6	0.0	0.6
Other	64.0	0.0	64.0
<b>Current Form Total</b>	<b>64.6</b>	<b>0.0</b>	<b>64.6</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.6	0.0	0.6
SWB Dir Ld w/ Liner	64.3	0.0	64.3
<b>Final Form Total</b>	<b>64.9</b>	<b>0.0</b>	<b>64.9</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	0.32
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.11
Other Inorganic Materials	0.51
Cellulose	0.41
Rubber	0.04
Plastic	1.21
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.01
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	1.55
Packaging Material, Rubber	0.20
Packaging Material, Steel	153.22
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.22E-03
Am-243	1.42E-08
Np-237	1.27E-05
Pu-238	2.04E-04
Pu-239	7.09E-03
Pu-240	1.63E-03
Pu-241	2.34E-02
Pu-242	9.55E-08
Th-229	2.43E-15
Th-230	2.68E-11
Th-232	1.06E-18
U-233	5.53E-11
U-234	2.91E-06
U-235	1.33E-07
U-236	2.16E-08
U-238	1.08E-07

No Hazardous Waste Numbers Provided

**TRUCON Code(s)**

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

**Waste Stream Description**

CMR TRU Inline or Subaccountable Packaged Waste



Waste Stream ID: LA-TA-03-14

**Appendix A**  
**Waste Profile Report**

Site	Los Alamos National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2015		
Stream Name	Metals and Miscellaneous Equipment Debris			Activity Concentrations Decayed to CY	2015		

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
Box - Crate	8.8	0.0	8.8
<b>Current Form Total</b>	<b>8.8</b>	<b>0.0</b>	<b>8.8</b>

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

**Waste Material Parameters**

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

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Pu-238	2.86E-01
Pu-239	6.56E-04
Th-230	6.96E-09
U-234	3.69E-05
U-235	2.52E-11

**Haz. Waste No(s).**

D008

**TRUCON Code(s)**

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

**Waste Stream Description**

N/A

Waste Stream ID: LA-TA-03-27

**Appendix A**  
**Waste Profile Report**

Site	Los Alamos National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	RH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2015		
Stream Name	Combined combustible and noncombustible debris waste (RH-TRU) of the CMR facility			Activity Concentrations Decayed to CY	2015		

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

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

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Fxd Lid - Dir Ld	0.9	0.0	0.9
RH Can w/ Remov Lid - Dir Ld	76.5	0.0	76.5
<b>Final Form Total</b>	<b>77.4</b>	<b>0.0</b>	<b>77.4</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
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 <sup>3</sup> )
Am-241	3.54E-02
Cs-137	1.99E+01
Np-237	2.17E-08
Pu-238	2.02E-02
Pu-239	1.04E+00
Pu-240	3.24E-02
Pu-241	1.10E+00
Pu-242	1.97E-05
Sr-90	1.40E+01
Th-229	2.71E-18
Th-230	2.04E-10
Th-232	3.69E-18
U-233	6.97E-14
U-234	2.22E-05
U-235	1.07E-04
U-236	7.53E-08
U-238	5.26E-07

No Hazardous Waste Numbers Provided

TRUCON Code(s)  
117/217

**Waste Stream Description**

N/A

Waste Stream ID: LA-TA-03-28

**Appendix A**  
**Waste Profile Report**

Site	Los Alamos National Laboratory	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2015	
Stream Name	Cement paste from CMR building (mixed)			Activity Concentrations Decayed to CY	2015		

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

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

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

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	0.00
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	3.05
Cement	1015.09
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Pu-238	2.47E+00
Th-230	6.71E-08
U-234	3.38E-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	12/31/2015	
Stream Name	SILICON-BASED OIL - LIQUID				Activity Concentrations Decayed to CY	2015	

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
30-gal Drum	0.1	0.0	0.1
<b>Current Form Total</b>	<b>0.1</b>	<b>0.0</b>	<b>0.1</b>

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

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	39.93
Aluminum-based Metal/Alloys	7.55
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	15.65
Rubber	1.62
Plastic	22.66
Cement	0.00
Solidified Inorganic Material	226.07
Solidified Organic Material	226.07
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Pu-238	2.38E-01
Th-230	6.47E-09
U-234	3.26E-05

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

**Waste Stream Description**

Absorbed Organics on Vermiculite

Waste Stream ID: LA-TA-03-CVD

**Appendix A**  
**Waste Profile Report**

Site	Los Alamos National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Remediation/D&D Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2015		
Stream Name	Heterogeneous Debris	Activity Concentrations Decayed to CY			2015		

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

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

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

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	2.92
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.95
Other Inorganic Materials	4.62
Cellulose	3.73
Rubber	0.38
Plastic	10.94
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.07
Vitrified	0.00
Packaging Material, Cellulose	135.10
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	528.85
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.91E+00
Np-237	9.23E-07
Pu-238	6.89E-01
Pu-239	2.36E+01
Pu-240	5.52E+00
Pu-241	7.99E+01
Pu-242	3.19E-04
Th-229	5.83E-17
Th-230	4.73E-10
Th-232	4.03E-18
U-233	1.99E-12
U-234	5.24E-05
U-235	8.99E-07
U-236	1.63E-07
U-238	4.96E-14

**Haz. Waste No(s).**D004, D005, D006,  
D007, D008, D009,  
D010, D011, D018**TRUCON Code(s)**

125/225

**Waste Stream Description**

Mixed heterogeneous combustible and non-combustible debris.

Waste Stream ID: LA-TA-21-05

**Appendix A**  
**Waste Profile Report**

Site	Los Alamos National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2015		
Stream Name	Graphite	Activity Concentrations Decayed to CY			2015		

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
30-gal Drum	0.1	0.0	0.1
55-gal Drum Dir Ld w/ Liner	0.2	0.0	0.2
<b>Current Form Total</b>	<b>0.3</b>	<b>0.0</b>	<b>0.3</b>

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

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	49.00
Aluminum-based Metal/Alloys	18.68
Other Metal/Alloys	37.56
Other Inorganic Materials	10.68
Cellulose	31.84
Rubber	24.59
Plastic	18.30
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	5.49E-01
Np-237	5.96E-06
Pu-238	5.79E-02
Pu-239	2.53E+00
Pu-240	6.02E-01
Pu-241	1.44E+00
Pu-242	4.06E-05
Th-229	5.04E-13
Th-230	3.54E-09
Th-232	6.70E-16
U-233	4.65E-10
U-234	1.34E-05
U-235	4.70E-05
U-236	6.96E-07
U-238	2.46E-13

No Hazardous Waste Numbers Provided

**TRUCON Code(s)**

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

**Waste Stream Description**

N/A

Waste Stream ID: LA-TA-21-06

**Appendix A**  
**Waste Profile Report**

Site	Los Alamos National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2015		
Stream Name	Combustible debris waste (mixed)			Activity Concentrations Decayed to CY	2015		

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
30-gal Drum	14.9	0.0	14.9
55-gal Drum Dir Ld w/ Liner	184.7	0.0	184.7
85-gal Drum w/ 1 - 55-gal Drum w/ Liner	0.3	0.0	0.3
Cask - Misc w/ 1 - 30-gal Drum	7.9	0.0	7.9
Cask - Misc w/ 2 - 30-gal Drums	73.5	0.0	73.5
<b>Current Form Total</b>	<b>281.3</b>	<b>0.0</b>	<b>281.3</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	326.4	0.0	326.4
<b>Final Form Total</b>	<b>326.4</b>	<b>0.0</b>	<b>326.4</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	26.35
Aluminum-based Metal/Alloys	10.05
Other Metal/Alloys	20.20
Other Inorganic Materials	5.74
Cellulose	17.12
Rubber	13.23
Plastic	9.84
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.41E-01
Np-237	2.45E-06
Pu-238	4.16E+01
Pu-239	6.23E-01
Pu-240	1.89E-01
Pu-241	7.31E-01
Pu-242	3.52E-05
Th-229	1.85E-13
Th-230	1.23E-06
Th-232	1.90E-16
U-233	1.81E-10
U-234	6.02E-03
U-235	2.85E-06
U-236	2.08E-07
U-238	2.02E-13

**Haz. Waste No(s).**

F001, F002

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

Combustible waste that includes debris, plastic-based waste, cellulose-based waste, and may also contain a smaller fraction of non-combustible solids and a small fraction of homogenous solids, salts, leached solids, ash, hydroxide cakes, crucibles, and impure oxides.

Waste Stream ID: LA-TA-21-07

**Appendix A**  
**Waste Profile Report**

Site	Los Alamos National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2015		
Stream Name	Metal	Activity Concentrations Decayed to CY			2015		

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
30-gal Drum	5.7	0.0	5.7
55-gal Drum Dir Ld w/ Liner	66.6	0.0	66.6
Box - Crate	482.3	0.0	482.3
Cask - Misc w/ 1 - 30-gal Drum	3.1	0.0	3.1
Cask - Misc w/ 2 - 30-gal Drums	43.9	0.0	43.9
Other	7.8	0.0	7.8
<b>Current Form Total</b>	<b>609.4</b>	<b>0.0</b>	<b>609.4</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	142.3	0.0	142.3
SWB Dir Ld w/ Liner	493.3	0.0	493.3
<b>Final Form Total</b>	<b>635.6</b>	<b>0.0</b>	<b>635.6</b>

**Waste Material Parameters**

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

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	5.75E-02
Np-237	5.71E-07
Pu-238	1.64E+01
Pu-239	2.80E-01
Pu-240	5.91E-02
Pu-241	1.78E-01
Pu-242	5.27E-06
Th-229	4.11E-14
Th-230	3.50E-07
Th-232	5.60E-17
U-233	4.11E-11
U-234	1.97E-03
U-235	1.88E-08
U-236	6.31E-08
U-238	2.94E-14

**Haz. Waste No(s).**

D008

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

N/A



Waste Stream ID: **LA-TA-21-08**

**Appendix A**  
**Waste Profile Report**

Site	Los Alamos National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2015		
Stream Name	Glass	Activity Concentrations Decayed to CY			2015		

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
30-gal Drum	0.3	0.0	0.3
55-gal Drum Dir Ld w/ Liner	2.1	0.0	2.1
Cask - Misc w/ 2 - 30-gal Drums	1.1	0.0	1.1
<b>Current Form Total</b>	<b>3.5</b>	<b>0.0</b>	<b>3.5</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	4.2	0.0	4.2
<b>Final Form Total</b>	<b>4.2</b>	<b>0.0</b>	<b>4.2</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	32.11
Aluminum-based Metal/Alloys	12.24
Other Metal/Alloys	24.61
Other Inorganic Materials	7.00
Cellulose	20.86
Rubber	16.12
Plastic	11.99
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.11E-01
Np-237	2.27E-06
Pu-238	2.09E+01
Pu-239	6.41E-01
Pu-240	1.80E-01
Pu-241	5.73E-01
Pu-242	2.70E-05
Th-229	1.91E-13
Th-230	5.09E-07
Th-232	2.01E-16
U-233	1.77E-10
U-234	2.70E-03
U-235	4.83E-08
U-236	2.09E-07
U-238	1.63E-13

No Hazardous Waste Numbers Provided

**TRUCON Code(s)**

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

**Waste Stream Description**

N/A

Waste Stream ID: **LA-TA-21-09**

**Appendix A**  
**Waste Profile Report**

Site	Los Alamos National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2015		
Stream Name	Hepa Filters	Activity Concentrations Decayed to CY			2015		

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
30-gal Drum	0.1	0.0	0.1
55-gal Drum Dir Ld w/ Liner	0.6	0.0	0.6
Cask - Misc w/ 2 - 30-gal Drums	7.4	0.0	7.4
<b>Current Form Total</b>	<b>8.1</b>	<b>0.0</b>	<b>8.1</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	14.1	0.0	14.1
<b>Final Form Total</b>	<b>14.1</b>	<b>0.0</b>	<b>14.1</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	29.88
Aluminum-based Metal/Alloys	11.39
Other Metal/Alloys	22.90
Other Inorganic Materials	6.51
Cellulose	19.42
Rubber	15.00
Plastic	11.16
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	5.28E-03
Np-237	6.04E-08
Pu-238	9.95E+01
Pu-239	2.54E-02
Pu-240	5.92E-03
Pu-241	1.24E-02
Pu-242	3.44E-07
Th-229	5.65E-15
Th-230	2.70E-06
Th-232	7.28E-18
U-233	4.96E-12
U-234	1.36E-02
U-235	1.97E-09
U-236	7.20E-09
U-238	2.19E-15

No Hazardous Waste Numbers Provided

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

**Waste Stream Description**

N/A

Waste Stream ID: LA-TA-21-12

**Appendix A**  
**Waste Profile Report**

Site	Los Alamos National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2015		
Stream Name	Non-combustible and combustible debris waste			Activity Concentrations Decayed to CY	2015		

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
30-gal Drum	3.6	0.0	3.6
55-gal Drum Dir Ld w/ Liner	113.4	0.0	113.4
Box - Crate	6.3	0.0	6.3
Cask - Misc w/ 1 - 30-gal Drum	32.4	0.0	32.4
Cask - Misc w/ 2 - 30-gal Drums	89.4	0.0	89.4
<b>Current Form Total</b>	<b>245.1</b>	<b>0.0</b>	<b>245.1</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	335.5	0.0	335.5
SWB Dir Ld w/ Liner	7.6	0.0	7.6
<b>Final Form Total</b>	<b>343.1</b>	<b>0.0</b>	<b>343.1</b>

**Waste Material Parameters**

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

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	4.30E-01
Np-237	4.27E-06
Pu-238	1.25E+02
Pu-239	7.95E-01
Pu-240	2.68E-01
Pu-241	1.33E+00
Pu-242	7.25E-05
Th-229	3.82E-04
Th-230	4.66E-06
Th-232	2.54E-16
U-233	1.21E-01
U-234	2.10E-02
U-235	5.70E-06
U-236	2.86E-07
U-238	4.05E-13

No Hazardous Waste Numbers Provided

**TRUCON Code(s)**

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

**Waste Stream Description**

COMBINED COMBUSTIBLE/NON-COMBUSTIBLE LAB TRASH

Waste Stream ID: LA-TA-21-13

**Appendix A**  
**Waste Profile Report**

Site	Los Alamos National Laboratory	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2015	
Stream Name	Cemented wastewater treatment sludge (mixed)			Activity Concentrations Decayed to CY	2015		

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	15.0	0.0	15.0
85-gal Drum w/ 1 - 55-gal Drum w/ Liner	0.3	0.0	0.3
Other - Corrugated Metal Pipe	442.4	0.0	442.4
<b>Current Form Total</b>	<b>457.7</b>	<b>0.0</b>	<b>457.7</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	15.2	0.0	15.2
SWB Dir Ld w/ Liner	444.2	0.0	444.2
<b>Final Form Total</b>	<b>459.3</b>	<b>0.0</b>	<b>459.3</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	76.68
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	13.64
Cement	2145.28
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	2.39
Packaging Material, Rubber	0.20
Packaging Material, Steel	152.69
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.27E+01
Cs-137	3.99E-04
Np-237	3.68E-05
Pu-238	6.66E-02
Pu-239	1.36E-01
Pu-240	1.04E-06
Pu-241	9.51E-05
Pu-242	5.98E-11
Sr-90	2.79E-04
Th-229	5.76E-14
Th-230	6.00E-10
Th-232	4.45E-17
U-233	3.93E-10
U-234	1.35E-05
U-235	4.65E-05
U-236	1.80E-07
U-238	2.36E-05

**Haz. Waste No(s).**

D007, F001, F002

**No TRUCON  
Codes Provided**

**Waste Stream Description**

Cemented Wastewater Treatment Sludge Solidified aqueous waste generated from facility and equipment operations and maintenance. Solidified aqueous waste is a dewatered sludge generated by the vacuum filtration of solids from treated aqueous waste slurry. The filter media (diatomaceous earth) with the entrapped filtrate is then placed in drums with dry concreted absorbent.

Waste Stream ID: LA-TA-21-15

**Appendix A**  
**Waste Profile Report**

Site	Los Alamos National Laboratory	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Solidified Organics		Inventory Date	12/31/2015	
Stream Name	Solidified organics				Activity Concentrations Decayed to CY	2015	

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
30-gal Drum	0.2	0.0	0.2
55-gal Drum Dir Ld w/ Liner	3.1	0.0	3.1
<b>Current Form Total</b>	<b>3.3</b>	<b>0.0</b>	<b>3.3</b>

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

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	27.86
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	27.38
Cement	0.00
Solidified Inorganic Material	480.70
Solidified Organic Material	63.28
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.15E-01
Np-237	2.21E-06
Pu-238	2.30E-02
Pu-239	1.42E+00
Pu-240	2.44E-01
Pu-241	6.21E-01
Pu-242	1.41E-05
Th-229	1.68E-13
Th-230	1.26E-09
Th-232	2.44E-16
U-233	1.63E-10
U-234	5.02E-06
U-235	9.04E-08
U-236	2.67E-07
U-238	8.12E-14

No Hazardous  
Waste Numbers  
Provided

No TRUCON  
Codes Provided

**Waste Stream Description**

N/A

Waste Stream ID: LA-TA-21-16

**Appendix A**  
**Waste Profile Report**

Site	Los Alamos National Laboratory	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2015	
Stream Name	SOLIDIFIED INORGANIC PROCESS SOLID				Activity Concentrations Decayed to CY	2015	

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
30-gal Drum	25.9	0.0	25.9
55-gal Drum Dir Ld w/ Liner	31.4	0.0	31.4
85-gal Drum w/ 1 - 55-gal Drum w/ Liner	0.3	0.0	0.3
<b>Current Form Total</b>	<b>57.7</b>	<b>0.0</b>	<b>57.7</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	55.1	0.0	55.1
<b>Final Form Total</b>	<b>55.1</b>	<b>0.0</b>	<b>55.1</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	7.64
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	1.36
Cement	213.88
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.93E+00
Np-237	4.44E-06
Pu-238	4.55E-01
Pu-239	1.15E+01
Pu-240	2.75E+00
Pu-241	3.06E+01
Pu-242	2.26E-04
Th-229	1.67E-14
Th-230	3.19E-09
Th-232	1.28E-16
U-233	7.30E-11
U-234	4.87E-05
U-235	5.93E-05
U-236	6.51E-07
U-238	2.80E-13

**Haz. Waste No(s).**

D008

**No TRUCON  
Codes Provided**

**Waste Stream Description**

LEACHED PROCESS RESIDUES

Waste Stream ID: LA-TA-21-17

**Appendix A**  
**Waste Profile Report**

Site	Los Alamos National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Source Information Not Compiled	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2015		
Stream Name	Process solids	Activity Concentrations Decayed to CY			2015		

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
30-gal Drum	0.1	0.0	0.1
55-gal Drum Dir Ld w/ Liner	0.4	0.0	0.4
<b>Current Form Total</b>	<b>0.5</b>	<b>0.0</b>	<b>0.5</b>

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

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	29.57
Aluminum-based Metal/Alloys	11.28
Other Metal/Alloys	22.67
Other Inorganic Materials	6.44
Cellulose	19.22
Rubber	14.84
Plastic	11.05
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	8.72E-03
Np-237	9.99E-08
Pu-238	8.94E-04
Pu-239	4.19E-02
Pu-240	9.78E-03
Pu-241	2.06E-02
Pu-242	5.68E-07
Th-229	9.34E-15
Th-230	5.81E-11
Th-232	1.20E-17
U-233	8.20E-12
U-234	2.12E-07
U-235	3.25E-09
U-236	1.19E-08
U-238	3.62E-15

No Hazardous Waste Numbers Provided

**TRUCON Code(s)**

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

**Waste Stream Description**

Special items (precious metals) requiring tracking by CST-7

Waste Stream ID: **LA-TA-50-18**

**Appendix A**  
**Waste Profile Report**

Site	Los Alamos National Laboratory	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Materials Production/Recovery Effluents	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2015	
Stream Name	Cemented caustic liquid waste (mixed)			Activity Concentrations Decayed to CY	2015		

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

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

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

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	0.00
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	1.03
Cement	1026.98
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	7.11E-01
Np-237	9.76E-06
Pu-239	1.37E-02
Th-229	1.06E-12
U-233	8.79E-10
U-235	5.54E-10

**Haz. Waste No(s).**

D007, F001, F002

**TRUCON Code(s)**

111/211, 114/214

**Waste Stream Description**

Cemented Caustic Liquid Waste Solidified (through cementation) caustic aqueous waste from TA-55. The sludge is a residue from numerous treatment and filtration operations involving aqueous liquid radioactive waste.



Waste Stream ID: LA-TA-50-19

**Appendix A**  
**Waste Profile Report**

Site	Los Alamos National Laboratory	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Materials Production/Recovery Effluents	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2015	
Stream Name	Homogeneous Inorganic Solids				Activity Concentrations Decayed to CY	2015	

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	62.4	0.0	62.4
<b>Current Form Total</b>	<b>62.4</b>	<b>0.0</b>	<b>62.4</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	62.4	0.0	62.4
<b>Final Form Total</b>	<b>62.4</b>	<b>0.0</b>	<b>62.4</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	0.09
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	4.54
Cement	0.00
Solidified Inorganic Material	851.28
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	3.44E-01
Np-237	4.13E-06
Pu-238	2.32E-02
Pu-239	2.22E-02
Th-229	3.45E-13
Th-230	4.72E-10
U-233	3.26E-10
U-234	2.72E-06
U-235	7.88E-10

**Haz. Waste No(s).**

F001

**TRUCON Code(s)**

111/211

**Waste Stream Description**

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

Waste Stream ID: LA-TA-55-19

**Appendix A**  
**Waste Profile Report**

Site	Los Alamos National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2015		
Stream Name	Combustible debris waste (mixed)				Activity Concentrations Decayed to CY	2015	

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	40.6	0.0	40.6
55-gal POC - 12" w/ Liner	0.2	0.0	0.2
Cask - Misc w/ 1 - 30-gal Drum	0.4	0.0	0.4
<b>Current Form Total</b>	<b>41.2</b>	<b>0.0</b>	<b>41.2</b>

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

**Waste Material Parameters**

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

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	3.17E+00
Np-237	3.48E-05
Pu-238	4.27E+00
Pu-239	6.00E+00
Pu-240	2.98E+00
Pu-241	1.03E+02
Pu-242	1.69E-03
Th-229	6.54E-15
Th-230	4.61E-08
Th-232	9.58E-16
U-233	1.50E-10
U-234	5.01E-03
U-235	1.44E-04
U-236	1.95E-05
U-238	3.36E-05

**Haz. Waste No(s).**

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

**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.

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	12/31/2015		
Stream Name	Metal debris waste (mixed)	Activity Concentrations Decayed to CY			2015		

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	2.3	0.0	2.3
<b>Current Form Total</b>	<b>2.3</b>	<b>0.0</b>	<b>2.3</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	2.3	0.0	2.3
<b>Final Form Total</b>	<b>2.3</b>	<b>0.0</b>	<b>2.3</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	121.06
Aluminum-based Metal/Alloys	0.49
Other Metal/Alloys	14.51
Other Inorganic Materials	78.51
Cellulose	10.02
Rubber	15.03
Plastic	46.35
Cement	0.00
Solidified Inorganic Material	1.93
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.42E-01
Np-237	1.40E-06
Pu-238	1.04E+01
Pu-239	2.54E-01
Pu-240	9.06E-02
Pu-241	4.57E-01
Pu-242	2.41E-05
Th-229	9.95E-14
Th-230	7.28E-07
Th-232	8.60E-17
U-233	9.99E-11
U-234	2.78E-03
U-235	1.84E-08
U-236	9.68E-08
U-238	8.82E-07

**Haz. Waste No(s).**

D008

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

Metal Noncombustible metal waste that may also contain some glass, ceramic, porcelain, as well as some small fraction of combustible waste.

Waste Stream ID: LA-TA-55-30

**Appendix A**  
**Waste Profile Report**

Site	Los Alamos National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2015		
Stream Name	Non-combustible and combustible debris waste (mixed)			Activity Concentrations Decayed to CY	2015		

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	66.1	0.0	66.1
SWB Dir Ld w/ Liner	1.9	0.0	1.9
<b>Current Form Total</b>	<b>68.0</b>	<b>0.0</b>	<b>68.0</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	66.1	0.0	66.1
SWB Dir Ld w/ Liner	1.9	0.0	1.9
<b>Final Form Total</b>	<b>68.0</b>	<b>0.0</b>	<b>68.0</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	81.00
Aluminum-based Metal/Alloys	0.33
Other Metal/Alloys	9.71
Other Inorganic Materials	52.53
Cellulose	6.70
Rubber	10.06
Plastic	31.01
Cement	0.00
Solidified Inorganic Material	1.29
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	36.07
Packaging Material, Rubber	0.56
Packaging Material, Steel	131.40
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.25E+00
Np-237	7.12E-07
Pu-238	3.25E+00
Pu-239	2.45E+00
Pu-240	1.52E+00
Pu-241	6.58E+01
Pu-242	1.77E-03
Pu-244	2.93E-10
Th-229	4.49E-17
Th-230	4.97E-09
Th-232	1.85E-17
U-233	1.54E-12
U-234	5.45E-04
U-235	8.49E-06
U-236	3.97E-07
U-238	1.23E-04

**Haz. Waste No(s).**

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

**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.

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	12/31/2015	
Stream Name	LEACHED PROCESS RESIDUES			Activity Concentrations Decayed to CY	2015		

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
Cask - Misc w/ 1 - 30-gal Drum	0.4	0.0	0.4
<b>Current Form Total</b>	<b>0.4</b>	<b>0.0</b>	<b>0.4</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.8	0.0	0.8
<b>Final Form Total</b>	<b>0.8</b>	<b>0.0</b>	<b>0.8</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	0.66
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	0.12
Cement	18.46
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	4.38E-02
Np-237	3.96E-07
Pu-238	2.66E+01
Pu-239	2.06E-02
Pu-240	1.03E-02
Pu-241	1.62E-01
Pu-242	8.53E-06
Th-229	2.39E-14
Th-230	1.63E-06
Th-232	8.24E-18
U-233	2.61E-11
U-234	6.72E-03
U-235	1.71E-09
U-236	1.01E-08
U-238	4.37E-14

**Haz. Waste No(s).**

D008

**TRUCON Code(s)**

114/214, 126/226

**Waste Stream Description**

Cemented Inorganics and Spent Samples Solidified inorganic process solids generated from facility and equipment operations and maintenance. This waste includes process leached solids, ash, filter cakes, salts, metal oxides, fines, evaporator bottoms, and sample residues (received from the CMR building) stabilized in Portland or gypsum cement.

Waste Stream ID: **LA-TRU-Empty-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	12/31/2015	
Stream Name	Empty containers			Activity Concentrations Decayed to CY	2015		

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
110-gal Drum w/ 1 - 55-gal Drum w/ Liner (LANL)	0.8	0.0	0.8
<b>Current Form Total</b>	<b>0.8</b>	<b>0.0</b>	<b>0.8</b>

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

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	40.62
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.11
Plastic	7.27
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	1.20
Packaging Material, Rubber	0.19
Packaging Material, Steel	153.44
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	6.95E-03
Am-243	2.32E-08
Np-237	1.47E-08
Pu-239	2.40E-05
Pu-240	5.61E-06
Pu-241	3.51E-04
Th-229	2.53E-18
Th-232	4.09E-24
U-233	5.93E-14
U-235	2.36E-14
U-236	1.66E-13

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

**Waste Stream Description**

Empty containers identified as TRU resulting from repackaging/remediation of the CIN01 waste stream.

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	12/31/2015	
Stream Name	Empty containers				Activity Concentrations Decayed to CY	2015	

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner (LANL)	0.6	0.0	0.6
SWB w/ 4 - 55-gal Drums w/ Liners	11.4	0.0	11.4
<b>Current Form Total</b>	<b>12.0</b>	<b>0.0</b>	<b>12.0</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
SWB Dir Ld w/ Liner	1.9	0.0	1.9
SWB w/ 4 - 55-gal Drums w/ Liners	11.3	0.0	11.3
<b>Final Form Total</b>	<b>13.2</b>	<b>0.0</b>	<b>13.2</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	69.11
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.30
Plastic	19.59
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	14.14
Packaging Material, Rubber	0.41
Packaging Material, Steel	202.87
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.63E-02
Am-243	7.09E-07
Cs-137	1.38E-07
Np-237	3.11E-07
Pu-238	1.49E+00
Pu-239	2.78E-02
Pu-240	6.50E-03
Pu-241	7.52E-02
Pu-242	2.73E-08
Sr-90	1.37E-07
Th-229	6.52E-10
Th-230	9.14E-09
Th-232	7.59E-20
U-233	5.10E-12
U-234	2.57E-04
U-235	1.61E-08
U-236	7.69E-10
U-238	1.69E-17

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

**Waste Stream Description**

Empty containers identified as TRU resulting from repackaging/remediation of debris waste streams

Waste Stream ID: **LA-TRU-Empty-85**

**Appendix A**  
**Waste Profile Report**

Site	Los Alamos National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Remediation/D&D Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2015	
Stream Name	Empty containers			Activity Concentrations Decayed to CY	2015		

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
85-gal Drum w/ 1 - 55-gal Drum w/ Liner (LANL)	256.6	0.0	256.6
<b>Current Form Total</b>	<b>256.6</b>	<b>0.0</b>	<b>256.6</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
SWB Dir Ld w/ Liner	77.5	0.0	77.5
<b>Final Form Total</b>	<b>77.5</b>	<b>0.0</b>	<b>77.5</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	310.55
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	1.15
Plastic	37.47
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	1.20
Packaging Material, Rubber	0.19
Packaging Material, Steel	153.44
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	7.04E-01
Am-243	1.13E-04
Cs-137	1.65E-05
Np-237	3.66E-05
Pu-238	2.84E-01
Pu-239	4.00E-01
Pu-240	1.02E-01
Pu-241	1.04E+00
Pu-242	3.46E-06
Pu-244	8.90E-14
Sr-90	1.65E-05
Th-229	3.33E-08
Th-230	4.18E-10
Th-232	2.79E-19
U-233	1.59E-10
U-234	4.59E-05
U-235	4.06E-08
U-236	7.17E-09
U-238	1.89E-07

**Haz. Waste No(s).**

D008

**TRUCON Code(s)**116/216, 117/217,  
123/223, 125/225**Waste Stream Description**

Empty containers identified as TRU resulting from repackaging/remediation of debris waste streams



Waste Stream ID: **LB-T001**

**Appendix A**  
**Waste Profile Report**

Site	Lawrence Berkeley National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	R&D/R&D Laboratory Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2015	
Stream Name	LBL-Non Mixed Waste			Activity Concentrations Decayed to CY	2015		

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
12.2-gal Drum	0.0	0.0	0.1
<b>Current Form Total</b>	<b>0.0</b>	<b>0.0</b>	<b>0.1</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.2	0.2	0.4
<b>Final Form Total</b>	<b>0.2</b>	<b>0.2</b>	<b>0.4</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	0.00
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	9.71
Other Inorganic Materials	3.56
Cellulose	5.24
Rubber	0.00
Plastic	3.08
Cement	0.00
Solidified Inorganic Material	0.29
Solidified Organic Material	0.02
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.48E-02
Am-243	4.33E-03
Cm-244	3.61E-03
Cs-137	3.88E-07
Np-237	4.11E-05
Pu-238	1.58E-02
Pu-239	1.48E-03
Pu-240	4.97E-05
Pu-241	5.51E-04
Pu-242	5.88E-16
Pu-244	1.29E-14
Th-229	1.23E-13
Th-230	3.36E-12
Th-232	2.69E-06
U-233	6.97E-10
U-234	1.82E-07
U-235	5.83E-12
U-236	5.79E-12
U-238	1.88E-09

No Hazardous Waste Numbers Provided

TRUCON Code(s)  
125/225

**Waste Stream Description**

Heterogeneous transuranic, non mixed waste

Waste Stream ID: **LB-T002**

**Appendix A**  
**Waste Profile Report**

Site	Lawrence Berkeley National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	R&D/R&D Laboratory Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2015		
Stream Name	LBL - Mixed Waste			Activity Concentrations Decayed to CY	2015		

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

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

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.2	0.2	0.4
<b>Final Form Total</b>	<b>0.2</b>	<b>0.2</b>	<b>0.4</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	0.00
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.53
Cellulose	1.78
Rubber	0.00
Plastic	0.00
Cement	0.00
Solidified Inorganic Material	0.03
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	4.40E-05
Am-243	5.77E-08
Np-237	2.79E-07
Pu-239	2.64E-04
Pu-241	2.30E-04
Th-229	8.32E-16
U-233	4.73E-12
U-235	1.04E-12

**Haz. Waste No(s).**

D007

**TRUCON Code(s)**

125/225

**Waste Stream Description**

Heterogeneous transuranic mixed waste

Waste Stream ID: **LL-M001**

**Appendix A**  
**Waste Profile Report**

Site	Lawrence Livermore National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	R&D/R&D Laboratory Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2015	
Stream Name	R&D Glovebox Waste			Activity Concentrations Decayed to CY		2015	

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	11.4	0.0	11.4
55-gal Drum Dir Ld w/o Liner	64.1	298.5	362.5
55-gal POC - 12" w/ Liner	16.2	27.0	43.3
SWB Dir Ld w/o Liner	7.6	52.9	60.5
<b>Current Form Total</b>	<b>99.3</b>	<b>378.4</b>	<b>477.7</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	75.5	298.5	374.0
55-gal POC - 12" w/ Liner	16.2	27.0	43.3
SWB Dir Ld w/o Liner	7.6	52.9	60.5
<b>Final Form Total</b>	<b>99.3</b>	<b>378.4</b>	<b>477.7</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	40.96
Aluminum-based Metal/Alloys	8.00
Other Metal/Alloys	15.87
Other Inorganic Materials	4.21
Cellulose	20.32
Rubber	16.59
Plastic	48.97
Cement	9.30
Solidified Inorganic Material	6.92
Solidified Organic Material	0.36
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	12.23
Packaging Material, Plastic	3.36
Packaging Material, Rubber	0.52
Packaging Material, Steel	169.69
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.81E+00
Am-243	3.17E-04
Cm-244	1.00E+00
Cs-137	8.86E-04
Np-237	5.88E-05
Pu-238	3.58E+00
Pu-239	5.32E+00
Pu-240	1.55E+00
Pu-241	1.10E+01
Pu-242	8.08E-04
Pu-244	1.60E-14
Sr-90	8.86E-04
Th-229	1.74E-06
Th-230	3.22E-07
Th-232	3.38E-08
U-233	4.63E-04
U-234	5.06E-05
U-235	9.98E-06
U-236	4.59E-09
U-238	2.44E-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.15.00

NOTE: Actual numerical values have been rounded for presentation purposes

A - LL - 1

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	12/31/2015		
Stream Name	Pyrochemical salt waste	Activity Concentrations Decayed to CY			2015		

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

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

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

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	120.00
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	1740.00
Cellulose	12.00
Rubber	0.00
Plastic	120.00
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.33E-01
Cm-244	7.51E-03
Np-237	1.14E-06
Pu-238	4.79E-02
Pu-239	2.38E-01
Pu-240	1.15E-01
Pu-241	1.01E+00
Pu-242	3.74E-05
Th-229	6.57E-15
Th-230	2.31E-11
Th-232	3.03E-18
U-233	2.60E-11
U-234	8.31E-07
U-235	1.41E-09
U-236	2.05E-08
U-238	3.48E-14

No Hazardous Waste Numbers Provided

TRUCON Code(s)  
124/224

**Waste Stream Description**

The waste consists primarily of used chloride and fluoride salts from pyrochemical processes such as electrorefining, molten salt extraction, and direct oxide reduction. There may also be up to 20% heterogeneous organic glovebox bagout waste packaged with the salt waste. This waste does not contain any RCRA listed hazardous materials.

Waste Stream ID: LL-W018-S5100

**Appendix A**  
**Waste Profile Report**

Site	Lawrence Livermore National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	R&D/R&D Laboratory Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2015		
Stream Name	Combined metal scrap & incidental combust			Activity Concentrations Decayed to CY	2015		

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
Box - Misc	120.6	0.0	120.6
SLB2 Dir Ld	0.0	96.2	96.2
SWB Dir Ld w/o Liner	20.8	117.2	138.0
<b>Current Form Total</b>	<b>141.4</b>	<b>213.4</b>	<b>354.8</b>

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

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	55.05
Aluminum-based Metal/Alloys	3.35
Other Metal/Alloys	13.24
Other Inorganic Materials	0.56
Cellulose	14.72
Rubber	2.78
Plastic	2.13
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	2.65
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.16
Packaging Material, Steel	191.28
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	7.57E-02
Cm-244	3.90E-05
Np-237	1.95E-07
Pu-238	5.78E-03
Pu-239	5.12E-02
Pu-240	1.53E-02
Pu-241	3.08E-01
Pu-242	3.31E-06
Th-229	7.99E-16
Th-230	5.00E-12
Th-232	7.17E-19
U-233	3.37E-12
U-234	1.35E-07
U-235	4.04E-10
U-236	3.64E-09
U-238	4.11E-15

**Haz. Waste No(s).**

D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D022, D028, D029, D035, D040, F001, F002, F005

**TRUCON Code(s)**

125/225

**Waste Stream Description**

This waste stream is composed primarily of objects which, because of physical size, cannot be packaged in a 55-gallon drum. Typical objects include decommissioned gloveboxes, hoods, and large pieces of equipment (lathes, mills, etc.). This waste stream may contain lead metal (e.g., bricks, foil), Kaufman cans (lead seams), lead-lined and cadmium-lined steel cans, mercury batteries, fluorescent and incandescent light bulbs. The void space in boxes may be filled with other TRU waste items or with foam in plastic bags.

Waste Stream ID: LL-W018-SS

**Appendix A**  
**Waste Profile Report**

Site	Lawrence Livermore National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	R&D/R&D Laboratory Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2015	
Stream Name	Sealed Sources			Activity Concentrations Decayed to CY		2015	

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	4.2	0.0	4.2
55-gal POC - 12" w/ Liner	0.0	4.2	4.2
<b>Current Form Total</b>	<b>4.2</b>	<b>4.2</b>	<b>8.3</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal POC - 12" w/ Liner	4.2	4.2	8.3
<b>Final Form Total</b>	<b>4.2</b>	<b>4.2</b>	<b>8.3</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	7.11
Aluminum-based Metal/Alloys	1.52
Other Metal/Alloys	4.31
Other Inorganic Materials	3.78
Cellulose	1.54
Rubber	0.00
Plastic	0.03
Cement	0.00
Solidified Inorganic Material	9.30
Solidified Organic Material	4.92
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	135.10
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	528.85
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.88E+01
Am-243	2.50E-06
Cm-244	1.61E-04
Cs-137	3.20E-03
Np-237	5.07E-05
Pu-238	2.96E+00
Pu-239	1.44E-01
Pu-240	4.61E-04
Pu-241	7.11E-02
Pu-244	8.71E-23
Sr-90	9.87E-03
Th-229	2.19E-13
Th-230	2.56E-09
Th-232	2.16E-20
U-233	9.02E-10
U-234	6.90E-05
U-235	1.04E-07
U-236	1.09E-10

No Hazardous Waste Numbers Provided

TRUCON Code(s)  
117/217

**Waste Stream Description**

Specific waste items in this waste stream include sealed sources composed primarily of metal or metal encapsulated in a plastic or resin disk. Other waste items consist of packaging including cans, ice cream cartons, and plastic bags, sheet, and tape, bentonite clay or other inorganic absorbents such as Floor Dry

Waste Stream ID: **LL-W019**

**Appendix A**  
**Waste Profile Report**

Site	Lawrence Livermore National Laboratory	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	R&D/R&D Laboratory Waste	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2015	
Stream Name	Solidified Waste			Activity Concentrations Decayed to CY		2015	

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	10.6	0.0	10.6
55-gal Drum Dir Ld w/o Liner	9.4	20.8	30.2
<b>Current Form Total</b>	<b>20.0</b>	<b>20.8</b>	<b>40.8</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	20.0	20.8	40.8
<b>Final Form Total</b>	<b>20.0</b>	<b>20.8</b>	<b>40.8</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	11.61
Aluminum-based Metal/Alloys	0.86
Other Metal/Alloys	2.05
Other Inorganic Materials	0.00
Cellulose	2.65
Rubber	3.71
Plastic	35.74
Cement	2.75
Solidified Inorganic Material	198.98
Solidified Organic Material	32.02
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.22E+00
Am-243	1.08E-07
Cm-244	9.24E-04
Cs-137	1.85E-06
Np-237	6.76E-05
Pu-238	4.75E+00
Pu-239	2.68E+00
Pu-240	7.66E-01
Pu-241	1.03E+01
Pu-242	1.70E-04
Sr-90	1.85E-06
Th-229	5.01E-07
Th-230	1.08E-11
Th-232	5.59E-21
U-233	5.69E-02
U-234	1.24E-05
U-235	9.17E-06
U-236	2.27E-09
U-238	7.07E-05

**Haz. Waste No(s).**

D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D022, D028, D029, D035, D040, F001, F002, F005

**TRUCON Code(s)**

111/211, 113/213

**Waste Stream Description**

This waste stream consists of drums classified as homogeneous solids; predominately solidified inorganics with a small percentage of solidified organics.

Waste Stream ID: **ND-T001**

**Appendix A**  
**Waste Profile Report**

Site	Nuclear Radiation Development Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2015		
Stream Name	AmO2 Bagout/ Silver Bagout	Activity Concentrations Decayed to CY			2015		

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

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

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

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	211.54
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	10.63
Other Inorganic Materials	5.41
Cellulose	211.54
Rubber	31.73
Plastic	52.88
Cement	0.00
Solidified Inorganic Material	531.73
Solidified Organic Material	10.63
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	7.09E+01
Np-237	9.22E-05
Th-229	9.18E-14
U-233	7.83E-10

**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	12/31/2015		
Stream Name	Returned Smoke Detector Sources	Activity Concentrations Decayed to CY			2015		

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

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

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

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	31.79
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	3.18
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	0.00
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.25E+00
Np-237	4.39E-06
Th-229	9.94E-15
U-233	5.65E-11

No Hazardous Waste Numbers Provided

TRUCON Code(s)  
125/225

**Waste Stream Description**

Sealed sources returned from smoke detector manufacturers or other end users.

Waste Stream ID: **NT-JAS-01**

**Appendix A**  
**Waste Profile Report**

Site	Nevada National Security Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	R&D/R&D Laboratory Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2015	
Stream Name	Combined metal scrap and incidental combustibles				Activity Concentrations Decayed to CY	2015	

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
SWB Dir Ld w/o Liner	54.8	68.0	122.9
<b>Current Form Total</b>	<b>54.8</b>	<b>68.0</b>	<b>122.9</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
SWB Dir Ld w/o Liner	54.8	68.0	122.9
<b>Final Form Total</b>	<b>54.8</b>	<b>68.0</b>	<b>122.9</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	673.23
Aluminum-based Metal/Alloys	3.43
Other Metal/Alloys	0.00
Other Inorganic Materials	3.43
Cellulose	0.00
Rubber	3.43
Plastic	3.43
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.19
Packaging Material, Steel	153.44
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	7.22E-02
Np-237	8.58E-07
Pu-238	3.45E-02
Pu-239	1.09E+00
Pu-240	2.48E-01
Pu-241	1.27E+00
Pu-242	1.39E-05
Th-229	1.91E-14
Th-230	6.87E-11
Th-232	2.61E-17
U-233	3.81E-11
U-234	1.23E-06
U-235	1.29E-08
U-236	8.81E-08
U-238	2.58E-14

No Hazardous Waste Numbers Provided

TRUCON Code(s)  
125/225

**Waste Stream Description**

Waste stream consists of spent Primary Target Chambers from Jasper gas gun experiments. PTCs are metal chambers used to contain debris from the impact of a sabot on a disk of plutonium metal.

Waste Stream ID: **NT-W021**

**Appendix A**  
**Waste Profile Report**

Site	Nevada National Security Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	R&D/R&D Laboratory Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2015	
Stream Name	V3XA Spheres					Activity Concentrations Decayed to CY	2015

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
Box - Crate	5.1	0.0	5.1
<b>Current Form Total</b>	<b>5.1</b>	<b>0.0</b>	<b>5.1</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	5.4	0.0	5.4
<b>Final Form Total</b>	<b>5.4</b>	<b>0.0</b>	<b>5.4</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	464.11
Aluminum-based Metal/Alloys	0.98
Other Metal/Alloys	1.56
Other Inorganic Materials	12.57
Cellulose	1.50
Rubber	0.00
Plastic	0.00
Cement	2.22
Solidified Inorganic Material	68.42
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.39E+00
Np-237	2.20E-06
Pu-238	2.43E-01
Pu-239	9.43E+00
Pu-240	2.17E+00
Pu-241	9.88E+00
Pu-242	1.92E-04
Th-229	1.74E-13
Th-230	5.95E-08
Th-232	3.95E-17
U-233	4.11E-10
U-234	1.30E-03
U-235	8.92E-06
U-236	3.21E-07
U-238	4.59E-04

No Hazardous Waste Numbers Provided

TRUCON Code(s)  
125/225

**Waste Stream Description**

The two steel vessels are 1-inch thick by 3-foot diameter, weighing about 3300 lbs. each. The vessels contain heterogeneous mixtures of the following materials: Plutonium, D-38, Beryllium metal, Completely burned high explosive, Stainless steel, Brass, Polystyrene foam, Aluminum, Coke (degassed coal), Water absorbed by the coke, Steel, Glass, Epoxy resin, Thermalite (aerated cement block), Plaster, Hortag (fly-ash and clay), Wood, and Krypton-85 tracer gas for leak detection. The UK has had similar vessels in storage for over ten years, but none containing plutonium have ever been opened. Vessels containing D-38 only have been opened, with small amounts of water vapor and some loose debris found inside. The bulk of the materials were found to be trapped within the thick coke layer lining the inner surface of the vessel. No more wastes of this type are planned to be generated.

Waste Stream ID: **OR-CHEM-CH-HET**

**Appendix A**  
**Waste Profile Report**

Site	Oak Ridge National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Analytical Laboratory Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2015		
Stream Name	ORNL Analytical Chemistry CH-TRU Debris Waste			Activity Concentrations Decayed to CY	2015		

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	31.8	0.0	31.8
55-gal POC - 6" w/ Liner	0.4	0.0	0.4
79-gal Drum Dir Ld	0.6	0.0	0.6
<b>Current Form Total</b>	<b>32.8</b>	<b>0.0</b>	<b>32.8</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	32.4	0.0	32.4
55-gal POC - 6" w/ Liner	0.4	0.0	0.4
<b>Final Form Total</b>	<b>32.9</b>	<b>0.0</b>	<b>32.9</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	19.85
Aluminum-based Metal/Alloys	2.38
Other Metal/Alloys	3.21
Other Inorganic Materials	4.64
Cellulose	36.50
Rubber	23.30
Plastic	28.77
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.24
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	2.72
Packaging Material, Plastic	0.47
Packaging Material, Rubber	0.57
Packaging Material, Steel	133.17
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.38E-01
Am-243	1.02E-03
Cm-244	1.87E-01
Cs-137	1.94E-01
Np-237	2.60E-06
Pu-238	7.91E+00
Pu-239	9.98E-02
Pu-240	3.74E-02
Pu-241	3.99E-01
Pu-242	4.14E-05
Pu-244	2.17E-13
Sr-90	1.71E-01
Th-229	8.23E-07
Th-230	1.69E-09
Th-232	6.21E-08
U-233	5.07E-02
U-234	1.83E-03
U-235	1.48E-05
U-236	2.53E-04
U-238	7.04E-04

**Haz. Waste No(s).**

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

**TRUCON Code(s)**

125/225

**Waste Stream Description**

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

Waste Stream ID: **OR-GENR-CH-HET**

**Appendix A**  
**Waste Profile Report**

Site	Oak Ridge National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	R&D/R&D Laboratory Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2015	
Stream Name	ORNL General Research & Development CH-TRU Debris Waste				Activity Concentrations Decayed to CY	2015	

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	26.6	0.0	26.6
55-gal POC - 6" w/ Liner	0.2	0.0	0.2
<b>Current Form Total</b>	<b>26.8</b>	<b>0.0</b>	<b>26.8</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	26.6	0.0	26.6
55-gal POC - 6" w/ Liner	0.2	0.0	0.2
<b>Final Form Total</b>	<b>26.8</b>	<b>0.0</b>	<b>26.8</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	19.20
Aluminum-based Metal/Alloys	4.77
Other Metal/Alloys	4.77
Other Inorganic Materials	19.20
Cellulose	35.38
Rubber	23.28
Plastic	9.66
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.12
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	1.67
Packaging Material, Plastic	0.29
Packaging Material, Rubber	0.57
Packaging Material, Steel	132.24
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.44E-01
Am-243	1.69E-02
Cm-244	3.78E-01
Cs-137	6.80E-05
Np-237	6.27E-04
Pu-238	1.06E-01
Pu-239	7.48E-02
Pu-240	9.18E-02
Pu-241	1.16E+00
Pu-242	1.08E-02
Pu-244	1.55E-14
Sr-90	6.80E-05
Th-229	3.34E-07
Th-230	2.47E-12
Th-232	2.59E-07
U-233	1.37E-10
U-234	2.71E-06
U-235	4.62E-08
U-236	2.85E-10
U-238	3.66E-05

**Haz. Waste No(s).**

D004, D005, D006,  
D007, D008, D009,  
D010, D011, D019,  
D022, D028, F002,  
F005

**TRUCON Code(s)**

125/225

**Waste Stream Description**

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

Waste Stream ID: **OR-GENR-RH-HET**

**Appendix A**  
**Waste Profile Report**

Site	Oak Ridge National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	RH
Source Cat.	R&D/R&D Laboratory Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2015	
Stream Name	ORNL General Research & Development RH-TRU Debris Waste				Activity Concentrations Decayed to CY	2015	

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	2.1	0.0	2.1
<b>Current Form Total</b>	<b>2.1</b>	<b>0.0</b>	<b>2.1</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	2.5	0.0	2.5
<b>Final Form Total</b>	<b>2.5</b>	<b>0.0</b>	<b>2.5</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	21.04
Aluminum-based Metal/Alloys	5.23
Other Metal/Alloys	5.23
Other Inorganic Materials	21.04
Cellulose	38.76
Rubber	25.50
Plastic	10.58
Cement	0.00
Solidified Inorganic Material	0.13
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	45.67
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	6.05E-03
Am-243	5.15E-02
Cm-244	3.93E-02
Np-237	2.75E-03
Pu-239	4.17E-01
Pu-240	5.48E-04
Pu-241	3.04E-05
Pu-242	7.35E-03
Pu-244	4.59E-12
Th-229	1.06E-03
Th-230	3.44E-13
Th-232	2.74E-19
U-233	4.01E-01
U-234	2.41E-09
U-235	1.23E-08
U-236	4.04E-10
U-238	2.75E-05

**Haz. Waste No(s).**

D004, D005, D006,  
D007, D008, D009,  
D010, D011, D019,  
D022, D028, F002,  
F005

**TRUCON Code(s)**

325

**Waste Stream Description**

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

Waste Stream ID: **OR-ISTP-CH-HET**

**Appendix A**  
**Waste Profile Report**

Site	Oak Ridge National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Materials Production/Recovery Effluents	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2015		
Stream Name	ORNL Isotopes Facilities CH-TRU Debris Waste			Activity Concentrations Decayed to CY	2015		

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	127.9	0.0	127.9
55-gal POC - 12" w/ Liner	0.6	0.0	0.6
55-gal POC - 6" w/ Liner	0.2	0.0	0.2
79-gal Drum Dir Ld	0.3	0.0	0.3
85-gal Drum Dir Ld w/o Liner	1.0	0.0	1.0
Box - Misc	2.6	0.0	2.6
<b>Current Form Total</b>	<b>132.6</b>	<b>0.0</b>	<b>132.6</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	131.9	0.0	131.9
55-gal POC - 12" w/ Liner	0.2	0.0	0.2
55-gal POC - 6" w/ Liner	0.2	0.0	0.2
<b>Final Form Total</b>	<b>132.3</b>	<b>0.0</b>	<b>132.3</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	57.92
Aluminum-based Metal/Alloys	3.04
Other Metal/Alloys	16.63
Other Inorganic Materials	3.58
Cellulose	28.96
Rubber	15.91
Plastic	52.38
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.36
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.55
Packaging Material, Plastic	0.12
Packaging Material, Rubber	0.57
Packaging Material, Steel	131.69
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.05E+01
Am-243	5.71E-03
Cm-244	9.64E+00
Cs-137	6.29E-04
Np-237	8.57E-04
Pu-238	5.09E+00
Pu-239	5.61E-01
Pu-240	2.38E+00
Pu-241	5.53E+01
Pu-242	1.88E-02
Pu-244	3.31E-07
Sr-90	1.46E-04
Th-229	1.28E-06
Th-230	8.05E-06
Th-232	9.48E-07
U-233	4.08E-03
U-234	7.99E-04
U-235	4.54E-06
U-236	3.61E-06
U-238	5.60E-06

**Haz. Waste No(s).**

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

**TRUCON Code(s)**

125/225

**Waste Stream Description**

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

Waste Stream ID: **OR-ISTP-RH-HET**

**Appendix A**  
**Waste Profile Report**

Site	Oak Ridge National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	RH
Source Cat.	Materials Production/Recovery Effluents	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2015		
Stream Name	ORNL Isotopes Facilities RH-TRU Debris Waste			Activity Concentrations Decayed to CY	2015		

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	5.2	0.0	5.2
<b>Current Form Total</b>	<b>5.2</b>	<b>0.0</b>	<b>5.2</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	5.6	0.0	5.6
<b>Final Form Total</b>	<b>5.6</b>	<b>0.0</b>	<b>5.6</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	65.57
Aluminum-based Metal/Alloys	3.44
Other Metal/Alloys	18.82
Other Inorganic Materials	4.05
Cellulose	32.79
Rubber	18.01
Plastic	59.30
Cement	0.00
Solidified Inorganic Material	0.40
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	45.67
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.04E+01
Am-243	2.49E-03
Cm-244	1.93E+01
Cs-137	8.18E-06
Np-237	1.17E-03
Pu-238	1.05E+01
Pu-239	4.83E-01
Pu-240	1.03E+00
Pu-241	4.30E-01
Sr-90	7.82E-06
Th-229	5.29E-07
Th-230	5.88E-07
Th-232	1.78E-04
U-233	2.01E-04
U-234	2.62E-03
U-235	3.49E-05
U-236	8.76E-07
U-238	3.04E-06

**Haz. Waste No(s).**

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

325
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**Waste Stream Description**

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



Waste Stream ID: **OR-MRF-CH-HET**

**Appendix A**  
**Waste Profile Report**

Site	Oak Ridge National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Materials Production/Recovery Effluents	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2015		
Stream Name	ORNL Metal Recovery Facility CH-TRU Debris Waste			Activity Concentrations Decayed to CY	2015		

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

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

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

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	65.72
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	2.63
Cellulose	73.60
Rubber	26.29
Plastic	36.80
Cement	0.00
Solidified Inorganic Material	5.25
Solidified Organic Material	52.57
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.03E-01
Am-243	1.47E-04
Cm-244	1.47E-02
Cs-137	1.89E-04
Np-237	5.99E-06
Pu-238	1.43E-02
Pu-239	1.33E-01
Pu-240	3.94E-02
Pu-241	8.92E-02
Pu-242	1.39E-05
Sr-90	1.89E-04
Th-229	8.79E-10
Th-230	3.08E-12
Th-232	2.87E-22
U-233	9.99E-05
U-234	3.36E-06
U-235	1.12E-07
U-236	1.16E-10
U-238	2.26E-06

**Haz. Waste No(s).**D007, D008, D009,  
D011**TRUCON Code(s)**

125/225

**Waste Stream Description**

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

Waste Stream ID: **OR-NBL-CH-HET**

**Appendix A**  
**Waste Profile Report**

Site	Oak Ridge National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	R&D/R&D Laboratory Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2015		
Stream Name	New Brunswick Laboratory CH-TRU Debris Waste			Activity Concentrations Decayed to CY	2015		

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	12.1	0.0	12.1
79-gal Drum Dir Ld	0.3	0.0	0.3
<b>Current Form Total</b>	<b>12.4</b>	<b>0.0</b>	<b>12.4</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	12.3	0.0	12.3
<b>Final Form Total</b>	<b>12.3</b>	<b>0.0</b>	<b>12.3</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	28.56
Aluminum-based Metal/Alloys	1.87
Other Metal/Alloys	36.95
Other Inorganic Materials	63.09
Cellulose	11.20
Rubber	19.97
Plastic	11.20
Cement	0.00
Solidified Inorganic Material	13.44
Solidified Organic Material	0.37
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	6.72E-02
Am-243	3.99E-05
Cm-244	4.15E-03
Cs-137	1.57E-05
Np-237	2.90E-06
Pu-238	1.21E-02
Pu-239	7.66E-02
Pu-240	3.01E-02
Pu-241	2.27E-01
Pu-242	8.01E-06
Sr-90	1.57E-05
Th-229	7.11E-09
Th-230	1.42E-11
Th-232	1.20E-06
U-233	4.20E-04
U-234	1.54E-05
U-235	1.25E-06
U-236	8.90E-11
U-238	7.57E-06

**Haz. Waste No(s).**D004, D005, D007,  
D008, D009, D011,  
D022, F002, F005**TRUCON Code(s)**

125/225

**Waste Stream Description**

Waste consists of CH-TRU debris from NBL

Waste Stream ID: **OR-NFS-CH-HET**

**Appendix A**  
**Waste Profile Report**

Site	Oak Ridge National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Remediation/D&D Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2015		
Stream Name	Nuclear Fuel Services CH-TRU Waste			Activity Concentrations Decayed to CY	2015		

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	98.4	0.0	98.4
85-gal Drum Dir Ld w/o Liner	6.4	0.0	6.4
<b>Current Form Total</b>	<b>104.8</b>	<b>0.0</b>	<b>104.8</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	104.8	0.0	104.8
<b>Final Form Total</b>	<b>104.8</b>	<b>0.0</b>	<b>104.8</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	58.57
Aluminum-based Metal/Alloys	5.17
Other Metal/Alloys	4.74
Other Inorganic Materials	313.94
Cellulose	12.06
Rubber	2.58
Plastic	33.16
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.43
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	4.20E-01
Am-243	2.61E-06
Cm-244	4.58E-03
Cs-137	3.80E-06
Np-237	6.11E-06
Pu-238	1.53E-01
Pu-239	1.22E+00
Pu-240	4.03E-01
Pu-241	3.25E+00
Pu-242	8.28E-05
Sr-90	3.80E-06
Th-229	2.21E-06
Th-230	9.17E-12
Th-232	2.75E-06
U-233	1.89E-03
U-234	9.99E-06
U-235	7.02E-07
U-236	1.19E-09
U-238	2.82E-05

**Haz. Waste No(s).**D006, D008, D009,  
D011, F002**TRUCON Code(s)**

125/225

**Waste Stream Description**

Waste consists of CH-TRU debris from NFS

Waste Stream ID: **OR-NFS-CH-HOM**

**Appendix A**  
**Waste Profile Report**

Site	Oak Ridge National Laboratory	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Remediation/D&D Waste	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2015	
Stream Name	Nuclear Fuel Services CH-TRU Homogeneous Waste				Activity Concentrations Decayed to CY	2015	

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	8.3	0.0	8.3
55-gal POC - 12" w/ Liner	0.4	0.0	0.4
<b>Current Form Total</b>	<b>8.7</b>	<b>0.0</b>	<b>8.7</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	8.3	0.0	8.3
55-gal POC - 12" w/ Liner	0.4	0.0	0.4
<b>Final Form Total</b>	<b>8.7</b>	<b>0.0</b>	<b>8.7</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	5.41
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	10.81
Cement	8.86
Solidified Inorganic Material	54.87
Solidified Organic Material	8.69
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	6.43
Packaging Material, Plastic	1.77
Packaging Material, Rubber	0.57
Packaging Material, Steel	149.73
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	7.20E+00
Am-243	6.02E-04
Cs-137	2.08E-05
Np-237	5.65E-05
Pu-238	1.47E+00
Pu-239	1.16E+01
Pu-240	3.88E+00
Pu-241	3.14E+01
Pu-242	7.25E-04
Sr-90	2.08E-05
Th-229	1.13E-05
Th-230	5.01E-13
Th-232	1.08E-05
U-233	6.26E-04
U-234	7.53E-07
U-235	5.85E-08
U-236	1.15E-08
U-238	2.47E-05

**Haz. Waste No(s).**

D006, D009

**TRUCON Code(s)**

111/211

**Waste Stream Description**

Waste consists of homogeneous waste from NFS

Waste Stream ID: **OR-NFS-CH-SOIL**

**Appendix A**  
**Waste Profile Report**

Site	Oak Ridge National Laboratory	Summary Category	S4000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Remediation/D&D Waste	Waste Matrix Code Group	Contaminated Soil/Debris Waste		Inventory Date	12/31/2015	
Stream Name	Nuclear Fuel Services CH-TRU Soil Waste			Activity Concentrations Decayed to CY		2015	

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	183.0	0.0	183.0
<b>Current Form Total</b>	<b>183.0</b>	<b>0.0</b>	<b>183.0</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	183.0	0.0	183.0
<b>Final Form Total</b>	<b>183.0</b>	<b>0.0</b>	<b>183.0</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	0.00
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	2.02
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	13.48
Soil	658.62
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	8.07E-02
Am-243	6.84E-08
Cs-137	5.55E-06
Np-237	1.80E-07
Pu-238	1.34E-02
Pu-239	1.62E-01
Pu-240	5.42E-02
Pu-241	2.08E-01
Pu-242	2.37E-06
Sr-90	1.85E-07
Th-229	4.71E-09
Th-230	7.19E-08
Th-232	8.22E-07
U-233	2.14E-04
U-234	9.98E-06
U-235	4.75E-07
U-236	1.60E-10
U-238	9.91E-06

**Haz. Waste No(s).**

F002

**TRUCON Code(s)**

111/211

**Waste Stream Description**

Waste consists of soils from NFS

Waste Stream ID: **OR-OXIDE-CH-HET**

**Appendix A**  
**Waste Profile Report**

Site	Oak Ridge National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Materials Production/Recovery Effluents	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2015	
Stream Name	ORNL Oxide CH-TRU Debris Waste				Activity Concentrations Decayed to CY	2015	

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	5.4	0.0	5.4
<b>Current Form Total</b>	<b>5.4</b>	<b>0.0</b>	<b>5.4</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal POC - 6" w/ Liner	6.4	0.0	6.4
<b>Final Form Total</b>	<b>6.4</b>	<b>0.0</b>	<b>6.4</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	61.46
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	122.91
Cellulose	20.49
Rubber	0.00
Plastic	0.00
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	214.90
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	320.67
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.30E+02
Np-237	1.22E-03
Pu-238	2.94E+01
Pu-239	2.29E+01
Pu-240	3.64E+01
Pu-241	1.68E+02
Pu-242	1.43E-01
Th-229	8.54E-04
Th-230	1.60E-06
Th-232	7.89E-14
U-233	3.24E-01
U-234	7.14E-03
U-235	9.72E-06
U-236	6.95E-05
U-238	1.73E-04

No Hazardous Waste Numbers Provided

TRUCON Code(s)  
125/225

**Waste Stream Description**

Waste consists of CH-TRU debris from ORNL oxide handling, packaging, and production activities

Waste Stream ID: **OR-PGDP-CH-HET**

**Appendix A**  
**Waste Profile Report**

Site	Oak Ridge National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Materials Production/Recovery Effluents	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2015		
Stream Name	Paducah Gaseous Diffusion Plant CH-TRU Debris Waste			Activity Concentrations Decayed to CY	2015		

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	6.9	0.0	6.9
<b>Current Form Total</b>	<b>6.9</b>	<b>0.0</b>	<b>6.9</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	6.9	0.0	6.9
<b>Final Form Total</b>	<b>6.9</b>	<b>0.0</b>	<b>6.9</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	279.32
Aluminum-based Metal/Alloys	7.89
Other Metal/Alloys	66.81
Other Inorganic Materials	37.58
Cellulose	11.14
Rubber	8.35
Plastic	38.97
Cement	0.00
Solidified Inorganic Material	2.78
Solidified Organic Material	11.14
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	4.15E-02
Am-243	3.67E-06
Cs-137	2.61E-05
Np-237	2.45E-02
Pu-238	2.97E-02
Pu-239	2.13E-01
Pu-240	4.96E-02
Pu-241	5.66E-01
Pu-242	5.17E-06
Sr-90	2.61E-05
Th-229	9.83E-07
Th-230	6.07E-10
Th-232	4.69E-07
U-233	9.46E-04
U-234	6.60E-04
U-235	1.13E-04
U-236	1.47E-10
U-238	2.74E-03

**Haz. Waste No(s).**D005, D007, D008,  
D011**TRUCON Code(s)**

125/225

**Waste Stream Description**

Waste consists of CH-TRU debris from PGDP

Waste Stream ID: **OR-RADP-CH-HET**

**Appendix A**  
**Waste Profile Report**

Site	Oak Ridge National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	R&D/R&D Laboratory Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2015	
Stream Name	ORNL Radiochemical Processing Research & Development CH-TRU Debris Waste				Activity Concentrations Decayed to CY	2015	

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	34.1	0.0	34.1
<b>Current Form Total</b>	<b>34.1</b>	<b>0.0</b>	<b>34.1</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	34.1	0.0	34.1
<b>Final Form Total</b>	<b>34.1</b>	<b>0.0</b>	<b>34.1</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	54.37
Aluminum-based Metal/Alloys	2.03
Other Metal/Alloys	7.54
Other Inorganic Materials	6.23
Cellulose	31.31
Rubber	7.68
Plastic	34.65
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	1.16
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	4.27E-01
Am-243	3.47E-03
Cm-244	8.22E-01
Cs-137	1.29E-03
Np-237	6.09E-04
Pu-238	2.09E-01
Pu-239	4.78E-01
Pu-240	1.79E-01
Pu-241	9.84E-01
Pu-242	4.61E-05
Pu-244	1.70E-05
Sr-90	1.59E-03
Th-229	2.51E-06
Th-230	5.23E-09
Th-232	3.34E-07
U-233	1.74E-02
U-234	7.76E-05
U-235	1.57E-06
U-236	2.56E-09
U-238	6.48E-07

**Haz. Waste No(s).**

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

**TRUCON Code(s)**

125/225

**Waste Stream Description**

Waste consists of CH-TRU debris from radiochemical processing R&D at ORNL



Waste Stream ID: **OR-RADP-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	12/31/2015	
Stream Name	ORNL Radiochemical Processing Research & Development RH-TRU Debris Waste				Activity Concentrations Decayed to CY	2015	

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

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

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

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	60.97
Aluminum-based Metal/Alloys	2.28
Other Metal/Alloys	8.45
Other Inorganic Materials	6.99
Cellulose	35.12
Rubber	8.62
Plastic	38.86
Cement	0.00
Solidified Inorganic Material	1.30
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	45.67
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	7.64E-05
Am-243	5.41E-01
Cm-244	2.54E-05
Np-237	1.13E-04
Pu-239	4.64E-01
Pu-240	5.43E-03
Th-229	1.94E-11
Th-232	3.58E-18
U-233	1.47E-08
U-235	1.39E-05
U-236	4.83E-09

**Haz. Waste No(s).**

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

**TRUCON Code(s)**

325

**Waste Stream Description**

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

Waste Stream ID: **OR-REDC-CH-HET**

**Appendix A**  
**Waste Profile Report**

Site	Oak Ridge National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	R&D/R&D Laboratory Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2015	
Stream Name	Radiochemical Engineering Development Center CH-TRU Waste				Activity Concentrations Decayed to CY	2015	

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
110-gal Drum Dir Ld	0.4	0.0	0.4
55-gal Drum Dir Ld w/o Liner	547.5	286.2	833.7
55-gal POC - 12" w/ Liner	0.8	0.0	0.8
55-gal POC - 6" w/ Liner	0.6	0.0	0.6
Box - Misc	10.2	257.6	267.8
<b>Current Form Total</b>	<b>559.5</b>	<b>543.8</b>	<b>1103.3</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	558.3	545.4	1103.6
55-gal POC - 12" w/ Liner	0.8	0.0	0.8
55-gal POC - 6" w/ Liner	0.6	0.0	0.6
<b>Final Form Total</b>	<b>559.7</b>	<b>545.4</b>	<b>1105.1</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	45.09
Aluminum-based Metal/Alloys	2.19
Other Metal/Alloys	1.37
Other Inorganic Materials	17.49
Cellulose	6.56
Rubber	1.78
Plastic	62.17
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.22
Packaging Material, Plastic	0.05
Packaging Material, Rubber	0.57
Packaging Material, Steel	131.18
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.19E-01
Am-243	5.75E-03
Cm-244	6.03E+00
Cs-137	2.87E-02
Np-237	7.95E-04
Pu-238	2.24E-01
Pu-239	3.75E-02
Pu-240	8.79E-02
Pu-241	1.04E+00
Pu-242	2.54E-04
Pu-244	1.33E-09
Sr-90	2.96E-01
Th-229	2.09E-06
Th-230	2.89E-10
Th-232	1.69E-08
U-233	1.57E-03
U-234	3.14E-04
U-235	1.74E-07
U-236	3.15E-07
U-238	4.01E-06

**Haz. Waste No(s).**

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

**TRUCON Code(s)**

125/225

**Waste Stream Description**

Waste consists of CH-TRU debris from REDC at ORNL

Waste Stream ID: **OR-REDC-CH-HOM**

**Appendix A**  
**Waste Profile Report**

Site	Oak Ridge National Laboratory	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Materials Production/Recovery Effluents	Waste Matrix Code Group	Solidified Organics		Inventory Date	12/31/2015	
Stream Name	Radiochemical Engineering Development Center CH-TRU Homogeneous Waste				Activity Concentrations Decayed to CY	2015	

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.0	120.6	120.6
<b>Current Form Total</b>	<b>0.0</b>	<b>120.6</b>	<b>120.6</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.0	120.6	120.6
<b>Final Form Total</b>	<b>0.0</b>	<b>120.6</b>	<b>120.6</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	14.42
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	72.12
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	153.85
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	3.07E-03
Np-237	1.54E-03
Pu-238	3.10E+01
Pu-239	1.62E-02
Pu-240	8.51E-03
Pu-241	5.74E-01
Pu-242	3.05E-06
Th-229	7.40E-16
Th-230	4.02E-12
Th-232	6.21E-23
U-233	2.35E-10
U-234	8.74E-06
U-235	1.60E-12
U-236	2.52E-11
U-238	4.74E-17

No Hazardous Waste Numbers Provided

TRUCON Code(s)  
112/212

**Waste Stream Description**

Waste consists of solidified CH-TRU liquids from REDC at ORNL

Waste Stream ID: **OR-REDC-RH-HET**

**Appendix A**  
**Waste Profile Report**

<b>Site</b>	Oak Ridge National Laboratory	<b>Summary Category</b>	S5000	<b>Defense Determination</b>	Defense-Related	<b>Handling</b>	RH
<b>Source Cat.</b>	R&D/R&D Laboratory Waste	<b>Waste Matrix Code Group</b>	Heterogeneous Debris Waste		<b>Inventory Date</b>	12/31/2015	
<b>Stream Name</b>	Radiochemical Engineering Development Center RH-TRU Waste				<b>Activity Concentrations Decayed to CY</b>	2015	

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	13.9	0.0	13.9
Cask - Misc	43.8	11.6	55.4
RH Can NS30 w/ Liner	0.0	58.7	58.7
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	11.6	117.5	129.1
<b>Current Form Total</b>	<b>69.3</b>	<b>187.8</b>	<b>257.2</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can NS15 w/ Liner	7.0	0.0	7.0
RH Can NS30 w/ Liner	10.8	24.7	35.6
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	48.0	91.7	139.8
<b>Final Form Total</b>	<b>65.9</b>	<b>116.5</b>	<b>182.3</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	190.89
Aluminum-based Metal/Alloys	0.03
Other Metal/Alloys	19.08
Other Inorganic Materials	54.17
Cellulose	21.57
Rubber	5.36
Plastic	27.83
Cement	0.00
Solidified Inorganic Material	3.91
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	274.77
Packaging Material, Rubber	0.43
Packaging Material, Steel	1138.81
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	4.05E-01
Am-243	3.36E-02
Cm-244	3.37E+01
Cs-137	5.84E-01
Np-237	4.17E-04
Pu-238	2.29E-01
Pu-239	3.36E-02
Pu-240	1.85E-01
Pu-241	1.58E+00
Pu-242	1.42E-03
Pu-244	2.30E-09
Sr-90	4.85E+00
Th-229	1.26E-10
Th-230	6.46E-08
Th-232	1.04E-10
U-233	1.43E-05
U-234	1.39E-05
U-235	6.15E-08
U-236	1.82E-08
U-238	1.98E-06

**Haz. Waste No(s).**

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

**TRUCON Code(s)**

325

**Waste Stream Description**

Waste consists of RH-TRU debris from REDC at ORNL

Waste Stream ID: **OR-REDC-RH-HOM**

**Appendix A**  
**Waste Profile Report**

Site	Oak Ridge National Laboratory	Summary Category	S3000	Defense Determination	Defense-Related	Handling	RH
Source Cat.	Materials Production/Recovery Effluents	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2015	
Stream Name	Radiochemical Engineering Development Center RH-TRU Homogeneous Waste				Activity Concentrations Decayed to CY	2015	

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
RH Can NS30 w/ Liner	0.0	25.8	25.8
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	0.0	413.0	413.0
<b>Current Form Total</b>	<b>0.0</b>	<b>438.8</b>	<b>438.8</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can NS30 w/ Liner	0.0	9.8	9.8
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	0.0	289.5	289.5
<b>Final Form Total</b>	<b>0.0</b>	<b>299.4</b>	<b>299.4</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	59.29
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	0.00
Cement	395.23
Solidified Inorganic Material	533.57
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	68.97
Packaging Material, Rubber	0.55
Packaging Material, Steel	953.60
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	5.52E-02
Am-243	5.27E-04
Cm-244	3.26E+00
Cs-137	7.64E+01
Np-237	1.24E-02
Pu-238	4.94E+01
Pu-239	2.63E-02
Pu-240	1.88E-02
Pu-241	1.08E+00
Pu-242	9.44E-05
Pu-244	2.23E-09
Sr-90	3.04E+01
Th-229	2.97E-04
Th-230	5.12E-04
Th-232	2.30E-14
U-233	3.38E+01
U-234	5.57E+02
U-235	3.41E-04
U-236	4.67E-03
U-238	4.73E-08

No Hazardous Waste Numbers Provided

TRUCON Code(s)  
311

**Waste Stream Description**

Waste consists of solidified RH-TRU liquids from REDC at ORNL

Waste Stream ID: **OR-RF-CH-HET**

**Appendix A**  
**Waste Profile Report**

Site	Oak Ridge National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	R&D/R&D Laboratory Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2015		
Stream Name	ORNL Reactor Fuels Research & Development CH-TRU Debris Waste			Activity Concentrations Decayed to CY	2015		

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
110-gal Drum Dir Ld	0.4	0.0	0.4
55-gal Drum Dir Ld w/o Liner	104.2	0.0	104.2
55-gal POC - 6" w/ Liner	0.2	0.0	0.2
79-gal Drum Dir Ld	0.9	0.0	0.9
<b>Current Form Total</b>	<b>105.7</b>	<b>0.0</b>	<b>105.7</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	105.0	0.0	105.0
55-gal POC - 6" w/ Liner	0.2	0.0	0.2
<b>Final Form Total</b>	<b>105.2</b>	<b>0.0</b>	<b>105.2</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	32.77
Aluminum-based Metal/Alloys	5.96
Other Metal/Alloys	14.90
Other Inorganic Materials	2.98
Cellulose	25.32
Rubber	20.85
Plastic	38.73
Cement	0.00
Solidified Inorganic Material	7.45
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.42
Packaging Material, Plastic	0.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	131.14
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	4.00E-01
Am-243	1.66E-04
Cm-244	3.31E-01
Cs-137	1.18E-01
Np-237	7.40E-06
Pu-238	4.46E-01
Pu-239	6.48E-01
Pu-240	2.85E-01
Pu-241	2.93E+00
Pu-242	9.93E-05
Pu-244	6.47E-18
Sr-90	2.53E-02
Th-229	1.23E-04
Th-230	2.06E-09
Th-232	1.99E-06
U-233	2.32E-01
U-234	2.24E-03
U-235	3.56E-06
U-236	2.01E-08
U-238	5.14E-05

**Haz. Waste No(s).**D006, D007, D008,  
D009, D011, D019,  
F001, F002, F005**TRUCON Code(s)**

125/225

**Waste Stream Description**

Waste consists of CH-TRU debris from reactor fuels R&amp;D at ORNL

Waste Stream ID: **OR-RF-CH-HOM**

**Appendix A**  
**Waste Profile Report**

Site	Oak Ridge National Laboratory	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	R&D/R&D Laboratory Waste	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2015	
Stream Name	ORNL Reactor Fuels Research & Development CH-TRU Homogeneous Waste				Activity Concentrations Decayed to CY	2015	

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

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

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

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	7.21
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	14.42
Cement	12.02
Solidified Inorganic Material	73.32
Solidified Organic Material	12.02
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	5.22E-02
Cs-137	1.37E-03
Np-237	5.20E-07
Pu-238	4.02E-04
Pu-239	1.00E-03
Sr-90	2.34E-02
Th-229	3.01E-14
Th-230	5.51E-12
U-233	3.41E-11
U-234	3.84E-08
U-235	2.97E-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&amp;D at ORNL

Waste Stream ID: **OR-RF-RH-HET**

**Appendix A**  
**Waste Profile Report**

Site	Oak Ridge National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	RH
Source Cat.	R&D/R&D Laboratory Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2015	
Stream Name	ORNL Reactor Fuels Research & Development RH-TRU Debris Waste				Activity Concentrations Decayed to CY	2015	

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	11.6	0.0	11.6
79-gal Drum Dir Ld	0.3	0.0	0.3
Cask - Misc	34.9	8.3	43.2
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	0.0	28.5	28.5
<b>Current Form Total</b>	<b>46.8</b>	<b>36.8</b>	<b>83.6</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	26.2	21.2	47.4
<b>Final Form Total</b>	<b>26.2</b>	<b>21.2</b>	<b>47.4</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	209.52
Aluminum-based Metal/Alloys	47.62
Other Metal/Alloys	42.86
Other Inorganic Materials	47.62
Cellulose	66.67
Rubber	14.29
Plastic	38.10
Cement	0.00
Solidified Inorganic Material	4.76
Solidified Organic Material	9.52
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	45.67
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.52E+00
Am-243	2.02E-04
Cm-244	5.03E-02
Cs-137	2.36E+01
Np-237	2.66E-05
Pu-238	2.39E-02
Pu-239	2.44E-01
Pu-240	1.14E-01
Pu-241	5.15E-02
Pu-242	4.13E-06
Pu-244	1.14E-15
Sr-90	7.54E-01
Th-229	8.77E-04
Th-230	9.61E-08
Th-232	3.94E-06
U-233	3.09E-01
U-234	3.49E-04
U-235	1.09E-05
U-236	8.88E-06
U-238	1.85E-05

**Haz. Waste No(s).**

D008, D009, D011

**TRUCON Code(s)**

325

**Waste Stream Description**

Waste consists of RH-TRU debris from reactor fuels R&amp;D at ORNL



Waste Stream ID: **OR-SWSA-CH-HET**

**Appendix A**  
**Waste Profile Report**

Site	Oak Ridge National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Remediation/D&D Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2015		
Stream Name	ORNL Solid Waste Storage Area 5 North 7802N Trench Area Debris Waste			Activity Concentrations Decayed to CY	2015		

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

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

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

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	6.41
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	158.96
Cellulose	0.84
Rubber	0.00
Plastic	0.84
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	1.69
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.54E-01
Am-243	1.52E-04
Cm-244	2.34E-01
Cs-137	1.03E-04
Np-237	6.32E-05
Pu-238	5.73E-03
Pu-239	1.59E-03
Pu-240	4.02E-04
Pu-241	2.34E-03
Pu-242	3.70E-08
Sr-90	1.03E-04
Th-229	1.01E-06
Th-230	1.02E-10
Th-232	2.92E-24
U-233	1.37E-02
U-234	1.11E-04
U-235	1.57E-13
U-236	1.18E-12
U-238	5.74E-19

**Haz. Waste No(s).**

D004, D005, D006,  
D007, D008, D009,  
D010, D011, D019,  
D028, F001, F002,  
F005

**TRUCON Code(s)**

125/225

**Waste Stream Description**

Waste consists of CH-TRU debris from SWSA 5 7802N Trench area

Waste Stream ID: **OR-SWSA-CH-SOIL**

**Appendix A**  
**Waste Profile Report**

Site	Oak Ridge National Laboratory	Summary Category	S4000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Remediation/D&D Waste	Waste Matrix Code Group	Contaminated Soil/Debris Waste		Inventory Date	12/31/2015	
Stream Name	ORNL Solid Waste Storage Area 5 North 7802N Trench Area Soil Waste				Activity Concentrations Decayed to CY	2015	

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	2.7	0.0	2.7
<b>Current Form Total</b>	<b>2.7</b>	<b>0.0</b>	<b>2.7</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	2.7	0.0	2.7
<b>Final Form Total</b>	<b>2.7</b>	<b>0.0</b>	<b>2.7</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	2.95
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	1.48
Other Inorganic Materials	6.64
Cellulose	2.95
Rubber	0.00
Plastic	16.24
Cement	0.00
Solidified Inorganic Material	119.59
Solidified Organic Material	2.95
Soil	585.42
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	6.29E-02
Am-243	6.05E-05
Cm-244	9.38E+00
Cs-137	5.92E-06
Np-237	2.78E-06
Pu-238	4.39E-02
Pu-239	2.61E-02
Pu-240	8.80E-03
Pu-241	8.09E-02
Pu-242	4.21E-06
Sr-90	5.91E-06
Th-229	4.54E-07
Th-230	4.09E-12
Th-232	3.73E-07
U-233	4.25E-13
U-234	4.45E-06
U-235	9.58E-08
U-236	2.59E-11
U-238	6.52E-17

**Haz. Waste No(s).**

D004, D005, D006,  
D007, D008, D009,  
D010, D011, D019,  
D028, F001, F002,  
F005

**TRUCON Code(s)**

111/211

**Waste Stream Description**

Waste consists of CH-TRU soils from SWSA 5 7802N Trench area

Waste Stream ID: **OR-TBD-CH-HET**

**Appendix A**  
**Waste Profile Report**

Site	Oak Ridge National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Other/Multiple Sources	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2015	
Stream Name	TBD CH-TRU Debris Waste				Activity Concentrations Decayed to CY	2015	

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	22.0	0.0	22.0
79-gal Drum Dir Ld	0.9	0.0	0.9
Box - Misc	2.6	0.0	2.6
<b>Current Form Total</b>	<b>25.5</b>	<b>0.0</b>	<b>25.5</b>

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

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	33.95
Aluminum-based Metal/Alloys	6.17
Other Metal/Alloys	15.43
Other Inorganic Materials	3.09
Cellulose	26.24
Rubber	21.61
Plastic	40.13
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	7.72
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.23E+00
Am-243	6.22E-02
Cm-244	1.89E+00
Cs-137	9.96E-02
Np-237	1.35E-03
Pu-238	8.66E+00
Pu-239	1.57E+00
Pu-240	1.69E+00
Pu-241	1.11E+00
Pu-242	3.57E-04
Pu-244	5.62E-06
Sr-90	8.80E-02
Th-229	6.35E-04
Th-230	4.30E-07
Th-232	1.58E-14
U-233	2.41E-01
U-234	1.96E-03
U-235	6.20E-05
U-236	1.14E-05
U-238	7.86E-05

**Haz. Waste No(s).**

D004, D005, D006,  
D007, D008, D009,  
D010, D011, D022,  
F001, F002, F004,  
F005

**TRUCON Code(s)**

125/225

**Waste Stream Description**

CH-TRU Debris Waste Needing Further Evaluation

Waste Stream ID: **OR-TBD-RH-HET**

**Appendix A**  
**Waste Profile Report**

Site	Oak Ridge National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	RH
Source Cat.	Other/Multiple Sources	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2015	
Stream Name	TBD RH-TRU Debris Waste			Activity Concentrations Decayed to CY	2015		

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	2.3	0.0	2.3
Cask - Misc	17.9	0.0	17.9
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	0.0	30.3	30.3
<b>Current Form Total</b>	<b>20.2</b>	<b>30.3</b>	<b>50.5</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	20.6	21.2	41.8
<b>Final Form Total</b>	<b>20.6</b>	<b>21.2</b>	<b>41.8</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	197.75
Aluminum-based Metal/Alloys	44.94
Other Metal/Alloys	40.45
Other Inorganic Materials	44.94
Cellulose	62.92
Rubber	13.48
Plastic	35.95
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	8.99
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	45.67
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.09E+00
Am-243	1.48E-10
Cm-244	8.69E-02
Cs-137	8.10E+01
Np-237	2.54E-05
Pu-238	2.29E+00
Pu-239	3.32E-01
Pu-240	1.80E-01
Pu-241	1.97E-01
Pu-242	7.60E-07
Pu-244	1.61E-07
Sr-90	4.95E+01
Th-229	1.05E-04
Th-230	3.03E-07
Th-232	1.11E-06
U-233	3.98E-02
U-234	1.20E-03
U-235	3.12E-05
U-236	1.60E-07
U-238	3.14E-04

**Haz. Waste No(s).**D005, D006, D007,  
D008, D009, D011**TRUCON Code(s)**

325

**Waste Stream Description**

RH-TRU Debris Waste Needing Further Evaluation

Waste Stream ID: **OR-W213-RH-SOILS**

**Appendix A**  
**Waste Profile Report**

Site	Oak Ridge National Laboratory	Summary Category	S4000	Defense Determination	Defense-Related	Handling	RH
Source Cat.	Remediation/D&D Waste	Waste Matrix Code Group	Contaminated Soil/Debris Waste		Inventory Date	12/31/2015	
Stream Name	ER RH TRU Soils			Activity Concentrations Decayed to CY		2015	

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
Box - Misc	34.6	0.0	34.6
<b>Current Form Total</b>	<b>34.6</b>	<b>0.0</b>	<b>34.6</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	10.6	0.0	10.6
<b>Final Form Total</b>	<b>10.6</b>	<b>0.0</b>	<b>10.6</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	0.00
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	12.64
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	25.27
Soil	1225.68
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	45.67
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.06E-01
Am-243	3.26E-05
Cm-244	2.36E-04
Cs-137	9.13E-01
Np-237	1.09E-04
Pu-238	1.85E-02
Pu-239	5.18E-02
Pu-240	4.93E-04
Pu-241	1.60E-01
Pu-242	2.86E-05
Sr-90	7.46E-03
Th-229	7.64E-02
Th-230	1.29E-04
Th-232	1.22E-03
U-233	9.91E-02
U-234	5.65E-03
U-235	8.41E-05
U-236	8.91E-05
U-238	1.07E-03

No Hazardous Waste Numbers Provided

TRUCON Code(s)

311

**Waste Stream Description**

This waste is made up of soils.

Waste Stream ID: **OR-WSTR-CH-HET**

**Appendix A**  
**Waste Profile Report**

Site	Oak Ridge National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2015		
Stream Name	ORNL-Liquid Waste Treatment CH-TRU Debris Waste			Activity Concentrations Decayed to CY	2015		

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	7.7	0.0	7.7
<b>Current Form Total</b>	<b>7.7</b>	<b>0.0</b>	<b>7.7</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	7.7	0.0	7.7
<b>Final Form Total</b>	<b>7.7</b>	<b>0.0</b>	<b>7.7</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	27.52
Aluminum-based Metal/Alloys	5.00
Other Metal/Alloys	12.51
Other Inorganic Materials	2.50
Cellulose	21.27
Rubber	17.51
Plastic	32.53
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	6.26
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.41E-02
Am-243	4.01E-05
Cm-244	7.73E-04
Cs-137	7.80E-02
Np-237	5.07E-06
Pu-238	1.48E-02
Pu-239	1.11E+00
Pu-240	1.34E-03
Pu-241	8.41E-03
Pu-242	2.92E-06
Sr-90	2.62E-03
Th-229	5.89E-08
Th-230	7.95E-06
Th-232	1.39E-05
U-233	6.70E-04
U-234	4.32E-04
U-235	6.44E-06
U-236	5.38E-06
U-238	1.19E-05

**Haz. Waste No(s).**

D008

**TRUCON Code(s)**

125/225

**Waste Stream Description**

Waste consists of CH-TRU debris from ORNL liquids waste system.

Waste Stream ID: **OR-Y12-CH-HET**

**Appendix A**  
**Waste Profile Report**

Site	Oak Ridge National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Materials Production/Recovery Effluents	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2015		
Stream Name	Oak Ridge Y-12 CH-TRU Debris Waste			Activity Concentrations Decayed to CY	2015		

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

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

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

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	22.14
Aluminum-based Metal/Alloys	4.03
Other Metal/Alloys	10.06
Other Inorganic Materials	2.01
Cellulose	17.11
Rubber	14.09
Plastic	26.17
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	5.03
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Np-237	1.02E-02
Pu-238	4.21E-04
Pu-239	4.97E-02
Pu-240	2.08E-05
Th-229	1.94E-12
Th-230	8.09E-09
Th-232	1.52E-23
U-233	4.42E-08
U-234	8.80E-04
U-235	1.20E-04
U-236	6.17E-13
U-238	9.84E-04

**Haz. Waste No(s).**

D008

**TRUCON Code(s)**

125/225

**Waste Stream Description**

Waste consists of CH-TRU debris from Y-12

Waste Stream ID: **RL100D-08**

**Appendix A**  
**Waste Profile Report**

Site	Hanford (Richland) Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	RH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2015		
Stream Name	RH-TRU Non Mixed Debris Waste from 100-D			Activity Concentrations Decayed to CY	2015		

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
85-gal Drum w/1-55-gal drum with or without liner	0.3	0.0	0.3
<b>Current Form Total</b>	<b>0.3</b>	<b>0.0</b>	<b>0.3</b>

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

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	1714.74
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	0.00
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	45.67
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	5.08E-02
Am-243	2.15E-05
Cs-137	6.80E-01
Np-237	3.65E-06
Pu-238	9.45E-03
Pu-239	1.34E-02
Pu-240	1.73E-02
Pu-241	1.16E+00
Pu-242	6.75E-06
Sr-90	4.87E-01
Th-229	6.24E-15
Th-230	1.12E-12
Th-232	1.14E-19
U-233	4.74E-11
U-234	8.12E-08
U-235	3.51E-06
U-236	1.54E-09
U-238	2.60E-05

No Hazardous Waste Numbers Provided

TRUCON Code(s)  
325

**Waste Stream Description**

Not available



Waste Stream ID: **RL105-01**

**Appendix A**  
**Waste Profile Report**

Site	Hanford (Richland) Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2015		
Stream Name	105-C, 105KE, and 105-N Bldg. TRU CH Mixed Debris			Activity Concentrations Decayed to CY	2015		

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	29.7	0.0	29.7
85-gal Drum Dir Ld w/ Liner	0.6	0.0	0.6
Box - Misc	54.2	0.0	54.2
<b>Current Form Total</b>	<b>84.6</b>	<b>0.0</b>	<b>84.6</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	37.9	0.0	37.9
SWB Dir Ld w/ Liner	68.0	0.0	68.0
<b>Final Form Total</b>	<b>105.9</b>	<b>0.0</b>	<b>105.9</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	75.59
Aluminum-based Metal/Alloys	3.85
Other Metal/Alloys	0.00
Other Inorganic Materials	25.04
Cellulose	15.41
Rubber	13.48
Plastic	28.50
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	14.02
Packaging Material, Rubber	0.33
Packaging Material, Steel	145.34
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.05E-01
Am-243	5.20E-04
Cm-244	7.85E-03
Cs-137	1.15E+00
Np-237	2.29E-04
Pu-238	4.30E-02
Pu-239	1.44E-01
Pu-240	5.80E-02
Pu-241	4.54E+00
Pu-242	1.72E-05
Sr-90	4.05E-01
Th-229	1.55E-12
Th-230	2.03E-09
Th-232	2.14E-15
U-233	5.87E-09
U-234	3.71E-05
U-235	2.04E-05
U-236	7.25E-06
U-238	3.33E-04

**Haz. Waste No(s).**

D004, D005, D006, D007, D008, D009, D010, D011, D022, D027, D028, D029, D030, D034, D037, D043, F001, F002, F003, F004, F005

**TRUCON Code(s)**

125/225

**Waste Stream Description**

CH TRU Combustible and noncombustible debris from Hanford production reactor storage basin operations. Combustible waste may include wood, plastics, paper, and rags. Noncombustible waste may include metals, glass, concrete, cartridge-type water filters from the Primary Recirculation System, and absorbed liquids.

Waste Stream ID: **RL105-03**

**Appendix A**  
**Waste Profile Report**

Site	Hanford (Richland) Site	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2015	
Stream Name	NLOP sludge				Activity Concentrations Decayed to CY	2015	

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	68.4	0.0	68.4
<b>Current Form Total</b>	<b>68.4</b>	<b>0.0</b>	<b>68.4</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	68.4	0.0	68.4
<b>Final Form Total</b>	<b>68.4</b>	<b>0.0</b>	<b>68.4</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	36.09
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	12.59
Cellulose	0.00
Rubber	0.00
Plastic	0.00
Cement	930.62
Solidified Inorganic Material	620.41
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	5.61E-01
Cs-137	1.47E+00
Np-237	9.70E-06
Pu-238	6.54E-02
Pu-239	3.38E-01
Pu-240	1.86E-01
Pu-241	6.34E+00
Pu-242	8.86E-05
Sr-90	7.32E+00
Th-229	8.21E-14
Th-230	3.85E-08
Th-232	6.65E-18
U-233	2.73E-10
U-234	5.99E-04
U-235	2.25E-05
U-236	3.85E-08
U-238	4.82E-04

No Hazardous Waste Numbers Provided

TRUCON Code(s)  
111/211

**Waste Stream Description**

Solidified inorganic CH TRU waste generated from Facility/Equipment Operation and Maintenance activities at the Reactor facility.

Waste Stream ID: **RL105-08**

**Appendix A**  
**Waste Profile Report**

Site	Hanford (Richland) Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	RH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2015	
Stream Name	105-C, 105KE, and 105-N Bldg RH-TRU Mixed Debris				Activity Concentrations Decayed to CY	2015	

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	3.7	0.0	3.7
Box - Misc	120.5	0.0	120.5
SWB Dir Ld w/ Liner	3.8	0.0	3.8
<b>Current Form Total</b>	<b>128.0</b>	<b>0.0</b>	<b>128.0</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	161.0	0.0	161.0
<b>Final Form Total</b>	<b>161.0</b>	<b>0.0</b>	<b>161.0</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	106.95
Aluminum-based Metal/Alloys	5.45
Other Metal/Alloys	0.00
Other Inorganic Materials	35.42
Cellulose	21.80
Rubber	19.07
Plastic	38.15
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	45.67
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	9.85E-02
Am-243	3.79E-08
Cm-244	8.59E-04
Cs-137	1.50E+00
Np-237	1.09E-06
Pu-238	2.40E-02
Pu-239	7.75E-02
Pu-240	4.22E-02
Pu-241	8.39E-01
Pu-242	1.73E-06
Sr-90	6.88E-01
Th-229	5.54E-14
Th-230	2.95E-09
Th-232	4.95E-08
U-233	8.44E-11
U-234	3.25E-05
U-235	1.61E-06
U-236	5.63E-06
U-238	3.89E-05

**Haz. Waste No(s).**

D004, D005, D006, D007, D008, D009, D010, D011, D022, D027, D028, D029, D030, D034, D037, D043, F001, F002, F003, F004, F005

**TRUCON Code(s)**

325

**Waste Stream Description**

The 105-KE RH waste stream is composed solely of cartridge-type water filters from the Primary Recirculation System. The waste stream includes water filters, accumulated waste and associated packaging. Other 100 area drums contain both combustible and noncombustible waste items. Combustible waste may include wood, plastics, paper, and rags. Noncombustible waste items may include metals, glass, concrete, and absorbed liquids. If present, boxes typically contain larger waste items (e.g., whole or sectioned glove boxes, ducting, and process vessels). Both drums and boxes may be used for disposal of high-efficiency particulate air filters. The waste stream ranges from contaminated clothing to process equipment. The waste is generated from Reactor Facility/Equipment Operation and Maintenance Waste activities.

Waste Stream ID: **RL105-09**

**Appendix A**  
**Waste Profile Report**

Site	Hanford (Richland) Site	Summary Category	S3000	Defense Determination	Defense-Related	Handling	RH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2015	
Stream Name	105KE TRU RH Non-mixed solidified inorganics				Activity Concentrations Decayed to CY	2015	

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
85-gal Drum Dir Ld w/ Liner	0.6	0.0	0.6
Sludge Transport and Storage Container	50.7	0.0	50.7
<b>Current Form Total</b>	<b>51.4</b>	<b>0.0</b>	<b>51.4</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	624.0	0.0	624.0
<b>Final Form Total</b>	<b>624.0</b>	<b>0.0</b>	<b>624.0</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	4.25
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.16
Cellulose	0.00
Rubber	0.00
Plastic	0.00
Cement	1.15
Solidified Inorganic Material	10.40
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	45.67
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.16E+00
Cs-137	5.37E+00
Np-237	9.64E-05
Pu-238	1.31E-01
Pu-239	6.53E-01
Pu-240	3.78E-01
Pu-241	4.89E+00
Pu-242	1.58E-04
Sr-90	7.47E+00
Th-229	1.44E-12
Th-230	1.61E-07
Th-232	1.10E-13
U-233	3.67E-09
U-234	1.94E-03
U-235	7.87E-05
U-236	2.48E-04
U-238	1.71E-03

No Hazardous Waste Numbers Provided

TRUCON Code(s)  
311

**Waste Stream Description**

Solidified inorganic RH TRU waste generated from Facility/Equipment Operation and Maintenance activities at the K Basin facility.

Waste Stream ID: **RL200-01**

**Appendix A**  
**Waste Profile Report**

Site	Hanford (Richland) Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Other/Multiple Sources	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2015	
Stream Name	Misc 200 Area TRU Mixed Debris			Activity Concentrations Decayed to CY		2015	

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	71.1	0.0	71.1
Box - Misc	46.3	0.0	46.3
SWB Dir Ld w/ Liner	1.9	0.0	1.9
<b>Current Form Total</b>	<b>119.3</b>	<b>0.0</b>	<b>119.3</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	88.8	0.0	88.8
SWB Dir Ld w/ Liner	60.5	0.0	60.5
<b>Final Form Total</b>	<b>149.3</b>	<b>0.0</b>	<b>149.3</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	567.18
Aluminum-based Metal/Alloys	128.32
Other Metal/Alloys	0.00
Other Inorganic Materials	33.59
Cellulose	24.62
Rubber	8.49
Plastic	33.60
Cement	0.00
Solidified Inorganic Material	5.39
Solidified Organic Material	0.00
Soil	2.90
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	22.54
Packaging Material, Rubber	0.42
Packaging Material, Steel	139.95
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	5.38E-01
Cs-137	3.08E-03
Np-237	1.58E-06
Pu-238	9.00E-04
Pu-239	6.36E-03
Pu-240	2.28E-03
Pu-241	2.84E-02
Pu-242	2.21E-07
Sr-90	2.29E-04
Th-229	8.09E-15
Th-230	9.91E-13
Th-232	1.35E-19
U-233	3.06E-11
U-234	2.37E-08
U-235	5.64E-11
U-236	6.07E-10
U-238	3.08E-16

**Haz. Waste No(s).**

D004, D005, D006, D007, D008, D009, D010, D011, F001, F002, F003, F004, F005

**TRUCON Code(s)**

125/225

**Waste Stream Description**

Containers with both combustible and noncombustible waste items from various general operations/maintenance/evaporator in 200 area. Combustible waste may include wood, plastics, paper, and rags. Noncombustible waste items may include metals, glass, concrete, and absorbed liquids. If present, boxes typically contain larger waste items (e.g., whole or sectioned glove boxes, ducting, and process vessels). Both drums and boxes may be used for disposal of high-efficiency particulate air filters.

Waste Stream ID: **RL200-02**

**Appendix A**  
**Waste Profile Report**

Site	Hanford (Richland) Site	Summary Category	S4000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Other/Multiple Sources	Waste Matrix Code Group	Contaminated Soil/Debris Waste		Inventory Date	12/31/2015	
Stream Name	Soil from Groundwater projects and contaminated soil from PFP				Activity Concentrations Decayed to CY	2015	

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	7.3	0.0	7.3
85-gal Drum Dir Ld w/ Liner	3.2	0.0	3.2
Uncontained	0.0	8437.2	8437.2
<b>Current Form Total</b>	<b>10.5</b>	<b>8437.2</b>	<b>8447.7</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	10.2	7269.8	7280.0
SLB2 Dir Ld	0.0	1177.3	1177.3
<b>Final Form Total</b>	<b>10.2</b>	<b>8447.1</b>	<b>8457.3</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	3.66
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	524.00
Cellulose	4.83
Rubber	2.24
Plastic	9.44
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	554.78
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	31.91
Packaging Material, Rubber	0.51
Packaging Material, Steel	142.57
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	4.97E-01
Cs-137	2.94E-04
Np-237	1.28E-05
Pu-238	7.56E-02
Pu-239	1.70E+00
Pu-240	4.47E-01
Pu-241	2.48E+00
Pu-242	3.37E-05
Sr-90	2.65E-04
Th-229	5.75E-14
Th-230	2.52E-11
Th-232	8.16E-18
U-233	2.64E-10
U-234	1.09E-06
U-235	8.36E-09
U-236	6.61E-08
U-238	2.62E-14

**Haz. Waste No(s).**

D004, D005, D006,  
D007, D008, D009,  
D010, D011, D018,  
D019, D021, D022,  
D027, D028, D030,  
D039, D040, D043,  
F001, F002, F003,  
F005

**TRUCON Code(s)**

125/225

**Waste Stream Description**

Crib and soil characterization and remediation wastes

Waste Stream ID: **RL201-03**

**Appendix A**  
**Waste Profile Report**

Site	Hanford (Richland) Site	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Remediation/D&D Waste	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2015	
Stream Name	201C TRU Mixed Solid Inorganic			Activity Concentrations Decayed to CY	2015		

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	11.4	0.0	11.4
<b>Current Form Total</b>	<b>11.4</b>	<b>0.0</b>	<b>11.4</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	13.5	0.0	13.5
<b>Final Form Total</b>	<b>13.5</b>	<b>0.0</b>	<b>13.5</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	0.00
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	27.63
Other Inorganic Materials	9.16
Cellulose	64.47
Rubber	119.33
Plastic	32.23
Cement	0.00
Solidified Inorganic Material	0.93
Solidified Organic Material	0.00
Soil	314.38
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.09E+00
Cs-137	1.82E-01
Np-237	2.71E-06
Pu-238	6.66E-05
Pu-239	1.39E-01
Pu-240	3.43E-02
Pu-241	2.88E-03
Pu-242	5.00E-08
Sr-90	4.68E+00
Th-229	2.70E-15
Th-230	1.19E-13
Th-232	4.01E-19
U-233	2.30E-11
U-234	6.47E-09
U-235	5.49E-10
U-236	4.06E-09
U-238	5.18E-04

**Haz. Waste No(s).**

D007, D010

**TRUCON Code(s)**

122/222

**Waste Stream Description**

Generated from tank CX-70 sludge cleanout/remediation. A vacuuming process loaded sludge waste into cloth lined 16 gal drums. A 16 gal drum was placed into each 55 gal drum. Diatomaceous earth was added to ensure no free liquid process waste.

Waste Stream ID: **RL202S-01**

**Appendix A**  
**Waste Profile Report**

Site	Hanford (Richland) Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Remediation/D&D Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2015	
Stream Name	202S TRU Mixed Debris			Activity Concentrations Decayed to CY	2015		

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

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

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

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	2.74
Aluminum-based Metal/Alloys	0.91
Other Metal/Alloys	0.77
Other Inorganic Materials	0.00
Cellulose	3.34
Rubber	0.77
Plastic	53.09
Cement	0.00
Solidified Inorganic Material	3.59
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	4.76E-02
Cs-137	1.01E-07
Np-237	1.91E-06
Pu-238	1.05E-02
Pu-239	6.29E-02
Pu-240	2.35E-02
Pu-241	1.26E-01
Pu-242	2.70E-06
Sr-90	9.10E-08
Th-229	8.72E-15
Th-230	3.49E-12
Th-232	4.30E-19
U-233	3.99E-11
U-234	1.51E-07
U-235	3.10E-10
U-236	3.48E-09
U-238	2.10E-15

**Haz. Waste No(s).**D006, D007, D008,  
D009**TRUCON Code(s)**

125/225

**Waste Stream Description**

Generated from investigations at the North Sample Gallery of the 202-S Canyon (REDOX CANYON AND SERVICE FACILITY). Debris waste of personal protective equipment, sharp metal objects, and cleanup material generated in S canyon investigation, waste characterization samples. Predominant debris waste consists of over 80% plastic.



Waste Stream ID: **RL209E-01**

**Appendix A**  
**Waste Profile Report**

Site	Hanford (Richland) Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	R&D/R&D Laboratory Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2015	
Stream Name	209E TRU Mixed Debris			Activity Concentrations Decayed to CY		2015	

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	12.1	0.0	12.1
85-gal Drum Dir Ld w/ Liner	1.6	0.0	1.6
Box - Misc	213.8	0.0	213.8
SWB Dir Ld w/ Liner	66.2	0.0	66.2
<b>Current Form Total</b>	<b>293.6</b>	<b>0.0</b>	<b>293.6</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	15.4	0.0	15.4
SWB Dir Ld w/ Liner	334.5	0.0	334.5
<b>Final Form Total</b>	<b>349.9</b>	<b>0.0</b>	<b>349.9</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	70.85
Aluminum-based Metal/Alloys	0.03
Other Metal/Alloys	0.72
Other Inorganic Materials	8.56
Cellulose	39.53
Rubber	15.06
Plastic	34.22
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	2.78
Packaging Material, Rubber	0.21
Packaging Material, Steel	152.44
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	7.55E+00
Cs-137	1.41E-08
Np-237	7.09E-05
Pu-238	1.50E+00
Pu-239	1.09E+01
Pu-240	3.99E+00
Pu-241	3.83E+01
Pu-242	5.85E-04
Sr-90	1.27E-08
Th-229	1.92E-13
Th-230	8.44E-09
Th-232	4.67E-17
U-233	1.12E-09
U-234	2.38E-04
U-235	8.13E-06
U-236	4.73E-07
U-238	2.07E-05

**Haz. Waste No(s).**

D006, D007, D008, D018, D019, D043, F002, F003, F005

**TRUCON Code(s)**

125/225

**Waste Stream Description**

Combustible and noncombustible debris waste generated during operations, cleanout, and D&D of the 209-E Critical Mass Laboratory (CML) at Hanford. Combustible waste may include wood, plastics, paper, and rags. Noncombustible waste may include metals, glass, concrete, and absorbed liquids.

Waste Stream ID: **RL209E-08**

**Appendix A**  
**Waste Profile Report**

Site	Hanford (Richland) Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	RH
Source Cat.	R&D/R&D Laboratory Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2015	
Stream Name	209E TRU RH Mixed Debris			Activity Concentrations Decayed to CY	2015		

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

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

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

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	2.40
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.80
Cellulose	24.04
Rubber	3.21
Plastic	23.08
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	45.67
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	4.22E+00
Np-237	3.97E-05
Pu-238	8.14E-01
Pu-239	5.59E+00
Pu-240	1.96E+00
Pu-241	1.64E+01
Pu-242	2.44E-04
Th-229	3.93E-13
Th-230	7.05E-10
Th-232	9.16E-17
U-233	1.18E-09
U-234	1.90E-05
U-235	4.41E-08
U-236	4.64E-07
U-238	3.03E-13

**Haz. Waste No(s).**

D006, D007, D018, D019, F002, F003, F005
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**TRUCON Code(s)**

325
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**Waste Stream Description**

Combustible and noncombustible debris waste generated during operations, cleanout, and D&D of the 209-E CML. Combustible waste may include wood, plastics, paper, and rags. Noncombustible waste items may include metals, glass, concrete, and absorbed liquids.

Waste Stream ID: **RL216Z-02**

**Appendix A**  
**Waste Profile Report**

Site	Hanford (Richland) Site	Summary Category	S4000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Contaminated Soil/Debris Waste		Inventory Date	12/31/2015	
Stream Name	216-Z-9 TRU Mixed Soil			Activity Concentrations Decayed to CY	2015		

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	176.4	0.0	176.4
85-gal Drum Dir Ld w/ Liner	39.0	0.0	39.0
Box - Misc	25.5	0.0	25.5
SWB Dir Ld w/ Liner	1.9	0.0	1.9
<b>Current Form Total</b>	<b>242.7</b>	<b>0.0</b>	<b>242.7</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	293.9	0.0	293.9
SWB Dir Ld w/ Liner	35.9	0.0	35.9
<b>Final Form Total</b>	<b>329.8</b>	<b>0.0</b>	<b>329.8</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	1.99
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	16.11
Cellulose	0.33
Rubber	0.00
Plastic	0.99
Cement	0.00
Solidified Inorganic Material	17.66
Solidified Organic Material	0.00
Soil	17.67
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	33.16
Packaging Material, Rubber	0.53
Packaging Material, Steel	133.24
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	4.19E+00
Np-237	6.63E-06
Pu-238	1.11E+00
Pu-239	1.37E+01
Pu-240	3.21E+00
Pu-241	4.18E+01
Pu-242	1.92E-04
Th-229	9.21E-15
Th-230	2.35E-10
Th-232	3.75E-17
U-233	6.73E-11
U-234	1.27E-05
U-235	5.38E-08
U-236	3.80E-07
U-238	1.19E-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.

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	12/31/2015	
Stream Name	221U Solidified sludge			Activity Concentrations Decayed to CY	2015		

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

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

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

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	9.89
Aluminum-based Metal/Alloys	1.38
Other Metal/Alloys	0.41
Other Inorganic Materials	1.84
Cellulose	1.06
Rubber	0.25
Plastic	0.93
Cement	0.00
Solidified Inorganic Material	0.17
Solidified Organic Material	0.00
Soil	0.19
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	5.76E-04
Cs-137	1.37E-03
Np-237	7.32E-10
Pu-238	7.50E-05
Pu-239	3.26E-03
Pu-240	7.45E-04
Pu-241	3.84E-03
Pu-242	6.35E-08
Sr-90	1.24E-03
Th-229	7.21E-19
Th-230	1.59E-14
Th-232	8.70E-21
U-233	6.17E-15
U-234	8.60E-10
U-235	1.29E-11
U-236	8.82E-11
U-238	3.94E-17

**Haz. Waste No(s).**

D006, D007, D008,  
D009, D011, D027,  
D030, D032, D033,  
D034, D036, D037,  
F001, F002

**TRUCON Code(s)**

122/222

**Waste Stream Description**

Solidified sludge and laboratory sample debris (e.g., glass sample bottles, plastic, and tape) from characterization efforts of U Plant.

Waste Stream ID: **RL221U-09**

**Appendix A**  
**Waste Profile Report**

Site	Hanford (Richland) Site	Summary Category	S3000	Defense Determination	Defense-Related	Handling	RH
Source Cat.	Remediation/D&D Waste	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2015	
Stream Name	U Plant Tank 10 Waste				Activity Concentrations Decayed to CY	2015	

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
Box - Misc	28.1	0.0	28.1
<b>Current Form Total</b>	<b>28.1</b>	<b>0.0</b>	<b>28.1</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	35.6	0.0	35.6
<b>Final Form Total</b>	<b>35.6</b>	<b>0.0</b>	<b>35.6</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	0.00
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	0.00
Cement	0.00
Solidified Inorganic Material	193.99
Solidified Organic Material	1.96
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	45.67
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	5.41E-01
Am-243	2.79E-08
Cm-244	1.76E-02
Cs-137	1.34E+01
Np-237	1.77E-03
Pu-238	1.79E-01
Pu-239	1.37E+00
Pu-240	3.88E-01
Pu-241	1.56E+01
Pu-242	3.92E-05
Sr-90	1.03E+01
Th-229	2.37E-11
Th-230	3.90E-07
Th-232	2.66E-07
U-233	6.77E-08
U-234	7.08E-03
U-235	7.42E-06
U-236	6.90E-08
U-238	1.39E-04

**Haz. Waste No(s).**

D007, D008, D010

**No TRUCON  
Codes Provided**

**Waste Stream Description**

RH-TRU Nitrate Salts in the heel of U Plant Tank 10. Waste is under a CERCLA ROD to dispose of TRU constituents at WIPP.

Waste Stream ID: **RL222S-01**

**Appendix A**  
**Waste Profile Report**

Site	Hanford (Richland) Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	R&D/R&D Laboratory Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2015	
Stream Name	222S TRU Mixed Debris			Activity Concentrations Decayed to CY		2015	

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	54.9	0.0	54.9
85-gal Drum Dir Ld w/ Liner	1.6	0.0	1.6
Box - Misc	43.5	0.0	43.5
<b>Current Form Total</b>	<b>100.0</b>	<b>0.0</b>	<b>100.0</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	67.2	0.0	67.2
SWB Dir Ld w/ Liner	54.8	0.0	54.8
<b>Final Form Total</b>	<b>122.0</b>	<b>0.0</b>	<b>122.0</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	526.83
Aluminum-based Metal/Alloys	104.52
Other Metal/Alloys	0.01
Other Inorganic Materials	35.07
Cellulose	53.29
Rubber	21.04
Plastic	59.14
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	8.79
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	20.95
Packaging Material, Rubber	0.40
Packaging Material, Steel	140.95
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.72E-01
Am-243	3.44E-07
Cs-137	1.24E-03
Np-237	2.54E-05
Pu-238	1.09E-02
Pu-239	6.11E-02
Pu-240	2.76E-02
Pu-241	5.85E-01
Pu-242	1.99E-06
Sr-90	1.10E-03
Th-229	1.14E-07
Th-230	9.61E-12
Th-232	5.03E-19
U-233	2.60E-04
U-234	2.88E-07
U-235	4.87E-09
U-236	4.08E-09
U-238	1.14E-04

**Haz. Waste No(s).**

D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D022, D030, D039, F001, F002, F003, F005
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**TRUCON Code(s)**

125/225
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**Waste Stream Description**

Combustible waste and Noncombustible waste - TRU wastes were generated from multiple operations, primarily from the hot cells, the hoods, or from within the gloveboxes (for standards laboratory tasks) located in the Analytical laboratory.

Waste Stream ID: **RL222S-08**

**Appendix A**  
**Waste Profile Report**

Site	Hanford (Richland) Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	RH
Source Cat.	R&D/R&D Laboratory Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2015	
Stream Name	222S TRU RH Mixed Debris			Activity Concentrations Decayed to CY		2015	

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.8	0.0	0.8
85-gal Drum Dir Ld w/ Liner	0.3	0.0	0.3
Box - Misc	0.1	0.0	0.1
<b>Current Form Total</b>	<b>1.3</b>	<b>0.0</b>	<b>1.3</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	2.5	0.0	2.5
<b>Final Form Total</b>	<b>2.5</b>	<b>0.0</b>	<b>2.5</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	379.68
Aluminum-based Metal/Alloys	59.95
Other Metal/Alloys	0.00
Other Inorganic Materials	29.31
Cellulose	72.03
Rubber	30.74
Plastic	73.76
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	10.55
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	45.67
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.47E-01
Am-243	1.02E-02
Cs-137	9.87E-02
Np-237	1.12E-03
Pu-238	2.25E-02
Pu-239	2.52E+00
Pu-240	6.44E-02
Pu-241	5.07E+00
Pu-242	2.24E-04
Pu-244	9.32E-07
Sr-90	1.62E-01
Th-229	1.39E-04
Th-230	2.49E-11
Th-232	3.81E-18
U-233	1.76E-01
U-234	5.96E-07
U-235	4.26E-06
U-236	1.72E-08
U-238	1.57E-04

**Haz. Waste No(s).**

D004, D005, D006,  
D007, D008, D009,  
D010, D039, F001,  
F002, F003, F004,  
F005

**TRUCON Code(s)**

325

**Waste Stream Description**

Combustible waste and Noncombustible waste- TRU wastes were generated from multiple operations, primarily from the hot cells, the hoods, or from within the gloveboxes (for standards laboratory tasks) located in the Analytical laboratory.

Waste Stream ID: **RL231Z-01**

**Appendix A**  
**Waste Profile Report**

Site	Hanford (Richland) Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	R&D/R&D Laboratory Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2015	
Stream Name	231-Z TRU Mixed Debris			Activity Concentrations Decayed to CY		2015	

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	147.5	0.0	147.5
85-gal Drum Dir Ld w/ Liner	13.5	0.0	13.5
Box - Misc	930.8	0.0	930.8
SWB Dir Ld w/ Liner	62.4	0.0	62.4
<b>Current Form Total</b>	<b>1154.2</b>	<b>0.0</b>	<b>1154.2</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	193.2	0.0	193.2
SWB Dir Ld w/ Liner	1117.0	0.0	1117.0
<b>Final Form Total</b>	<b>1310.2</b>	<b>0.0</b>	<b>1310.2</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	120.27
Aluminum-based Metal/Alloys	0.52
Other Metal/Alloys	1.93
Other Inorganic Materials	18.22
Cellulose	23.57
Rubber	4.32
Plastic	30.95
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	6.49
Packaging Material, Rubber	0.25
Packaging Material, Steel	150.10
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.08E-01
Am-243	3.76E-06
Cs-137	4.14E-05
Np-237	1.75E-05
Pu-238	5.16E-02
Pu-239	4.56E-01
Pu-240	1.21E-01
Pu-241	1.22E+00
Pu-242	1.46E-05
Sr-90	3.74E-05
Th-229	8.07E-14
Th-230	2.99E-09
Th-232	2.22E-18
U-233	3.68E-10
U-234	6.53E-05
U-235	1.72E-06
U-236	1.80E-08
U-238	1.07E-05

**Haz. Waste No(s).**

D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D022, D027, D028, D029, D030, D034, D035, D037, D043, F001, F002, F003, F004, F005

**TRUCON Code(s)**

125/225

**Waste Stream Description**

Combustible and noncombustible debris waste generated during operations, cleanout, and D&D activities of the 231-Z Building at Hanford. Combustible waste may include wood, plastics, paper, and rags. Noncombustible waste items may include metals, glass, concrete, and absorbed liquids. The 231-Z Building has also been called the 231-W Building, the Concentration Building, the Isolation Building, the Plutonium Metallurgical Laboratory, and the 231-Z Materials Engineering Laboratory.



Waste Stream ID: **RL231Z-03**

**Appendix A**  
**Waste Profile Report**

Site	Hanford (Richland) Site	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	R&D/R&D Laboratory Waste	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2015	
Stream Name	231Z TRU Mixed Solid Inorganic			Activity Concentrations Decayed to CY	2015		

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
85-gal Drum Dir Ld w/ Liner	0.6	0.0	0.6
<b>Current Form Total</b>	<b>0.6</b>	<b>0.0</b>	<b>0.6</b>

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

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	0.00
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	104.98
Other Inorganic Materials	0.19
Cellulose	6.57
Rubber	1.56
Plastic	20.58
Cement	0.00
Solidified Inorganic Material	93.37
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.85E-01
Np-237	2.10E-06
Pu-238	1.29E-04
Pu-239	4.95E-01
Pu-240	1.71E-01
Pu-241	1.72E-01
Pu-242	1.53E-05
Th-229	1.69E-13
Th-230	2.62E-12
Th-232	1.62E-16
U-233	1.62E-10
U-234	1.51E-08
U-235	1.76E-08
U-236	1.82E-07
U-238	8.52E-14

**Haz. Waste No(s).**D006, D007, D008,  
D009, F001, F002,  
F003, F005**TRUCON Code(s)**

122/222

**Waste Stream Description**

Solidified inorganic waste generated during operations, cleanout, and D&D activities of the 231-Z Building, which has also been called the 231-W Building, the Concentration Building, the Isolation Building, the Plutonium Metallurgical Laboratory, and the 231-Z Materials Engineering Laboratory.

Waste Stream ID: **RL233S-01**

**Appendix A**  
**Waste Profile Report**

Site	Hanford (Richland) Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Other/Multiple Sources	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2015	
Stream Name	233S TRU Mixed Debris			Activity Concentrations Decayed to CY		2015	

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	6.2	0.0	6.2
85-gal Drum Dir Ld w/ Liner	4.5	0.0	4.5
SWB Dir Ld w/ Liner	28.4	0.0	28.4
<b>Current Form Total</b>	<b>39.1</b>	<b>0.0</b>	<b>39.1</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	10.2	0.0	10.2
SWB Dir Ld w/ Liner	34.0	0.0	34.0
<b>Final Form Total</b>	<b>44.2</b>	<b>0.0</b>	<b>44.2</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	196.24
Aluminum-based Metal/Alloys	0.82
Other Metal/Alloys	1.79
Other Inorganic Materials	4.47
Cellulose	13.42
Rubber	2.90
Plastic	15.93
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.52
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	9.47
Packaging Material, Rubber	0.28
Packaging Material, Steel	148.21
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	4.23E-01
Cs-137	3.49E-05
Np-237	1.76E-04
Pu-238	8.19E-02
Pu-239	6.28E-01
Pu-240	2.05E-01
Pu-241	1.66E+00
Pu-242	6.17E-05
Sr-90	3.16E-05
Th-229	8.24E-13
Th-230	1.78E-10
Th-232	3.74E-18
U-233	3.75E-09
U-234	4.47E-06
U-235	1.13E-07
U-236	3.03E-08
U-238	1.65E-06

**Haz. Waste No(s).**

D004, D005, D006,  
D007, D008, D009,  
D010, D011, F002,  
F003

**TRUCON Code(s)**

125/225

**Waste Stream Description**

Combustible and noncombustible debris waste generated during cleanout, stabilization, and D&D activities of the 233-S Building (Plutonium Concentration Facility) at Hanford. Combustible waste may include wood, plastics, paper, and rags. Noncombustible waste items may include metals, glass, concrete, and absorbed liquids.

Waste Stream ID: **RL233S-03**

**Appendix A**  
**Waste Profile Report**

Site	Hanford (Richland) Site	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Remediation/D&D Waste	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2015	
Stream Name	233S solidified inorganic waste			Activity Concentrations Decayed to CY	2015		

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	4.2	0.0	4.2
<b>Current Form Total</b>	<b>4.2</b>	<b>0.0</b>	<b>4.2</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	5.2	0.0	5.2
<b>Final Form Total</b>	<b>5.2</b>	<b>0.0</b>	<b>5.2</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	0.04
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	513.33
Cellulose	0.00
Rubber	0.04
Plastic	0.65
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	7.43E-02
Cs-137	1.06E-06
Np-237	6.01E-05
Pu-238	1.72E-02
Pu-239	7.02E-02
Pu-240	2.83E-02
Pu-241	1.28E-01
Pu-242	1.79E-05
Sr-90	8.76E-07
Th-229	4.06E-13
Th-230	8.27E-12
Th-232	7.44E-19
U-233	1.54E-09
U-234	2.97E-07
U-235	4.15E-10
U-236	5.02E-09
U-238	1.67E-14

**Haz. Waste No(s).**

D007

**TRUCON Code(s)**

122/222

**Waste Stream Description**

Solidified inorganic CH TRU waste generated from 233 Facility/Equipment Operation and Maintenance activities

Waste Stream ID: **RL300-01**

**Appendix A**  
**Waste Profile Report**

Site	Hanford (Richland) Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Other/Multiple Sources	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2015	
Stream Name	300 Area TRU Mixed Debris			Activity Concentrations Decayed to CY	2015		

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	17.1	0.0	17.1
85-gal Drum Dir Ld w/ Liner	10.6	0.0	10.6
Box - Misc	89.5	0.0	89.5
SWB Dir Ld w/ Liner	35.9	0.0	35.9
<b>Current Form Total</b>	<b>153.1</b>	<b>0.0</b>	<b>153.1</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	26.8	0.0	26.8
SWB Dir Ld w/ Liner	149.3	0.0	149.3
<b>Final Form Total</b>	<b>176.1</b>	<b>0.0</b>	<b>176.1</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	61.63
Aluminum-based Metal/Alloys	0.09
Other Metal/Alloys	6.70
Other Inorganic Materials	27.49
Cellulose	10.02
Rubber	2.09
Plastic	17.78
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	6.66
Packaging Material, Rubber	0.25
Packaging Material, Steel	149.99
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.61E+00
Am-243	2.87E-05
Cs-137	1.37E-04
Np-237	3.75E-05
Pu-238	4.32E-01
Pu-239	2.20E+00
Pu-240	1.02E+00
Pu-241	1.31E+01
Pu-242	1.97E-04
Sr-90	1.24E-04
Th-229	1.08E-13
Th-230	1.74E-08
Th-232	1.92E-06
U-233	6.19E-10
U-234	4.77E-04
U-235	2.12E-05
U-236	1.20E-07
U-238	4.97E-04

**Haz. Waste No(s).**

D004, D005, D006, D007, D008, D009, D010, D011, D022, D027, D028, D029, D030, D034, D037, D043, F001, F002, F003, F004, F005

**TRUCON Code(s)**

125/225

**Waste Stream Description**

Combustible and noncombustible debris waste generated from operations, including fuel fabrication, reactor studies, research and development, maintenance, and laboratory operations in the Hanford 300 Area. Combustible waste may include wood, plastics, paper, and rags. Noncombustible waste may include metals, glass, concrete, and absorbed liquids.

Waste Stream ID: **RL300-03**

**Appendix A**  
**Waste Profile Report**

Site	Hanford (Richland) Site	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Other/Multiple Sources	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2015	
Stream Name	300 Area Mixed Solidified Inorganics			Activity Concentrations Decayed to CY		2015	

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	3.5	0.0	3.5
85-gal Drum Dir Ld w/ Liner	1.3	0.0	1.3
<b>Current Form Total</b>	<b>4.8</b>	<b>0.0</b>	<b>4.8</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	4.6	0.0	4.6
<b>Final Form Total</b>	<b>4.6</b>	<b>0.0</b>	<b>4.6</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	2.37
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	25.00
Cement	464.16
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.73E+00
Cs-137	4.32E-04
Np-237	1.92E-05
Pu-238	6.05E-01
Pu-239	3.28E+00
Pu-240	1.68E+00
Pu-241	2.20E+01
Pu-242	2.79E-04
Sr-90	5.35E-04
Th-229	5.03E-14
Th-230	1.57E-09
Th-232	1.96E-17
U-233	2.96E-10
U-234	4.63E-05
U-235	1.39E-06
U-236	1.99E-07
U-238	2.38E-05

**Haz. Waste No(s).**

D004, D005, D006, D007, D008, D009, D010, D011, D022, D027, D028, D029, D030, D034, D037, D043, F001, F002, F003, F004, F005

**TRUCON Code(s)**

122/222

**Waste Stream Description**

Solidified inorganic CH TRU waste generated from operations, including fuel fabrication, reactor studies, research and development, maintenance, and laboratory operations in the Hanford 300 Area.

Waste Stream ID: **RL300-08**

**Appendix A**  
**Waste Profile Report**

Site	Hanford (Richland) Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	RH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2015	
Stream Name	300 Area TRU RH Mixed Debris			Activity Concentrations Decayed to CY	2015		

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	28.7	0.0	28.7
85-gal Drum Dir Ld w/ Liner	1.0	0.0	1.0
Box - Misc	202.7	0.0	202.7
SWB Dir Ld w/ Liner	3.8	0.0	3.8
<b>Current Form Total</b>	<b>236.1</b>	<b>0.0</b>	<b>236.1</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	295.8	0.0	295.8
<b>Final Form Total</b>	<b>295.8</b>	<b>0.0</b>	<b>295.8</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	79.40
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	607.94
Cellulose	19.85
Rubber	0.00
Plastic	4.96
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	45.67
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	3.71E+00
Am-243	1.28E-02
Cm-244	2.12E+00
Cs-137	6.61E+02
Np-237	9.31E-05
Pu-238	9.84E-01
Pu-239	2.54E-01
Pu-240	2.92E-01
Pu-241	2.11E+01
Pu-242	9.98E-04
Pu-244	1.11E-13
Sr-90	3.90E+02
Th-229	2.93E-07
Th-230	1.24E-08
Th-232	1.45E-14
U-233	6.66E-04
U-234	2.78E-04
U-235	5.39E-06
U-236	5.90E-05
U-238	1.68E-04

**Haz. Waste No(s).**

D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D027, D028, D029, D030, D033, D034, D036, D039, D040, D043, F001, F002, F003, F005

**TRUCON Code(s)**

325

**Waste Stream Description**

Typically, drums contain both combustible and noncombustible waste items. Combustible waste may include wood, plastics, paper, and rags. Noncombustible waste items may include metals, glass, concrete, and absorbed liquids. If present, boxes typically contain larger waste items (e.g., whole or sectioned glove boxes, ducting, and process vessels). Both drums and boxes may be used for disposal of high-efficiency particulate air filters.

Waste Stream ID: **RL308-01**

**Appendix A**  
**Waste Profile Report**

Site	Hanford (Richland) Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Remediation/D&D Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2015	
Stream Name	308 TRU Mixed Debris			Activity Concentrations Decayed to CY		2015	

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	24.5	0.0	24.5
85-gal Drum Dir Ld w/ Liner	5.2	0.0	5.2
Box - Misc	308.8	0.0	308.8
SWB Dir Ld w/ Liner	170.1	0.0	170.1
<b>Current Form Total</b>	<b>508.6</b>	<b>0.0</b>	<b>508.6</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	31.8	0.0	31.8
SWB Dir Ld w/ Liner	557.6	0.0	557.6
<b>Final Form Total</b>	<b>589.4</b>	<b>0.0</b>	<b>589.4</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	189.41
Aluminum-based Metal/Alloys	0.18
Other Metal/Alloys	3.56
Other Inorganic Materials	3.36
Cellulose	6.69
Rubber	1.49
Plastic	7.70
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	3.14
Packaging Material, Rubber	0.21
Packaging Material, Steel	152.22
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	3.44E+01
Am-243	3.15E-06
Cs-137	2.94E-04
Np-237	4.96E-05
Pu-238	9.86E+00
Pu-239	1.61E+01
Pu-240	1.04E+01
Pu-241	1.87E+02
Pu-242	9.85E-03
Sr-90	2.66E-04
Th-229	4.47E-08
Th-230	1.09E-08
Th-232	8.99E-07
U-233	1.27E-04
U-234	3.54E-04
U-235	2.39E-05
U-236	1.23E-06
U-238	3.45E-04

**Haz. Waste No(s).**

D004, D005, D006, D007, D008, D009, D010, D011, D019, D022, D027, D028, D029, D030, D034, D037, D043, F001, F002, F003, F004, F005
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**TRUCON Code(s)**

125/225
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**Waste Stream Description**

Debris waste stream associated with the 308 Bldg. fuel development laboratory, fuel fabrication capabilities, and deactivation. Waste items include plutonium alloys, casting skulls, clad plates, plastic mounts, plutonium-aluminum scrap, metal mounts, Pu pellets, rags, wipes, HEPA filters, batteries, stainless steel tubing, tape, thermometers, electrical wire, and a variety of other solid debris items.

Waste Stream ID: **RL308-03**

**Appendix A**  
**Waste Profile Report**

Site	Hanford (Richland) Site	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Remediation/D&D Waste	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2015	
Stream Name	308 Building TRU Solid Inorganics			Activity Concentrations Decayed to CY	2015		

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

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

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

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	94.95
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	7.21
Cement	228.97
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	6.10E-01
Np-237	5.22E-06
Pu-238	1.12E-01
Pu-239	8.03E-01
Pu-240	3.05E-01
Pu-241	1.30E+00
Pu-242	3.69E-05
Th-229	2.49E-13
Th-230	1.32E-09
Th-232	1.75E-16
U-233	3.08E-10
U-234	9.89E-06
U-235	2.22E-08
U-236	2.53E-07
U-238	1.60E-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	12/31/2015	
Stream Name	308 Building TRU RH Non-Mixed Debris			Activity Concentrations Decayed to CY	2015		

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

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

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

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	16.36
Aluminum-based Metal/Alloys	0.04
Other Metal/Alloys	2.50
Other Inorganic Materials	2.25
Cellulose	2.88
Rubber	0.92
Plastic	6.26
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	45.67
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.30E-03
Cs-137	1.80E-01
Np-237	4.49E-09
Pu-238	2.92E-03
Pu-239	4.28E-04
Pu-240	7.21E-04
Sr-90	9.35E+00
Th-229	1.02E-17
Th-230	1.41E-12
Th-232	1.90E-20
U-233	5.78E-14
U-234	5.06E-08
U-235	2.53E-12
U-236	1.28E-10

No Hazardous Waste Numbers Provided

TRUCON Code(s)  
325

**Waste Stream Description**

Debris waste stream associated with the 308 Bldg. fuel development laboratory, fuel fabrication capabilities, and deactivation. Examples of waste items in this waste stream include plutonium alloys, casting skulls, clad plates, plastic mounts, metal mounts, Pu pellets, rags, wipes, HEPA filters, batteries, stainless steel tubing, tape, thermometers, electrical wire, and a variety of other solid debris items.

Waste Stream ID: **RL325-01**

**Appendix A**  
**Waste Profile Report**

Site	Hanford (Richland) Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	R&D/R&D Laboratory Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2015	
Stream Name	325 TRU Mixed Debris			Activity Concentrations Decayed to CY		2015	

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	525.4	0.0	525.4
85-gal Drum Dir Ld w/ Liner	38.6	0.0	38.6
Box - Misc	301.5	0.0	301.5
SWB Dir Ld w/ Liner	39.7	0.0	39.7
Uncontained	0.0	53.8	53.8
<b>Current Form Total</b>	<b>905.2</b>	<b>53.8</b>	<b>959.0</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	680.0	51.8	731.7
SWB Dir Ld w/ Liner	442.3	5.7	447.9
<b>Final Form Total</b>	<b>1122.2</b>	<b>57.5</b>	<b>1179.7</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	72.21
Aluminum-based Metal/Alloys	0.28
Other Metal/Alloys	3.22
Other Inorganic Materials	23.03
Cellulose	12.76
Rubber	3.31
Plastic	22.18
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.25
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	23.45
Packaging Material, Rubber	0.42
Packaging Material, Steel	139.38
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.54E+00
Am-243	3.88E-04
Cm-244	5.77E-03
Cs-137	7.68E-04
Np-237	1.74E-04
Pu-238	7.16E-01
Pu-239	1.45E+00
Pu-240	5.86E-01
Pu-241	8.68E+00
Pu-242	1.74E-04
Sr-90	7.62E-04
Th-229	1.63E-08
Th-230	1.00E-08
Th-232	1.58E-06
U-233	4.63E-05
U-234	2.77E-04
U-235	9.32E-06
U-236	6.94E-08
U-238	9.20E-05

**Haz. Waste No(s).**

D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D022, D027, D028, D029, D030, D032, D033, D034, D035, D036, D037, D038, D039, D040, D043, F001, F002, F003, F004, F005

**TRUCON Code(s)**

125/225

**Waste Stream Description**

Debris waste stream containing waste materials associated with the 325 Bldg. laboratory operations, sample analysis, facility cleanout, and facility waste treatment. Operations waste includes any discarded item used in laboratory analysis (e.g., glass beakers, tweezers, latex gloves, plastic tape, glass pipettes) and facility cleanout (e.g., glassware, wipes, and equipment). Maintenance waste may include filters, wipes, and various types of gloves. Small amounts of solid sample residues (unused samples) generated during lab operations are present in the waste.

Waste Stream ID: **RL325-03**

**Appendix A**  
**Waste Profile Report**

Site	Hanford (Richland) Site	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	R&D/R&D Laboratory Waste	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2015	
Stream Name	325 TRU Mixed Solid Inorganic			Activity Concentrations Decayed to CY		2015	

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	7.1	0.0	7.1
85-gal Drum Dir Ld w/ Liner	1.6	0.0	1.6
<b>Current Form Total</b>	<b>8.7</b>	<b>0.0</b>	<b>8.7</b>

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

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	122.30
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.03
Other Inorganic Materials	744.39
Cellulose	3.12
Rubber	3.09
Plastic	28.76
Cement	63.75
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	135.15
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	5.32E+00
Am-243	1.32E-02
Cm-244	5.82E+00
Cs-137	9.48E-03
Np-237	4.72E-04
Pu-238	1.54E+00
Pu-239	5.67E+00
Pu-240	2.64E+00
Pu-241	5.66E+01
Pu-242	4.90E-04
Sr-90	3.67E-02
Th-229	1.39E-12
Th-230	3.79E-09
Th-232	3.08E-17
U-233	7.94E-09
U-234	1.12E-04
U-235	3.76E-06
U-236	3.12E-07
U-238	5.69E-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
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**TRUCON Code(s)**

122/222

**Waste Stream Description**

The mixed solid inorganic portion of the 325 waste stream from liquid laboratory samples neutralized and solidified using nonhazardous absorbents. Small amounts of neutralized and solidified liquids from hazardous waste treatment may also be present in the waste. Corrosive liquids, such as hydrochloric acid and sodium hydroxide were neutralized and solidified in cement before being packaged as waste.

Waste Stream ID: **RL325-08**

**Appendix A**  
**Waste Profile Report**

Site	Hanford (Richland) Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	RH
Source Cat.	R&D/R&D Laboratory Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2015	
Stream Name	325 TRU RH Mixed Debris			Activity Concentrations Decayed to CY		2015	

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	44.3	0.0	44.3
85-gal Drum Dir Ld w/ Liner	3.2	0.0	3.2
Box - Misc	147.7	0.0	147.7
SWB Dir Ld w/ Liner	32.1	0.0	32.1
Uncontained	0.0	36.0	36.0
<b>Current Form Total</b>	<b>227.4</b>	<b>36.0</b>	<b>263.4</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	282.7	43.1	325.7
<b>Final Form Total</b>	<b>282.7</b>	<b>43.1</b>	<b>325.7</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	106.31
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	902.37
Cellulose	0.00
Rubber	0.00
Plastic	22.68
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	45.67
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	4.07E-01
Am-243	5.12E-04
Cm-244	1.01E-01
Cs-137	9.63E-01
Np-237	3.59E-04
Pu-238	5.84E-01
Pu-239	8.94E-02
Pu-240	8.99E-02
Pu-241	6.09E+00
Pu-242	1.16E-04
Sr-90	6.64E+00
Th-229	6.31E-11
Th-230	1.86E-09
Th-232	1.56E-07
U-233	3.83E-08
U-234	5.39E-05
U-235	2.88E-06
U-236	1.14E-08
U-238	4.48E-06

**Haz. Waste No(s).**

D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D021, D022, D027, D028, D029, D030, D032, D033, D034, D036, D037, D038, D039, D040, D043, F001, F002, F003, F004, F005

**TRUCON Code(s)**

325

**Waste Stream Description**

Typically, drums contain both combustible and noncombustible waste items. If present, boxes typically contain larger waste items (e.g., whole or sectioned glove boxes, ducting, and process vessels). Both drums and boxes may be used for disposal of high-efficiency particulate air filters. The waste is generated from R&D/R&D Laboratory Waste activities at the RADIOCHEMISTRY BUILDING.

Waste Stream ID: **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	12/31/2015	
Stream Name	B325 Solidified sludges			Activity Concentrations Decayed to CY	2015		

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

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

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	2.5	0.0	2.5
<b>Final Form Total</b>	<b>2.5</b>	<b>0.0</b>	<b>2.5</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	448.44
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.09
Other Inorganic Materials	2729.42
Cellulose	11.44
Rubber	11.35
Plastic	105.44
Cement	233.75
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	495.53
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	45.67
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	6.16E-02
Cs-137	6.51E+00
Np-237	2.00E-08
Pu-238	1.68E-03
Pu-239	4.95E-03
Sr-90	6.87E+01
Th-229	1.27E-18
Th-230	2.19E-14
U-233	4.35E-14
U-234	4.76E-09
U-235	4.87E-12

**Haz. Waste No(s).**

D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D028, D029, D030, D033, D034, D036, D038, D039, D040, D043, F001, F002, F004, F005
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**TRUCON Code(s)**

311
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**Waste Stream Description**

Waste materials consist of absorbed liquids, including oils or hydraulic fluids, and inorganic debris (such as iron-based metal containers). Materials associated with waste packaging include plastic liners and various absorbents (including Cleanup-IV, Nochar A610, vermiculite, diatomaceous earth, and Radsorb). A limited amount of debris waste materials (glassware, rags, wipes, etc.) may also be present in the containers.

Waste Stream ID: **RL618-01**

**Appendix A**  
**Waste Profile Report**

Site	Hanford (Richland) Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2015		
Stream Name	618 - 10&11 Burial Grounds TRU Mixed Debris			Activity Concentrations Decayed to CY	2015		

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
Uncontained	125.4	0.0	125.4
<b>Current Form Total</b>	<b>125.4</b>	<b>0.0</b>	<b>125.4</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
SWB Dir Ld w/ Liner	126.6	0.0	126.6
<b>Final Form Total</b>	<b>126.6</b>	<b>0.0</b>	<b>126.6</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	1.91
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	3.44
Other Inorganic Materials	3.31
Cellulose	0.25
Rubber	0.51
Plastic	0.51
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	1.27
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	1.20
Packaging Material, Rubber	0.19
Packaging Material, Steel	153.44
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	5.44E-01
Cs-137	2.81E+00
Np-237	1.58E-06
Pu-238	2.65E-01
Pu-239	1.18E-01
Pu-240	1.12E+00
Pu-241	6.44E-01
Pu-242	1.42E+00
Sr-90	2.53E+00
Th-229	8.07E-15
Th-230	2.92E-10
Th-232	6.64E-17
U-233	3.06E-11
U-234	6.97E-06
U-235	1.05E-09
U-236	2.99E-07
U-238	1.98E-09

No Hazardous Waste Numbers Provided

TRUCON Code(s)  
125/225

**Waste Stream Description**

Retrieved containerized debris waste from Burial Grounds 618 - 10 and 11

Waste Stream ID: **RL618-08**

**Appendix A**  
**Waste Profile Report**

Site	Hanford (Richland) Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	RH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2015		
Stream Name	618 - 10&11 Burial Grounds TRU RH Mixed Debris			Activity Concentrations Decayed to CY	2015		

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
Uncontained	257.0	0.0	257.0
<b>Current Form Total</b>	<b>257.0</b>	<b>0.0</b>	<b>257.0</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	257.1	0.0	257.1
<b>Final Form Total</b>	<b>257.1</b>	<b>0.0</b>	<b>257.1</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	657.14
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	1184.96
Other Inorganic Materials	1270.62
Cellulose	87.62
Rubber	175.24
Plastic	175.24
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	438.09
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	45.67
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	9.58E+00
Cs-137	4.94E+01
Np-237	2.78E-05
Pu-238	4.66E+00
Pu-239	2.08E+00
Pu-240	1.97E+01
Pu-241	1.13E+01
Pu-242	2.50E+01
Sr-90	4.45E+01
Th-229	1.42E-13
Th-230	5.14E-09
Th-232	1.17E-15
U-233	5.38E-10
U-234	1.23E-04
U-235	1.84E-08
U-236	5.26E-06
U-238	3.49E-08

No Hazardous Waste Numbers Provided

TRUCON Code(s)  
325

**Waste Stream Description**

Retrieved containerized debris waste from Burial Grounds 618 - 10 and 11.

Waste Stream ID: **RLALE-02**

**Appendix A**  
**Waste Profile Report**

Site	Hanford (Richland) Site	Summary Category	S4000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	R&D/R&D Laboratory Waste	Waste Matrix Code Group	Contaminated Soil/Debris Waste	Inventory Date	12/31/2015		
Stream Name	TRU Soils/Absorbents from the Arid Lands Ecology Reserve			Activity Concentrations Decayed to CY	2015		

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

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

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

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	2.56
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	3.21
Plastic	81.41
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	381.41
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.74E-04
Cs-137	5.06E-07
Np-237	3.24E-10
Pu-238	4.08E-05
Pu-239	8.49E-02
Pu-240	2.75E-03
Pu-241	7.21E-03
Pu-242	2.69E-07
Pu-244	3.64E-11
Sr-90	4.57E-07
Th-229	3.06E-19
Th-230	8.65E-15
Th-232	3.21E-20
U-233	2.66E-15
U-234	4.68E-10
U-235	3.34E-10
U-236	3.25E-10
U-238	1.67E-16

No Hazardous Waste Numbers Provided

TRUCON Code(s)  
125/225

**Waste Stream Description**

Soils and debris from the 6652H building.



Waste Stream ID: **RLARG-01**

**Appendix A**  
**Waste Profile Report**

Site	Hanford (Richland) Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	R&D/R&D Laboratory Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2015	
Stream Name	Argonne Nat Lab TRU Mixed Debris			Activity Concentrations Decayed to CY	2015		

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	10.6	0.0	10.6
<b>Current Form Total</b>	<b>10.6</b>	<b>0.0</b>	<b>10.6</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	13.3	0.0	13.3
<b>Final Form Total</b>	<b>13.3</b>	<b>0.0</b>	<b>13.3</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	478.69
Aluminum-based Metal/Alloys	64.94
Other Metal/Alloys	8.00
Other Inorganic Materials	32.10
Cellulose	78.38
Rubber	33.59
Plastic	79.87
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	21.15
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	4.46E+00
Np-237	3.89E-05
Pu-238	1.68E+01
Pu-239	3.29E+00
Pu-240	1.67E+00
Pu-241	1.35E+01
Pu-242	5.78E-05
Th-229	2.04E-12
Th-230	2.29E-07
Th-232	1.09E-06
U-233	2.40E-09
U-234	1.60E-03
U-235	9.73E-08
U-236	1.49E-06
U-238	2.69E-13

No Hazardous Waste Numbers Provided

TRUCON Code(s)  
125/225

**Waste Stream Description**

Typically, drums contain both combustible and noncombustible waste items. Combustible waste may include wood, plastics, paper, and rags. Noncombustible waste items may include metals, glass, concrete, and absorbed liquids. If present, boxes typically contain larger waste items (e.g., whole or sectioned glove boxes, ducting, and process vessels). Both drums and boxes may be used for disposal of high-efficiency particulate air filters. The waste is generated from R&D/R&D Laboratory Waste activities at the Argonne National Laboratory - East (IL).

Waste Stream ID: **RLBART-08**

**Appendix A**  
**Waste Profile Report**

Site	Hanford (Richland) Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	RH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2015		
Stream Name	Bartlesville RH-TRU Mixed Debris	Activity Concentrations Decayed to CY			2015		

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

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

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

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	253.04
Aluminum-based Metal/Alloys	39.95
Other Metal/Alloys	0.00
Other Inorganic Materials	19.54
Cellulose	48.01
Rubber	20.49
Plastic	49.16
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	7.03
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	45.67
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	7.10E-01
Np-237	8.05E-06
Pu-238	6.64E-07
Pu-239	5.41E-06
Pu-240	2.62E-06
Pu-241	5.82E-06
Pu-242	7.57E-10
Th-229	6.00E-13
Th-230	1.19E-14
Th-232	2.22E-21
U-233	6.00E-10
U-234	7.31E-11
U-235	1.81E-13
U-236	2.64E-12
U-238	3.99E-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	12/31/2015		
Stream Name	Battelle Columbus TRU Mixed Debris			Activity Concentrations Decayed to CY	2015		

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	13.3	0.0	13.3
85-gal Drum Dir Ld w/ Liner	3.9	0.0	3.9
Box - Misc	20.4	0.0	20.4
<b>Current Form Total</b>	<b>37.6</b>	<b>0.0</b>	<b>37.6</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	18.7	0.0	18.7
SWB Dir Ld w/ Liner	26.5	0.0	26.5
<b>Final Form Total</b>	<b>45.2</b>	<b>0.0</b>	<b>45.2</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	561.11
Aluminum-based Metal/Alloys	118.24
Other Metal/Alloys	0.00
Other Inorganic Materials	35.60
Cellulose	42.97
Rubber	16.03
Plastic	50.31
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	7.58
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	16.06
Packaging Material, Rubber	0.35
Packaging Material, Steel	144.05
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.81E-01
Np-237	3.10E-05
Pu-238	2.51E+00
Pu-239	2.43E-01
Pu-240	9.22E-02
Pu-241	1.72E+00
Pu-242	5.22E-06
Th-229	1.45E-13
Th-230	1.86E-08
Th-232	1.16E-07
U-233	6.58E-10
U-234	4.22E-04
U-235	1.46E-05
U-236	1.36E-08
U-238	1.24E-05

**Haz. Waste No(s).**

D005, D006, D007, D008, D009, D011, F001, F002, F003, F005
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**TRUCON Code(s)**

125/225
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**Waste Stream Description**

Typically, drums contain both combustible and noncombustible waste items. Combustible waste may include wood, plastics, paper, and rags. Noncombustible waste items may include metals, glass, concrete, and absorbed liquids. If present, boxes typically contain larger waste items (e.g., whole or sectioned glove boxes, ducting, and process vessels). Both drums and boxes may be used for disposal of high-efficiency particulate air filters.

Waste Stream ID: **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	12/31/2015	
Stream Name	BATCO TRU RH Mixed Debris				Activity Concentrations Decayed to CY	2015	

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	4.2	0.0	4.2
Box - Misc	0.6	0.0	0.6
<b>Current Form Total</b>	<b>4.7</b>	<b>0.0</b>	<b>4.7</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	6.9	0.0	6.9
<b>Final Form Total</b>	<b>6.9</b>	<b>0.0</b>	<b>6.9</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	1492.62
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	13.33
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	0.00
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	45.67
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	6.93E-01
Am-243	4.18E-03
Cm-244	2.76E-01
Cs-137	8.34E+00
Np-237	2.68E-06
Pu-238	4.91E-01
Pu-239	6.98E-02
Pu-240	1.14E-01
Pu-241	4.89E+00
Pu-242	3.04E-04
Sr-90	5.37E+00
Th-229	2.15E-12
Th-230	8.26E-09
Th-232	7.40E-15
U-233	1.93E-09
U-234	7.84E-05
U-235	2.76E-06
U-236	1.16E-05
U-238	5.34E-05

**Haz. Waste No(s).**

D006, D008, P015

**TRUCON Code(s)**

325

**Waste Stream Description**

Typically, drums contain metals. If present, boxes typically contain larger waste items (e.g., whole or sectioned glove boxes, ducting, and process vessels). Both drums and boxes may be used for disposal of high-efficiency particulate air filters.

Waste Stream ID: **RLBET-08**

**Appendix A**  
**Waste Profile Report**

Site	Hanford (Richland) Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	RH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2015	
Stream Name	Bettis TRU Non-Mixed Debris			Activity Concentrations Decayed to CY	2015		

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

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

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

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	108.39
Aluminum-based Metal/Alloys	17.08
Other Metal/Alloys	0.00
Other Inorganic Materials	8.44
Cellulose	20.62
Rubber	8.84
Plastic	21.01
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	2.95
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	45.67
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	9.04E-03
Cs-137	1.39E-04
Np-237	1.14E-08
Pu-238	3.23E-03
Pu-239	1.58E-02
Pu-240	8.87E-03
Pu-241	7.81E-02
Pu-242	3.53E-07
Sr-90	1.26E-04
Th-229	1.12E-17
Th-230	9.49E-09
Th-232	1.04E-19
U-233	9.58E-14
U-234	2.58E-04
U-235	9.47E-06
U-236	1.05E-09
U-238	1.00E-07

No Hazardous Waste Numbers Provided

TRUCON Code(s)  
325

**Waste Stream Description**

Typically, drums contain both combustible and noncombustible waste items. Combustible waste may include wood, plastics, paper, and rags. Noncombustible waste items may include metals, glass, concrete, and absorbed liquids. Drums may be used for disposal of high-efficiency particulate air filters.

Waste Stream ID: **RLBW-01**

**Appendix A**  
**Waste Profile Report**

Site	Hanford (Richland) Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Remediation/D&D Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2015	
Stream Name	Babcock and Wilcox TRU Mixed Debris				Activity Concentrations Decayed to CY	2015	

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	18.5	0.0	18.5
85-gal Drum Dir Ld w/ Liner	29.3	0.0	29.3
Box - Misc	127.5	0.0	127.5
<b>Current Form Total</b>	<b>175.3</b>	<b>0.0</b>	<b>175.3</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	43.7	0.0	43.7
SWB Dir Ld w/ Liner	160.7	0.0	160.7
<b>Final Form Total</b>	<b>204.3</b>	<b>0.0</b>	<b>204.3</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	48.08
Aluminum-based Metal/Alloys	0.21
Other Metal/Alloys	4.84
Other Inorganic Materials	31.92
Cellulose	23.25
Rubber	4.97
Plastic	25.30
Cement	0.00
Solidified Inorganic Material	0.82
Solidified Organic Material	0.14
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	8.87
Packaging Material, Rubber	0.27
Packaging Material, Steel	148.59
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.57E+00
Am-243	8.83E-08
Cs-137	3.31E-04
Np-237	1.09E-05
Pu-238	3.49E-01
Pu-239	2.02E+00
Pu-240	9.60E-01
Pu-241	1.16E+01
Pu-242	1.72E-04
Sr-90	2.99E-04
Th-229	5.53E-08
Th-230	1.63E-09
Th-232	1.12E-17
U-233	1.57E-04
U-234	4.63E-05
U-235	1.13E-06
U-236	1.14E-07
U-238	2.44E-05

**Haz. Waste No(s).**

D004, D005, D006, D007, D008, D009, D010, D011, D019, D030, D035, F001, F002, F003, F005

**TRUCON Code(s)**

125/225

**Waste Stream Description**

Combustible and noncombustible debris waste generated from operations and decontamination and decommissioning of the Babcock and Wilcox Parks Township Site Plutonium Facility. Combustible waste may include wood, plastics, paper, and rags. Noncombustible waste may include metals, glass, concrete, and absorbed liquids.

Waste Stream ID: **RLBW-03**

**Appendix A**  
**Waste Profile Report**

Site	Hanford (Richland) Site	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Remediation/D&D Waste	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2015	
Stream Name	Babcock & Wilcox solidified inorganics			Activity Concentrations Decayed to CY	2015		

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	1.9	0.0	1.9
85-gal Drum Dir Ld w/ Liner	1.6	0.0	1.6
<b>Current Form Total</b>	<b>3.5</b>	<b>0.0</b>	<b>3.5</b>

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

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	3.75
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	534.38
Cellulose	0.00
Rubber	0.00
Plastic	14.98
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	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	3.46E+00
Cs-137	1.85E-07
Np-237	1.98E-05
Pu-238	7.03E-01
Pu-239	3.80E+00
Pu-240	1.93E+00
Pu-241	2.46E+01
Pu-242	3.11E-04
Sr-90	1.70E-07
Th-229	7.56E-14
Th-230	4.40E-09
Th-232	3.53E-17
U-233	3.63E-10
U-234	1.01E-04
U-235	2.85E-06
U-236	2.86E-07
U-238	4.62E-05

**Haz. Waste No(s).**

D005, D006, D007,  
D008, D009, D011,  
D035, F001, F002,  
F003, F005

**TRUCON Code(s)**

122/222

**Waste Stream Description**

Solidified inorganic CH TRU waste generated from operations and decontamination and decommissioning of the Babcock and Wilcox Parks Township Site Plutonium Facility.

Waste Stream ID: **RLBW-08**

**Appendix A**  
**Waste Profile Report**

Site	Hanford (Richland) Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	RH
Source Cat.	Remediation/D&D Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2015	
Stream Name	Babcock and Wilcox TRU RH Mixed Debris				Activity Concentrations Decayed to CY	2015	

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.2	0.0	0.2
85-gal Drum Dir Ld w/ Liner	0.3	0.0	0.3
<b>Current Form Total</b>	<b>0.5</b>	<b>0.0</b>	<b>0.5</b>

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

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	4.08
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.20
Other Inorganic Materials	2.04
Cellulose	27.35
Rubber	0.31
Plastic	18.37
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	45.67
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	8.32E-01
Np-237	2.00E-06
Pu-238	1.50E-01
Pu-239	6.09E-01
Pu-240	3.44E-01
Pu-241	9.00E+00
Pu-242	1.39E-05
Th-229	7.71E-15
Th-230	1.30E-10
Th-232	1.61E-17
U-233	3.34E-11
U-234	3.50E-06
U-235	4.80E-09
U-236	8.14E-08
U-238	1.72E-14

**Haz. Waste No(s).**

D005, D006, D007,  
D008, D009, D011,  
F001, F002, F003,  
F005

**TRUCON Code(s)**

325

**Waste Stream Description**

Combustible and noncombustible debris waste generated from operations and decontamination and decommissioning of the Babcock and Wilcox Parks Township Site Plutonium Facility. Combustible waste may include wood, plastics, paper, and rags. Noncombustible waste may include metals, glass, concrete, and absorbed liquids.



Waste Stream ID: **RLCFF-01**

**Appendix A**  
**Waste Profile Report**

Site	Hanford (Richland) Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2015		
Stream Name	Kerr McGee TRU Mixed Debris				Activity Concentrations Decayed to CY	2015	

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	1.2	0.0	1.2
85-gal Drum Dir Ld w/ Liner	2.6	0.0	2.6
<b>Current Form Total</b>	<b>3.8</b>	<b>0.0</b>	<b>3.8</b>

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

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	546.53
Aluminum-based Metal/Alloys	2.55
Other Metal/Alloys	0.54
Other Inorganic Materials	54.92
Cellulose	61.46
Rubber	13.31
Plastic	87.05
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.13
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.17E+00
Cs-137	9.27E-08
Np-237	3.87E-06
Pu-238	4.07E-01
Pu-239	2.55E+00
Pu-240	1.29E+00
Pu-241	1.48E+01
Pu-242	2.10E-04
Sr-90	8.36E-08
Th-229	7.35E-15
Th-230	8.94E-10
Th-232	5.55E-09
U-233	4.56E-11
U-234	2.24E-05
U-235	5.88E-07
U-236	1.91E-07
U-238	1.54E-05

**Haz. Waste No(s).**

D007, D008, D009, D040, F001, F002, F003
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**TRUCON Code(s)**

125/225
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**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	12/31/2015	
Stream Name	Kerr McGee TRU Mixed Solid Inorganic				Activity Concentrations Decayed to CY	2015	

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	4.8	0.0	4.8
<b>Current Form Total</b>	<b>4.8</b>	<b>0.0</b>	<b>4.8</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	4.8	0.0	4.8
<b>Final Form Total</b>	<b>4.8</b>	<b>0.0</b>	<b>4.8</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	32.39
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	23.23
Other Inorganic Materials	475.93
Cellulose	8.57
Rubber	1.03
Plastic	35.60
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.24E+00
Np-237	1.96E-06
Pu-238	3.62E+00
Pu-239	1.50E+00
Pu-240	7.36E-01
Pu-241	8.25E+00
Pu-242	9.30E-05
Th-229	3.03E-15
Th-230	1.70E-09
Th-232	1.34E-17
U-233	2.07E-11
U-234	6.29E-05
U-235	4.85E-07
U-236	1.09E-07
U-238	1.02E-05

**Haz. Waste No(s).**D007, D008, D009,  
F001, F002, F003**TRUCON Code(s)**

122/222

**Waste Stream Description**

Waste generated from R&amp;D/R&amp;D Laboratory Waste activities at the Kerr McGee.

Waste Stream ID: **RLCH2-01**

**Appendix A**  
**Waste Profile Report**

Site	Hanford (Richland) Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Remediation/D&D Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2015	
Stream Name	Tank Farms TRU Mixed Debris			Activity Concentrations Decayed to CY		2015	

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.2	0.0	0.2
SWB Dir Ld w/ Liner	1.9	0.0	1.9
Uncontained	0.0	7.7	7.7
<b>Current Form Total</b>	<b>2.1</b>	<b>7.7</b>	<b>9.8</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.2	7.9	8.1
SWB Dir Ld w/ Liner	1.9	0.0	1.9
<b>Final Form Total</b>	<b>2.1</b>	<b>7.9</b>	<b>10.0</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	21.50
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	19.01
Other Inorganic Materials	11.06
Cellulose	1.61
Rubber	0.01
Plastic	1.90
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	30.29
Packaging Material, Rubber	0.50
Packaging Material, Steel	135.05
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.38E-02
Cs-137	1.79E-01
Np-237	2.22E-08
Pu-238	1.26E-03
Pu-239	9.63E-03
Pu-240	2.47E-03
Pu-241	1.92E-02
Sr-90	7.93E-01
Th-229	3.31E-07
Th-230	4.27E-13
Th-232	4.51E-20
U-233	7.53E-04
U-234	1.84E-08
U-235	9.77E-07
U-236	3.66E-10
U-238	2.13E-05

**Haz. Waste No(s).**

D004, D006, D007, D008, D009, D010, F001, F002, F003, F004, F005

**TRUCON Code(s)**

125/225

**Waste Stream Description**

CH waste- Equipment removed from waste tanks (instrument trees, pumps, circulators, agitators, heaters, sluicers, steam coils, air lances, cameras). The waste stream ranges from contaminated clothing to process equipment contaminated with RCRA constituents.

Waste Stream ID: **RLCH2-09**

**Appendix A**  
**Waste Profile Report**

Site	Hanford (Richland) Site	Summary Category	S3000	Defense Determination	Defense-Related	Handling	RH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Solidified Organics		Inventory Date	12/31/2015	
Stream Name	Tank Farms Absorbed Oils				Activity Concentrations Decayed to CY	2015	

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

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

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

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	0.00
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.72
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	0.00
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	36.35
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	45.67
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.48E-03
Cs-137	1.68E-01
Np-237	1.61E-09
Pu-238	3.58E-05
Pu-239	1.15E-03
Pu-240	2.47E-04
Sr-90	1.59E+00
Th-229	4.11E-19
Th-230	1.88E-15
Th-232	7.21E-22
U-233	7.00E-15
U-234	2.04E-10
U-235	2.27E-12
U-236	1.46E-11

**Haz. Waste No(s).**

D007, F001, F002, F003, F004, F005

**TRUCON Code(s)**

314

**Waste Stream Description**

Solidified organic waste generated during Tank Farms operations.

Waste Stream ID: **RLESG-01**

**Appendix A**  
**Waste Profile Report**

Site	Hanford (Richland) Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2015		
Stream Name	Energy Systems Group TRU Mixed Debris	Activity Concentrations Decayed to CY			2015		

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	13.1	0.0	13.1
85-gal Drum Dir Ld w/ Liner	3.5	0.0	3.5
Box - Misc	14.9	0.0	14.9
<b>Current Form Total</b>	<b>31.5</b>	<b>0.0</b>	<b>31.5</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	16.8	0.0	16.8
SWB Dir Ld w/ Liner	18.9	0.0	18.9
<b>Final Form Total</b>	<b>35.7</b>	<b>0.0</b>	<b>35.7</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	228.99
Aluminum-based Metal/Alloys	0.68
Other Metal/Alloys	7.31
Other Inorganic Materials	30.12
Cellulose	28.62
Rubber	19.12
Plastic	38.84
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	18.10
Packaging Material, Rubber	0.37
Packaging Material, Steel	142.75
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	7.44E-01
Cs-137	3.00E-03
Np-237	6.99E-06
Pu-238	1.06E-01
Pu-239	6.57E-01
Pu-240	2.99E-01
Pu-241	4.05E+00
Pu-242	5.57E-05
Sr-90	2.44E-03
Th-229	1.90E-14
Th-230	3.82E-08
Th-232	2.51E-07
U-233	1.10E-10
U-234	1.04E-03
U-235	2.65E-05
U-236	3.54E-08
U-238	2.59E-05

**Haz. Waste No(s).**D006, D007, D008,  
F001, F002, F003**TRUCON Code(s)**

125/225

**Waste Stream Description**

RLETECD waste is composed of heterogeneous debris consisting of organic and inorganic debris material generated from glove box operations at the Energy Technology Engineering Center. Examples of waste items in this waste stream include cardboard tubes, cladding material, plastic, paper, glove port flanges, rubber air hoses, electrical connectors, wooden broom handles, plexiglas windows, steel plates, glove box ventilation piping and valves, lead, stainless steel, nickel-cadmium batteries, paint brushes and rollers, full-face respirators, sphincter cans, tools, copper, poly bottles, shoe covers, aluminum, vermiculite, soda ash, mixer components, glass, rags, molybdenum plates, drying ovens, MOX ash, gloves, fittings, gas line hookups, balance weights, cloth, pumps, castings, small quantities of neutralized/solidified liquids, and concrete.

Waste Stream ID: RLESG-03

**Appendix A**  
**Waste Profile Report**

Site	Hanford (Richland) Site	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2015	
Stream Name	Energy Systems Group TRU Solid Inorganics			Activity Concentrations Decayed to CY	2015		

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

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

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

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	29.72
Aluminum-based Metal/Alloys	29.72
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	29.72
Rubber	29.72
Plastic	29.72
Cement	22.43
Solidified Inorganic Material	62.50
Solidified Organic Material	0.00
Soil	126.03
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.21E-02
Cs-137	3.40E-03
Np-237	1.37E-08
Pu-238	5.26E-03
Pu-239	1.58E-01
Pu-240	3.88E-02
Pu-241	4.75E-01
Pu-242	2.54E-06
Sr-90	3.08E-03
Th-229	1.25E-17
Th-230	1.12E-12
Th-232	4.54E-19
U-233	1.10E-13
U-234	6.04E-08
U-235	6.23E-10
U-236	4.60E-09
U-238	1.58E-15

No Hazardous Waste Numbers Provided

TRUCON Code(s)  
122/222

**Waste Stream Description**

Absorbed/solidified liquids from operations and decommissioning of the Nuclear Materials Development Facility.

Waste Stream ID: **RLESG-08**

**Appendix A**  
**Waste Profile Report**

Site	Hanford (Richland) Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	RH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2015		
Stream Name	Energy Systems Group RH TRU Mixed Debris	Activity Concentrations Decayed to CY			2015		

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	12.9	0.0	12.9
85-gal Drum Dir Ld w/ Liner	9.0	0.0	9.0
<b>Current Form Total</b>	<b>21.9</b>	<b>0.0</b>	<b>21.9</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	23.7	0.0	23.7
<b>Final Form Total</b>	<b>23.7</b>	<b>0.0</b>	<b>23.7</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	6.97
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	33.18
Other Inorganic Materials	3.14
Cellulose	83.05
Rubber	9.84
Plastic	44.74
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	45.67
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.14E-01
Cs-137	7.49E-02
Np-237	2.68E-07
Pu-238	3.69E-02
Pu-239	1.62E-01
Pu-240	8.78E-02
Pu-241	2.36E+00
Pu-242	3.38E-06
Sr-90	2.29E-02
Th-229	2.62E-16
Th-230	7.82E-12
Th-232	1.03E-18
U-233	2.25E-12
U-234	4.23E-07
U-235	6.37E-10
U-236	1.04E-08
U-238	2.10E-15

**Haz. Waste No(s).**D006, D007, D008,  
F001, F002, F003**TRUCON Code(s)**

325

**Waste Stream Description**

Typically, drums contain both combustible and noncombustible waste items. Combustible waste may include wood, plastics, paper, and rags. Noncombustible waste items may include metals, glass, concrete, and absorbed liquids. If present, boxes typically contain larger waste items (e.g., whole or sectioned glove boxes, ducting, and process vessels). Both drums and boxes may be used for disposal of high-efficiency particulate air filters. The waste is generated from R&D/R&D Laboratory Waste activities at the Rockwell International, Energy Systems Group (CA).

Waste Stream ID: **RLEXX-01**

**Appendix A**  
**Waste Profile Report**

Site	Hanford (Richland) Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2015		
Stream Name	Exxon TRU Mixed Debris	Activity Concentrations Decayed to CY			2015		

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	42.8	0.0	42.8
85-gal Drum Dir Ld w/ Liner	1.3	0.0	1.3
<b>Current Form Total</b>	<b>44.1</b>	<b>0.0</b>	<b>44.1</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	129.8	0.0	129.8
<b>Final Form Total</b>	<b>129.8</b>	<b>0.0</b>	<b>129.8</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	40.00
Aluminum-based Metal/Alloys	0.16
Other Metal/Alloys	7.91
Other Inorganic Materials	25.93
Cellulose	4.75
Rubber	1.09
Plastic	5.08
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.32E+00
Np-237	9.60E-06
Pu-238	9.19E-01
Pu-239	5.93E-01
Pu-240	5.06E-01
Pu-241	1.29E+01
Pu-242	6.16E-04
Th-229	2.27E-14
Th-230	2.32E-09
Th-232	5.92E-18
U-233	1.38E-10
U-234	6.82E-05
U-235	7.62E-07
U-236	5.99E-08
U-238	3.04E-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	12/31/2015	
Stream Name	FFTF TRU Non-Mixed Debris			Activity Concentrations Decayed to CY	2015		

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

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

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

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	116.67
Aluminum-based Metal/Alloys	0.47
Other Metal/Alloys	23.06
Other Inorganic Materials	75.63
Cellulose	13.85
Rubber	3.19
Plastic	1.54
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.19E-02
Cs-137	1.02E-02
Np-237	1.52E-08
Pu-238	3.38E-03
Pu-239	1.06E-02
Pu-240	9.15E-03
Pu-241	7.72E-02
Sr-90	6.86E-03
Th-229	1.49E-17
Th-230	7.16E-13
Th-232	1.07E-19
U-233	1.28E-13
U-234	3.87E-08
U-235	4.19E-11
U-236	1.08E-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	12/31/2015	
Stream Name	FFTF RH-TRU Non-Mixed Debris			Activity Concentrations Decayed to CY	2015		

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
85-gal Drum Dir Ld w/ Liner	0.3	0.0	0.3
<b>Current Form Total</b>	<b>0.3</b>	<b>0.0</b>	<b>0.3</b>

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

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	2.64
Aluminum-based Metal/Alloys	0.01
Other Metal/Alloys	0.52
Other Inorganic Materials	1.71
Cellulose	0.31
Rubber	0.07
Plastic	0.33
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	45.67
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	4.52E-03
Am-243	2.66E-11
Cs-137	7.77E-01
Np-237	8.31E-09
Pu-238	1.21E-03
Pu-239	3.77E-03
Pu-240	3.24E-03
Pu-241	4.95E-02
Sr-90	8.32E-04
Th-229	1.82E-17
Th-230	5.83E-13
Th-232	8.51E-20
U-233	1.05E-13
U-234	2.10E-08
U-235	2.23E-11
U-236	5.75E-10

No Hazardous Waste Numbers Provided

TRUCON Code(s)  
325

**Waste Stream Description**

Combustible and noncombustible debris from Fast Flux Test Reactor operations, maintenance, and clean out. Combustible waste may include wood, plastics, paper, and rags. Noncombustible waste may include metals, glass, concrete, and absorbed liquids.

Waste Stream ID: **RLGEV-01**

**Appendix A**  
**Waste Profile Report**

Site	Hanford (Richland) Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Remediation/D&D Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2015	
Stream Name	GE San Jose and Vallecitos TRU Mixed Debris				Activity Concentrations Decayed to CY	2015	

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	16.8	0.0	16.8
85-gal Drum Dir Ld w/ Liner	8.4	0.0	8.4
Box - Misc	147.2	0.0	147.2
SWB Dir Ld w/ Liner	15.1	0.0	15.1
<b>Current Form Total</b>	<b>187.5</b>	<b>0.0</b>	<b>187.5</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	23.9	0.0	23.9
SWB Dir Ld w/ Liner	200.3	0.0	200.3
<b>Final Form Total</b>	<b>224.3</b>	<b>0.0</b>	<b>224.3</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	231.42
Aluminum-based Metal/Alloys	0.26
Other Metal/Alloys	4.60
Other Inorganic Materials	24.63
Cellulose	20.70
Rubber	5.14
Plastic	51.89
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	5.03
Packaging Material, Rubber	0.23
Packaging Material, Steel	151.02
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	5.03E-01
Cs-137	1.25E-07
Np-237	2.66E-06
Pu-238	1.16E-01
Pu-239	6.31E-01
Pu-240	2.75E-01
Pu-241	3.85E+00
Pu-242	4.35E-05
Sr-90	1.13E-07
Th-229	6.65E-15
Th-230	1.10E-08
Th-232	3.22E-18
U-233	3.96E-11
U-234	2.99E-04
U-235	6.33E-06
U-236	3.26E-08
U-238	2.16E-04

**Haz. Waste No(s).**D006, D007, D008,  
D011, D035**TRUCON Code(s)**

125/225

**Waste Stream Description**

Combustible and noncombustible debris waste from decontamination and decommissioning of Building 102 at the GE-Vallecitos Nuclear Center. Combustible waste may include wood, plastics, paper, and rags. Noncombustible waste may include metals, glass, concrete, and absorbed liquids.

Waste Stream ID: **RLGEV-03**

**Appendix A**  
**Waste Profile Report**

Site	Hanford (Richland) Site	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Remediation/D&D Waste	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2015	
Stream Name	GE Vallecitos TRU Homogeneous Solids				Activity Concentrations Decayed to CY	2015	

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

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

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

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	4.72
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.24
Cellulose	5.42
Rubber	0.04
Plastic	9.41
Cement	0.00
Solidified Inorganic Material	427.04
Solidified Organic Material	6.56
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	4.81E+00
Cs-137	3.61E-08
Np-237	7.44E-06
Pu-238	9.38E-01
Pu-239	3.71E+00
Pu-240	2.09E+00
Pu-241	6.33E+01
Pu-242	8.45E-05
Sr-90	3.33E-08
Th-229	1.15E-14
Th-230	3.71E-10
Th-232	3.82E-17
U-233	7.84E-11
U-234	1.48E-05
U-235	6.11E-08
U-236	3.10E-07
U-238	6.41E-07

**Haz. Waste No(s).**D006, D007, D008,  
D011, D035**TRUCON Code(s)**

122/222

**Waste Stream Description**

Homogeneous solids from decontamination and decommissioning of Building 102 at the GE-Vallecitos Nuclear Center.

Waste Stream ID: **RLGEV-08**

**Appendix A**  
**Waste Profile Report**

Site	Hanford (Richland) Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	RH
Source Cat.	Remediation/D&D Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2015	
Stream Name	GE San Jose and Vallecitos TRU RH Non-Mixed Debris				Activity Concentrations Decayed to CY	2015	

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
Box - Misc	5.3	0.0	5.3
<b>Current Form Total</b>	<b>5.3</b>	<b>0.0</b>	<b>5.3</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	6.9	0.0	6.9
<b>Final Form Total</b>	<b>6.9</b>	<b>0.0</b>	<b>6.9</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	1062.29
Aluminum-based Metal/Alloys	167.73
Other Metal/Alloys	0.00
Other Inorganic Materials	82.01
Cellulose	201.53
Rubber	86.00
Plastic	206.38
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	29.52
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	45.67
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.72E+00
Cs-137	1.25E+00
Np-237	1.82E-05
Pu-238	7.00E-02
Pu-239	9.17E+01
Pu-240	9.54E+00
Pu-241	1.66E-01
Pu-242	3.86E-01
Sr-90	9.34E-01
Th-229	1.20E-12
Th-230	1.10E-09
Th-232	7.15E-15
U-233	1.27E-09
U-234	7.19E-06
U-235	2.89E-06
U-236	9.05E-06
U-238	1.92E-09

No Hazardous Waste Numbers Provided

TRUCON Code(s)  
325

**Waste Stream Description**

Combustible and noncombustible debris waste from decontamination and decommissioning of Building 102 at the GE-Vallecitos Nuclear Center. Combustible waste may include wood, plastics, paper, and rags. Noncombustible waste may include metals, glass, concrete, and absorbed liquids.

Waste Stream ID: **RLHAN-01**

**Appendix A**  
**Waste Profile Report**

Site	Hanford (Richland) Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Other/Multiple Sources	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2015	
Stream Name	Trench Designation waste stream				Activity Concentrations Decayed to CY	2015	

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	76.3	0.0	76.3
85-gal Drum Dir Ld w/ Liner	107.2	0.0	107.2
Box - Misc	248.6	0.0	248.6
SWB Dir Ld w/ Liner	5.7	0.0	5.7
SWB w/ 4 - 55-gal Drums w/ Liners	172.0	0.0	172.0
<b>Current Form Total</b>	<b>609.8</b>	<b>0.0</b>	<b>609.8</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	163.3	0.0	163.3
SWB Dir Ld w/ Liner	412.0	0.0	412.0
<b>Final Form Total</b>	<b>575.3</b>	<b>0.0</b>	<b>575.3</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	26.54
Aluminum-based Metal/Alloys	0.09
Other Metal/Alloys	6.27
Other Inorganic Materials	8.75
Cellulose	22.92
Rubber	7.90
Plastic	27.51
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	11.38
Packaging Material, Rubber	0.30
Packaging Material, Steel	147.01
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	5.03E-01
Cs-137	8.76E-08
Np-237	1.75E-06
Pu-238	7.45E-02
Pu-239	7.93E-01
Pu-240	2.77E-01
Pu-241	2.31E+00
Pu-242	4.16E-05
Sr-90	7.90E-08
Th-229	5.66E-15
Th-230	2.48E-11
Th-232	5.05E-18
U-233	2.86E-11
U-234	1.07E-06
U-235	3.91E-09
U-236	4.10E-08
U-238	3.23E-14

**Haz. Waste No(s).**

D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D022, D027, D028, D029, D030, D032, D033, D034, D035, D037, D038, D043, F001, F002, F003, F004, F005
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**TRUCON Code(s)**

125/225
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**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	12/31/2015	
Stream Name	Trench Designation waste stream				Activity Concentrations Decayed to CY	2015	

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

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

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

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	184.62
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	111.06
Cellulose	0.00
Rubber	0.00
Plastic	74.04
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.58E-01
Np-237	1.99E-07
Pu-238	1.84E-02
Pu-239	7.21E-02
Pu-240	4.07E-02
Pu-241	1.28E+00
Th-229	1.95E-16
Th-230	3.90E-12
Th-232	4.76E-19
U-233	1.67E-12
U-234	2.11E-07
U-235	2.84E-10
U-236	4.82E-09

**Haz. Waste No(s).**

D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D022, D027, D028, D029, D030, D034, D035, D037, D043, F001, F002, F003, F004, F005

**TRUCON Code(s)**

114/214

**Waste Stream Description**

Trench Designation waste stream

Waste Stream ID: **RLHAN-08**

**Appendix A**  
**Waste Profile Report**

Site	Hanford (Richland) Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	RH
Source Cat.	Other/Multiple Sources	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2015	
Stream Name	Trench Designation waste stream				Activity Concentrations Decayed to CY	2015	

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.2	0.0	0.2
Box - Misc	16.9	0.0	16.9
SWB Dir Ld w/ Liner	3.8	0.0	3.8
<b>Current Form Total</b>	<b>20.9</b>	<b>0.0</b>	<b>20.9</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	23.7	0.0	23.7
<b>Final Form Total</b>	<b>23.7</b>	<b>0.0</b>	<b>23.7</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	31.99
Aluminum-based Metal/Alloys	0.11
Other Metal/Alloys	7.45
Other Inorganic Materials	10.55
Cellulose	27.83
Rubber	9.42
Plastic	33.62
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	45.67
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.98E-01
Am-243	2.66E-06
Cs-137	6.00E-02
Np-237	3.28E-06
Pu-238	1.70E-02
Pu-239	1.77E-01
Pu-240	2.86E-02
Pu-241	9.00E-01
Pu-242	1.14E-06
Sr-90	4.55E-02
Th-229	2.97E-08
Th-230	3.61E-12
Th-232	3.34E-19
U-233	8.43E-05
U-234	1.95E-07
U-235	6.98E-10
U-236	3.38E-09
U-238	7.10E-16

**Haz. Waste No(s).**

D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D022, D027, D028, D029, D030, D034, D035, D037, D043, F001, F002, F003, F004, F005

**TRUCON Code(s)**

325

**Waste Stream Description**

Combustible and noncombustible RH-TRU debris waste retrieved from the Hanford low-level burial grounds that cannot be identified or assigned to an original generator. Combustible waste may include wood, plastics, paper, absorbents, rubber, and rags. Noncombustible waste may include failed machinery, tools, glass, concrete, plumbing, and fixtures.



Waste Stream ID: **RLIAEA-03**

**Appendix A**  
**Waste Profile Report**

Site	Hanford (Richland) Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	R&D/R&D Laboratory Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2015	
Stream Name	International Atomic Energy Agency TRU Non-Mixed Debris			Activity Concentrations Decayed to CY	2015		

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

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

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

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	552.00
Aluminum-based Metal/Alloys	87.00
Other Metal/Alloys	0.00
Other Inorganic Materials	43.00
Cellulose	105.00
Rubber	45.00
Plastic	107.00
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	15.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.90E+00
Cs-137	3.85E-05
Np-237	3.06E-06
Pu-238	9.84E-01
Pu-239	5.31E-01
Pu-240	6.82E-01
Pu-241	3.51E+00
Pu-242	1.01E-03
Sr-90	3.49E-05
Th-229	4.77E-15
Th-230	3.28E-10
Th-232	1.25E-17
U-233	3.25E-11
U-234	1.42E-05
U-235	2.62E-09
U-236	1.01E-07
U-238	7.81E-13

No Hazardous Waste Numbers Provided

TRUCON Code(s)  
122/222

**Waste Stream Description**

Typically, drums contain both combustible and noncombustible waste items. Combustible waste may include wood, plastics, paper, and rags. Noncombustible waste items may include metals, glass, concrete, and absorbed liquids.

Waste Stream ID: **RLMLB-08**

**Appendix A**  
**Waste Profile Report**

Site	Hanford (Richland) Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	RH
Source Cat.	R&D/R&D Laboratory Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2015	
Stream Name	Lawrence Berkeley Nat Lab TRU Mixed Debris			Activity Concentrations Decayed to CY	2015		

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

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

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

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	401.22
Aluminum-based Metal/Alloys	63.24
Other Metal/Alloys	0.00
Other Inorganic Materials	31.25
Cellulose	76.32
Rubber	32.71
Plastic	77.77
Cement	0.00
Solidified Inorganic Material	10.90
Solidified Organic Material	0.00
Soil	13.08
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	45.67
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.38E-01
Cm-244	1.82E+01
Np-237	1.32E-06
Pu-238	1.69E-02
Pu-239	8.34E-02
Pu-240	1.74E-01
Pu-241	3.69E-01
Pu-242	1.90E-06
Th-229	8.34E-14
Th-230	2.85E-10
Th-232	8.19E-17
U-233	8.93E-11
U-234	1.80E-06
U-235	2.71E-09
U-236	1.21E-07
U-238	9.73E-15

**Haz. Waste No(s).**

D005, D007, D008,  
D009, D011, D019,  
F002, F003, F005

**TRUCON Code(s)**

325

**Waste Stream Description**

Typically, drums contain both combustible and noncombustible waste items. Combustible waste may include wood, plastics, paper, and rags. Noncombustible waste items may include metals, glass, concrete, and absorbed liquids. Drums may be used for disposal of high-efficiency particulate air filters.

Waste Stream ID: **RLMLL-01**

**Appendix A**  
**Waste Profile Report**

Site	Hanford (Richland) Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	R&D/R&D Laboratory Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2015		
Stream Name	Lawrence Livermore TRU Mixed Debris	Activity Concentrations Decayed to CY			2015		

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.4	0.0	0.4
85-gal Drum Dir Ld w/ Liner	0.3	0.0	0.3
<b>Current Form Total</b>	<b>0.7</b>	<b>0.0</b>	<b>0.7</b>

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

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	393.83
Aluminum-based Metal/Alloys	62.07
Other Metal/Alloys	0.00
Other Inorganic Materials	30.68
Cellulose	74.91
Rubber	32.11
Plastic	76.34
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	10.70
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	8.40E-02
Np-237	1.03E-06
Pu-238	9.45E-03
Pu-239	5.00E-02
Pu-240	2.82E-02
Pu-241	1.43E-01
Pu-242	1.14E-06
Th-229	1.06E-13
Th-230	2.71E-10
Th-232	3.64E-17
U-233	8.92E-11
U-234	1.33E-06
U-235	2.07E-09
U-236	3.51E-08
U-238	7.43E-15

**Haz. Waste No(s).**

D006, D007, D008, D011

**TRUCON Code(s)**

125/225

**Waste Stream Description**

Typically, drums contain both combustible and noncombustible waste items. Combustible waste may include wood, plastics, paper, and rags. Noncombustible waste items may include metals, glass, concrete, and absorbed liquids.

Waste Stream ID: **RLP11-01**

**Appendix A**  
**Waste Profile Report**

Site	Hanford (Richland) Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Remediation/D&D Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2015	
Stream Name	P11 Criticality Facility TRU Mixed Debris			Activity Concentrations Decayed to CY		2015	

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
Box - Misc	51.2	0.0	51.2
<b>Current Form Total</b>	<b>51.2</b>	<b>0.0</b>	<b>51.2</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
SWB Dir Ld w/ Liner	64.3	0.0	64.3
<b>Final Form Total</b>	<b>64.3</b>	<b>0.0</b>	<b>64.3</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	22.61
Aluminum-based Metal/Alloys	11.34
Other Metal/Alloys	0.00
Other Inorganic Materials	22.61
Cellulose	11.28
Rubber	0.00
Plastic	11.28
Cement	11.34
Solidified Inorganic Material	0.10
Solidified Organic Material	0.10
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	1.20
Packaging Material, Rubber	0.19
Packaging Material, Steel	153.44
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	4.83E-02
Np-237	7.41E-08
Pu-238	9.43E-03
Pu-239	3.73E-02
Pu-240	2.11E-02
Pu-241	6.37E-01
Pu-242	8.49E-07
Th-229	1.12E-16
Th-230	3.14E-12
Th-232	3.84E-19
U-233	7.74E-13
U-234	1.36E-07
U-235	1.84E-10
U-236	3.12E-09
U-238	6.59E-16

**Haz. Waste No(s).**

D005, D006, D007

**TRUCON Code(s)**

125/225

**Waste Stream Description**

Misc. demolition debris.

Waste Stream ID: **RLPFP-01**

**Appendix A**  
**Waste Profile Report**

Site	Hanford (Richland) Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2015		
Stream Name	2345Z TRU Mixed Debris	Activity Concentrations Decayed to CY			2015		

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	1710.4	0.0	1710.4
85-gal Drum Dir Ld w/ Liner	173.6	0.0	173.6
Box - Misc	3972.1	0.0	3972.1
SLB2 Dir Ld	113.2	0.0	113.2
SWB Dir Ld w/ Liner	1268.2	0.0	1268.2
Uncontained	0.0	2943.4	2943.4
<b>Current Form Total</b>	<b>7237.4</b>	<b>2943.4</b>	<b>10180.8</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	2209.8	11.0	2220.8
SLB2 Dir Ld	113.2	996.2	1109.4
SWB Dir Ld w/ Liner	6002.6	1958.0	7960.7
<b>Final Form Total</b>	<b>8325.6</b>	<b>2965.2</b>	<b>11290.9</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	58.88
Aluminum-based Metal/Alloys	0.29
Other Metal/Alloys	1.27
Other Inorganic Materials	9.36
Cellulose	14.67
Rubber	8.31
Plastic	23.11
Cement	0.00
Solidified Inorganic Material	0.02
Solidified Organic Material	0.02
Soil	0.17
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	8.14
Packaging Material, Rubber	0.26
Packaging Material, Steel	155.08
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.06E+00
Am-243	1.38E-05
Cs-137	9.22E-01
Np-237	1.04E-05
Pu-238	4.61E-01
Pu-239	1.10E+00
Pu-240	4.95E-01
Pu-241	8.56E+00
Pu-242	1.93E-04
Sr-90	1.15E-04
Th-229	6.25E-09
Th-230	6.10E-06
Th-232	9.46E-07
U-233	1.78E-05
U-234	1.66E-01
U-235	9.26E-07
U-236	5.86E-08
U-238	1.50E-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.

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	12/31/2015	
Stream Name	PFP Absorbed Plutonium Nitrate Solutions			Activity Concentrations Decayed to CY	2015		

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	13.9	0.0	13.9
85-gal Drum Dir Ld w/ Liner	0.6	0.0	0.6
<b>Current Form Total</b>	<b>14.6</b>	<b>0.0</b>	<b>14.6</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	15.2	0.0	15.2
<b>Final Form Total</b>	<b>15.2</b>	<b>0.0</b>	<b>15.2</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	3.34
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.01
Other Inorganic Materials	0.23
Cellulose	3.95
Rubber	0.04
Plastic	11.12
Cement	0.00
Solidified Inorganic Material	396.63
Solidified Organic Material	18.94
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	7.42E+00
Cs-137	3.63E-06
Np-237	4.56E-05
Pu-238	1.83E+00
Pu-239	1.44E+01
Pu-240	4.48E+00
Pu-241	5.30E+01
Pu-242	8.31E-04
Sr-90	3.28E-06
Th-229	1.17E-13
Th-230	4.00E-08
Th-232	5.24E-17
U-233	6.93E-10
U-234	1.10E-03
U-235	5.42E-06
U-236	5.31E-07
U-238	4.39E-05

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

114/214

**Waste Stream Description**

Solidified inorganic waste generated from operations, maintenance, and D&D activities at the 325 Laboratory, the 209-E Critical Mass Laboratory, and the Plutonium Reclamation Facility (Bldg. 236-Z) at the Plutonium Finishing Plant (PFP).

Waste Stream ID: **RLPFP-04**

**Appendix A**  
**Waste Profile Report**

Site	Hanford (Richland) Site	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Solidified Organics		Inventory Date	12/31/2015	
Stream Name	PFP Comprehensive Homogenous Solids				Activity Concentrations Decayed to CY	2015	

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	20.8	0.0	20.8
85-gal Drum Dir Ld w/ Liner	2.3	0.0	2.3
<b>Current Form Total</b>	<b>23.1</b>	<b>0.0</b>	<b>23.1</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	25.0	0.0	25.0
<b>Final Form Total</b>	<b>25.0</b>	<b>0.0</b>	<b>25.0</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	14.08
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.39
Other Inorganic Materials	0.00
Cellulose	9.18
Rubber	0.18
Plastic	13.05
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	70.79
Soil	0.32
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.95E+00
Cs-137	9.28E-05
Np-237	2.81E-05
Pu-238	6.37E-01
Pu-239	7.46E+00
Pu-240	2.11E+00
Pu-241	2.59E+01
Pu-242	2.49E-04
Sr-90	8.39E-05
Th-229	7.64E-14
Th-230	5.53E-09
Th-232	2.46E-17
U-233	4.45E-10
U-234	1.54E-04
U-235	4.92E-06
U-236	2.50E-07
U-238	7.33E-05

**Haz. Waste No(s).**

D004, D005, D006, D007, D008, D009, D010, D011, D019, D022, D030, D032, D033, F001, F002, F003, F005

**TRUCON Code(s)**

112/212

**Waste Stream Description**

Homogenous solids generated from operations, maintenance, and D&D activities at the Plutonium Finishing Plant (PFP), which includes the 234-SZ, 232-Z, 236-Z, 2736-ZB, 242-Z, and 291-Z Buildings.

Waste Stream ID: **RLPFP-08**

**Appendix A**  
**Waste Profile Report**

Site	Hanford (Richland) Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	RH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2015	
Stream Name	2345Z RH-TRU Mixed Debris			Activity Concentrations Decayed to CY		2015	

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	18.7	0.0	18.7
85-gal Drum Dir Ld w/ Liner	7.7	0.0	7.7
<b>Current Form Total</b>	<b>26.4</b>	<b>0.0</b>	<b>26.4</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	30.0	0.0	30.0
<b>Final Form Total</b>	<b>30.0</b>	<b>0.0</b>	<b>30.0</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	33.30
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	20.38
Other Inorganic Materials	17.18
Cellulose	4.71
Rubber	9.20
Plastic	25.68
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	45.67
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.70E+00
Cs-137	4.89E-06
Np-237	1.10E-05
Pu-238	4.04E-01
Pu-239	2.31E+00
Pu-240	8.46E-01
Pu-241	1.51E+01
Pu-242	1.59E-04
Sr-90	4.42E-06
Th-229	2.86E-14
Th-230	4.04E-10
Th-232	1.00E-17
U-233	1.69E-10
U-234	1.33E-05
U-235	2.99E-07
U-236	1.01E-07
U-238	5.72E-07

**Haz. Waste No(s).**

D004, D005, D006, D007, D008, D009, D010, D011, D019, D022, D030, F001, F002, F003, F004, F005

**TRUCON Code(s)**

325

**Waste Stream Description**

Combustible and noncombustible debris waste generated from operations, maintenance, and D&D activities at the Plutonium Finishing Plant (PFP), which includes the 234-5Z, 232-Z, 236-Z, 2736-ZB, 242-Z, and 291-Z Buildings. Combustible waste may include wood, plastics, paper, and rags. Noncombustible waste items may include metals, glass, concrete, and absorbed liquids.



Waste Stream ID: **RLPURX-01**

**Appendix A**  
**Waste Profile Report**

Site	Hanford (Richland) Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2015		
Stream Name	202A and 202AL TRU Mixed Debris			Activity Concentrations Decayed to CY	2015		

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	306.6	0.0	306.6
85-gal Drum Dir Ld w/ Liner	2.9	0.0	2.9
Box - Misc	255.4	0.0	255.4
SWB Dir Ld w/ Liner	7.6	0.0	7.6
<b>Current Form Total</b>	<b>572.5</b>	<b>0.0</b>	<b>572.5</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	385.6	0.0	385.6
SWB Dir Ld w/ Liner	327.0	0.0	327.0
<b>Final Form Total</b>	<b>712.6</b>	<b>0.0</b>	<b>712.6</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	37.86
Aluminum-based Metal/Alloys	0.14
Other Metal/Alloys	0.44
Other Inorganic Materials	11.76
Cellulose	15.16
Rubber	14.47
Plastic	25.62
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.01
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	20.61
Packaging Material, Rubber	0.40
Packaging Material, Steel	141.17
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	4.47E+00
Am-243	6.32E-07
Cs-137	1.42E-02
Np-237	1.43E-05
Pu-238	1.85E+00
Pu-239	9.83E+00
Pu-240	3.74E+00
Pu-241	1.01E+02
Pu-242	8.80E-04
Sr-90	1.28E-02
Th-229	8.20E-07
Th-230	5.91E-10
Th-232	4.38E-17
U-233	2.33E-03
U-234	2.66E-05
U-235	2.18E-07
U-236	4.43E-07
U-238	2.94E-06

**Haz. Waste No(s).**

D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D022, D027, D028, D029, D030, D034, D035, D037, D043, F001, F002, F003, F004, F005

**TRUCON Code(s)**

125/225

**Waste Stream Description**

Combustible and noncombustible debris waste generated from facility/equipment operation and maintenance, and analytical laboratory waste activities at the Plutonium Uranium Extraction Facility. Combustible waste may include wood, plastics, paper, and rags. Noncombustible waste may include metals, glass, concrete, and absorbed liquids.

Waste Stream ID: **RLPURX-08**

**Appendix A**  
**Waste Profile Report**

Site	Hanford (Richland) Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	RH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2015		
Stream Name	202A & 202AL TRU RH Mixed Debris			Activity Concentrations Decayed to CY	2015		

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	12.5	0.0	12.5
Box - Misc	11.5	0.0	11.5
<b>Current Form Total</b>	<b>24.0</b>	<b>0.0</b>	<b>24.0</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	31.8	0.0	31.8
<b>Final Form Total</b>	<b>31.8</b>	<b>0.0</b>	<b>31.8</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	21.10
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.53
Other Inorganic Materials	15.83
Cellulose	10.55
Rubber	35.88
Plastic	26.38
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	45.67
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	6.87E-02
Np-237	5.37E-07
Pu-238	2.77E-03
Pu-239	9.11E-03
Pu-240	2.17E-03
Pu-241	4.32E-01
Pu-242	1.19E-07
Th-229	2.87E-14
Th-230	6.00E-11
Th-232	2.18E-18
U-233	3.27E-11
U-234	3.36E-07
U-235	3.32E-10
U-236	2.38E-09
U-238	6.80E-16

**Haz. Waste No(s).**D004, D005, D006,  
D007, D008, D009,  
D010, D011**TRUCON Code(s)**

325

**Waste Stream Description**

Combustible and noncombustible debris waste generated from facility/equipment operation and maintenance, and analytical laboratory waste activities at the Plutonium Uranium Extraction Facility. Combustible waste may include wood, plastics, paper, and rags. Noncombustible waste may include metals, glass, concrete, and absorbed liquids.

Waste Stream ID: **RLRFET-01**

**Appendix A**  
**Waste Profile Report**

Site	Hanford (Richland) Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2015		
Stream Name	Rocky Flats TRU Mixed Debris	Activity Concentrations Decayed to CY			2015		

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	198.0	0.0	198.0
85-gal Drum Dir Ld w/ Liner	6.8	0.0	6.8
<b>Current Form Total</b>	<b>204.8</b>	<b>0.0</b>	<b>204.8</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	253.1	0.0	253.1
<b>Final Form Total</b>	<b>253.1</b>	<b>0.0</b>	<b>253.1</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	362.70
Aluminum-based Metal/Alloys	50.51
Other Metal/Alloys	15.18
Other Inorganic Materials	67.36
Cellulose	38.72
Rubber	9.19
Plastic	34.16
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.01
Soil	6.41
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	3.11E-01
Np-237	3.17E-06
Pu-238	3.33E-03
Pu-239	1.61E-02
Pu-240	9.10E-03
Pu-241	7.86E-02
Pu-242	3.68E-07
Th-229	1.95E-13
Th-230	4.89E-11
Th-232	6.40E-18
U-233	2.14E-10
U-234	3.30E-07
U-235	4.93E-10
U-236	8.36E-09
U-238	1.77E-15

No Hazardous Waste Numbers Provided

TRUCON Code(s)  
125/225

**Waste Stream Description**

Typically, drums contain both combustible and noncombustible waste items. Combustible waste may include wood, plastics, paper, and rags. Noncombustible waste items may include metals, glass, concrete, and absorbed liquids. If present, boxes typically contain larger waste items (e.g., whole or sectioned glove boxes, ducting, and process vessels). Both drums and boxes may be used for disposal of high-efficiency particulate air filters.

Waste Stream ID: **RLSAN-01**

**Appendix A**  
**Waste Profile Report**

Site	Hanford (Richland) Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Remediation/D&D Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2015	
Stream Name	GE San Jose TRU Mixed Debris				Activity Concentrations Decayed to CY	2015	

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	3.3	0.0	3.3
<b>Current Form Total</b>	<b>3.3</b>	<b>0.0</b>	<b>3.3</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	4.2	0.0	4.2
<b>Final Form Total</b>	<b>4.2</b>	<b>0.0</b>	<b>4.2</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	233.45
Aluminum-based Metal/Alloys	0.23
Other Metal/Alloys	5.58
Other Inorganic Materials	21.84
Cellulose	18.96
Rubber	4.64
Plastic	49.67
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.31E+01
Np-237	1.21E-04
Pu-238	1.62E+00
Pu-239	7.93E+00
Pu-240	4.47E+00
Pu-241	3.68E+01
Pu-242	1.79E-04
Th-229	7.21E-12
Th-230	2.55E-08
Th-232	3.35E-15
U-233	7.96E-09
U-234	1.67E-04
U-235	2.50E-07
U-236	4.24E-06
U-238	8.90E-13

No Hazardous Waste Numbers Provided

TRUCON Code(s)  
125/225

**Waste Stream Description**

Combustible and noncombustible debris waste from decontamination and decommissioning at the GE-San Jose Nuclear Center. Combustible waste may include wood, plastics, paper, and rags. Noncombustible waste may include metals, glass, concrete, and absorbed liquids.

Waste Stream ID: **RLSWO-01**

**Appendix A**  
**Waste Profile Report**

Site	Hanford (Richland) Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Other/Multiple Sources	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2015	
Stream Name	SWOC TRU Mixed Debris			Activity Concentrations Decayed to CY		2015	

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	33.9	0.0	33.9
85-gal Drum Dir Ld w/ Liner	13.5	0.0	13.5
Box - Misc	175.6	0.0	175.6
SWB Dir Ld w/ Liner	66.2	0.0	66.2
Uncontained	0.0	52.6	52.6
<b>Current Form Total</b>	<b>289.2</b>	<b>52.6</b>	<b>341.8</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	44.3	41.8	86.1
SWB Dir Ld w/ Liner	285.4	15.1	300.5
<b>Final Form Total</b>	<b>329.7</b>	<b>56.9</b>	<b>386.6</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	19.74
Aluminum-based Metal/Alloys	0.33
Other Metal/Alloys	0.58
Other Inorganic Materials	4.08
Cellulose	12.08
Rubber	43.23
Plastic	45.76
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.10
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	9.19
Packaging Material, Rubber	0.28
Packaging Material, Steel	148.39
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	3.87E-01
Am-243	5.85E-08
Cs-137	2.88E-05
Np-237	4.96E-06
Pu-238	1.06E-01
Pu-239	8.21E-01
Pu-240	2.72E-01
Pu-241	3.43E+00
Pu-242	4.13E-05
Sr-90	2.60E-05
Th-229	1.38E-14
Th-230	2.53E-10
Th-232	3.17E-18
U-233	7.99E-11
U-234	7.49E-06
U-235	2.33E-07
U-236	3.22E-08
U-238	1.68E-07

**Haz. Waste No(s).**

D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D022, D027, D028, D029, D030, D034, D035, D037, D039, D043, F001, F002, F003, F004, F005
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**TRUCON Code(s)**

125/225
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**Waste Stream Description**

Combustible and noncombustible debris waste generated from operations, maintenance, and clean up at the Hanford Solid Waste Operations Complex facilities. Combustible waste may include wood, plastics, paper, and rags. Noncombustible waste may include metals, glass, concrete, and absorbed liquids.

Waste Stream ID: **RLWAR-01**

**Appendix A**  
**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	12/31/2015	
Stream Name	Ward TRU Mixed Debris					Activity Concentrations Decayed to CY	2015

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	26.8	0.0	26.8
85-gal Drum Dir Ld w/ Liner	10.3	0.0	10.3
Box - Misc	294.8	0.0	294.8
SWB Dir Ld w/ Liner	11.3	0.0	11.3
<b>Current Form Total</b>	<b>343.3</b>	<b>0.0</b>	<b>343.3</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	36.8	0.0	36.8
SWB Dir Ld w/ Liner	376.1	0.0	376.1
<b>Final Form Total</b>	<b>412.9</b>	<b>0.0</b>	<b>412.9</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	96.21
Aluminum-based Metal/Alloys	0.43
Other Metal/Alloys	2.10
Other Inorganic Materials	15.66
Cellulose	20.34
Rubber	5.33
Plastic	30.07
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.01
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	4.40
Packaging Material, Rubber	0.23
Packaging Material, Steel	151.42
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	8.00E-01
Am-243	4.07E-15
Cs-137	4.18E-08
Np-237	5.08E-06
Pu-238	2.79E-01
Pu-239	3.56E-01
Pu-240	2.26E-01
Pu-241	5.04E+00
Pu-242	1.77E-04
Sr-90	3.78E-08
Th-229	1.31E-14
Th-230	6.08E-09
Th-232	1.42E-08
U-233	7.74E-11
U-234	1.67E-04
U-235	6.14E-06
U-236	2.68E-08
U-238	3.40E-05

**Haz. Waste No(s).**D007, D008, D009,  
D035, F001, F002,  
F003, F005**TRUCON Code(s)**

125/225

**Waste Stream Description**

Combustible and noncombustible debris waste generated during decontamination and decommissioning of the Westinghouse Advanced Reactors Division facility in Cheswick, PA. Combustible waste may include wood, plastics, paper, and rags. Noncombustible waste may include metals, glass, concrete, and absorbed liquids.

Waste Stream ID: **RLWAR-03**

**Appendix A**  
**Waste Profile Report**

Site	Hanford (Richland) Site	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Remediation/D&D Waste	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2015	
Stream Name	WARD solidified inorganics			Activity Concentrations Decayed to CY	2015		

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	4.8	0.0	4.8
85-gal Drum Dir Ld w/ Liner	1.6	0.0	1.6
<b>Current Form Total</b>	<b>6.4</b>	<b>0.0</b>	<b>6.4</b>

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

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	0.80
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.11
Other Inorganic Materials	0.00
Cellulose	3.20
Rubber	0.00
Plastic	41.39
Cement	401.34
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	6.50E-01
Cs-137	9.47E-08
Np-237	2.98E-06
Pu-238	1.60E-01
Pu-239	5.44E-01
Pu-240	2.64E-01
Pu-241	4.42E+00
Pu-242	1.04E-04
Th-229	1.87E-14
Th-230	6.95E-09
Th-232	9.45E-18
U-233	6.79E-11
U-234	1.10E-04
U-235	5.22E-06
U-236	5.47E-08
U-238	5.00E-06

**Haz. Waste No(s).**

D007, D008, D009,  
D035, F001, F002,  
F003, F005

**TRUCON Code(s)**

122/222

**Waste Stream Description**

Solidified inorganic waste generated during decontamination and decommissioning of the Westinghouse Advanced Reactors Division facility in Cheswick, PA.

Waste Stream ID: **RLWTP-08**

**Appendix A**  
**Waste Profile Report**

Site	Hanford (Richland) Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	RH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2015	
Stream Name	Waste Treatment Plant TRU RH Mixed Debris				Activity Concentrations Decayed to CY	2015	

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
Uncontained	0.0	74.5	74.5
<b>Current Form Total</b>	<b>0.0</b>	<b>74.5</b>	<b>74.5</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	0.0	74.9	74.9
<b>Final Form Total</b>	<b>0.0</b>	<b>74.9</b>	<b>74.9</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	44.94
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	11.92
Cellulose	0.00
Rubber	0.00
Plastic	0.00
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	45.67
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	4.23E-03
Cs-137	1.21E+00
Np-237	4.49E-06
Pu-238	2.96E-03
Pu-239	1.49E-03
Pu-240	3.18E-04
Pu-241	6.44E-04
Sr-90	1.35E+00
Th-229	3.31E-08
Th-230	5.88E-10
Th-232	6.19E-17
U-233	4.18E-05
U-234	7.14E-06
U-235	2.79E-07
U-236	1.39E-07
U-238	6.27E-06

No Hazardous Waste Numbers Provided

TRUCON Code(s)  
325

**Waste Stream Description**

RH debris waste to be generated from future WTP operations



Waste Stream ID: SA-W134

**Appendix A**  
**Waste Profile Report**

Site	Sandia National Laboratories	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	R&D/R&D Laboratory Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2015		
Stream Name	CH TRU Project Generated Waste (PGW)			Activity Concentrations Decayed to CY	2015		

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

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

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

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	124.28
Aluminum-based Metal/Alloys	17.71
Other Metal/Alloys	7.53
Other Inorganic Materials	8.25
Cellulose	5.93
Rubber	1.60
Plastic	8.89
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.03E-02
Cs-137	2.67E-01
Np-237	6.59E-10
Pu-238	9.10E-03
Pu-239	4.38E-02
Pu-240	2.47E-02
Pu-241	2.38E-01
Pu-242	6.36E-06
Sr-90	6.35E-06
Th-229	2.07E-14
Th-230	1.04E-10
Th-232	1.80E-22
U-233	2.35E-09
U-234	1.13E-04
U-235	3.80E-06
U-236	7.32E-11
U-238	1.39E-06

**Haz. Waste No(s).**

D004, D005, D006,  
D007, D008, D009,  
D011, D019, D022,  
D028, F002, F005

**TRUCON Code(s)**

125/225

**Waste Stream Description**

CH PGW TRU waste from repackaging RH

Waste Stream ID: SA-W135

**Appendix A**  
**Waste Profile Report**

Site	Sandia National Laboratories	Summary Category	S5000	Defense Determination	Defense-Related	Handling	RH
Source Cat.	R&D/R&D Laboratory Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2015	
Stream Name	TRU Waste from SNL/NM - Remote Handled				Activity Concentrations Decayed to CY	2015	

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	5.2	0.0	5.2
<b>Current Form Total</b>	<b>5.2</b>	<b>0.0</b>	<b>5.2</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/o Liner	5.6	0.0	5.6
<b>Final Form Total</b>	<b>5.6</b>	<b>0.0</b>	<b>5.6</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	127.01
Aluminum-based Metal/Alloys	18.07
Other Metal/Alloys	7.69
Other Inorganic Materials	8.40
Cellulose	6.09
Rubber	1.60
Plastic	9.12
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	8.70
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.41E+00
Cs-137	2.91E+01
Np-237	7.80E-08
Pu-238	1.26E+00
Pu-239	3.35E+00
Pu-240	2.14E+00
Pu-241	2.91E+01
Pu-242	1.00E-03
Sr-90	2.18E+01
Th-229	1.72E-12
Th-230	1.08E-08
Th-232	1.56E-20
U-233	1.96E-07
U-234	1.18E-02
U-235	3.79E-04
U-236	6.32E-09
U-238	1.27E-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

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	12/31/2015		
Stream Name	CH TRU Debris waste from Z-machine			Activity Concentrations Decayed to CY	2015		

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
SWB Dir Ld w/o Liner	9.5	47.3	56.7
<b>Current Form Total</b>	<b>9.5</b>	<b>47.3</b>	<b>56.7</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
SWB Dir Ld w/o Liner	9.5	47.3	56.7
<b>Final Form Total</b>	<b>9.5</b>	<b>47.3</b>	<b>56.7</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	240.69
Aluminum-based Metal/Alloys	2.14
Other Metal/Alloys	2.00
Other Inorganic Materials	0.01
Cellulose	0.00
Rubber	0.35
Plastic	0.21
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.24
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.19
Packaging Material, Steel	153.44
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.30E+01
Np-237	4.22E-06
Pu-238	3.31E-03
Pu-239	9.87E-02
Pu-240	2.65E-02
Pu-241	1.87E-01
Pu-242	2.51E-06
Th-229	2.69E-16
Th-230	4.32E-14
Th-232	1.94E-20
U-233	9.18E-12
U-234	9.38E-09
U-235	9.72E-11
U-236	7.86E-10
U-238	3.89E-16

No Hazardous Waste Numbers Provided

TRUCON Code(s)  
125/225

**Waste Stream Description**

CH debris waste from the Z-machine, Pu ICE experiments. Waste generated at SNL/NM, but is LANL waste

Waste Stream ID: SA-W137

**Appendix A**  
**Waste Profile Report**

Site	Sandia National Laboratories	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	R&D/R&D Laboratory Waste	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2015	
Stream Name	CH TRU solidified waste			Activity Concentrations Decayed to CY	2015		

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
2.5-gal Pail	0.0	0.0	0.0
20-gal Pail	0.1	0.0	0.1
5-gal Pail	0.0	0.0	0.0
doubled bagged	0.0	0.0	0.0
<b>Current Form Total</b>	<b>0.1</b>	<b>0.0</b>	<b>0.1</b>

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

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	0.00
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	9.76
Other Inorganic Materials	33.65
Cellulose	0.00
Rubber	0.00
Plastic	0.00
Cement	0.02
Solidified Inorganic Material	27.88
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	4.16E-01
Cs-137	3.26E-02
Np-237	5.41E-07
Pu-239	6.25E-03
Pu-240	6.15E-04
Pu-241	5.35E-04
Th-229	5.39E-16
Th-232	7.19E-21
U-233	4.59E-12
U-235	2.46E-11
U-236	7.28E-11

No Hazardous Waste Numbers Provided

TRUCON Code(s)  
125/225

**Waste Stream Description**

Solidified PuNO<sub>3</sub> sample used for instrumental analysis, Pu sources, and Am-241 salt standards.

Waste Stream ID: SA-W138M

**Appendix A**  
**Waste Profile Report**

Site	Sandia National Laboratories	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	R&D/R&D Laboratory Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2015	
Stream Name	CH TRU sealed source				Activity Concentrations Decayed to CY	2015	

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
1-gal Pail	0.0	0.0	0.0
20-gal Pail	0.1	0.0	0.1
5-gal Pail	0.1	0.0	0.1
doubled bagged	0.0	0.0	0.0
<b>Current Form Total</b>	<b>0.1</b>	<b>0.0</b>	<b>0.1</b>

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

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	0.00
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	4.95
Other Inorganic Materials	79.33
Cellulose	0.00
Rubber	0.00
Plastic	0.00
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	6.15E-03
Cs-137	8.77E-07
Np-237	8.78E-09
Pu-238	4.01E-07
Pu-239	7.61E-05
Th-229	1.04E-17
Th-230	8.50E-17
U-233	8.15E-14
U-234	4.60E-12
U-235	3.00E-13

**Haz. Waste No(s).**D006, D007, D008,  
D009, D011**TRUCON Code(s)**

125/225

**Waste Stream Description**

Sealed sources from instrumentation and on circuit boards.

Waste Stream ID: **SP-CHHD**

**Appendix A**  
**Waste Profile Report**

Site	Separations Process Research Unit	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Remediation/D&D Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2015	
Stream Name	D&D Debris				Activity Concentrations Decayed to CY	2015	

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum	0.2	0.0	0.2
85-gal Drum	0.6	0.0	0.6
Box - B-25	5.1	0.0	5.1
<b>Current Form Total</b>	<b>6.0</b>	<b>0.0</b>	<b>6.0</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.6	0.0	0.6
SWB Dir Ld w/ Liner	5.7	0.0	5.7
<b>Final Form Total</b>	<b>6.3</b>	<b>0.0</b>	<b>6.3</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	3.65
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	139.34
Other Inorganic Materials	25.23
Cellulose	48.46
Rubber	0.00
Plastic	24.55
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	4.76
Packaging Material, Rubber	0.23
Packaging Material, Steel	151.19
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	4.44E-03
Cs-137	5.16E-01
Np-237	1.44E-10
Pu-238	4.51E-04
Pu-239	4.11E-02
Pu-241	5.54E-03
Pu-242	7.15E-06
Sr-90	2.05E-02
Th-229	1.80E-23
Th-230	3.05E-10
U-233	7.86E-18
U-234	3.32E-04
U-235	2.08E-05
U-238	3.58E-04

**Haz. Waste No(s).**

D007, D008, D011

**TRUCON Code(s)**

111/211

**Waste Stream Description**

Process components, inorganic solids, Wastelock, piping, asbestos insulation, PPE, herculite and poly sheets, absorbent pads, and miscellaneous debris.

Waste Stream ID: **SP-RHHD**

**Appendix A**  
**Waste Profile Report**

Site	Separations Process Research Unit	Summary Category	S5000	Defense Determination	Defense-Related	Handling	RH
Source Cat.	Remediation/D&D Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2015	
Stream Name	D&D Debris			Activity Concentrations Decayed to CY	2015		

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum	0.6	0.0	0.6
85-gal Drum	1.6	0.0	1.6
Box - B-25	5.1	0.0	5.1
<b>Current Form Total</b>	<b>7.3</b>	<b>0.0</b>	<b>7.3</b>

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

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	53.42
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	912.77
Other Inorganic Materials	154.17
Cellulose	36.32
Rubber	0.00
Plastic	1.18
Cement	302.35
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	45.67
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	5.74E-02
Cs-137	3.38E+00
Np-237	1.86E-09
Pu-238	4.25E-03
Pu-239	2.93E-01
Pu-241	2.73E-02
Pu-242	1.50E-03
Sr-90	1.42E+00
Th-229	2.33E-22
Th-230	3.65E-09
U-233	1.02E-16
U-234	3.97E-03
U-235	4.13E-04
U-238	4.37E-03

**Haz. Waste No(s).**

D007, D008, D011

**TRUCON Code(s)**

311

**Waste Stream Description**

Process components, inorganic solids, piping, miscellaneous debris, lead, PPE, herculite and poly sheets, plastic bags, Wastelock, absorbent pads, and paper towels.

Waste Stream ID: **SP-RHIN**

**Appendix A**  
**Waste Profile Report**

Site	Separations Process Research Unit	Summary Category	S5000	Defense Determination	Defense-Related	Handling	RH
Source Cat.	Remediation/D&D Waste	Waste Matrix Code Group	Inorganic Nonmetal Waste	Inventory Date	12/31/2015		
Stream Name	Process cell and sump cleanout sludge			Activity Concentrations Decayed to CY	2015		

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum	1.5	0.0	1.5
85-gal Drum	0.3	0.0	0.3
<b>Current Form Total</b>	<b>1.8</b>	<b>0.0</b>	<b>1.8</b>

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

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	0.00
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	192.63
Cellulose	0.00
Rubber	0.00
Plastic	10.42
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	45.67
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	7.23E-02
Cs-137	2.09E+01
Np-237	2.34E-09
Pu-238	1.03E-02
Pu-239	8.88E-01
Pu-241	2.01E-01
Pu-242	6.84E-03
Sr-90	4.67E-01
Th-229	2.94E-22
Th-230	5.98E-09
U-233	1.28E-16
U-234	6.50E-03
U-235	5.00E-04
U-238	7.50E-03

**Haz. Waste No(s).**

D007, D008, D011

**TRUCON Code(s)**

311

**Waste Stream Description**

Inorganic solids with Aquaset IIG added to absorb free water



Waste Stream ID: **SR-221H-EUOx**

**Appendix A**  
**Waste Profile Report**

Site	Savannah River Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Discarding Excess/Expired Materials	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2015	
Stream Name	221H U Oxide CH TRU Debris				Activity Concentrations Decayed to CY	2015	

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal POC - 12" w/ Liner	6.3	0.0	6.3
<b>Current Form Total</b>	<b>6.3</b>	<b>0.0</b>	<b>6.3</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal POC - 12" w/ Liner	6.2	0.0	6.2
<b>Final Form Total</b>	<b>6.2</b>	<b>0.0</b>	<b>6.2</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	98.08
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	367.79
Cellulose	0.00
Rubber	0.00
Plastic	24.52
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	135.10
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	528.85
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.23E-03
Am-243	1.36E-10
Cm-244	2.87E-04
Cs-137	2.95E-04
Np-237	3.09E-04
Pu-238	1.22E-03
Pu-239	8.11E-02
Pu-240	6.29E-08
Pu-242	3.09E-04
Sr-90	2.95E-04
Th-229	4.85E-03
Th-230	9.59E-04
Th-232	3.09E-04
U-233	1.16E+00
U-234	1.69E+00
U-235	1.36E-01
U-236	1.89E-15
U-238	4.02E-03

No Hazardous Waste Numbers Provided

TRUCON Code(s)  
125/225

**Waste Stream Description**

The uranium oxide material is being blended and packaged specifically for disposal at WIPP.

Waste Stream ID: **SR-221H-PuOx**

**Appendix A**  
**Waste Profile Report**

Site	Savannah River Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Discarding Excess/Expired Materials	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2015	
Stream Name	221H Pu Oxide CH TRU Debris				Activity Concentrations Decayed to CY	2015	

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal POC - 12" w/ Liner	54.8	0.0	54.8
<b>Current Form Total</b>	<b>54.8</b>	<b>0.0</b>	<b>54.8</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal POC - 12" w/ Liner	54.3	0.0	54.3
<b>Final Form Total</b>	<b>54.3</b>	<b>0.0</b>	<b>54.3</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	128.68
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	34.60
Other Inorganic Materials	300.75
Cellulose	0.00
Rubber	0.00
Plastic	26.35
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	135.10
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	528.85
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.98E+01
Np-237	1.35E-04
Pu-238	7.22E+00
Pu-239	3.27E+01
Pu-240	9.48E+00
Pu-241	1.31E+02
Pu-242	4.77E-03
Th-229	2.50E-14
Th-230	9.42E-11
Th-232	6.92E-18
U-233	5.74E-10
U-234	2.05E-05
U-235	4.89E-05
U-236	2.81E-07
U-238	3.25E-06

**Haz. Waste No(s).**

D006, D007, D008, D011

**TRUCON Code(s)**

125/225

**Waste Stream Description**

The plutonium oxide material is being blended and packaged specifically for disposal at WIPP.

Waste Stream ID: **SR-AGNS-HOM**

**Appendix A**  
**Waste Profile Report**

Site	Savannah River Site	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	R&D/R&D Laboratory Waste	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2015	
Stream Name	SR-AGNS-HOM					Activity Concentrations Decayed to CY	2015

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.4	0.0	0.4
SWB w/ 4 - 55-gal Drums w/ Liners	1.8	0.0	1.8
<b>Current Form Total</b>	<b>2.2</b>	<b>0.0</b>	<b>2.2</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.4	0.0	0.4
SWB w/ 4 - 55-gal Drums w/ Liners	1.9	0.0	1.9
<b>Final Form Total</b>	<b>2.3</b>	<b>0.0</b>	<b>2.3</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	66.23
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	0.00
Cement	878.97
Solidified Inorganic Material	0.95
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	20.04
Packaging Material, Rubber	0.46
Packaging Material, Steel	196.62
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.43E-01
Np-237	2.91E-04
Pu-238	3.40E-01
Pu-239	5.82E-01
Pu-240	1.38E-01
Pu-241	5.45E+00
Pu-242	2.39E-05
Th-229	5.01E-13
Th-230	1.08E-09
Th-232	9.04E-19
U-233	3.80E-09
U-234	4.06E-05
U-235	1.88E-06
U-236	1.22E-08
U-238	4.02E-05

**Haz. Waste No(s).**D004, D005, D006,  
D007, D008, D009,  
D011, F005**TRUCON Code(s)**

111/211, 154

**Waste Stream Description**

This waste is comprised of aqueous liquids solidified with lime and cement in a 55-gallon drum and aqueous liquid that had been absorbed using Florco-X and then later solidified with cement and water inside a 55-gallon drum.

Waste Stream ID: **SR-BCLDP.003.001**

**Appendix A**  
**Waste Profile Report**

Site	Savannah River Site	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Discarding Excess/Expired Materials	Waste Matrix Code Group	Solidified Organics		Inventory Date	12/31/2015	
Stream Name	BCL JN-1 CH TRU Homogeneous Sludge				Activity Concentrations Decayed to CY	2015	

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

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

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

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	1.61
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.24
Cellulose	1.88
Rubber	0.00
Plastic	6.17
Cement	0.00
Solidified Inorganic Material	93.09
Solidified Organic Material	165.89
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.32E-01
Am-243	1.10E-04
Cm-244	8.93E-03
Cs-137	3.83E-02
Np-237	1.42E-06
Pu-238	1.18E-01
Pu-239	1.56E-02
Pu-240	2.55E-02
Pu-241	1.85E+00
Pu-242	7.60E-05
Sr-90	3.82E-02
Th-229	2.93E-14
Th-230	4.00E-10
Th-232	9.81E-17
U-233	1.73E-10
U-234	2.21E-05
U-235	3.72E-07
U-236	9.95E-07
U-238	2.20E-06

**Haz. Waste No(s).**

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

**TRUCON Code(s)**

127/227

**Waste Stream Description**

This waste consists of CH Hydraulic Sludge and Debris

Waste Stream ID: **SR-BCLDP.004.004**

**Appendix A**  
**Waste Profile Report**

Site	Savannah River Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Discarding Excess/Expired Materials	Waste Matrix Code Group	Composite Filter Waste	Inventory Date	12/31/2015		
Stream Name	CH Mixed TRU Cartridge Water Filters(S5000)			Activity Concentrations Decayed to CY	2015		

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

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

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

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	0.00
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	94.72
Cellulose	90.19
Rubber	3.47
Plastic	17.34
Cement	0.00
Solidified Inorganic Material	26.42
Solidified Organic Material	34.42
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	4.86E-02
Am-243	1.32E-04
Cs-137	5.03E-03
Np-237	1.88E-05
Pu-238	2.30E-01
Pu-239	3.96E-03
Pu-240	6.52E-03
Pu-242	7.74E-08
Sr-90	4.94E-03
Th-229	2.29E-12
Th-230	5.46E-09
Th-232	6.86E-19
U-233	2.66E-09
U-234	5.35E-05
U-235	8.11E-07
U-236	2.32E-09
U-238	1.57E-05

**Haz. Waste No(s).**

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

**TRUCON Code(s)**

119/219

**Waste Stream Description**

This waste consists of CH Cartridge Water Filters

Waste Stream ID: SR-BCLDP-HET

**Appendix A**  
**Waste Profile Report**

Site	Savannah River Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Remediation/D&D Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2015	
Stream Name	BCL JN-4 CH TRU Heterogeneous Debris				Activity Concentrations Decayed to CY	2015	

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
SWB Dir Ld w/o Liner	3.6	0.0	3.6
<b>Current Form Total</b>	<b>3.6</b>	<b>0.0</b>	<b>3.6</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
SWB Dir Ld w/o Liner	3.8	0.0	3.8
<b>Final Form Total</b>	<b>3.8</b>	<b>0.0</b>	<b>3.8</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	198.44
Aluminum-based Metal/Alloys	2.03
Other Metal/Alloys	1.02
Other Inorganic Materials	4.06
Cellulose	52.78
Rubber	11.67
Plastic	81.20
Cement	0.00
Solidified Inorganic Material	156.82
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.19
Packaging Material, Steel	153.44
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.54E-02
Np-237	1.62E-08
Pu-238	7.72E+00
Pu-239	2.65E-02
Pu-240	1.23E-02
Pu-241	2.57E-01
Pu-242	3.79E-06
Th-229	4.10E-18
Th-230	4.05E-10
Th-232	3.58E-20
U-233	7.01E-14
U-234	4.39E-05
U-235	5.22E-11
U-236	7.26E-10
U-238	1.17E-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&amp;D of Battelle Columbus Lab Building JN-4

Waste Stream ID: SR-DWPF-HET

**Appendix A**  
**Waste Profile Report**

Site	Savannah River Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Analytical Laboratory Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2015	
Stream Name	CH TRU - Heterogeneous debris from the DWPF laboratory				Activity Concentrations Decayed to CY	2015	

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

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

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

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	7.05
Aluminum-based Metal/Alloys	3.52
Other Metal/Alloys	0.00
Other Inorganic Materials	14.10
Cellulose	34.06
Rubber	0.00
Plastic	58.73
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	4.56E-01
Cs-137	1.35E-02
Np-237	4.86E-06
Pu-238	9.31E-02
Pu-239	1.49E-02
Pu-240	2.35E-01
Pu-241	3.27E-01
Sr-90	1.33E-02
Th-229	1.13E-05
Th-230	1.03E-10
Th-232	1.39E-17
U-233	1.42E-02
U-234	2.45E-06
U-235	1.97E-06
U-236	6.26E-08
U-238	5.58E-05

No Hazardous Waste Numbers Provided

TRUCON Code(s)  
125/225, 154

**Waste Stream Description**

CH TRU waste consisting of contaminated laboratory debris

Waste Stream ID: **SR-HBL-235F-HET**

**Appendix A**  
**Waste Profile Report**

Site	Savannah River Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Remediation/D&D Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2015		
Stream Name	Commingled waste from HBL and 235F.			Activity Concentrations Decayed to CY	2015		

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.6	0.0	0.6
SWB Dir Ld w/o Liner	1.8	0.0	1.8
<b>Current Form Total</b>	<b>2.4</b>	<b>0.0</b>	<b>2.4</b>

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
<b>Final Form Total</b>	<b>2.5</b>	<b>0.0</b>	<b>2.5</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	171.35
Aluminum-based Metal/Alloys	11.80
Other Metal/Alloys	18.92
Other Inorganic Materials	18.92
Cellulose	28.26
Rubber	1.78
Plastic	21.02
Cement	0.00
Solidified Inorganic Material	1.37
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	9.20
Packaging Material, Rubber	0.29
Packaging Material, Steel	147.81
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	3.43E-05
Np-237	6.85E-05
Pu-238	5.33E-01
Pu-239	3.75E-04
Pu-240	2.05E-04
Pu-241	1.02E-02
Pu-242	2.44E-07
Th-229	5.25E-14
Th-230	2.80E-11
Th-232	5.99E-22
U-233	5.97E-10
U-234	3.03E-06
U-235	7.38E-13
U-236	1.21E-11
U-238	7.57E-17

**Haz. Waste No(s).**

D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D022, D029, D043, F002, F005, U133

**TRUCON Code(s)**

125/225, 154

**Waste Stream Description**

This waste consists of repackaged waste from a large steel box that was originally loaded from two separate SRS generator facilities (i.e. H-B line and 235F)



Waste Stream ID: **SR-KAC-HET**

**Appendix A**  
**Waste Profile Report**

Site	Savannah River Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2015		
Stream Name	CH TRU Heterogeneous debris from the K Area Plutonium surveillance program			Activity Concentrations Decayed to CY	2015		

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	1.7	7.1	8.8
<b>Current Form Total</b>	<b>1.7</b>	<b>7.1</b>	<b>8.8</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	1.7	7.1	8.7
<b>Final Form Total</b>	<b>1.7</b>	<b>7.1</b>	<b>8.7</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	24.60
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	2.28
Rubber	21.07
Plastic	158.65
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	7.46E-01
Np-237	5.31E-06
Pu-238	2.41E-01
Pu-239	2.02E+00
Pu-240	5.24E-01
Pu-241	5.09E+00
Pu-242	1.73E-04
Th-229	3.82E-15
Th-230	1.26E-11
Th-232	1.53E-18
U-233	4.41E-11
U-234	1.37E-06
U-235	3.85E-06
U-236	3.10E-08
U-238	1.35E-07

No Hazardous Waste Numbers Provided

TRUCON Code(s)  
125/225, 154

**Waste Stream Description**

This waste stream consists of plutonium contaminated debris resulting from destructive and non-destructive containers used to store plutonium material

Waste Stream ID: **SR-KAC-PuOx**

**Appendix A**  
**Waste Profile Report**

Site	Savannah River Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Discarding Excess/Expired Materials	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2015	
Stream Name	K-Area Pu Oxide CH TRU Debris				Activity Concentrations Decayed to CY	2015	

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal CCO w/ Liner	0.0	5011.3	5011.3
<b>Current Form Total</b>	<b>0.0</b>	<b>5011.3</b>	<b>5011.3</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal CCO w/ Liner	0.0	5011.3	5011.3
<b>Final Form Total</b>	<b>0.0</b>	<b>5011.3</b>	<b>5011.3</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	0.00
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	18.02
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	111.06
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	389.42
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	5.34E+01
Np-237	8.93E-04
Pu-238	1.36E+01
Pu-239	5.33E+01
Pu-240	2.59E+01
Pu-241	2.67E+02
Pu-242	1.20E-02
Th-229	4.41E-10
Th-230	3.36E-08
Th-232	1.89E-19
U-233	5.01E-05
U-234	3.65E-02
U-235	3.42E-04
U-236	7.67E-08
U-238	1.35E-04

**Haz. Waste No(s).**

D006, D007, D008, D011

**TRUCON Code(s)**

125/225

**Waste Stream Description**

The plutonium oxide material is being blended and packaged specifically for disposal at WIPP.

Waste Stream ID: **SR-LA-PAD1**

**Appendix A**  
**Waste Profile Report**

Site	Savannah River Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2015		
Stream Name	CH TRU Heterogeneous debris from the Los Alamos Scientific Laboratory (LASL)			Activity Concentrations Decayed to CY	2015		

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	4.6	0.0	4.6
<b>Current Form Total</b>	<b>4.6</b>	<b>0.0</b>	<b>4.6</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	4.6	0.0	4.6
<b>Final Form Total</b>	<b>4.6</b>	<b>0.0</b>	<b>4.6</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	64.55
Aluminum-based Metal/Alloys	0.05
Other Metal/Alloys	1.16
Other Inorganic Materials	6.72
Cellulose	7.81
Rubber	6.60
Plastic	7.89
Cement	0.00
Solidified Inorganic Material	0.18
Solidified Organic Material	0.01
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	9.01E-01
Am-243	3.79E-07
Cs-137	2.57E-06
Np-237	4.66E-05
Pu-238	4.11E+02
Pu-239	4.73E-01
Pu-240	7.48E-01
Pu-241	7.23E+00
Pu-242	9.49E-04
Sr-90	3.06E-06
Th-229	2.56E-08
Th-230	1.38E-06
Th-232	6.50E-08
U-233	1.45E-04
U-234	7.61E-02
U-235	1.13E-06
U-236	4.43E-08
U-238	2.95E-13

**Haz. Waste No(s).**

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

**TRUCON Code(s)**

125/225, 154

**Waste Stream Description**

This CH TRU waste stream consists of debris and Impure Oxide shipped to the SRS from the LASL in 1971 and 1972.

Waste Stream ID: SR-MD-HET

**Appendix A**  
**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	12/31/2015	
Stream Name	CH Mixed TRU/F listed solvents - Heterogeneous debris from Mound Laboratories				Activity Concentrations Decayed to CY	2015	

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	1.3	0.0	1.3
55-gal Drum Dir Ld w/o Liner	0.2	0.0	0.2
SWB Dir Ld w/o Liner	12.6	0.0	12.6
<b>Current Form Total</b>	<b>14.1</b>	<b>0.0</b>	<b>14.1</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	1.2	0.0	1.2
55-gal Drum Dir Ld w/o Liner	0.2	0.0	0.2
SWB Dir Ld w/o Liner	13.2	0.0	13.2
<b>Final Form Total</b>	<b>14.7</b>	<b>0.0</b>	<b>14.7</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	80.57
Aluminum-based Metal/Alloys	0.27
Other Metal/Alloys	1.52
Other Inorganic Materials	14.02
Cellulose	28.11
Rubber	4.17
Plastic	20.28
Cement	0.00
Solidified Inorganic Material	0.53
Solidified Organic Material	0.00
Soil	4.77
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	3.15
Packaging Material, Rubber	0.23
Packaging Material, Steel	151.19
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	3.24E-02
Am-243	8.16E-08
Cm-244	3.90E-06
Cs-137	6.41E-06
Np-237	6.83E-06
Pu-238	5.86E+00
Pu-239	8.30E-02
Pu-240	1.28E-02
Pu-241	3.35E-01
Pu-242	8.07E-06
Sr-90	6.40E-06
Th-229	1.52E-07
Th-230	2.36E-06
Th-232	2.48E-07
U-233	1.73E-03
U-234	1.03E-03
U-235	4.63E-07
U-236	3.79E-10
U-238	8.31E-06

**Haz. Waste No(s).**

D004, D005, D006, D007, D008, D009, D010, D011, D019, D022, D027, D028, D029, D030, D032, D034, D037, D043, F002, F003, F004, F005, F007, F009

**TRUCON Code(s)**

125/225, 154, 425

**Waste Stream Description**

This waste stream is primarily solids consisting of booties, lab coats, floor sweeping, labware, rags, and other job control waste.

Waste Stream ID: **SR-MD-PAD1**

**Appendix A**  
**Waste Profile Report**

Site	Savannah River Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2015		
Stream Name	CH TRU Heterogeneous debris from the Mound Plant			Activity Concentrations Decayed to CY	2015		

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	15.3	0.0	15.3
SLB2 Dir Ld	13.3	0.0	13.3
SWB Dir Ld w/o Liner	30.6	0.0	30.6
<b>Current Form Total</b>	<b>59.2</b>	<b>0.0</b>	<b>59.2</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	15.2	0.0	15.2
SLB2 Dir Ld	11.3	0.0	11.3
SWB Dir Ld w/o Liner	32.1	0.0	32.1
<b>Final Form Total</b>	<b>58.6</b>	<b>0.0</b>	<b>58.6</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	60.25
Aluminum-based Metal/Alloys	0.12
Other Metal/Alloys	0.75
Other Inorganic Materials	6.93
Cellulose	19.48
Rubber	2.55
Plastic	11.31
Cement	0.00
Solidified Inorganic Material	0.60
Solidified Organic Material	0.28
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	9.60
Packaging Material, Rubber	0.28
Packaging Material, Steel	159.56
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	5.64E-01
Am-243	2.01E-06
Cm-244	1.19E-03
Cs-137	2.84E-03
Np-237	5.88E-05
Pu-238	2.93E+02
Pu-239	3.50E-01
Pu-240	4.76E-01
Pu-241	4.77E+00
Pu-242	5.81E-04
Sr-90	2.84E-03
Th-229	1.12E-14
Th-230	4.87E-07
Th-232	1.71E-06
U-233	2.56E-10
U-234	5.33E-02
U-235	1.10E-06
U-236	1.41E-08
U-238	4.04E-06

**Haz. Waste No(s).**

D004, D005, D006, D007, D008, D009, D010, D011, D019, D022, D027, D028, D029, D030, D032, D034, D037, D043, F002, F004, F005

**TRUCON Code(s)**

125/225, 154, 425

**Waste Stream Description**

This CH TRU waste stream consists of debris shipped to the SRS from the Mound Plant in 1971 and 1972.

Waste Stream ID: **SR-MD-SOIL**

**Appendix A**  
**Waste Profile Report**

Site	Savannah River Site	Summary Category	S4000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Remediation/D&D Waste	Waste Matrix Code Group	Contaminated Soil/Debris Waste		Inventory Date	12/31/2015	
Stream Name	CH Mixed TRU Soil / Gravel (S4000)				Activity Concentrations Decayed to CY	2015	

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.2	0.0	0.2
55-gal Drum Dir Ld w/o Liner	1.9	0.0	1.9
<b>Current Form Total</b>	<b>2.1</b>	<b>0.0</b>	<b>2.1</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.2	0.0	0.2
55-gal Drum Dir Ld w/o Liner	1.9	0.0	1.9
<b>Final Form Total</b>	<b>2.1</b>	<b>0.0</b>	<b>2.1</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	0.10
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	68.94
Cellulose	0.34
Rubber	0.12
Plastic	5.07
Cement	0.00
Solidified Inorganic Material	20.13
Solidified Organic Material	0.00
Soil	843.39
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	3.71
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	7.51E-03
Cs-137	2.19E-06
Np-237	1.03E-06
Pu-238	5.16E-01
Pu-239	1.25E-02
Pu-240	1.81E-03
Pu-241	2.19E-02
Pu-242	2.41E-06
Sr-90	2.18E-06
Th-229	7.88E-16
Th-230	1.66E-09
Th-232	5.29E-21
U-233	8.97E-12
U-234	9.16E-05
U-235	2.47E-11
U-236	1.07E-10
U-238	7.48E-16

**Haz. Waste No(s).**

D004, D005, D006,  
D007, D008, D009,  
D010, D011, F002,  
F003, F004, F005,  
F007, F009

**TRUCON Code(s)**

111/211, 411

**Waste Stream Description**

Soil mixed with absorbent and some commingled debris.

Waste Stream ID: SR-NIST-HET

**Appendix A**  
**Waste Profile Report**

Site	Savannah River Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Other/Multiple Sources	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2015		
Stream Name	Heterogeneous Debris Waste from the NIST			Activity Concentrations Decayed to CY	2015		

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

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

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

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	106.73
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	13.34
Cement	139.42
Solidified Inorganic Material	7.36
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	3.04E+01
Np-237	2.94E-05
Pu-238	3.94E+01
Pu-239	1.24E+01
Pu-240	2.93E+00
Pu-241	1.16E+02
Pu-242	5.23E-04
Th-229	1.68E-14
Th-230	6.19E-08
Th-232	5.60E-14
U-233	1.91E-10
U-234	2.41E-03
U-235	3.02E-05
U-236	3.78E-04
U-238	1.20E-06

No Hazardous Waste Numbers Provided

TRUCON Code(s)  
125/225, 154

**Waste Stream Description**

This material consist of a combination of unirradiated PuO/Uo fuel pellets, Pacemaker source and solidified Pu solutions

Waste Stream ID: **SR-RH-221H.01**

**Appendix A**  
**Waste Profile Report**

Site	Savannah River Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	RH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2015		
Stream Name	RH TRU Heterogeneous debris from the HB-Line			Activity Concentrations Decayed to CY	2015		

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

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

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

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	137.88
Aluminum-based Metal/Alloys	7.97
Other Metal/Alloys	10.36
Other Inorganic Materials	55.79
Cellulose	47.02
Rubber	117.95
Plastic	416.81
Cement	0.00
Solidified Inorganic Material	2.39
Solidified Organic Material	0.80
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	45.67
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.54E-02
Np-237	5.58E-01
Pu-238	3.45E+02
Pu-239	2.73E-01
Pu-240	1.41E-01
Pu-241	7.15E+00
Pu-242	1.63E-04
Th-229	1.07E-10
Th-230	4.07E-08
Th-232	1.89E-16
U-233	2.43E-06
U-234	4.91E-03
U-235	1.39E-05
U-236	3.84E-06
U-238	1.22E-08

**Haz. Waste No(s).**

D006, D008, D009,  
D019, D022, D029,  
D039, D040, D043,  
F001, F002, F003,  
F005, U133

**TRUCON Code(s)**

321, 322, 325

**Waste Stream Description**

This waste stream is composed of dry heterogeneous organic and inorganic debris.



Waste Stream ID: **SR-RH-221H.02**

**Appendix A**  
**Waste Profile Report**

Site	Savannah River Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	RH
Source Cat.	Discarding Excess/Expired Materials	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2015		
Stream Name	RH TRU spent Berl saddles from H-Canyon dissolver off-gas system.			Activity Concentrations Decayed to CY	2015		

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

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

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	3.1	0.0	3.1
<b>Final Form Total</b>	<b>3.1</b>	<b>0.0</b>	<b>3.1</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	90.46
Aluminum-based Metal/Alloys	5.23
Other Metal/Alloys	6.80
Other Inorganic Materials	36.60
Cellulose	30.85
Rubber	77.39
Plastic	273.48
Cement	0.00
Solidified Inorganic Material	1.57
Solidified Organic Material	0.52
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	45.67
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Np-237	2.90E-04
Pu-238	7.02E-01
Pu-239	6.15E-03
Pu-240	4.20E-03
Pu-242	7.24E-05
Th-229	2.22E-13
Th-230	1.37E-09
Th-232	1.23E-20
U-233	2.52E-09
U-234	7.64E-05
U-235	1.21E-11
U-236	2.49E-10
U-238	2.25E-14

**Haz. Waste No(s).**

D007, D009, D011

**TRUCON Code(s)**

321

**Waste Stream Description**

This waste stream is composed of spent Berl saddles (silicon dioxide and aluminum oxide).

Waste Stream ID: **SR-RH-235F.01**

**Appendix A**  
**Waste Profile Report**

Site	Savannah River Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	RH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2015		
Stream Name	RH TRU Heterogeneous debris from the 235F facility.			Activity Concentrations Decayed to CY	2015		

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	1.1	0.0	1.1
<b>Current Form Total</b>	<b>1.1</b>	<b>0.0</b>	<b>1.1</b>

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

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	57.57
Aluminum-based Metal/Alloys	3.14
Other Metal/Alloys	1.53
Other Inorganic Materials	16.72
Cellulose	9.78
Rubber	58.79
Plastic	74.00
Cement	0.00
Solidified Inorganic Material	0.69
Solidified Organic Material	0.13
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	45.67
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	8.44E+01
Np-237	2.83E-02
Pu-238	3.10E+02
Pu-239	2.40E+00
Pu-240	6.35E-01
Pu-241	4.32E+03
Pu-242	2.31E-04
Th-229	2.17E-11
Th-230	1.63E-08
Th-232	1.85E-18
U-233	2.46E-07
U-234	1.76E-03
U-235	4.73E-09
U-236	3.76E-08
U-238	7.17E-14

**Haz. Waste No(s).**

D004, D005, D006,  
D007, D008, D009,  
D010, D011, D018,  
D019, D035, F002

**TRUCON Code(s)**

322, 325

**Waste Stream Description**

This waste stream is composed of metal equipment and debris

Waste Stream ID: **SR-RH-772F.01**

**Appendix A**  
**Waste Profile Report**

Site	Savannah River Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	RH
Source Cat.	Analytical Laboratory Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2015	
Stream Name	RH TRU Heterogeneous debris from the 772F and 772-1F laboratories.				Activity Concentrations Decayed to CY	2015	

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

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

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

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	116.34
Aluminum-based Metal/Alloys	8.54
Other Metal/Alloys	23.48
Other Inorganic Materials	234.81
Cellulose	58.70
Rubber	43.76
Plastic	581.68
Cement	0.00
Solidified Inorganic Material	1.07
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	45.67
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.42E-02
Cs-137	1.05E+00
Np-237	6.38E-06
Pu-238	5.31E-02
Pu-239	4.29E-02
Pu-240	1.31E-02
Pu-241	7.47E-02
Pu-242	2.14E-06
Sr-90	1.03E+00
Th-229	2.03E-13
Th-230	5.30E-10
Th-232	1.69E-16
U-233	3.56E-10
U-234	5.44E-06
U-235	2.97E-08
U-236	2.65E-07
U-238	4.31E-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 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	12/31/2015	
Stream Name	RH TRU Heterogeneous debris from the SRNL				Activity Concentrations Decayed to CY	2015	

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	16.2	0.0	16.2
55-gal Drum Dir Ld w/o Liner	0.4	10.7	11.1
<b>Current Form Total</b>	<b>16.6</b>	<b>10.7</b>	<b>27.3</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	16.2	0.0	16.2
RH Can w/ Remov Lid w/ 3 - 55-gal w/o Liner	0.6	10.6	11.2
<b>Final Form Total</b>	<b>16.8</b>	<b>10.6</b>	<b>27.5</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	192.09
Aluminum-based Metal/Alloys	2.11
Other Metal/Alloys	12.86
Other Inorganic Materials	126.46
Cellulose	68.83
Rubber	104.22
Plastic	215.86
Cement	0.00
Solidified Inorganic Material	4.36
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	30.55
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.54E-01
Am-243	5.19E-02
Cm-244	4.09E+00
Cs-137	9.10E-01
Np-237	3.91E-06
Pu-238	2.70E+00
Pu-239	7.35E-02
Pu-240	4.19E-02
Pu-241	5.17E-01
Pu-242	2.06E-05
Pu-244	2.55E-14
Sr-90	6.67E-01
Th-229	8.15E-14
Th-230	4.50E-09
Th-232	3.38E-18
U-233	1.73E-10
U-234	8.77E-05
U-235	7.96E-10
U-236	1.28E-08
U-238	3.51E-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 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	12/31/2015		
Stream Name	RH TRU Heterogeneous debris from the FB-Line			Activity Concentrations Decayed to CY	2015		

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

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

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

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	27.60
Aluminum-based Metal/Alloys	0.32
Other Metal/Alloys	0.71
Other Inorganic Materials	129.81
Cellulose	6.10
Rubber	9.28
Plastic	77.34
Cement	0.00
Solidified Inorganic Material	0.08
Solidified Organic Material	0.46
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	45.67
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	3.29E+00
Cs-137	4.60E-06
Np-237	1.03E-05
Pu-238	1.46E+00
Pu-239	1.47E+00
Pu-240	1.45E+00
Pu-241	1.28E+01
Pu-242	7.18E-05
Sr-90	4.53E-06
Th-229	9.24E-06
Th-230	1.59E-08
Th-232	1.06E-16
U-233	1.05E-02
U-234	1.94E-04
U-235	2.99E-06
U-236	4.29E-07
U-238	2.09E-05

**Haz. Waste No(s).**

D005, D006, D007, D008, D009, D011, D018, D019, D022, D029, D039, D040, D043, F002, F005, U002, U151

**TRUCON Code(s)**

321

**Waste Stream Description**

This waste stream consists primarily of dry heterogeneous organic debris.

Waste Stream ID: **SR-RH-FBL.02**

**Appendix A**  
**Waste Profile Report**

Site	Savannah River Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	RH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2015		
Stream Name	RH TRU Heterogeneous debris from the F-Canyon dissolver off-gas system.			Activity Concentrations Decayed to CY	2015		

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

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

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

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	0.00
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	899.37
Cellulose	0.00
Rubber	0.00
Plastic	65.62
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	45.67
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.05E-03
Np-237	3.31E-05
Pu-238	2.69E-05
Pu-239	1.01E-03
Pu-240	7.35E-04
Pu-241	5.74E-03
Pu-242	2.76E-01
Th-229	6.27E-13
Th-230	5.68E-06
Th-232	2.40E-15
U-233	1.43E-09
U-234	6.18E-02
U-235	7.86E-01
U-236	4.86E-06
U-238	3.94E-02

**Haz. Waste No(s).**

D006, D007, D008, D009, D011, D019, D022, D028, D029, F002, F005
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**TRUCON Code(s)**

321
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**Waste Stream Description**

This waste stream is primarily solids consisting silver coated ceramics (Berl or Beryl saddles) and debris materials.

Waste Stream ID: **SR-RH-MNDPAD1.01**

**Appendix A**  
**Waste Profile Report**

Site	Savannah River Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	RH
Source Cat.	Remediation/D&D Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2015	
Stream Name	RH Debris from Mound Laboratories			Activity Concentrations Decayed to CY	2015		

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	2.7	0.0	2.7
<b>Current Form Total</b>	<b>2.7</b>	<b>0.0</b>	<b>2.7</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	3.1	0.0	3.1
<b>Final Form Total</b>	<b>3.1</b>	<b>0.0</b>	<b>3.1</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	61.25
Aluminum-based Metal/Alloys	0.04
Other Metal/Alloys	0.48
Other Inorganic Materials	8.38
Cellulose	3.70
Rubber	2.91
Plastic	6.77
Cement	0.00
Solidified Inorganic Material	0.36
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	45.67
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.13E-01
Np-237	9.57E-08
Pu-238	7.38E+02
Pu-239	5.31E-01
Pu-240	2.90E-01
Pu-241	1.25E+01
Pu-242	3.45E-04
Th-229	7.77E-17
Th-230	2.46E-07
Th-232	5.30E-18
U-233	6.96E-13
U-234	1.06E-02
U-235	2.61E-09
U-236	4.30E-08
U-238	2.68E-13

**Haz. Waste No(s).**

D004, D005, D006,  
D007, D008, D009,  
D010, D011, D019,  
D022, D027, D028,  
D029, D030, D032,  
D034, D037, D043,  
F002, F004, F005

**TRUCON Code(s)**

325

**Waste Stream Description**

Process equipment and exchange resin

Waste Stream ID: **SR-RH-SDD.01**

**Appendix A**  
**Waste Profile Report**

Site	Savannah River Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	RH
Source Cat.	Discarding Excess/Expired Materials	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2015		
Stream Name	Remote Handled PuBe Sources	Activity Concentrations Decayed to CY			2015		

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

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

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

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	1810.90
Aluminum-based Metal/Alloys	53.29
Other Metal/Alloys	15.22
Other Inorganic Materials	0.00
Cellulose	1924.68
Rubber	0.00
Plastic	0.00
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	45.67
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	9.50E+00
Np-237	2.38E-05
Pu-238	1.43E+02
Pu-239	2.28E+00
Pu-240	1.37E+00
Pu-241	5.37E+01
Pu-242	2.29E-03
Th-229	9.38E-14
Th-230	1.24E-07
Th-232	6.42E-17
U-233	4.03E-10
U-234	3.33E-03
U-235	1.79E-08
U-236	3.25E-07
U-238	2.84E-12

No Hazardous Waste Numbers Provided

TRUCON Code(s)

320

**Waste Stream Description**

This waste stream consists of three PuBe sources.



Waste Stream ID: **SR-RH-SWD.01**

**Appendix A**  
**Waste Profile Report**

Site	Savannah River Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	RH
Source Cat.	Remediation/D&D Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2015	
Stream Name	Remote Handled (RH) Mixed TRU Debris (S5000)				Activity Concentrations Decayed to CY	2015	

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

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

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

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	8.49
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	267.15
Other Inorganic Materials	33.81
Cellulose	31.57
Rubber	5.61
Plastic	80.77
Cement	0.00
Solidified Inorganic Material	11.81
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	45.67
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.85E-02
Am-243	2.96E-02
Cm-244	2.74E+00
Cs-137	8.24E-03
Np-237	2.15E-04
Pu-238	1.20E-01
Pu-239	1.38E-01
Pu-240	4.34E-02
Pu-241	1.38E+00
Pu-242	1.50E-05
Pu-244	1.43E-16
Sr-90	5.82E-03
Th-229	1.64E-13
Th-230	6.30E-12
Th-232	1.25E-19
U-233	1.87E-09
U-234	6.84E-07
U-235	2.72E-10
U-236	2.55E-09
U-238	4.67E-15

**Haz. Waste No(s).**

D004, D005, D006,  
D007, D008, D009,  
D010, D011, D019,  
D022, D027, D028,  
D029, D043, F002,  
F004, F005, U133

**TRUCON Code(s)**

322

**Waste Stream Description**

RH Mixed TRU waste resulting from solvent tank emptying and closure in the E-Area of SRS.

Waste Stream ID: SR-SDD-HET-A

**Appendix A**  
**Waste Profile Report**

Site	Savannah River Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Remediation/D&D Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2015		
Stream Name	CH TRU - Heterogeneous debris from the D&D of the 211-F-Area			Activity Concentrations Decayed to CY	2015		

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	1.9	0.0	1.9
SWB Dir Ld w/o Liner	3.6	0.0	3.6
<b>Current Form Total</b>	<b>5.5</b>	<b>0.0</b>	<b>5.5</b>

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
<b>Final Form Total</b>	<b>5.7</b>	<b>0.0</b>	<b>5.7</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	51.02
Aluminum-based Metal/Alloys	0.50
Other Metal/Alloys	0.04
Other Inorganic Materials	0.48
Cellulose	2.26
Rubber	0.00
Plastic	22.45
Cement	1.07
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	12.28
Packaging Material, Rubber	0.32
Packaging Material, Steel	145.93
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.55E-03
Am-243	5.33E-07
Cm-244	5.31E-05
Cs-137	2.36E-05
Np-237	7.50E-06
Pu-238	6.13E-01
Pu-239	3.39E-02
Pu-240	4.74E-03
Pu-241	8.72E-02
Pu-242	4.20E-06
Sr-90	5.77E-03
Th-229	4.66E-11
Th-230	4.35E-11
Th-232	2.91E-18
U-233	5.29E-07
U-234	5.60E-06
U-235	7.95E-09
U-236	5.90E-08
U-238	1.69E-07

**Haz. Waste No(s).**

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

**TRUCON Code(s)**

125/225

**Waste Stream Description**

This waste stream is composed of metal equipment, tools and debris and small amounts of Portland cement

Waste Stream ID: SR-SDD-HOM-A

**Appendix A**  
**Waste Profile Report**

Site	Savannah River Site	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Remediation/D&D Waste	Waste Matrix Code Group	Solidified Organics		Inventory Date	12/31/2015	
Stream Name	Organic Sludge from D&D of the SRS F-Area 800 Series Underground Tanks				Activity Concentrations Decayed to CY	2015	

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.4	0.0	0.4
55-gal Drum Dir Ld w/o Liner	3.6	0.0	3.6
<b>Current Form Total</b>	<b>4.0</b>	<b>0.0</b>	<b>4.0</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.4	0.0	0.4
55-gal Drum Dir Ld w/o Liner	3.5	0.0	3.5
<b>Final Form Total</b>	<b>4.0</b>	<b>0.0</b>	<b>4.0</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	0.00
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	7.93
Cement	530.09
Solidified Inorganic Material	3.98
Solidified Organic Material	27.90
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	3.90
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.65E-02
Am-243	1.43E-04
Np-237	2.05E-02
Pu-238	2.46E+00
Pu-239	2.20E-01
Pu-240	4.18E-02
Pu-241	5.99E-01
Pu-242	9.55E-02
Th-229	8.21E-06
Th-230	1.94E-06
Th-232	3.09E-14
U-233	9.34E-02
U-234	2.11E-01
U-235	1.67E-04
U-236	6.26E-04
U-238	1.01E-02

**Haz. Waste No(s).**D004, D005, D007,  
D008, D009, D011**TRUCON Code(s)**

112/212

**Waste Stream Description**

Absorbed organic sludge

Waste Stream ID: SR-SDD-HOM-B

**Appendix A**  
**Waste Profile Report**

Site	Savannah River Site	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Remediation/D&D Waste	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2015	
Stream Name	Sludge from D&D of the SRS F-Area 800 Series Underground Tanks				Activity Concentrations Decayed to CY	2015	

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.4	0.0	0.4
55-gal Drum Dir Ld w/o Liner	8.4	0.0	8.4
SWB Dir Ld w/o Liner	1.8	0.0	1.8
<b>Current Form Total</b>	<b>10.6</b>	<b>0.0</b>	<b>10.6</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.4	0.0	0.4
55-gal Drum Dir Ld w/o Liner	8.3	0.0	8.3
SWB Dir Ld w/o Liner	1.9	0.0	1.9
<b>Final Form Total</b>	<b>10.6</b>	<b>0.0</b>	<b>10.6</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	39.57
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	2.86
Cellulose	15.10
Rubber	0.00
Plastic	30.98
Cement	163.56
Solidified Inorganic Material	8.61
Solidified Organic Material	0.05
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	1.45
Packaging Material, Rubber	0.50
Packaging Material, Steel	134.80
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.24E-01
Am-243	5.84E-05
Cm-244	2.94E-03
Cs-137	4.59E-04
Np-237	5.87E-04
Pu-238	4.76E+01
Pu-239	2.65E+00
Pu-240	3.71E-01
Pu-241	6.34E+00
Pu-242	1.28E-03
Sr-90	1.99E-04
Th-229	4.50E-13
Th-230	8.22E-09
Th-232	4.71E-16
U-233	5.11E-09
U-234	5.82E-04
U-235	2.56E-06
U-236	4.79E-06
U-238	7.56E-05

**Haz. Waste No(s).**D004, D005, D006,  
D007, D008, D009,  
D010, D011**TRUCON Code(s)**

127/227

**Waste Stream Description**

Absorbed sludge

Waste Stream ID: SR-SWMF-HET-A

**Appendix A**  
**Waste Profile Report**

Site	Savannah River Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2015		
Stream Name	CH Mixed TRU Debris (S5000)				Activity Concentrations Decayed to CY	2015	

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.8	0.0	0.8
55-gal Drum Dir Ld w/o Liner	4.8	15.1	20.0
SWB Dir Ld w/o Liner	61.2	0.0	61.2
<b>Current Form Total</b>	<b>66.9</b>	<b>15.1</b>	<b>82.0</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.8	0.0	0.8
55-gal Drum Dir Ld w/o Liner	4.8	15.0	19.8
SWB Dir Ld w/o Liner	64.3	0.0	64.3
<b>Final Form Total</b>	<b>69.9</b>	<b>15.0</b>	<b>84.9</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	61.76
Aluminum-based Metal/Alloys	0.82
Other Metal/Alloys	0.06
Other Inorganic Materials	1.95
Cellulose	7.42
Rubber	4.24
Plastic	19.96
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.36
Packaging Material, Rubber	0.28
Packaging Material, Steel	147.94
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	6.70E-02
Am-243	5.30E-06
Cm-244	1.84E-03
Cs-137	6.02E-05
Np-237	6.64E-05
Pu-238	7.26E+00
Pu-239	1.45E-01
Pu-240	4.11E-02
Pu-241	5.90E-01
Pu-242	1.06E-04
Sr-90	6.00E-05
Th-229	1.02E-09
Th-230	1.67E-08
Th-232	1.68E-09
U-233	5.77E-06
U-234	9.26E-04
U-235	1.36E-07
U-236	2.43E-09
U-238	5.01E-06

**Haz. Waste No(s).**

D008, F001, F002, F004, F005, F007, F009, U133, U151

**TRUCON Code(s)**

125/225, 154

**Waste Stream Description**

CH Mixed TRU waste resulting from remediation and re-packaging of Mixed "defense related" TRU waste.

Waste Stream ID: SR-SWMF-HET-B

**Appendix A**  
**Waste Profile Report**

Site	Savannah River Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Spill Clean-ups/Emergency Response Actions	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2015	
Stream Name	Spill cleanup debris.				Activity Concentrations Decayed to CY	2015	

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	1.1	0.0	1.1
<b>Current Form Total</b>	<b>1.1</b>	<b>0.0</b>	<b>1.1</b>

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

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	130.29
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	32.40
Cellulose	25.91
Rubber	0.00
Plastic	24.62
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	3.46E-01
Am-243	4.27E-01
Cm-244	3.94E+01
Cs-137	5.62E-06
Np-237	2.24E-07
Pu-238	6.78E-01
Pu-239	8.90E-04
Pu-240	1.55E-01
Pu-241	2.67E-01
Pu-242	1.35E-04
Pu-244	2.39E-15
Sr-90	5.61E-06
Th-229	5.72E-17
Th-230	3.56E-11
Th-232	4.37E-19
U-233	9.76E-13
U-234	3.86E-06
U-235	1.73E-12
U-236	8.94E-09
U-238	4.18E-14

**Haz. Waste No(s).**

D004, D005, D006, D007, D008, D009, D010, D011, D019, D022, D027, D028, D029, D043, F002, F004, F005, U133

**TRUCON Code(s)**

125/225, 154

**Waste Stream Description**

Solid Waste Management Facility debris resulting from spill cleanup activities

Waste Stream ID: **SR-T001-WSB-1**

**Appendix A**  
**Waste Profile Report**

Site	Savannah River Site	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Materials Production/Recovery Effluents	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2015	
Stream Name	N/A					Activity Concentrations Decayed to CY	2015

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	0.0	4556.2	4556.2
<b>Current Form Total</b>	<b>0.0</b>	<b>4556.2</b>	<b>4556.2</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	0.0	4512.8	4512.8
<b>Final Form Total</b>	<b>0.0</b>	<b>4512.8</b>	<b>4512.8</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	19.32
Aluminum-based Metal/Alloys	32.22
Other Metal/Alloys	18.31
Other Inorganic Materials	29.76
Cellulose	26.60
Rubber	31.91
Plastic	100.66
Cement	0.00
Solidified Inorganic Material	4.44
Solidified Organic Material	3.64
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.52E+01
Np-237	8.18E-07
Pu-238	6.76E-03
Pu-239	4.44E-02
Pu-240	1.69E-02
Pu-241	8.13E+00
Th-229	1.03E-19
Th-230	1.21E-09
Th-232	3.37E-18
U-233	4.47E-14
U-234	1.32E-03
U-235	4.25E-05
U-236	6.83E-07
U-238	3.84E-07

No Hazardous Waste Numbers Provided

TRUCON Code(s)  
125/225

**Waste Stream Description**

This waste stream will consist of a neutralized aqueous stream solidified in an inorganic matrix.

Waste Stream ID: **SR-W026-221F-HEPA**

**Appendix A**  
**Waste Profile Report**

Site	Savannah River Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Composite Filter Waste	Inventory Date	12/31/2015		
Stream Name	CH Mixed TRU HEPA Filters (S5000)				Activity Concentrations Decayed to CY	2015	

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

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

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.8	0.0	0.8
<b>Final Form Total</b>	<b>0.8</b>	<b>0.0</b>	<b>0.8</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	25.16
Aluminum-based Metal/Alloys	0.24
Other Metal/Alloys	0.00
Other Inorganic Materials	1.56
Cellulose	10.41
Rubber	0.00
Plastic	18.22
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.64E-01
Am-243	4.68E-15
Cs-137	2.15E-07
Np-237	1.72E-06
Pu-238	7.42E-02
Pu-239	9.42E-01
Pu-240	2.53E-01
Pu-241	2.89E+00
Pu-242	3.19E-05
Sr-90	2.14E-07
Th-229	4.17E-08
Th-230	6.02E-10
Th-232	7.40E-19
U-233	2.37E-04
U-234	3.29E-05
U-235	7.06E-07
U-236	1.50E-08
U-238	5.15E-08

**Haz. Waste No(s).**

D005, D007, D009,  
D011, D019, D022,  
D028, D029, D043,  
F002, F005

**TRUCON Code(s)**

119/219, 154

**Waste Stream Description**

HEPA Filters in Filtered Polyethylene Boxes



Waste Stream ID: SR-W026-221F-HET

**Appendix A**  
**Waste Profile Report**

Site	Savannah River Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Materials Production/Recovery Effluents	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2015		
Stream Name	CH Mixed TRU/Thirds Heterogeneous debris from 221F			Activity Concentrations Decayed to CY	2015		

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.8	0.0	0.8
SWB Dir Ld w/o Liner	5.4	0.0	5.4
<b>Current Form Total</b>	<b>6.2</b>	<b>0.0</b>	<b>6.2</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.8	0.0	0.8
SWB Dir Ld w/o Liner	5.7	0.0	5.7
<b>Final Form Total</b>	<b>6.5</b>	<b>0.0</b>	<b>6.5</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	42.38
Aluminum-based Metal/Alloys	0.44
Other Metal/Alloys	0.52
Other Inorganic Materials	6.76
Cellulose	29.50
Rubber	7.04
Plastic	31.29
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.02
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	4.74
Packaging Material, Rubber	0.24
Packaging Material, Steel	150.54
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	3.41E-01
Am-243	7.70E-07
Cm-244	5.09E-03
Cs-137	8.74E-05
Np-237	4.49E-06
Pu-238	3.91E-01
Pu-239	1.52E+00
Pu-240	4.18E-01
Pu-241	6.60E+00
Pu-242	2.58E-04
Sr-90	8.73E-05
Th-229	8.46E-16
Th-230	1.53E-09
Th-232	4.76E-08
U-233	1.93E-11
U-234	1.67E-04
U-235	2.22E-06
U-236	1.24E-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.

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	12/31/2015	
Stream Name	CH Mixed TRU/Thirds Heterogeneous debris from 221F				Activity Concentrations Decayed to CY	2015	

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	4.6	0.0	4.6
SLB2 Dir Ld	6.6	0.0	6.6
<b>Current Form Total</b>	<b>11.3</b>	<b>0.0</b>	<b>11.3</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	4.6	0.0	4.6
SLB2 Dir Ld	5.7	0.0	5.7
<b>Final Form Total</b>	<b>10.2</b>	<b>0.0</b>	<b>10.2</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	0.00
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.71
Other Inorganic Materials	48.30
Cellulose	0.06
Rubber	0.00
Plastic	2.78
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	16.57
Packaging Material, Rubber	0.33
Packaging Material, Steel	177.65
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	9.66E-02
Cm-244	2.80E-03
Cs-137	7.91E-02
Np-237	9.07E-07
Pu-238	1.33E-02
Pu-239	2.37E-01
Pu-240	5.96E-02
Pu-241	1.75E+00
Pu-242	1.03E-05
Sr-90	2.22E-02
Th-229	5.43E-10
Th-230	1.38E-09
Th-232	3.38E-17
U-233	3.09E-06
U-234	7.52E-05
U-235	2.38E-06
U-236	3.44E-07
U-238	9.08E-07

**Haz. Waste No(s).**

D006, D007, D008, D009, D011, D019, D022, D028, D029, F002, F005

**TRUCON Code(s)**

125/225, 154

**Waste Stream Description**

200 Areas (F Separations Facilities). This waste consists of silver impregnated ceramic saddles removed from the F-Canyon dissolver off-gas system.

Waste Stream ID: **SR-W026-221F-HOM**

**Appendix A**  
**Waste Profile Report**

Site	Savannah River Site	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Materials Production/Recovery Effluents	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2015	
Stream Name	CH Mixed TRU Solids (S3000)				Activity Concentrations Decayed to CY	2015	

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

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

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

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	1.69
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	1.64
Rubber	0.63
Plastic	26.90
Cement	0.00
Solidified Inorganic Material	257.73
Solidified Organic Material	4.42
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	4.51E-01
Am-243	1.17E-07
Cs-137	2.39E-02
Np-237	1.47E-05
Pu-238	3.62E-01
Pu-239	1.85E+00
Pu-240	4.15E-01
Pu-241	4.23E+00
Pu-242	5.87E-05
Sr-90	1.25E-05
Th-229	2.48E-14
Th-230	8.60E-10
Th-232	2.73E-18
U-233	1.89E-10
U-234	3.27E-05
U-235	2.68E-08
U-236	3.69E-08
U-238	3.11E-07

**Haz. Waste No(s).**

D005, D006, D007,  
D008, D009, D011,  
D019, D022, D028,  
D029, D043, F002,  
F004, F005, U151

**TRUCON Code(s)**

127/227

**Waste Stream Description**

Absorbed oil, neutralized acids / bases and water

Waste Stream ID: SR-W026-772F-HET

**Appendix A**  
**Waste Profile Report**

Site	Savannah River Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	R&D/R&D Laboratory Waste	Waste Matrix Code Group	Combustible Waste		Inventory Date	12/31/2015	
Stream Name	CH Mixed TRU/Thirds Heterogeneous debris from 772F				Activity Concentrations Decayed to CY	2015	

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	5.0	46.2	51.2
55-gal Drum Dir Ld w/o Liner	1.9	0.0	1.9
SWB Dir Ld w/o Liner	3.6	21.6	25.2
<b>Current Form Total</b>	<b>10.5</b>	<b>67.8</b>	<b>78.3</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	5.0	45.8	50.8
55-gal Drum Dir Ld w/o Liner	1.9	0.0	1.9
SWB Dir Ld w/o Liner	3.8	22.7	26.5
<b>Final Form Total</b>	<b>10.6</b>	<b>68.4</b>	<b>79.1</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	11.01
Aluminum-based Metal/Alloys	0.65
Other Metal/Alloys	0.86
Other Inorganic Materials	18.33
Cellulose	6.43
Rubber	4.13
Plastic	44.11
Cement	0.00
Solidified Inorganic Material	0.08
Solidified Organic Material	0.01
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	23.79
Packaging Material, Rubber	0.44
Packaging Material, Steel	138.35
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.25E-01
Am-243	2.10E-06
Cm-244	3.11E-03
Cs-137	9.19E-04
Np-237	2.38E-04
Pu-238	8.76E+00
Pu-239	3.89E-01
Pu-240	9.69E-02
Pu-241	1.98E+00
Pu-242	4.45E-05
Sr-90	9.12E-04
Th-229	1.17E-08
Th-230	1.36E-08
Th-232	5.08E-07
U-233	7.55E-05
U-234	1.49E-03
U-235	1.54E-06
U-236	2.87E-09
U-238	1.29E-06

**Haz. Waste No(s).**

D004, D005, D006,  
D007, D008, D009,  
D010, D011, D019,  
D022, D028, D029,  
F002, F003, F005

**TRUCON Code(s)**

125/225, 154

**Waste Stream Description**

This waste stream is composed of Job Control waste, sludges and resins, HEPA filters and metal equipment.

Waste Stream ID: SR-W026-MFFF-1

**Appendix A**  
**Waste Profile Report**

Site	Savannah River Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2015		
Stream Name	UNKNOWN	Activity Concentrations Decayed to CY			2015		

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	0.0	2999.0	2999.0
<b>Current Form Total</b>	<b>0.0</b>	<b>2999.0</b>	<b>2999.0</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	0.0	2970.4	2970.4
<b>Final Form Total</b>	<b>0.0</b>	<b>2970.4</b>	<b>2970.4</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	19.32
Aluminum-based Metal/Alloys	32.22
Other Metal/Alloys	18.31
Other Inorganic Materials	29.76
Cellulose	26.60
Rubber	31.91
Plastic	100.66
Cement	0.00
Solidified Inorganic Material	4.44
Solidified Organic Material	3.64
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	7.99E-03
Np-237	1.58E-10
Pu-238	4.16E-01
Pu-239	2.81E+00
Pu-240	6.47E-01
Pu-241	4.98E+01
Pu-242	1.91E-04
Th-229	8.92E-24
Th-230	6.36E-14
Th-232	7.94E-20
U-233	4.82E-18
U-234	1.28E-07
U-235	9.45E-07
U-236	1.71E-08
U-238	8.57E-09

**Haz. Waste No(s).**

D008

**TRUCON Code(s)**

125/225

**Waste Stream Description**

This waste stream will be composed of heterogeneous debris which could include HEPA filters, plastic, protective clothing, metal, gloves, lead lined gloves and sludges.

Waste Stream ID: SR-W026-WSB-2

**Appendix A**  
**Waste Profile Report**

Site	Savannah River Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2015		
Stream Name	N/A	Activity Concentrations Decayed to CY				2015	

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	0.0	557.6	557.6
<b>Current Form Total</b>	<b>0.0</b>	<b>557.6</b>	<b>557.6</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	0.0	552.2	552.2
<b>Final Form Total</b>	<b>0.0</b>	<b>552.2</b>	<b>552.2</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	3.64
Aluminum-based Metal/Alloys	0.77
Other Metal/Alloys	13.74
Other Inorganic Materials	8.55
Cellulose	33.50
Rubber	62.29
Plastic	148.67
Cement	0.00
Solidified Inorganic Material	8.42
Solidified Organic Material	6.88
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	7.12E+01
Np-237	2.31E-06
Pu-238	1.77E-03
Pu-239	1.23E-02
Pu-240	4.24E-03
Pu-241	2.10E-01
Pu-242	8.04E-06
Th-229	2.89E-19
Th-230	1.03E-13
Th-232	8.21E-19
U-233	1.26E-13
U-234	1.13E-07
U-235	1.03E-05
U-236	1.66E-07
U-238	9.69E-08

**Haz. Waste No(s).**

D008

**TRUCON Code(s)**

125/225

**Waste Stream Description**

This waste stream will be composed of heterogeneous debris which could include HEPA filters, plastic, protective clothing, metal, gloves, lead lined gloves, and sludges.

Waste Stream ID: SR-W027-221F-HET-A

**Appendix A**  
**Waste Profile Report**

Site	Savannah River Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Materials Production/Recovery Effluents	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2015	
Stream Name	CH Mixed TRU/F listed solvents - Heterogeneous debris from 221F				Activity Concentrations Decayed to CY	2015	

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	2.1	0.0	2.1
SWB Dir Ld w/o Liner	5.4	0.0	5.4
<b>Current Form Total</b>	<b>7.5</b>	<b>0.0</b>	<b>7.5</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	2.1	0.0	2.1
SWB Dir Ld w/o Liner	5.7	0.0	5.7
<b>Final Form Total</b>	<b>7.8</b>	<b>0.0</b>	<b>7.8</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	46.71
Aluminum-based Metal/Alloys	0.13
Other Metal/Alloys	0.02
Other Inorganic Materials	1.89
Cellulose	40.36
Rubber	0.59
Plastic	18.62
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	9.95
Packaging Material, Rubber	0.29
Packaging Material, Steel	147.35
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.89E-01
Am-243	1.97E-07
Cm-244	2.83E-05
Cs-137	4.81E-07
Np-237	1.69E-06
Pu-238	5.34E-02
Pu-239	6.38E-01
Pu-240	1.61E-01
Pu-241	1.86E+00
Pu-242	1.52E-05
Sr-90	4.80E-07
Th-229	1.62E-09
Th-230	4.73E-10
Th-232	4.69E-19
U-233	9.22E-06
U-234	2.59E-05
U-235	1.04E-07
U-236	9.52E-09
U-238	3.20E-07

**Haz. Waste No(s).**D006, D008, D009,  
F001, F002, F005**TRUCON Code(s)**

125/225, 154

**Waste Stream Description**

This waste stream is primarily solids consisting of booties, lab coats, floor sweeping, labware, rags, and other job control waste. This stream differs from SR-W026 because solvent rags are suspected to be in the waste.

Waste Stream ID: **SR-W027-221H-HEPA**

**Appendix A**  
**Waste Profile Report**

Site	Savannah River Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Composite Filter Waste	Inventory Date	12/31/2015		
Stream Name	CH TRU HEPA filters	Activity Concentrations Decayed to CY			2015		

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	2.7	0.0	2.7
55-gal Drum Dir Ld w/o Liner	0.0	3.4	3.4
SLB2 Dir Ld	6.6	0.0	6.6
SWB Dir Ld w/o Liner	66.6	10.8	77.4
<b>Current Form Total</b>	<b>76.0</b>	<b>14.2</b>	<b>90.1</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	2.7	0.0	2.7
55-gal Drum Dir Ld w/o Liner	0.0	3.3	3.3
SLB2 Dir Ld	5.7	0.0	5.7
SWB Dir Ld w/o Liner	69.9	11.3	81.3
<b>Final Form Total</b>	<b>78.3</b>	<b>14.7</b>	<b>93.0</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	4.19
Aluminum-based Metal/Alloys	23.19
Other Metal/Alloys	0.00
Other Inorganic Materials	9.90
Cellulose	6.48
Rubber	0.09
Plastic	13.41
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	1.08
Packaging Material, Rubber	0.21
Packaging Material, Steel	155.75
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.36E-02
Am-243	1.21E-07
Cs-137	1.48E-03
Np-237	4.03E-05
Pu-238	9.47E+00
Pu-239	3.62E-02
Pu-240	1.02E-02
Pu-241	2.12E-01
Pu-242	1.83E-05
Sr-90	1.48E-03
Th-229	3.09E-14
Th-230	3.13E-08
Th-232	2.97E-20
U-233	3.51E-10
U-234	1.73E-03
U-235	1.11E-07
U-236	6.02E-10
U-238	5.67E-15

**Haz. Waste No(s).**

D006, D007, D008,  
D009, D011, D019,  
D022, D029, D035,  
D039, D040, D043

**TRUCON Code(s)**

119/219

**Waste Stream Description**

This waste stream is mixed TRU composed of HEPA filters



Waste Stream ID: SR-W027-221H-HET

**Appendix A**  
**Waste Profile Report**

Site	Savannah River Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Materials Production/Recovery Effluents	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2015	
Stream Name	CH Mixed TRU/F listed solvents - Heterogeneous debris from 221H				Activity Concentrations Decayed to CY	2015	

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	3.6	0.0	3.6
55-gal Drum Dir Ld w/o Liner	0.2	0.0	0.2
SWB Dir Ld w/o Liner	72.0	0.0	72.0
<b>Current Form Total</b>	<b>75.8</b>	<b>0.0</b>	<b>75.8</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	3.5	0.0	3.5
55-gal Drum Dir Ld w/o Liner	0.2	0.0	0.2
SWB Dir Ld w/o Liner	75.6	0.0	75.6
<b>Final Form Total</b>	<b>79.3</b>	<b>0.0</b>	<b>79.3</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	24.59
Aluminum-based Metal/Alloys	1.15
Other Metal/Alloys	0.38
Other Inorganic Materials	9.08
Cellulose	5.83
Rubber	16.03
Plastic	50.67
Cement	0.00
Solidified Inorganic Material	0.13
Solidified Organic Material	0.01
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	1.65
Packaging Material, Rubber	0.21
Packaging Material, Steel	152.37
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.20E-01
Am-243	1.77E-06
Cm-244	2.82E-03
Cs-137	1.46E-05
Np-237	1.47E-03
Pu-238	7.74E+01
Pu-239	2.48E-01
Pu-240	6.98E-02
Pu-241	5.92E+00
Pu-242	1.58E-04
Sr-90	1.45E-05
Th-229	3.08E-08
Th-230	1.27E-07
Th-232	2.23E-06
U-233	3.50E-04
U-234	1.39E-02
U-235	2.26E-06
U-236	2.06E-09
U-238	2.36E-06

**Haz. Waste No(s).**

D006, D008, D009, D019, D022, D029, D039, D040, D043, F001, F002, F003, F005, U133

**TRUCON Code(s)**

125/225, 154

**Waste Stream Description**

This waste stream is primarily solids consisting of booties, lab coats, floor sweeping, labware, rags, and other job control waste. This stream differs from SR-W026 because solvent rags are suspected to be in the waste. Small HEPA filters, sludges, resins, absorbed liquids, and large metal equipment are also in these waste streams.

Waste Stream ID: SR-W027-221H-HET-C

**Appendix A**  
**Waste Profile Report**

Site	Savannah River Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Materials Production/Recovery Effluents	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2015		
Stream Name	CH Mixed TRU - Heterogeneous debris from 221H			Activity Concentrations Decayed to CY	2015		

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	1.3	0.0	1.3
55-gal Drum Dir Ld w/o Liner	12.2	59.6	71.8
SWB Dir Ld w/o Liner	16.2	27.0	43.2
<b>Current Form Total</b>	<b>29.6</b>	<b>86.6</b>	<b>116.3</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	1.2	0.0	1.2
55-gal Drum Dir Ld w/o Liner	12.1	59.1	71.1
SWB Dir Ld w/o Liner	17.0	28.4	45.4
<b>Final Form Total</b>	<b>30.3</b>	<b>87.4</b>	<b>117.7</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	45.75
Aluminum-based Metal/Alloys	6.96
Other Metal/Alloys	0.30
Other Inorganic Materials	15.60
Cellulose	4.25
Rubber	25.50
Plastic	52.61
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	0.39
Packaging Material, Rubber	0.42
Packaging Material, Steel	139.50
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.28E-01
Am-243	7.01E-06
Cs-137	3.12E-05
Np-237	2.31E-03
Pu-238	1.77E+00
Pu-239	8.47E-01
Pu-240	2.04E-01
Pu-241	1.66E+00
Pu-242	1.15E-04
Sr-90	3.11E-05
Th-229	1.52E-09
Th-230	4.16E-09
Th-232	1.49E-19
U-233	1.73E-05
U-234	4.55E-04
U-235	7.06E-06
U-236	6.03E-09
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	12/31/2015	
Stream Name	CH Mixed TRU Absorbed / Stabilized Liquids				Activity Concentrations Decayed to CY	2015	

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.6	0.0	0.6
55-gal Drum Dir Ld w/o Liner	0.2	0.0	0.2
<b>Current Form Total</b>	<b>0.8</b>	<b>0.0</b>	<b>0.8</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.6	0.0	0.6
55-gal Drum Dir Ld w/o Liner	0.2	0.0	0.2
<b>Final Form Total</b>	<b>0.8</b>	<b>0.0</b>	<b>0.8</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	6.05
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	106.84
Cellulose	4.03
Rubber	4.03
Plastic	46.37
Cement	0.00
Solidified Inorganic Material	32.25
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	27.80
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	3.31E-01
Am-243	1.16E-07
Cs-137	5.45E-03
Np-237	1.40E-04
Pu-238	7.72E-01
Pu-239	8.05E-01
Pu-240	2.19E-01
Pu-241	2.51E+00
Pu-242	7.83E-05
Sr-90	5.44E-03
Th-229	9.88E-10
Th-230	2.79E-08
Th-232	6.28E-16
U-233	5.62E-06
U-234	1.52E-03
U-235	2.91E-05
U-236	6.37E-06
U-238	1.53E-06

**Haz. Waste No(s).**

D006, D007, D008,  
D009, D011, D019,  
D022, D029, D043,  
F002, F005, U133

**TRUCON Code(s)**

127/227

**Waste Stream Description**

This waste stream is comprised of greater than 50 percent by volume absorbed liquid waste

Waste Stream ID: **SR-W027-235F-HEPA**

**Appendix A**  
**Waste Profile Report**

Site	Savannah River Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Materials Production/Recovery Effluents	Waste Matrix Code Group	Composite Filter Waste	Inventory Date	12/31/2015		
Stream Name	CH Mixed TRU consisting of HEPA Filters from the 235-F.			Activity Concentrations Decayed to CY	2015		

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.4	0.0	0.4
SWB Dir Ld w/o Liner	9.0	0.0	9.0
<b>Current Form Total</b>	<b>9.4</b>	<b>0.0</b>	<b>9.4</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.4	0.0	0.4
SWB Dir Ld w/o Liner	9.5	0.0	9.5
<b>Final Form Total</b>	<b>9.9</b>	<b>0.0</b>	<b>9.9</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	2.75
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.67
Cellulose	27.02
Rubber	0.00
Plastic	16.87
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	1.56
Packaging Material, Rubber	0.21
Packaging Material, Steel	152.48
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.07E-02
Am-243	5.58E-15
Cs-137	7.05E-08
Np-237	1.70E-04
Pu-238	9.76E-01
Pu-239	6.47E-03
Pu-240	2.80E-03
Pu-241	4.62E-02
Pu-242	4.95E-06
Sr-90	7.04E-08
Th-229	3.25E-14
Th-230	2.64E-09
Th-232	2.05E-21
U-233	7.39E-10
U-234	2.88E-04
U-235	2.49E-06
U-236	8.30E-11
U-238	7.69E-16

**Haz. Waste No(s).**

D004, D005, D006,  
D007, D008, D009,  
D010, D011, D018,  
D019, D035

**TRUCON Code(s)**

119/219, 154

**Waste Stream Description**

This waste stream is composed of spent HEPA Filters

Waste Stream ID: **SR-W027-235F-HET**

**Appendix A**  
**Waste Profile Report**

Site	Savannah River Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Materials Production/Recovery Effluents	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2015	
Stream Name	CH Mixed TRU/F listed solvents - Heterogeneous debris from 235F				Activity Concentrations Decayed to CY	2015	

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	3.4	0.0	3.4
SWB Dir Ld w/o Liner	3.6	0.0	3.6
<b>Current Form Total</b>	<b>7.0</b>	<b>0.0</b>	<b>7.0</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	3.3	0.0	3.3
SWB Dir Ld w/o Liner	3.8	0.0	3.8
<b>Final Form Total</b>	<b>7.1</b>	<b>0.0</b>	<b>7.1</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	55.37
Aluminum-based Metal/Alloys	1.56
Other Metal/Alloys	2.76
Other Inorganic Materials	7.76
Cellulose	9.56
Rubber	26.09
Plastic	47.11
Cement	0.00
Solidified Inorganic Material	0.18
Solidified Organic Material	0.09
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.37
Packaging Material, Steel	142.82
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.18E-01
Am-243	1.48E-06
Cm-244	3.39E-04
Cs-137	2.52E-06
Np-237	4.28E-03
Pu-238	1.23E+02
Pu-239	1.62E-01
Pu-240	7.00E-02
Pu-241	5.69E+00
Pu-242	1.34E-04
Sr-90	2.51E-06
Th-229	1.95E-08
Th-230	2.84E-07
Th-232	1.51E-06
U-233	2.21E-04
U-234	3.11E-02
U-235	3.18E-06
U-236	2.07E-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.

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	12/31/2015	
Stream Name	CH mixed TRU S3000 solids from 235F				Activity Concentrations Decayed to CY	2015	

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

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

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

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	2.80
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	2.80
Cellulose	2.80
Rubber	2.80
Plastic	8.41
Cement	0.00
Solidified Inorganic Material	260.70
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.24E-01
Np-237	1.09E-07
Pu-238	2.49E+02
Pu-239	1.76E-01
Pu-240	9.63E-02
Pu-241	4.57E+00
Pu-242	1.15E-04
Th-229	5.96E-17
Th-230	2.95E-08
Th-232	6.33E-19
U-233	6.90E-13
U-234	2.13E-03
U-235	5.20E-10
U-236	8.56E-09
U-238	5.34E-14

**Haz. Waste No(s).**D004, D005, D006,  
D007, D008, D009,  
D010, D011, F002**TRUCON Code(s)**

127/227

**Waste Stream Description**

This waste consists of sludge from tank cleanout.

Waste Stream ID: **SR-W027-321-322M-HET**

**Appendix A**  
**Waste Profile Report**

Site	Savannah River Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Materials Production/Recovery Effluents	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2015		
Stream Name	CH Mixed TRU Debris (S5000)			Activity Concentrations Decayed to CY	2015		

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	1.3	0.0	1.3
<b>Current Form Total</b>	<b>1.3</b>	<b>0.0</b>	<b>1.3</b>

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

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	141.74
Aluminum-based Metal/Alloys	3.63
Other Metal/Alloys	8.34
Other Inorganic Materials	18.49
Cellulose	23.56
Rubber	68.51
Plastic	97.15
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	1.09
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.11E+00
Np-237	5.01E-04
Pu-238	2.48E-02
Pu-239	4.21E-02
Pu-240	9.96E-03
Pu-241	1.38E+02
Pu-242	1.73E-06
Th-229	3.83E-13
Th-230	1.30E-12
Th-232	2.91E-20
U-233	4.36E-09
U-234	1.41E-07
U-235	8.30E-11
U-236	5.90E-10
U-238	5.38E-16

**Haz. Waste No(s).**

D008, D009, F001, F002

**TRUCON Code(s)**

125/225, 129/229

**Waste Stream Description**

CH Mixed TRU waste resulting from target assembly fabrication leading to production of defense related nuclear materials.

Waste Stream ID: **SR-W027-773A-HET**

**Appendix A**  
**Waste Profile Report**

Site	Savannah River Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	R&D/R&D Laboratory Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2015	
Stream Name	CH Mixed TRU/F listed solvents - Heterogeneous debris from 773A				Activity Concentrations Decayed to CY	2015	

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	12.4	0.0	12.4
55-gal Drum Dir Ld w/o Liner	9.0	99.5	108.6
55-gal POC - 12" w/ Liner	0.0	1.2	1.2
SLB2 Dir Ld	6.6	0.0	6.6
SWB Dir Ld w/o Liner	72.0	63.0	135.0
<b>Current Form Total</b>	<b>100.1</b>	<b>163.8</b>	<b>263.8</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	12.3	0.0	12.3
55-gal Drum Dir Ld w/o Liner	8.9	98.6	107.5
55-gal POC - 12" w/ Liner	0.0	1.2	1.2
SLB2 Dir Ld	5.7	0.0	5.7
SWB Dir Ld w/o Liner	75.6	66.2	141.8
<b>Final Form Total</b>	<b>102.5</b>	<b>166.0</b>	<b>268.5</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	35.29
Aluminum-based Metal/Alloys	0.67
Other Metal/Alloys	1.22
Other Inorganic Materials	13.83
Cellulose	11.15
Rubber	6.77
Plastic	30.80
Cement	0.00
Solidified Inorganic Material	0.15
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.63
Packaging Material, Plastic	1.87
Packaging Material, Rubber	0.36
Packaging Material, Steel	146.38
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.59E-01
Am-243	1.05E-03
Cm-244	9.60E-02
Cs-137	7.98E-04
Np-237	2.36E-04
Pu-238	1.01E+01
Pu-239	4.22E-01
Pu-240	9.71E-02
Pu-241	1.77E+00
Pu-242	2.09E-05
Pu-244	9.03E-17
Sr-90	7.97E-04
Th-229	3.99E-09
Th-230	1.67E-08
Th-232	5.25E-07
U-233	4.54E-05
U-234	1.83E-03
U-235	1.09E-06
U-236	2.87E-09
U-238	1.04E-05

**Haz. Waste No(s).**

D004, D005, D006, D007, D008, D009, D010, D011, D019, D022, D027, D028, D029, D043, F002, F003, F004, F005

**TRUCON Code(s)**

125/225, 154, 425

**Waste Stream Description**

This mixed waste stream is primarily solids consisting of booties, lab coats, floor sweeping, labware, rags, other job control waste, small HEPAs liquids, sludges and resins may also be found in this waste.



Waste Stream ID: **SR-W027-773A-HOM**

**Appendix A**  
**Waste Profile Report**

Site	Savannah River Site	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Analytical Laboratory Waste	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2015	
Stream Name	CH Mixed TRU Homogeneous Solids (S3000)				Activity Concentrations Decayed to CY	2015	

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	1.1	0.0	1.1
<b>Current Form Total</b>	<b>1.1</b>	<b>0.0</b>	<b>1.1</b>

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

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	1.46
Aluminum-based Metal/Alloys	0.03
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	6.96
Rubber	2.20
Plastic	22.02
Cement	0.00
Solidified Inorganic Material	90.10
Solidified Organic Material	243.27
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	6.01E-04
Cs-137	6.90E-03
Np-237	1.36E-05
Pu-238	6.66E+01
Pu-239	4.20E-05
Pu-240	2.14E-05
Pu-241	4.42E-04
Pu-242	2.06E-05
Sr-90	6.88E-03
Th-229	1.04E-14
Th-230	2.23E-07
Th-232	6.26E-23
U-233	1.18E-10
U-234	1.23E-02
U-235	8.28E-14
U-236	1.27E-12
U-238	6.38E-15

**Haz. Waste No(s).**

D004, D005, D006,  
D007, D008, D009,  
D010, D011, D019,  
D022, D027, D028,  
D029, D043, F002,  
F004, F005

**TRUCON Code(s)**

127/227

**Waste Stream Description**

CH Mixed TRU Homogeneous Solids resulting from liquid absorption at the SRNL.

Waste Stream ID: **SR-W027-FB-Pre86-C**

**Appendix A**  
**Waste Profile Report**

Site	Savannah River Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Materials Production/Recovery Effluents	Waste Matrix Code Group	Combustible Waste	Inventory Date	12/31/2015		
Stream Name	CH Mixed TRU - Heterogeneous debris from FB-Line			Activity Concentrations Decayed to CY	2015		

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	31.7	0.0	31.7
SWB Dir Ld w/o Liner	34.2	0.0	34.2
<b>Current Form Total</b>	<b>65.9</b>	<b>0.0</b>	<b>65.9</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	31.4	0.0	31.4
SWB Dir Ld w/o Liner	35.9	0.0	35.9
<b>Final Form Total</b>	<b>67.3</b>	<b>0.0</b>	<b>67.3</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	25.55
Aluminum-based Metal/Alloys	0.26
Other Metal/Alloys	0.32
Other Inorganic Materials	8.62
Cellulose	9.18
Rubber	8.32
Plastic	58.32
Cement	0.00
Solidified Inorganic Material	0.19
Solidified Organic Material	0.04
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	17.29
Packaging Material, Rubber	0.37
Packaging Material, Steel	142.86
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	8.14E-01
Am-243	1.29E-06
Cm-244	3.14E-03
Cs-137	4.76E-06
Np-237	4.80E-05
Pu-238	3.72E-01
Pu-239	2.52E+00
Pu-240	7.23E-01
Pu-241	9.82E+00
Pu-242	1.33E-04
Sr-90	4.75E-06
Th-229	2.10E-09
Th-230	1.09E-09
Th-232	7.06E-08
U-233	1.19E-05
U-234	6.06E-05
U-235	1.78E-07
U-236	4.28E-08
U-238	7.65E-07

**Haz. Waste No(s).**

D005, D006, D007, D008, D009, D011, D018, D019, D022, D029, D039, D040, D043, F001, F002, F003, F005, U002, U151

**TRUCON Code(s)**

125/225, 133/233, 154, 425

**Waste Stream Description**

This waste stream is primarily solids consisting of booties, lab coats, floor sweeping, labware, rags, and other job control waste. Small HEPA filters, sludges, resins, absorbed liquids, and metal equipment is also in present in the waste stream.

Waste Stream ID: **SR-W027-HBL-Box**

**Appendix A**  
**Waste Profile Report**

Site	Savannah River Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Remediation/D&D Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2015	
Stream Name	CH mixed TRU from 221H				Activity Concentrations Decayed to CY	2015	

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	4.2	0.0	4.2
SLB2 Dir Ld	13.3	0.0	13.3
SWB Dir Ld w/o Liner	64.8	0.0	64.8
<b>Current Form Total</b>	<b>82.3</b>	<b>0.0</b>	<b>82.3</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	4.2	0.0	4.2
SLB2 Dir Ld	11.3	0.0	11.3
SWB Dir Ld w/o Liner	68.0	0.0	68.0
<b>Final Form Total</b>	<b>83.5</b>	<b>0.0</b>	<b>83.5</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	32.74
Aluminum-based Metal/Alloys	0.01
Other Metal/Alloys	0.03
Other Inorganic Materials	2.71
Cellulose	38.13
Rubber	1.34
Plastic	22.38
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.20
Packaging Material, Steel	160.73
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	4.38E-03
Am-243	3.93E-10
Cm-244	4.99E-05
Cs-137	1.76E-05
Np-237	3.36E-05
Pu-238	2.11E+00
Pu-239	1.09E-02
Pu-240	3.25E-03
Pu-241	5.91E-02
Pu-242	6.31E-06
Sr-90	1.76E-05
Th-229	6.43E-15
Th-230	3.31E-09
Th-232	2.37E-21
U-233	1.46E-10
U-234	3.63E-04
U-235	3.50E-09
U-236	9.61E-11
U-238	9.80E-16

**Haz. Waste No(s).**

D006, D007, D008,  
D009, D011, D019,  
D022, D029, D043,  
F002, F005, U133

**TRUCON Code(s)**

125/225, 154

**Waste Stream Description**

This waste stream is defense related debris consisting of large equipment and job control waste packaged in large steel boxes

**APPENDIX B POTENTIAL TRU WASTE PROFILE REPORTS**

The following waste profile reports contain information on potential TRU waste streams as of the inventory date, December 31, 2015. These waste streams were placed in the potential category for various reasons as stated in section 4.0 of this report.

The TRU waste generator sites that have reported potential TRU waste streams are:

AW	Material and Fuels Complex
BL	Babcock and Wilcox Nuclear Energy Services
IN	Idaho National Laboratory
LA	Los Alamos National Laboratory
RL	Hanford (Richland) Site
RP	Hanford Site – Office of River Protection
WV	West Valley Demonstration Project

Waste Stream ID: **BL-Parks**

**Appendix B**  
**Waste Profile Report**

Site	Babcock and Wilcox Nuclear Energy Services	Summary Category	S5000	Defense Determination	Pending Determination	Handling	CH
Source Cat.	Source Information Not Compiled	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2015		
Stream Name	Parks Township TRU Waste			Activity Concentrations as of CY	2000		

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	4.0	0.0	4.0
Box - Steel	5.7	0.0	5.7
<b>Current Form Total</b>	<b>9.6</b>	<b>0.0</b>	<b>9.6</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	4.0	0.0	4.0
SWB Dir Ld w/o Liner	5.7	0.0	5.7
<b>Final Form Total</b>	<b>9.6</b>	<b>0.0</b>	<b>9.6</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	0.00
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	0.00
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.35
Packaging Material, Steel	144.13
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	7.99E+00
Cs-137	4.11E-03
Pu-238	3.44E+00
Pu-239	1.82E+01
Pu-240	6.85E+00
Pu-241	1.83E+02
Pu-242	4.04E-03
U-234	3.08E-05
U-235	1.40E-06
U-238	2.79E-06

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

**Waste Stream Description**

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	12/31/2015		
Stream Name	Parks Township TRU Waste			Activity Concentrations as of CY 2000			

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.2	0.0	0.2
Box - Misc	0.2	0.0	0.2
<b>Current Form Total</b>	<b>0.4</b>	<b>0.0</b>	<b>0.4</b>

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

**Waste Material Parameters**

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

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	8.01E-02
Pu-239	6.29E+00

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

**Waste Stream Description**

Waste from Parks Township ROD 63FR3629, 65FR82985, 69FR39446 amended 27 February 2008 Point of Contact William Spurgeon

Waste Stream ID: **IN-BN534**

**Appendix B**  
**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	12/31/2015		
Stream Name	Organic Liquid from Maintenance Activities			Activity Concentrations as of CY	2015		

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

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	3.7	0.0	3.7
<b>Current Form Total</b>	<b>3.7</b>	<b>0.0</b>	<b>3.7</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	3.7	0.0	3.7
<b>Final Form Total</b>	<b>3.7</b>	<b>0.0</b>	<b>3.7</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	0.00
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	0.00
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	5.18E-02
Cs-137	2.22E-07
Sr-90	2.44E-07

**Haz. Waste No(s).**

D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D021, D022, D026, D027, D028, D029, D030, D034, D035, D036, D037, D038, D039, D040, D043, F001, F002, F004, F005, F006, F007, F009

**No TRUCON  
Codes Provided**

**Waste Stream Description**

This waste includes non PCB contaminated organic liquids generated during AMWTP maintenance operations (e.g., draining the Brokk pedestal) prior to assay characterization.



Waste Stream ID: **IN-BN538**

**Appendix B**  
**Waste Profile Report**

Site	Idaho National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Other/Multiple Sources	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2015		
Stream Name	Oversized Debris Items from Supercompactor Facility			Activity Concentrations as of CY	2015		

**Waste Volume Detail (m<sup>3</sup>)**

Current Form Volumes			
Container Type	Stored	Proj.	Total
Box - Misc	155.3	0.0	155.3
<b>Current Form Total</b>	<b>155.3</b>	<b>0.0</b>	<b>155.3</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	40.8	0.0	40.8
<b>Final Form Total</b>	<b>40.8</b>	<b>0.0</b>	<b>40.8</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	0.00
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	0.00
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	9.88E-02
Cs-137	3.05E-06
Np-237	9.87E-07
Pu-238	1.75E-02
Pu-239	5.79E-01
Pu-240	1.29E-01
Pu-241	9.11E-01
Pu-242	1.69E-05
Sr-90	3.35E-06
Th-232	1.04E-08
U-234	6.94E-07
U-235	2.24E-07

**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**

Oversized waste items are removed from the boxline processing of feedstock debris. Oversized waste items identified in the hot maintenance cell and the boxlines as not conducive to size reduction are repackaged in boxes and removed from the facility. Oversized debris waste items include only those IDCs identified in RPT-TRUW-83 that are authorized as feed to the Supercompactor.

Waste Stream ID: **IN-BN539**

**Appendix B**  
**Waste Profile Report**

Site	Idaho National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Other/Multiple Sources	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2015		
Stream Name	TRU Radioactive-Only Debris Waste			Activity Concentrations as of CY	2010		

**Waste Volume Detail (m<sup>3</sup>)**

Current Form Volumes			
Container Type	Stored	Proj.	Total
Box - Misc	9.5	0.0	9.5
<b>Current Form Total</b>	<b>9.5</b>	<b>0.0</b>	<b>9.5</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	2.5	0.0	2.5
<b>Final Form Total</b>	<b>2.5</b>	<b>0.0</b>	<b>2.5</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	0.00
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	0.00
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.04E-04
Pu-238	2.52E-01
Pu-239	3.91E-04
Pu-240	2.67E-04
Pu-241	2.86E-04
Pu-242	3.06E-07

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

**Waste Stream Description**

Boxes that are emptied of waste contents into the boxlines for treatment are subsequently shredded. These include shredded boxes constructed of metal, wood, and fiberglass reinforced plywood.

Waste Stream ID: **IN-IC605**

**Appendix B**  
**Waste Profile Report**

Site	Idaho National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Remediation/D&D Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2015		
Stream Name	CWI CH Debris from Repackaging AMWTP RH Debris - Non-RPT-TRUW-83 IDCs			Activity Concentrations as of CY	2013		

**Waste Volume Detail (m<sup>3</sup>)**

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.4	0.0	0.4
<b>Current Form Total</b>	<b>0.4</b>	<b>0.0</b>	<b>0.4</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.4	0.0	0.4
<b>Final Form Total</b>	<b>0.4</b>	<b>0.0</b>	<b>0.4</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	0.00
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	0.00
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

No Final Form  
Radionuclides Provided

No Hazardous  
Waste Numbers  
Provided

No TRUCON  
Codes Provided

**Waste Stream Description**

This waste stream consists of drums of debris waste that were returned to the AMWTP from the Idaho Nuclear Technology and Engineering Center (INTEC) after characterization. The drums were opened to determine if contents were contact-handled (CH) or remote-handled (RH), remediated WIPP-prohibited items if necessary and finally repackaged in the appropriate configuration for RH or CH waste. The CH portion of this waste was returned to the AMWTP for further characterization and shipment to WIPP.

Waste Stream ID: **IN-JH826CH**

**Appendix B**  
**Waste Profile Report**

Site	Idaho National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Remediation/D&D Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2015		
Stream Name	J.C. Haynes Waste					Activity Concentrations as of CY	1985

**Waste Volume Detail (m<sup>3</sup>)**

Current Form Volumes			
Container Type	Stored	Proj.	Total
Box - Misc	3.2	0.0	3.2
<b>Current Form Total</b>	<b>3.2</b>	<b>0.0</b>	<b>3.2</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.8	0.0	0.8
<b>Final Form Total</b>	<b>0.8</b>	<b>0.0</b>	<b>0.8</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	0.00
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	0.00
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.27E+01

No Hazardous  
Waste Numbers  
Provided

No TRUCON  
Codes Provided

**Waste Stream Description**

Am-241 contaminated debris waste

Waste Stream ID: **IN-SBW-01A**

**Appendix B**  
**Waste Profile Report**

Site	Idaho National Laboratory	Summary Category	S3000	Defense Determination	Defense-Related	Handling	RH
Source Cat.	Materials Production/Recovery Effluents	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2015	
Stream Name	SBW Treatment - Steam Reforming - Carbonate Waste Form				Activity Concentrations as of CY	2006	

**Waste Volume Detail (m<sup>3</sup>)**

Current Form Volumes			
Container Type	Stored	Proj.	Total
Tank(s)	3520.0	0.0	3520.0
<b>Current Form Total</b>	<b>3520.0</b>	<b>0.0</b>	<b>3520.0</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid - Dir Ld	979.0	0.0	979.0
<b>Final Form Total</b>	<b>979.0</b>	<b>0.0</b>	<b>979.0</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
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 <sup>3</sup> )
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 2.0-year period. The steam reforming process is a fluidized bed reactor that converts the metals dissolved in the nitric acid into a dry granular powder. The fluidized bed operates at temperature between 600 and 1000 degrees centigrade. The carbonate waste form would be removed from the fluidized bed and transferred to the canning facility and placed by 96% loading in to 72-B canisters (direct loaded). The carbonate waste form would be RH-TRU waste, dried to 1% moisture, and would generate approximately 1100 canisters with a surface dose rate <100 Rem/hr.

Waste Stream ID: **IN-SBW-01B**

**Appendix B**  
**Waste Profile Report**

Site	Idaho National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	RH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2015		
Stream Name	SBW Treatment - Steam Reforming Process - Debris			Activity Concentrations as of CY	2014		

**Waste Volume Detail (m<sup>3</sup>)**

Current Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid - Dir Ld	0.0	89.0	89.0
<b>Current Form Total</b>	<b>0.0</b>	<b>89.0</b>	<b>89.0</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid - Dir Ld	0.0	89.0	89.0
<b>Final Form Total</b>	<b>0.0</b>	<b>89.0</b>	<b>89.0</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based 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 <sup>3</sup> )
Am-241	5.27E-03
Am-243	2.85E-06
Cm-244	2.02E-05
Cs-137	2.90E+00
Np-237	4.03E-05
Pu-238	6.22E-02
Pu-239	6.75E-03
Pu-240	2.50E-03
Pu-241	2.54E-02
Pu-242	1.29E-06
Sr-90	1.90E+00
U-233	5.64E-07
U-234	8.98E-05
U-235	2.20E-06
U-238	2.16E-06

**Haz. Waste No(s).**

D004, D005, D006,  
D007, D008, D009,  
D010, D011, F001,  
F002, F005, U134

**No TRUCON  
Codes Provided**

**Waste Stream Description**

The debris from the steam reforming process would include spent HEPA filters and other failed equipment.

Waste Stream ID: **IN-W139**

**Appendix B**  
**Waste Profile Report**

Site	Idaho National Laboratory	Summary Category	S5000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Discarding Excess/Expired Materials	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2015		
Stream Name	Mexican Americium Waste					Activity Concentrations as of CY	1986

**Waste Volume Detail (m<sup>3</sup>)**

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.8	0.0	0.8
<b>Current Form Total</b>	<b>0.8</b>	<b>0.0</b>	<b>0.8</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.8	0.0	0.8
<b>Final Form Total</b>	<b>0.8</b>	<b>0.0</b>	<b>0.8</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	0.00
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	0.00
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.50E+00

No Hazardous  
Waste Numbers  
Provided

No TRUCON  
Codes Provided

**Waste Stream Description**

This waste stream consists of Americium contaminated debris waste.

Waste Stream ID: **LA-TA-00-04**

**Appendix B**  
**Waste Profile Report**

Site	Los Alamos National Laboratory	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2015	
Stream Name	Absorbed Liquid Waste					Activity Concentrations as of CY	2007

**Waste Volume Detail (m<sup>3</sup>)**

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.2	0.0	0.2
<b>Current Form Total</b>	<b>0.2</b>	<b>0.0</b>	<b>0.2</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.2	0.0	0.2
<b>Final Form Total</b>	<b>0.2</b>	<b>0.0</b>	<b>0.2</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	1.22
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	1.20
Cement	0.00
Solidified Inorganic Material	20.99
Solidified Organic Material	2.76
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	37.07
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	4.03E-03
Pu-238	1.26E-03
Pu-239	4.29E-02
Pu-240	1.00E-02
Pu-241	1.53E-01
Pu-242	5.81E-07

**Haz. Waste No(s).**

D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D021, D022, D035, D038, D039, D040, F001, F002, F003, F005, U003, U044, U080, U196, U213

**TRUCON Code(s)**

112/212

**Waste Stream Description**

Inorganic particulate waste generated during TA-55 R&D/fabrication and associated recovery, facility and equipment maintenance, D&D, waste repackaging, and below-grade retrieval operations.



Waste Stream ID: **RL300-11**

**Appendix B**  
**Waste Profile Report**

Site	Hanford (Richland) Site	Summary Category	S5000	Defense Determination	Defense-Related	Handling	RH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2015		
Stream Name	300 Area TRU RH Non-Mixed Debris			Activity Concentrations as of CY	2001		

**Waste Volume Detail (m<sup>3</sup>)**

Current Form Volumes			
Container Type	Stored	Proj.	Total
Box - Misc	5.7	0.0	5.7
<b>Current Form Total</b>	<b>5.7</b>	<b>0.0</b>	<b>5.7</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	7.5	0.0	7.5
<b>Final Form Total</b>	<b>7.5</b>	<b>0.0</b>	<b>7.5</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	87.00
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	666.12
Cellulose	21.75
Rubber	0.00
Plastic	5.44
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	45.67
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	7.35E-01
Am-243	3.33E-01
Cs-137	5.32E+05
Np-237	2.32E-06
Pu-238	8.20E-01
Pu-239	3.22E-01
Pu-240	1.23E-01
Pu-241	5.42E+00
Pu-242	2.17E-04
Sr-90	3.85E+05
Th-232	1.25E-05
U-234	4.64E-05
U-235	7.08E-07
U-236	1.72E-06
U-238	1.25E-05

No Hazardous Waste Numbers Provided

TRUCON Code(s)  
325

**Waste Stream Description**

Typically, drums contain both combustible and noncombustible waste items. Combustible waste may include wood, plastics, paper, and rags. Noncombustible waste items may include metals, glass, concrete, and absorbed liquids. If present, boxes typically contain larger waste items (e.g., whole or sectioned glove boxes, ducting, and process vessels). Both drums and boxes may be used for disposal of high-efficiency particulate air filters.

Waste Stream ID: **RLCH2-08**

**Appendix B**  
**Waste Profile Report**

<b>Site</b>	Hanford (Richland) Site	<b>Summary Category</b>	S5000	<b>Defense Determination</b>	Defense-Related	<b>Handling</b>	RH
<b>Source Cat.</b>	Facility/Equipment Operation and Maintenance Waste	<b>Waste Matrix Code Group</b>	Heterogeneous Debris Waste		<b>Inventory Date</b>	12/31/2015	
<b>Stream Name</b>	Tank Farms TRU RH Mixed Debris				<b>Activity Concentrations as of CY</b>	2001	

**Waste Volume Detail (m<sup>3</sup>)**

Current Form Volumes			
Container Type	Stored	Proj.	Total
SWB Dir Ld w/ Liner	1.9	0.0	1.9
<b>Current Form Total</b>	<b>1.9</b>	<b>0.0</b>	<b>1.9</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/ Liner	2.5	0.0	2.5
<b>Final Form Total</b>	<b>2.5</b>	<b>0.0</b>	<b>2.5</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	3.09
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	374.77
Other Inorganic Materials	7.39
Cellulose	0.00
Rubber	46.03
Plastic	12.79
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	45.67
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	4.97E-02
Cs-137	4.45E+00
Pu-238	7.73E-04
Pu-239	4.45E-02
Pu-240	8.61E-03
Sr-90	2.04E+02
U-235	1.74E-05
U-238	4.05E-04

**Haz. Waste No(s).**

D030, D032, F001, F002, F003, F004, F005
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**TRUCON Code(s)**

325
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**Waste Stream Description**

RH waste- Equipment removed from waste tanks (instrument trees, pumps, circulators, agitators, heaters, sluicers, steam coils, air lances, cameras). The waste stream ranges from contaminated clothing to process equipment contaminated with RCRA constituents.

Waste Stream ID: **RLPFP-02**

**Appendix B**  
**Waste Profile Report**

Site	Hanford (Richland) Site	Summary Category	S4000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Remediation/D&D Waste	Waste Matrix Code Group	Contaminated Soil/Debris Waste	Inventory Date	12/31/2015		
Stream Name	PFP CH-TRU Contaminated Soil			Activity Concentrations as of CY		2010	

**Waste Volume Detail (m<sup>3</sup>)**

Current Form Volumes			
Container Type	Stored	Proj.	Total
Uncontained	0.0	14.6	14.6
<b>Current Form Total</b>	<b>0.0</b>	<b>14.6</b>	<b>14.6</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
SWB Dir Ld w/ Liner	0.0	15.1	15.1
<b>Final Form Total</b>	<b>0.0</b>	<b>15.1</b>	<b>15.1</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	0.00
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	0.00
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	1.20
Packaging Material, Rubber	0.19
Packaging Material, Steel	153.44
Packaging Material, Lead	0.00

No Final Form  
Radionuclides Provided

No Hazardous  
Waste Numbers  
Provided

TRUCON Code(s)  
125/225

**Waste Stream Description**

Soil remediation wastes in PFP Zone.

Waste Stream ID: **RLPRC-01**

**Appendix B**  
**Waste Profile Report**

Site	Hanford (Richland) Site	Summary Category	S5000	Defense Determination	Unknown	Handling	CH
Source Cat.	R&D/R&D Laboratory Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2015	
Stream Name	CUPRC TRU Non-Mixed Debris				Activity Concentrations as of CY	1987	

**Waste Volume Detail (m<sup>3</sup>)**

Current Form Volumes			
Container Type	Stored	Proj.	Total
SWB Dir Ld w/ Liner	1.9	0.0	1.9
<b>Current Form Total</b>	<b>1.9</b>	<b>0.0</b>	<b>1.9</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
SWB Dir Ld w/ Liner	1.9	0.0	1.9
<b>Final Form Total</b>	<b>1.9</b>	<b>0.0</b>	<b>1.9</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	0.00
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	46.45
Other Inorganic Materials	661.59
Cellulose	0.00
Rubber	0.00
Plastic	0.00
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	1.20
Packaging Material, Rubber	0.19
Packaging Material, Steel	153.44
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	4.89E-02
Pu-238	1.99E-02
Pu-239	1.82E-01
Pu-240	4.65E-02
Pu-241	1.28E+00
Pu-242	3.11E-06
Th-232	5.50E-05
U-234	6.24E-07
U-235	2.82E-08
U-238	6.06E-07

No Hazardous Waste Numbers Provided

TRUCON Code(s)  
125/225

**Waste Stream Description**

The waste is generated from R&D/R&D Laboratory Waste activities at the CEER University Laboratory.

Waste Stream ID: **RLPURX-02**

**Appendix B**  
**Waste Profile Report**

Site	Hanford (Richland) Site	Summary Category	S4000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Other/Multiple Sources	Waste Matrix Code Group	Contaminated Soil/Debris Waste	Inventory Date	12/31/2015		
Stream Name	Contaminated Soil from vicinity of PUREX			Activity Concentrations as of CY 2011			

**Waste Volume Detail (m<sup>3</sup>)**

Current Form Volumes			
Container Type	Stored	Proj.	Total
Uncontained	0.0	369.9	369.9
<b>Current Form Total</b>	<b>0.0</b>	<b>369.9</b>	<b>369.9</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
SWB Dir Ld w/ Liner	0.0	372.3	372.3
<b>Final Form Total</b>	<b>0.0</b>	<b>372.3</b>	<b>372.3</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	0.00
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	0.00
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	1.20
Packaging Material, Rubber	0.19
Packaging Material, Steel	153.44
Packaging Material, Lead	0.00

No Final Form  
Radionuclides Provided

No Hazardous  
Waste Numbers  
Provided

TRUCON Code(s)  
125/225

**Waste Stream Description**

Soil from Groundwater projects. And contaminated soil from PUREX

Waste Stream ID: **RP-TFC001**

**Appendix B**  
**Waste Profile Report**

Site	Hanford (River Protection) Site	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Materials Production/Recovery Effluents	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2015	
Stream Name	Bismuth Phosphate Process TRU Solids			Activity Concentrations as of CY		2004	

**Waste Volume Detail (m<sup>3</sup>)**

Current Form Volumes			
Container Type	Stored	Proj.	Total
Tank(s)	1200.0	0.0	1200.0
<b>Current Form Total</b>	<b>1200.0</b>	<b>0.0</b>	<b>1200.0</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	442.6	0.0	442.6
<b>Final Form Total</b>	<b>442.6</b>	<b>0.0</b>	<b>442.6</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	0.00
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	0.00
Cement	0.00
Solidified Inorganic Material	1091.22
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	7.30E-02
Cs-137	6.06E-01
Np-237	1.21E-05
Pu-238	6.54E-03
Pu-239	5.11E-01
Pu-240	6.17E-02
Pu-241	1.87E-01
Pu-242	3.05E-06
Sr-90	7.91E+00
U-233	1.09E-09
U-234	1.67E-03
U-235	5.37E-05
U-236	1.61E-05
U-238	1.23E-03

**Haz. Waste No(s).**

D002, D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D022, D028, D029, D030, D033, D034, D035, D036, D038, D039, D040, D041, D043, F001, F002, F003, F004, F005

**No TRUCON  
Codes Provided**

**Waste Stream Description**

Solidified aqueous waste slurry

Waste Stream ID: **RP-W754**

**Appendix B**  
**Waste Profile Report**

Site	Hanford (River Protection) Site	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Materials Production/Recovery Effluents	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2015	
Stream Name	224 Waste			Activity Concentrations as of CY 2004			

**Waste Volume Detail (m<sup>3</sup>)**

Current Form Volumes			
Container Type	Stored	Proj.	Total
Tank(s)	1060.0	0.0	1060.0
<b>Current Form Total</b>	<b>1060.0</b>	<b>0.0</b>	<b>1060.0</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	326.1	0.0	326.1
<b>Final Form Total</b>	<b>326.1</b>	<b>0.0</b>	<b>326.1</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	0.00
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	0.00
Cement	0.00
Solidified Inorganic Material	1063.95
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.19E-01
Cs-137	1.65E-01
Np-237	1.61E-06
Pu-238	1.10E-02
Pu-239	1.54E+00
Pu-240	1.28E-01
Pu-241	2.14E-01
Pu-242	4.87E-06
Sr-90	3.33E+00
U-233	1.23E-10
U-234	1.77E-04
U-235	7.19E-06
U-236	1.73E-06
U-238	1.63E-04

**Haz. Waste No(s).**

D002, D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D022, D028, D029, D030, D033, D034, D035, D036, D038, D039, D040, D041, D043, F001, F002, F003, F004, F005

**No TRUCON  
Codes Provided**

**Waste Stream Description**

Solidified aqueous waste slurry.

Waste Stream ID: **RP-W755**

**Appendix B**  
**Waste Profile Report**

Site	Hanford (River Protection) Site	Summary Category	S3000	Defense Determination	Defense-Related	Handling	CH
Source Cat.	Materials Production/Recovery Effluents	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2015	
Stream Name	Bismuth Phosphate Process TRU Solids			Activity Concentrations as of CY		2004	

**Waste Volume Detail (m<sup>3</sup>)**

Current Form Volumes			
Container Type	Stored	Proj.	Total
Tank(s)	3090.0	0.0	3090.0
<b>Current Form Total</b>	<b>3090.0</b>	<b>0.0</b>	<b>3090.0</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	801.4	0.0	801.4
<b>Final Form Total</b>	<b>801.4</b>	<b>0.0</b>	<b>801.4</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	0.00
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	0.00
Cement	0.00
Solidified Inorganic Material	1095.55
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.40E-01
Cs-137	3.29E-01
Np-237	7.96E-05
Pu-238	2.94E-03
Pu-239	5.35E-01
Pu-240	4.34E-02
Pu-241	6.75E-02
Pu-242	5.46E-07
Sr-90	1.19E+01
U-233	3.08E-09
U-234	3.57E-03
U-235	1.58E-04
U-236	2.87E-05
U-238	3.63E-03

**Haz. Waste No(s).**

D002, D004, D005, D006, D007, D008, D009, D010, D011, D018, D019, D022, D028, D029, D030, D033, D034, D035, D036, D038, D039, D040, D041, D043, F001, F002, F003, F004, F005

**No TRUCON  
Codes Provided**

**Waste Stream Description**

Solidified aqueous waste slurry



Waste Stream ID: **WV-M010a**

**Appendix B**  
**Waste Profile Report**

Site	West Valley Demonstration Project	Summary Category	S3000	Defense Determination	Pending Determination	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Solidified Organics		Inventory Date	12/31/2015	
Stream Name	TRU Spent Absorbents CH					Activity Concentrations as of CY	2008

**Waste Volume Detail (m<sup>3</sup>)**

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.2	0.0	0.2
Box - Misc	17.5	0.0	17.5
<b>Current Form Total</b>	<b>17.7</b>	<b>0.0</b>	<b>17.7</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	0.2	0.0	0.2
SWB Dir Ld w/o Liner	9.5	0.0	9.5
<b>Final Form Total</b>	<b>9.7</b>	<b>0.0</b>	<b>9.7</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	0.00
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	493.89
Cellulose	0.00
Rubber	0.00
Plastic	0.00
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	164.63
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.20
Packaging Material, Steel	152.95
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.09E-01
Am-243	9.16E-03
Cs-137	1.86E-02
Np-237	5.96E-05
Pu-238	4.50E-02
Pu-239	5.45E-02
Pu-240	4.17E-02
Pu-241	5.22E-01
Pu-242	2.48E-03
Sr-90	5.08E-01
U-233	1.99E-03
U-234	9.49E-04
U-235	2.15E-05
U-238	1.26E-03

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

**Waste Stream Description**

This waste stream consists of spent absorbents (not cement) generated from site operations. The media absorbed is an organic liquid for this waste stream. This does not contain hazardous waste.

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	12/31/2015	
Stream Name	CH TRU Liquids					Activity Concentrations as of CY	2004

**Waste Volume Detail (m<sup>3</sup>)**

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	0.6	0.0	0.6
<b>Current Form Total</b>	<b>0.6</b>	<b>0.0</b>	<b>0.6</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	0.6	0.0	0.6
<b>Final Form Total</b>	<b>0.6</b>	<b>0.0</b>	<b>0.6</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	0.00
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	0.00
Cement	423.08
Solidified Inorganic Material	211.54
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	1.16E-01
Am-243	3.51E-03
Cm-244	7.15E-05
Cs-137	1.15E-01
Np-237	3.29E-05
Pu-238	5.51E-02
Pu-239	3.72E-02
Pu-240	2.58E-02
Pu-241	5.87E-01
Pu-242	1.30E-03
Sr-90	2.05E-01
U-233	6.41E-05
U-234	2.61E-05
U-235	7.02E-07
U-238	2.42E-05

No Hazardous  
Waste Numbers  
Provided

No TRUCON  
Codes Provided

**Waste Stream Description**

This waste stream consists of liquid waste with associated fissile material generated from previous decontamination and decommissioning activities.

Waste Stream ID: **WV-T004b**

**Appendix B**  
**Waste Profile Report**

Site	West Valley Demonstration Project	Summary Category	S3000	Defense Determination	Pending Determination	Handling	RH
Source Cat.	Remediation/D&D Waste	Waste Matrix Code Group	Solidified Inorganics		Inventory Date	12/31/2015	
Stream Name	RH TRU Liquids			Activity Concentrations as of CY 2015			

**Waste Volume Detail (m<sup>3</sup>)**

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/ Liner	2.7	0.0	2.7
<b>Current Form Total</b>	<b>2.7</b>	<b>0.0</b>	<b>2.7</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/o Liner	3.1	0.0	3.1
<b>Final Form Total</b>	<b>3.1</b>	<b>0.0</b>	<b>3.1</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	0.00
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	0.00
Cement	685.90
Solidified Inorganic Material	342.95
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	8.70
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	3.81E-01
Am-243	8.69E-03
Cm-244	2.07E-03
Cs-137	9.17E-01
Np-237	8.72E-05
Pu-238	1.73E-01
Pu-239	1.19E-01
Pu-240	8.40E-02
Pu-241	1.79E+00
Pu-242	3.21E-03
Sr-90	2.48E+00
U-233	1.08E-03
U-234	5.03E-04
U-235	3.33E-06
U-238	7.28E-05

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

**Waste Stream Description**

This waste stream consists of liquid waste with associated fissile material generated from previous decontamination and decommissioning activities.

Waste Stream ID: **WV-T006a**

**Appendix B**  
**Waste Profile Report**

Site	West Valley Demonstration Project	Summary Category	S5000	Defense Determination	Pending Determination	Handling	CH
Source Cat.	Remediation/D&D Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2015	
Stream Name	CH TRU General Waste				Activity Concentrations as of CY	2006	

**Waste Volume Detail (m<sup>3</sup>)**

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	98.8	0.0	98.8
Box - Misc	7.4	0.0	7.4
SWB Dir Ld w/o Liner	104.0	0.0	104.0
<b>Current Form Total</b>	<b>210.1</b>	<b>0.0</b>	<b>210.1</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	99.2	0.0	99.2
SWB Dir Ld w/o Liner	107.7	0.0	107.7
<b>Final Form Total</b>	<b>206.9</b>	<b>0.0</b>	<b>206.9</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	0.00
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	56.54
Other Inorganic Materials	58.47
Cellulose	54.12
Rubber	22.52
Plastic	33.78
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.37
Packaging Material, Steel	142.57
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	5.70E-01
Am-243	5.90E-03
Cm-244	1.50E-03
Cs-137	6.04E-03
Np-237	4.00E-06
Pu-238	3.04E-01
Pu-239	1.42E-01
Pu-240	1.14E-01
Pu-241	2.04E+00
Pu-242	3.26E-03
Sr-90	1.63E-02
U-233	1.91E-04
U-234	1.12E-04
U-235	2.08E-06
U-238	2.36E-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	12/31/2015	
Stream Name	RH TRU General Waste				Activity Concentrations as of CY	2004	

**Waste Volume Detail (m<sup>3</sup>)**

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	120.8	0.0	120.8
Box - Misc	224.8	0.0	224.8
Uncontained	0.0	15.0	15.0
<b>Current Form Total</b>	<b>345.6</b>	<b>15.0</b>	<b>360.6</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/o Liner	252.1	15.0	267.1
<b>Final Form Total</b>	<b>252.1</b>	<b>15.0</b>	<b>267.1</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	0.00
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	122.57
Other Inorganic Materials	121.78
Cellulose	121.78
Rubber	49.19
Plastic	73.38
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	8.70
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	4.48E+00
Am-243	6.62E-03
Cm-244	2.23E-02
Cs-137	1.50E+01
Np-237	6.31E-04
Pu-238	2.03E+00
Pu-239	1.70E+00
Pu-240	1.30E+00
Pu-241	2.64E+01
Pu-242	8.53E-04
Sr-90	1.22E+01
U-233	2.37E-03
U-234	1.27E-03
U-235	5.20E-05
U-238	3.01E-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	12/31/2015	
Stream Name	RH TRU Spent Filter Media				Activity Concentrations as of CY	2008	

**Waste Volume Detail (m<sup>3</sup>)**

Current Form Volumes			
Container Type	Stored	Proj.	Total
Box - Misc	27.2	0.0	27.2
<b>Current Form Total</b>	<b>27.2</b>	<b>0.0</b>	<b>27.2</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/o Liner	7.5	0.0	7.5
<b>Final Form Total</b>	<b>7.5</b>	<b>0.0</b>	<b>7.5</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	0.00
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	251.07
Cellulose	0.00
Rubber	0.00
Plastic	0.00
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	8.70
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	3.80E-02
Cs-137	1.80E+01
Np-237	7.45E-05
Pu-238	1.70E-02
Pu-239	4.10E-02
Pu-240	3.14E-02
Pu-241	3.07E-01
Sr-90	5.93E-01
U-235	9.24E-05
U-238	1.45E-04

No Hazardous Waste Numbers Provided

No TRUCON Codes Provided

**Waste Stream Description**

This waste stream consists of spent filter media generated from filtration of the Fuel Receiving & Storage pool where radiologically contaminated equipment was stored.

Waste Stream ID: **WV-W024a**

**Appendix B**  
**Waste Profile Report**

Site	West Valley Demonstration Project	Summary Category	S5000	Defense Determination	Pending Determination	Handling	CH
Source Cat.	Remediation/D&D Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2015		
Stream Name	CH TRU Mixed Waste					Activity Concentrations as of CY	2006

**Waste Volume Detail (m<sup>3</sup>)**

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	2.7	0.0	2.7
SWB Dir Ld w/o Liner	5.7	0.0	5.7
<b>Current Form Total</b>	<b>8.4</b>	<b>0.0</b>	<b>8.4</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	2.7	0.0	2.7
SWB Dir Ld w/o Liner	5.7	0.0	5.7
<b>Final Form Total</b>	<b>8.4</b>	<b>0.0</b>	<b>8.4</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	0.00
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	101.62
Cellulose	101.62
Rubber	40.72
Plastic	61.02
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.31
Packaging Material, Steel	146.12
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	3.42E-01
Am-243	8.05E-03
Cm-244	2.30E-04
Cs-137	2.59E-02
Np-237	2.40E-06
Pu-238	2.05E-01
Pu-239	7.91E-02
Pu-240	7.15E-02
Pu-241	1.31E+00
Pu-242	2.26E-02
Sr-90	8.25E-02
U-233	4.45E-04
U-234	1.78E-04
U-235	1.82E-05
U-238	1.41E-04

**Haz. Waste No(s).**

D006, D007, D008, D009

**No TRUCON  
Codes Provided**

**Waste Stream Description**

Contains hazardous constituents from D&D activities and Laboratory Waste generated onsite in solid forms such as filters, vacuum cans, glove box debris, piping, hoses, pumps, anti C clothing, bags, wipes, and floor debris. If any liquids are found, then the liquid would be solidified and not expected to be TRU.

Waste Stream ID: **WV-W024b**

**Appendix B**  
**Waste Profile Report**

Site	West Valley Demonstration Project	Summary Category	S5000	Defense Determination	Pending Determination	Handling	RH
Source Cat.	Remediation/D&D Waste	Waste Matrix Code Group	Heterogeneous Debris Waste		Inventory Date	12/31/2015	
Stream Name	RH TRU Mixed Waste				Activity Concentrations as of CY	2004	

**Waste Volume Detail (m<sup>3</sup>)**

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	27.9	0.0	27.9
Box - Misc	33.8	0.0	33.8
<b>Current Form Total</b>	<b>61.7</b>	<b>0.0</b>	<b>61.7</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
RH Can w/ Remov Lid w/ 3 - 55-gal w/o Liner	46.8	0.0	46.8
<b>Final Form Total</b>	<b>46.8</b>	<b>0.0</b>	<b>46.8</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	161.75
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	202.14
Cellulose	0.00
Rubber	40.38
Plastic	60.68
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	8.70
Packaging Material, Rubber	0.57
Packaging Material, Steel	931.09
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	7.64E+00
Am-243	1.83E-01
Cm-244	3.09E-01
Cs-137	2.13E+02
Np-237	4.10E-03
Pu-238	2.15E+00
Pu-239	3.85E+00
Pu-240	2.92E+00
Pu-241	3.34E+01
Pu-242	1.35E-02
Sr-90	1.64E+02
U-233	1.53E-02
U-234	7.21E-03
U-235	1.14E-03
U-238	4.06E-03

**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.



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	12/31/2015	
Stream Name	TRU Mixed Liquids					Activity Concentrations as of CY	2004

**Waste Volume Detail (m<sup>3</sup>)**

Current Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	5.8	0.0	5.8
<b>Current Form Total</b>	<b>5.8</b>	<b>0.0</b>	<b>5.8</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	5.8	0.0	5.8
<b>Final Form Total</b>	<b>5.8</b>	<b>0.0</b>	<b>5.8</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	0.00
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	0.00
Cellulose	0.00
Rubber	0.00
Plastic	0.00
Cement	370.88
Solidified Inorganic Material	185.44
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

**Final Form Radionuclides**

Isotope	Typical Concentration (Ci/m <sup>3</sup> )
Am-241	2.54E-02
Am-243	1.57E-03
Cm-244	5.55E-04
Cs-137	2.04E-02
Np-237	2.94E-06
Pu-238	1.79E-02
Pu-239	3.14E-02
Pu-240	2.40E-02
Pu-241	9.94E-01
Pu-242	6.58E-05
Sr-90	2.23E-02
U-233	2.21E-04
U-234	7.11E-04
U-235	2.83E-07
U-238	1.40E-06

**Haz. Waste No(s).**D002, D006, D007,  
D008, D009, D010

**No TRUCON  
Codes Provided**

**Waste Stream Description**

This waste stream consists of RCRA hazardous liquid waste with associated fissile material generated from decontamination and decommissioning activities.

Waste Stream ID: **WV-Z001**

**Appendix B**  
**Waste Profile Report**

Site	West Valley Demonstration Project	Summary Category	S5000	Defense Determination	Pending Determination	Handling	CH
Source Cat.	Facility/Equipment Operation and Maintenance Waste	Waste Matrix Code Group	Heterogeneous Debris Waste	Inventory Date	12/31/2015		
Stream Name	West Valley Buried TRU Waste			Activity Concentrations as of CY		N/A	

**Waste Volume Detail (m<sup>3</sup>)**

Current Form Volumes			
Container Type	Stored	Proj.	Total
Uncontained	0.0	4300.0	4300.0
<b>Current Form Total</b>	<b>0.0</b>	<b>4300.0</b>	<b>4300.0</b>

Final Form Volumes			
Container Type	Stored	Proj.	Total
55-gal Drum Dir Ld w/o Liner	0.0	4300.0	4300.0
<b>Final Form Total</b>	<b>0.0</b>	<b>4300.0</b>	<b>4300.0</b>

**Waste Material Parameters**

Material Parameter	Average Density (kg/m <sup>3</sup> )
Iron-based Metal/Alloys	0.00
Aluminum-based Metal/Alloys	0.00
Other Metal/Alloys	0.00
Other Inorganic Materials	251.16
Cellulose	0.00
Rubber	0.00
Plastic	0.00
Cement	0.00
Solidified Inorganic Material	0.00
Solidified Organic Material	0.00
Soil	0.00
Vitrified	0.00
Packaging Material, Cellulose	0.00
Packaging Material, Plastic	0.00
Packaging Material, Rubber	0.57
Packaging Material, Steel	130.77
Packaging Material, Lead	0.00

No Final Form  
Radionuclides Provided

No Hazardous  
Waste Numbers  
Provided

No TRUCON  
Codes Provided

**Waste Stream Description**

Debris waste buried on-site during original plant processing operations

**APPENDIX C HISTORIC CROSSWALK OF WASTE STREAMS**

From one release of the ATWIR report to the next, waste streams may undergo reorganization by the TRU waste generator sites. Waste streams may be renamed, divided, consolidated, created, or removed from the inventory altogether (i.e., shipped to WIPP or reclassified as low-level waste [LLW]). This appendix contains a crosswalk that maps current ATWIR-2016 TRU waste generator site waste streams to the ATWIR-2015 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-2016 waste stream to its respective ATWIR-2015 waste stream(s). Waste streams that are newly reported in the ATWIR-2016 and that do not map to a previous waste stream from ATWIR-2015 are indicated as *New Waste Stream*.

Table C-2 shows the inverse of Table C-1. Table C-2 displays the association of each ATWIR-2015 waste stream to its respective ATWIR-2016 waste stream(s). Waste streams that were previously reported in the ATWIR-2015 and that do not map to a current ATWIR-2016 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
MC	U.S. Army Materiel Command
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-2016 to ATWIR-2015 Waste Streams**

<b>Site Code</b>	<b>ATWIR-2016 Waste Streams</b>	<b>ATWIR-2015 Waste Streams</b>
AE	AE-T001	AE-T001
AE	AE-T003	AE-T003
AE	AE-T009	AE-T009
AW	AW-5410N	AW-5410N
AW	AW-5649N	AW-5649N
AW	AW-5882N	AW-5882N
AW	AW-N027.531	AW-N027.531
AW	AW-T031.1322	AW-T031.1322
AW	AW-T033.1325	AW-T033.1325
AW	AW-W020.13	AW-W020.13
BL	BL-Parks	BL-Parks
BL	BL-Parks-A	BL-Parks-A
BT	BT-T001	BT-T001
IN	IN-AE-AGHC-02	AW-T031.1322, IN-AE-AGHC-02, IN-AE-AGHC-02T
IN	IN-BN004	IN-BN004
IN	IN-BN050	IN-BN050
IN	IN-BN090	IN-BN090
IN	IN-BN203	IN-BN203
IN	IN-BN204	IN-BN204
IN	IN-BN222	IN-BN222
IN	IN-BN290	IN-BN290
IN	IN-BN311	IN-BN311
IN	IN-BN375	IN-BN375
IN	IN-BN409	IN-BN409
IN	IN-BN421	IN-BN421
IN	IN-BN425	IN-BN425
IN	IN-BN432	IN-BN432
IN	IN-BN501	<i>New Waste Stream</i>
IN	IN-BN505	<i>New Waste Stream</i>
IN	IN-BN507	<i>New Waste Stream</i>
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-ID-EBR-S5000, IN-ID-INL-152M, IN-ID-RF-S5000-RH
IN	IN-BN511	<i>New Waste Stream</i>
IN	IN-BN513	<i>New Waste Stream</i>
IN	IN-BN514	<i>New Waste Stream</i>
IN	IN-BN516	<i>New Waste Stream</i>
IN	IN-BN517	<i>New Waste Stream</i>
IN	IN-BN518	<i>New Waste Stream</i>
IN	IN-BN520	<i>New Waste Stream</i>
IN	IN-BN522	<i>New Waste Stream</i>

**Table C-1. Crosswalk of ATWIR-2016 to ATWIR-2015 Waste Streams**  
Continued

<b>Site Code</b>	<b>ATWIR-2016 Waste Streams</b>	<b>ATWIR-2015 Waste Streams</b>
IN	IN-BN525	<i>New Waste Stream</i>
IN	IN-BN527	<i>New Waste Stream</i>
IN	IN-BN529	<i>New Waste Stream</i>
IN	IN-BN534	<i>New Waste Stream</i>
IN	IN-BN538	<i>New Waste Stream</i>
IN	IN-BN539	<i>New Waste Stream</i>
IN	IN-BN599	<i>New Waste Stream</i>
IN	IN-BN600	IN-BN600
IN	IN-BN602	<i>New Waste Stream</i>
IN	IN-BN604	<i>New Waste Stream</i>
IN	IN-BN650	IN-ID-SRP-S3000
IN	IN-BN806	IN-BN806
IN	IN-BN811	IN-BN811
IN	IN-BN817	IN-BN817
IN	IN-BN823	IN-BN823
IN	IN-BN835	IN-BN835
IN	IN-BN836	IN-BN836
IN	IN-BN842	IN-BN842
IN	IN-BN976	IN-BN976
IN	IN-BN978	IN-BN978
IN	IN-BNINW216	IN-BNINW216
IN	IN-BNINW218	IN-BNINW218
IN	IN-IC605	IN-IC605
IN	IN-ID-ANLE-BIN	IN-ID-ANLE-BIN
IN	IN-ID-ANLW-W269-RH	IN-ID-ANLW-W269-RH
IN	IN-ID-BTO-030	IN-ID-BTO-030
IN	IN-ID-EBR-S5000	IN-ID-EBR-S5000
IN	IN-ID-HFEF-S5000-RP	IN-ID-HFEF-S5000-RP
IN	IN-ID-INL-152M	IN-ID-INL-152M
IN	IN-ID-MFC-SOLID	IN-ID-MFC-SOLID
IN	IN-ID-MISC-RH	IN-ID-MISC-RH
IN	IN-ID-Miscellaneous	IN-ID-Miscellaneous
IN	IN-ID-RF-S3114	IN-ID-RF-S3114
IN	IN-ID-RF-S3150-A	IN-ID-RF-S3150-A
IN	IN-ID-RF-S5000-RH	IN-ID-RF-S5000-RH
IN	IN-ID-Sample Fuel	IN-ID-Sample Fuel
IN	IN-ID-SDA-Debris	IN-ID-SDA-Debris
IN	IN-ID-SDA-Sludge	IN-ID-SDA-Sludge
IN	IN-ID-SDA-Soil	IN-ID-SDA-Soil
IN	IN-ID-Source Material	IN-ID-Source Material
IN	IN-ID-SRP-S3000	IN-ID-SRP-S3000
IN	IN-ID-TRA-W345-RH	IN-ID-TRA-W345-RH
IN	IN-JH826CH	IN-JH826CH
IN	IN-NRF-SPC-103	IN-NRF-SPC-103
IN	IN-SBW-01A	IN-SBW-01A

**Table C-1. Crosswalk of ATWIR-2016 to ATWIR-2015 Waste Streams**  
Continued

Site Code	ATWIR-2016 Waste Streams	ATWIR-2015 Waste Streams
IN	IN-SBW-01B	IN-SBW-01B
IN	IN-W139	IN-W139
IN	IN-W347	IN-W347
IN	IN-W351	IN-W351
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	<i>New Waste Stream</i>
LA	LA-LA238HONR	LA-LA238HONR
LA	LA-LA238HOR	<i>New Waste Stream</i>
LA	LA-LAMHD02238	LA-LAMHD02238
LA	LA-LAMIN04S	LA-LAMIN04S
LA	LA-LANHD01	LA-LANHD01
LA	LA-LANHD02238	LA-LANHD02238
LA	LA-LANIN03NC	<i>New Waste Stream</i>
LA	LA-MHD01.001	LA-LAMHD02238, LA-LANHD02238, LA-MHD01.001
LA	LA-MHD03.001	LA-MHD03.001
LA	LA-MHD04.001	LA-MHD04.001
LA	LA-MHD05-ITRI.001	LA-MHD05-ITRI.001
LA	LA-MHD08.001	LA-MHD08.001
LA	LA-MHD09.001	LA-MHD09.001
LA	LA-MIN02-V.001	LA-MIN02-V.001, LA-MIN04-S.001
LA	LA-MIN03-NC.001	LA-MIN03-NC.001
LA	LA-MIN04-S.001	LA-MIN04-S.001
LA	LA-MIN05-V.001	LA-MIN05-V.001
LA	LA-MSG04.001	LA-MSG04.001
LA	LA-OS-00-01.001	LA-OS-00-01.001
LA	LA-OS-00-04	LA-OS-00-04
LA	LA-TA-00-01	LA-TA-00-01
LA	LA-TA-00-03	LA-TA-00-03
LA	LA-TA-00-04	LA-TA-00-04
LA	LA-TA-03-10	LA-TA-03-10
LA	LA-TA-03-14	LA-TA-03-14
LA	LA-TA-03-27	LA-TA-03-27
LA	LA-TA-03-28	LA-TA-03-28
LA	LA-TA-03-30	LA-TA-03-30
LA	LA-TA-03-CVD	<i>New Waste Stream</i>
LA	LA-TA-21-05	LA-TA-21-05
LA	LA-TA-21-06	LA-TA-21-06
LA	LA-TA-21-07	LA-TA-21-07
LA	LA-TA-21-08	LA-TA-21-08

**Table C-1. Crosswalk of ATWIR-2016 to ATWIR-2015 Waste Streams**  
Continued

Site Code	ATWIR-2016 Waste Streams	ATWIR-2015 Waste Streams
LA	LA-TA-21-09	LA-TA-21-09
LA	LA-TA-21-12	LA-TA-21-12
LA	LA-TA-21-13	LA-TA-21-13
LA	LA-TA-21-15	LA-TA-21-15
LA	LA-TA-21-16	LA-TA-21-16
LA	LA-TA-21-17	LA-TA-21-17
LA	LA-TA-50-18	LA-TA-50-18
LA	LA-TA-50-19	LA-TA-50-19
LA	LA-TA-55-19	LA-TA-55-19
LA	LA-TA-55-21	LA-TA-55-21
LA	LA-TA-55-30	LA-TA-55-30
LA	LA-TA-55-38	LA-TA-55-38
LA	LA-TRU-Empty-110	<i>New Waste Stream</i>
LA	LA-TRU-Empty-55	LA-TRU-Empty-55
LA	LA-TRU-Empty-85	LA-TRU-Empty-85
LB	LB-T001	LB-T001
LB	LB-T002	LB-T002
LL	LL-M001	LL-M001
LL	LL-T004	LL-T004
LL	LL-W018-S5100	LL-W018-S5100
LL	LL-W018-SS	LL-W018-SS
LL	LL-W019	LL-W019
ND	ND-T001	ND-T001
ND	ND-T002	ND-T002
NT	NT-JAS-01	NT-JAS-01
NT	NT-W021	NT-W021
OR	OR-CHEM-CH-HET	OR-CHEM-CH-HET
OR	OR-GENR-CH-HET	OR-GENR-CH-HET
OR	OR-GENR-RH-HET	OR-GENR-RH-HET
OR	OR-ISTP-CH-HET	OR-ISTP-CH-HET
OR	OR-ISTP-RH-HET	OR-ISTP-RH-HET
OR	OR-MRF-CH-HET	OR-MRF-CH-HET
OR	OR-NBL-CH-HET	OR-NBL-CH-HET
OR	OR-NFS-CH-HET	OR-NFS-CH-HET
OR	OR-NFS-CH-HOM	OR-NFS-CH-HOM
OR	OR-NFS-CH-SOIL	OR-NFS-CH-SOIL
OR	OR-OXIDE-CH-HET	OR-OXIDE-CH-HET
OR	OR-PGDP-CH-HET	OR-PGDP-CH-HET
OR	OR-RADP-CH-HET	OR-RADP-CH-HET
OR	OR-RADP-RH-HET	OR-RADP-RH-HET
OR	OR-REDC-CH-HET	OR-REDC-CH-HET, OR-REDC-RH-HET, OR-W203
OR	OR-REDC-CH-HOM	<i>New Waste Stream</i>
OR	OR-REDC-RH-HET	OR-REDC-RH-HET
OR	OR-REDC-RH-HOM	<i>New Waste Stream</i>
OR	OR-RF-CH-HET	OR-RF-CH-HET, OR-RF-RH-HET, OR-TBD-CH-HET



**Table C-1. Crosswalk of ATWIR-2016 to ATWIR-2015 Waste Streams**  
Continued

Site Code	ATWIR-2016 Waste Streams	ATWIR-2015 Waste Streams
OR	OR-RF-CH-HOM	OR-RF-CH-HOM
OR	OR-RF-RH-HET	OR-RF-RH-HET
OR	OR-SWSA-CH-HET	OR-SWSA-CH-HET
OR	OR-SWSA-CH-SOIL	OR-SWSA-CH-SOIL
OR	OR-TBD-CH-HET	OR-TBD-CH-HET
OR	OR-TBD-RH-HET	OR-TBD-RH-HET
OR	OR-W213-RH-SOILS	OR-W213-RH-SOILS
OR	OR-WSTR-CH-HET	OR-WSTR-CH-HET
OR	OR-Y12-CH-HET	OR-Y12-CH-HET
RL	RL100D-08	RL100D-08
RL	RL105-01	RL105-01
RL	RL105-03	RL105-03
RL	RL105-08	RL105-08
RL	RL105-09	RL105-09
RL	RL200-01	RL200-01
RL	RL200-02	RL200-02
RL	RL201-03	RL201-03
RL	RL202S-01	RL202S-01
RL	RL209E-01	RL209E-01
RL	RL209E-08	RL209E-08
RL	RL216Z-02	RL216Z-02
RL	RL221U-03	RL221U-03
RL	RL221U-09	RL221U-09
RL	RL222S-01	RL222S-01
RL	RL222S-08	RL222S-08
RL	RL231Z-01	RL231Z-01
RL	RL231Z-03	RL231Z-03
RL	RL233S-01	RL233S-01
RL	RL233S-03	RL233S-03
RL	RL300-01	RL300-01
RL	RL300-03	RL300-03
RL	RL300-08	RL300-08
RL	RL300-11	RL300-11
RL	RL308-01	RL308-01
RL	RL308-03	RL308-03
RL	RL308-08	RL308-08
RL	RL325-01	RL325-01
RL	RL325-03	RL325-03
RL	RL325-08	RL325-08
RL	RL325-09	RL325-09
RL	RL618-01	RL618-01
RL	RL618-08	RL618-08
RL	RLALE-02	RLALE-02
RL	RLARG-01	RLARG-01
RL	RLBART-08	RLBART-08

**Table C-1. Crosswalk of ATWIR-2016 to ATWIR-2015 Waste Streams**  
Continued

Site Code	ATWIR-2016 Waste Streams	ATWIR-2015 Waste Streams
RL	RLBAT-01	RLBAT-01
RL	RLBAT-08	RLBAT-08
RL	RLBET-08	RLBET-08
RL	RLBW-01	RLBW-01
RL	RLBW-03	RLBW-03
RL	RLBW-08	RLBW-08
RL	RLCFF-01	RLCFF-01
RL	RLCFF-03	RLCFF-03
RL	RLCH2-01	RLCH2-01
RL	RLCH2-08	RLCH2-08
RL	RLCH2-09	RLCH2-09
RL	RLESG-01	RLESG-01
RL	RLESG-03	RLESG-03
RL	RLESG-08	RLESG-08
RL	RLEXX-01	RLEXX-01
RL	RLFFTF-01	RLFFTF-01
RL	RLFFTF-08	RLFFTF-08
RL	RLGEV-01	RLGEV-01
RL	RLGEV-03	RLGEV-03
RL	RLGEV-08	RLGEV-08
RL	RLHAN-01	RLHAN-01
RL	RLHAN-03	RLHAN-03
RL	RLHAN-08	RLHAN-08
RL	RLIAEA-03	RLIAEA-03
RL	RLMLB-08	RLMLB-08
RL	RLMLL-01	RLMLL-01
RL	RLP11-01	RLP11-01
RL	RLPFP-01	RLPFP-01
RL	RLPFP-02	RLPFP-02
RL	RLPFP-03	RLPFP-03
RL	RLPFP-04	RLPFP-04
RL	RLPFP-08	RLPFP-08
RL	RLPRC-01	RLPRC-01
RL	RLPURX-01	RLPURX-01
RL	RLPURX-02	RLPURX-02
RL	RLPURX-08	RLPURX-08
RL	RLRFET-01	RLRFET-01
RL	RLSAN-01	RLSAN-01
RL	RLSWO-01	RLSWO-01
RL	RLWAR-01	RLWAR-01
RL	RLWAR-03	RLWAR-03
RL	RLWTP-08	RLWTP-08
RP	RP-TFC001	RP-TFC001
RP	RP-W754	RP-W754
RP	RP-W755	RP-W755

**Table C-1. Crosswalk of ATWIR-2016 to ATWIR-2015 Waste Streams**  
Continued

Site Code	ATWIR-2016 Waste Streams	ATWIR-2015 Waste Streams
SA	SA-W134	SA-W135
SA	SA-W135	SA-W135
SA	SA-W136	SA-W136
SA	SA-W137	SA-W137
SA	SA-W138M	SA-W138M
SP	SP-CHHD	<i>New Waste Stream</i>
SP	SP-RHHD	<i>New Waste Stream</i>
SP	SP-RHIN	<i>New Waste Stream</i>
SR	SR-221H-EUOx	SR-221H-EUOx
SR	SR-221H-PuOx	SR-221H-PuOx
SR	SR-AGNS-HOM	SR-AGNS-HOM
SR	SR-BCLDP-HET	SR-BCLDP-HET
SR	SR-BCLDP.003.001	SR-BCLDP.003.001
SR	SR-BCLDP.004.004	SR-BCLDP.004.004
SR	SR-DWPF-HET	SR-DWPF-HET
SR	SR-HBL-235F-HET	SR-HBL-235F-HET
SR	SR-KAC-HET	SR-KAC-HET
SR	SR-KAC-PuOx	<i>New Waste Stream</i>
SR	SR-LA-PAD1	SR-LA-PAD1
SR	SR-MD-HET	SR-MD-HET
SR	SR-MD-PAD1	SR-MD-PAD1
SR	SR-MD-SOIL	SR-MD-SOIL
SR	SR-NIST-HET	SR-NIST-HET
SR	SR-RH-221H.01	SR-RH-221H.01
SR	SR-RH-221H.02	SR-RH-221H.02
SR	SR-RH-235F.01	SR-RH-235F.01
SR	SR-RH-772F.01	SR-RH-772F.01
SR	SR-RH-773A.01	SR-RH-773A.01
SR	SR-RH-FBL.01	SR-RH-FBL.01
SR	SR-RH-FBL.02	SR-RH-FBL.02
SR	SR-RH-MNDPAD1.01	SR-RH-MNDPAD1.01
SR	SR-RH-SDD.01	SR-RH-SDD.01
SR	SR-RH-SWD.01	SR-RH-SWD.01
SR	SR-SDD-HET-A	SR-SDD-HET-A
SR	SR-SDD-HOM-A	SR-SDD-HOM-A
SR	SR-SDD-HOM-B	SR-SDD-HOM-B
SR	SR-SWMF-HET-A	SR-SWMF-HET-A
SR	SR-SWMF-HET-B	SR-SWMF-HET-B
SR	SR-T001-WSB-1	SR-T001-WSB-1
SR	SR-W026-221F-HEPA	SR-W026-221F-HEPA
SR	SR-W026-221F-HET	SR-W026-221F-HET
SR	SR-W026-221F-HET-A	SR-W026-221F-HET-A
SR	SR-W026-221F-HOM	SR-W026-221F-HOM
SR	SR-W026-772F-HET	SR-W026-772F-HET
SR	SR-W026-MFFF-1	SR-W026-MFFF-1

**Table C-1. Crosswalk of ATWIR-2016 to ATWIR-2015 Waste Streams**  
Continued

Site Code	ATWIR-2016 Waste Streams	ATWIR-2015 Waste Streams
SR	SR-W026-WSB-2	SR-W026-WSB-2
SR	SR-W027-221F-HET-A	SR-W027-221F-HET-A
SR	SR-W027-221H-HEPA	SR-W027-221H-HEPA
SR	SR-W027-221H-HET	SR-W027-221H-HET
SR	SR-W027-221H-HET-C	SR-W027-221H-HET-C
SR	SR-W027-221H-HOM	SR-W027-221H-HOM
SR	SR-W027-235F-HEPA	SR-W027-235F-HEPA
SR	SR-W027-235F-HET	SR-W027-235F-HET
SR	SR-W027-235F-HOM	SR-W027-235F-HOM
SR	SR-W027-321-322M-HET	SR-W027-321-322M-HET
SR	SR-W027-773A-HET	SR-W027-773A-HET
SR	SR-W027-773A-HOM	SR-W027-773A-HOM
SR	SR-W027-FB-Pre86-C	SR-W027-FB-Pre86-C
SR	SR-W027-HBL-Box	SR-W027-HBL-Box
WV	WV-M010a	WV-M010a
WV	WV-T004a	WV-T004
WV	WV-T004b	<i>New Waste Stream</i>
WV	WV-T006a	WV-T006a
WV	WV-T006b	WV-T006b
WV	WV-T017b	WV-T017b
WV	WV-W024a	WV-W024a
WV	WV-W024b	WV-W024b
WV	WV-W050a	WV-W050a
WV	WV-Z001	WV-Z001

Data Source: CID Data Version D.15.00 (LANL-CO 2016a). Note: This table contains data for WIPP-bound and potential waste streams only.

**Table C-2. Crosswalk of ATWIR-2015 to ATWIR-2016 Waste Streams**

<b>Site Code</b>	<b>ATWIR-2015 Waste Streams</b>	<b>ATWIR-2016 Waste Streams</b>
AE	AE-T001	AE-T001
AE	AE-T003	AE-T003
AE	AE-T009	AE-T009
AW	AW-5410N	AW-5410N
AW	AW-5649N	AW-5649N
AW	AW-5882N	AW-5882N
AW	AW-IN-TRA-BE-01	<i>Depleted Waste Stream - Determined to be GTCC-like waste</i>
AW	AW-N027.531	AW-N027.531
AW	AW-T031.1322	AW-T031.1322, IN-AE-AGHC-02
AW	AW-T033.1325	AW-T033.1325
AW	AW-W020.13	AW-W020.13
BL	BL-Parks	BL-Parks
BL	BL-Parks-A	BL-Parks-A
BT	BT-T001	BT-T001
IN	IN-AE-AGHC-02	IN-AE-AGHC-02
IN	IN-AE-AGHC-02T	IN-AE-AGHC-02
IN	IN-BN004	IN-BN004
IN	IN-BN050	IN-BN050
IN	IN-BN090	IN-BN090
IN	IN-BN203	IN-BN203
IN	IN-BN204	IN-BN204
IN	IN-BN222	IN-BN222
IN	IN-BN290	IN-BN290
IN	IN-BN311	IN-BN311
IN	IN-BN375	IN-BN375
IN	IN-BN409	IN-BN409
IN	IN-BN421	IN-BN421
IN	IN-BN425	IN-BN425
IN	IN-BN432	IN-BN432
IN	IN-BN510	IN-BN510
IN	IN-BN510.1	IN-BN510.1
IN	IN-BN510.2	IN-BN510.2
IN	IN-BN510.3	IN-BN510.3
IN	IN-BN510.4	IN-BN510.4
IN	IN-BN600	IN-BN600
IN	IN-BN806	IN-BN806
IN	IN-BN811	IN-BN811
IN	IN-BN817	IN-BN817
IN	IN-BN823	IN-BN823
IN	IN-BN835	IN-BN835
IN	IN-BN836	IN-BN836
IN	IN-BN842	IN-BN842
IN	IN-BN976	IN-BN976
IN	IN-BN978	IN-BN978

**Table C-2. Crosswalk of ATWIR-2015 to ATWIR-2016 Waste Streams**  
Continued

Site Code	ATWIR-2015 Waste Streams	ATWIR-2016 Waste Streams
IN	IN-BNINW216	IN-BNINW216
IN	IN-BNINW218	IN-BNINW218
IN	IN-IC605	IN-IC605
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-BN510.4, IN-ID-EBR-S5000
IN	IN-ID-HFEF-S5000-RP	IN-ID-HFEF-S5000-RP
IN	IN-ID-INL-152M	IN-BN510.4, IN-ID-INL-152M
IN	IN-ID-MFC-SOLID	IN-ID-MFC-SOLID
IN	IN-ID-MISC-RH	IN-ID-MISC-RH
IN	IN-ID-Miscellaneous	IN-ID-Miscellaneous
IN	IN-ID-RF-S3114	IN-ID-RF-S3114
IN	IN-ID-RF-S3150-A	IN-ID-RF-S3150-A
IN	IN-ID-RF-S5000-RH	IN-BN510.4, IN-ID-RF-S5000-RH
IN	IN-ID-Sample Fuel	IN-ID-Sample Fuel
IN	IN-ID-SDA-Debris	IN-ID-SDA-Debris
IN	IN-ID-SDA-Sludge	IN-ID-SDA-Sludge
IN	IN-ID-SDA-Soil	IN-ID-SDA-Soil
IN	IN-ID-Source Material	IN-ID-Source Material
IN	IN-ID-SRP-S3000	IN-BN650, IN-ID-SRP-S3000
IN	IN-ID-TRA-W345-RH	IN-ID-TRA-W345-RH
IN	IN-JH826CH	IN-JH826CH
IN	IN-NRF-SPC-103	IN-NRF-SPC-103
IN	IN-SBW-01A	IN-SBW-01A
IN	IN-SBW-01B	IN-SBW-01B
IN	IN-W139	IN-W139
IN	IN-W347	IN-W347
IN	IN-W351	IN-W351
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-LA238HONR	LA-LA238HONR
LA	LA-LAMHD02238	LA-LAMHD02238, LA-MHD01.001
LA	LA-LAMIN04S	LA-LAMIN04S
LA	LA-LANHD01	LA-LANHD01
LA	LA-LANHD02238	LA-LANHD02238, LA-MHD01.001
LA	LA-MHD01.001	LA-MHD01.001
LA	LA-MHD03.001	LA-MHD03.001
LA	LA-MHD04.001	LA-MHD04.001
LA	LA-MHD05-ITRI.001	LA-MHD05-ITRI.001

**Table C-2. Crosswalk of ATWIR-2015 to ATWIR-2016 Waste Streams**  
Continued

<b>Site Code</b>	<b>ATWIR-2015 Waste Streams</b>	<b>ATWIR-2016 Waste Streams</b>
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-MIN02-V.001, LA-MIN04-S.001
LA	LA-MIN05-V.001	LA-MIN05-V.001
LA	LA-MSG04.001	LA-MSG04.001
LA	LA-OS-00-01.001	LA-OS-00-01.001
LA	LA-OS-00-04	LA-OS-00-04
LA	LA-TA-00-01	LA-TA-00-01
LA	LA-TA-00-03	LA-TA-00-03
LA	LA-TA-00-04	LA-TA-00-04
LA	LA-TA-03-10	LA-TA-03-10
LA	LA-TA-03-14	LA-TA-03-14
LA	LA-TA-03-27	LA-TA-03-27
LA	LA-TA-03-28	LA-TA-03-28
LA	LA-TA-03-30	LA-TA-03-30
LA	LA-TA-21-05	LA-TA-21-05
LA	LA-TA-21-06	LA-TA-21-06
LA	LA-TA-21-07	LA-TA-21-07
LA	LA-TA-21-08	LA-TA-21-08
LA	LA-TA-21-09	LA-TA-21-09
LA	LA-TA-21-12	LA-TA-21-12
LA	LA-TA-21-13	LA-TA-21-13
LA	LA-TA-21-15	LA-TA-21-15
LA	LA-TA-21-16	LA-TA-21-16
LA	LA-TA-21-17	LA-TA-21-17
LA	LA-TA-50-18	LA-TA-50-18
LA	LA-TA-50-19	LA-TA-50-19
LA	LA-TA-55-19	LA-TA-55-19
LA	LA-TA-55-21	LA-TA-55-21
LA	LA-TA-55-30	LA-TA-55-30
LA	LA-TA-55-38	LA-TA-55-38
LA	LA-TRU-Empty-55	LA-TRU-Empty-55
LA	LA-TRU-Empty-85	LA-TRU-Empty-85
LB	LB-T001	LB-T001
LB	LB-T002	LB-T002
LL	LL-M001	LL-M001
LL	LL-T004	LL-T004
LL	LL-W018-S5100	LL-W018-S5100
LL	LL-W018-SS	LL-W018-SS
LL	LL-W019	LL-W019
ND	ND-T001	ND-T001
ND	ND-T002	ND-T002
NT	NT-JAS-01	NT-JAS-01

**Table C-2. Crosswalk of ATWIR-2015 to ATWIR-2016 Waste Streams**  
Continued

Site Code	ATWIR-2015 Waste Streams	ATWIR-2016 Waste Streams
NT	NT-W021	NT-W021
OR	OR-CHEM-CH-HET	OR-CHEM-CH-HET
OR	OR-GENR-CH-HET	OR-GENR-CH-HET
OR	OR-GENR-RH-HET	OR-GENR-RH-HET
OR	OR-ISTP-CH-HET	OR-ISTP-CH-HET
OR	OR-ISTP-RH-HET	OR-ISTP-RH-HET
OR	OR-MRF-CH-HET	OR-MRF-CH-HET
OR	OR-NBL-CH-HET	OR-NBL-CH-HET
OR	OR-NFS-CH-HET	OR-NFS-CH-HET
OR	OR-NFS-CH-HOM	OR-NFS-CH-HOM
OR	OR-NFS-CH-SOIL	OR-NFS-CH-SOIL
OR	OR-OXIDE-CH-HET	OR-OXIDE-CH-HET
OR	OR-PGDP-CH-HET	OR-PGDP-CH-HET
OR	OR-RADP-CH-HET	OR-RADP-CH-HET
OR	OR-RADP-RH-HET	OR-RADP-RH-HET
OR	OR-REDC-CH-HET	OR-REDC-CH-HET
OR	OR-REDC-RH-HET	OR-REDC-CH-HET, OR-REDC-RH-HET
OR	OR-RF-CH-HET	OR-RF-CH-HET
OR	OR-RF-CH-HOM	OR-RF-CH-HOM
OR	OR-RF-RH-HET	OR-RF-CH-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-RF-CH-HET, OR-TBD-CH-HET
OR	OR-TBD-RH-HET	OR-TBD-RH-HET
OR	OR-W203	OR-REDC-CH-HET
OR	OR-W213-RH-SOILS	OR-W213-RH-SOILS
OR	OR-WSTR-CH-HET	OR-WSTR-CH-HET
OR	OR-Y12-CH-HET	OR-Y12-CH-HET
RL	RL100D-08	RL100D-08
RL	RL105-01	RL105-01
RL	RL105-03	RL105-03
RL	RL105-08	RL105-08
RL	RL105-09	RL105-09
RL	RL200-01	RL200-01
RL	RL200-02	RL200-02
RL	RL201-03	RL201-03
RL	RL202S-01	RL202S-01
RL	RL209E-01	RL209E-01
RL	RL209E-08	RL209E-08
RL	RL216Z-02	RL216Z-02
RL	RL221U-03	RL221U-03
RL	RL221U-09	RL221U-09
RL	RL222S-01	RL222S-01
RL	RL222S-08	RL222S-08
RL	RL231Z-01	RL231Z-01



**Table C-2. Crosswalk of ATWIR-2015 to ATWIR-2016 Waste Streams**  
Continued

<b>Site Code</b>	<b>ATWIR-2015 Waste Streams</b>	<b>ATWIR-2016 Waste Streams</b>
RL	RL231Z-03	RL231Z-03
RL	RL233S-01	RL233S-01
RL	RL233S-03	RL233S-03
RL	RL300-01	RL300-01
RL	RL300-03	RL300-03
RL	RL300-08	RL300-08
RL	RL300-11	RL300-11
RL	RL308-01	RL308-01
RL	RL308-03	RL308-03
RL	RL308-08	RL308-08
RL	RL325-01	RL325-01
RL	RL325-03	RL325-03
RL	RL325-08	RL325-08
RL	RL325-09	RL325-09
RL	RL618-01	RL618-01
RL	RL618-08	RL618-08
RL	RLALE-02	RLALE-02
RL	RLARG-01	RLARG-01
RL	RLBART-08	RLBART-08
RL	RLBAT-01	RLBAT-01
RL	RLBAT-08	RLBAT-08
RL	RLBET-08	RLBET-08
RL	RLBW-01	RLBW-01
RL	RLBW-03	RLBW-03
RL	RLBW-08	RLBW-08
RL	RLCFF-01	RLCFF-01
RL	RLCFF-03	RLCFF-03
RL	RLCH2-01	RLCH2-01
RL	RLCH2-08	RLCH2-08
RL	RLCH2-09	RLCH2-09
RL	RLESG-01	RLESG-01
RL	RLESG-03	RLESG-03
RL	RLESG-08	RLESG-08
RL	RLEXX-01	RLEXX-01
RL	RLFFTF-01	RLFFTF-01
RL	RLFFTF-08	RLFFTF-08
RL	RLGEV-01	RLGEV-01
RL	RLGEV-03	RLGEV-03
RL	RLGEV-08	RLGEV-08
RL	RLHAN-01	RLHAN-01
RL	RLHAN-03	RLHAN-03
RL	RLHAN-08	RLHAN-08
RL	RLIAEA-03	RLIAEA-03
RL	RLMLB-08	RLMLB-08
RL	RLMLL-01	RLMLL-01

**Table C-2. Crosswalk of ATWIR-2015 to ATWIR-2016 Waste Streams**  
Continued

Site Code	ATWIR-2015 Waste Streams	ATWIR-2016 Waste Streams
RL	RLP11-01	RLP11-01
RL	RLPFP-01	RLPFP-01
RL	RLPFP-02	RLPFP-02
RL	RLPFP-03	RLPFP-03
RL	RLPFP-04	RLPFP-04
RL	RLPFP-08	RLPFP-08
RL	RLPRC-01	RLPRC-01
RL	RLPURX-01	RLPURX-01
RL	RLPURX-02	RLPURX-02
RL	RLPURX-08	RLPURX-08
RL	RLRFET-01	RLRFET-01
RL	RLSAN-01	RLSAN-01
RL	RLSWO-01	RLSWO-01
RL	RLWAR-01	RLWAR-01
RL	RLWAR-03	RLWAR-03
RL	RLWTP-08	RLWTP-08
RP	RP-TFC001	RP-TFC001
RP	RP-W754	RP-W754
RP	RP-W755	RP-W755
SA	SA-W135	SA-W134, SA-W135
SA	SA-W136	SA-W136
SA	SA-W137	SA-W137
SA	SA-W138M	SA-W138M
SR	SR-221H-EUOx	SR-221H-EUOx
SR	SR-221H-PuOx	SR-221H-PuOx
SR	SR-AGNS-HOM	SR-AGNS-HOM
SR	SR-BCLDP-HET	SR-BCLDP-HET
SR	SR-BCLDP.003.001	SR-BCLDP.003.001
SR	SR-BCLDP.004.004	SR-BCLDP.004.004
SR	SR-DWPF-HET	SR-DWPF-HET
SR	SR-HBL-235F-HET	SR-HBL-235F-HET
SR	SR-KAC-HET	SR-KAC-HET
SR	SR-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

**Table C-2. Crosswalk of ATWIR-2015 to ATWIR-2016 Waste Streams**  
Continued

Site Code	ATWIR-2015 Waste Streams	ATWIR-2016 Waste Streams
SR	SR-RH-SDD.01	SR-RH-SDD.01
SR	SR-RH-SWD.01	SR-RH-SWD.01
SR	SR-SDD-HET-A	SR-SDD-HET-A
SR	SR-SDD-HOM-A	SR-SDD-HOM-A
SR	SR-SDD-HOM-B	SR-SDD-HOM-B
SR	SR-SWMF-HET-A	SR-SWMF-HET-A
SR	SR-SWMF-HET-B	SR-SWMF-HET-B
SR	SR-T001-WSB-1	SR-T001-WSB-1
SR	SR-W026-221F-HEPA	SR-W026-221F-HEPA
SR	SR-W026-221F-HET	SR-W026-221F-HET
SR	SR-W026-221F-HET-A	SR-W026-221F-HET-A
SR	SR-W026-221F-HOM	SR-W026-221F-HOM
SR	SR-W026-772F-HET	SR-W026-772F-HET
SR	SR-W026-MFFF-1	SR-W026-MFFF-1
SR	SR-W026-WSB-2	SR-W026-WSB-2
SR	SR-W027-221F-HET-A	SR-W027-221F-HET-A
SR	SR-W027-221H-HEPA	SR-W027-221H-HEPA
SR	SR-W027-221H-HET	SR-W027-221H-HET
SR	SR-W027-221H-HET-C	SR-W027-221H-HET-C
SR	SR-W027-221H-HOM	SR-W027-221H-HOM
SR	SR-W027-235F-HEPA	SR-W027-235F-HEPA
SR	SR-W027-235F-HET	SR-W027-235F-HET
SR	SR-W027-235F-HOM	SR-W027-235F-HOM
SR	SR-W027-321-322M-HET	SR-W027-321-322M-HET
SR	SR-W027-773A-HET	SR-W027-773A-HET
SR	SR-W027-773A-HOM	SR-W027-773A-HOM
SR	SR-W027-FB-Pre86-C	SR-W027-FB-Pre86-C
SR	SR-W027-HBL-Box	SR-W027-HBL-Box
WV	WV-M010a	WV-M010a
WV	WV-T004	WV-T004a
WV	WV-T006a	WV-T006a
WV	WV-T006b	WV-T006b
WV	WV-T017b	WV-T017b
WV	WV-W024a	WV-W024a
WV	WV-W024b	WV-W024b
WV	WV-W050a	WV-W050a
WV	WV-Z001	WV-Z001

Data Source: CID Data Version D.15.00 (LANL-CO 2016a). Note: This table contains data for WIPP-bound and potential waste streams only.

**APPENDIX D DOE POTENTIAL WASTE SCREENING MEMORANDUM**



**Department of Energy**  
 Carlsbad Field Office  
 P. O. Box 3090  
 Carlsbad, New Mexico 88221  
 March 29, 2010

Mr. Ned Elkins, Manager  
 Los Alamos National Laboratory - Carlsbad Operations  
 115 N. Main  
 Carlsbad, NM 88220

Subject: TRU Waste Inventory Screening Criteria Guidance

Dear Mr. Elkins:

The Department of Energy Carlsbad Field Office (CBFO), in the enclosed memorandum, is providing guidance on the criteria to be used to screen transuranic (TRU) waste streams for exclusion from the Waste Isolation Pilot Plant (WIPP)-bound inventory in upcoming Annual TRU Waste Inventory Reports. This guidance will stay in effect until Los Alamos National Laboratory – Carlsbad Operations is formally notified otherwise by CBFO.

If you have any questions regarding this guidance please notify me at (575) 234-7457.

Sincerely,

Russ Patterson  
 Compliance Certification Manager

Enclosure

cc: w/enclosure  
 C. Fesmire, CBFO \*ED  
 S. McCauslin, CBFO ED  
 G. Basabilvazo, CBFO ED  
 R. Nelson, CBFO ED  
 D. Kessel, SNL ED  
 S. Kouba, WRES ED  
 B. Crawford, LANL-CO ED  
 B. McInroy, LANL-CO ED  
 \*ED denotes electronic distribution

*INV - 1004 - 01 - 01 - 01*

**Screening Memorandum  
March 17, 2010**

This screening memo describes criteria that will be used to screen transuranic (TRU) waste streams for exclusion from the Waste Isolation Pilot Plant (WIPP)-bound inventory. This WIPP-bound waste is used in future performance assessments (PAs) for the Compliance Recertification Application (CRA). This memo does not address high level, low level or commercial waste since they are prohibited for disposal in WIPP. The table below contains screening criteria that will be used to designate Potential waste streams. The table in no way indicates that waste identified as Potential will be excluded from emplacement in WIPP in the future.

All waste streams collected for each Annual TRU Waste Inventory Report (ATWIR) are categorized within the TRU waste inventory database as WIPP-Bound unless one or more of the screening criteria listed in the table below are encountered. All shipments to WIPP will be subject to the conditions delineated in the WIPP Hazardous Waste Facility Permit Waste Analysis Plan (WAP), WIPP Waste Acceptance Criteria (WAC) and the Transuranic Authorized Methods for Payload Control (TRAMPAC). The table below is intended to be treated as a guide for delineating Potential waste streams that will be reported in the ATWIR in Appendix C and excluded from being reported in Performance Assessment Inventory Report (PAIR) that will be used for future PAs.

**Criteria for Categorizing Waste Streams as Potential**


<b>Screening Criteria</b>	<b>Comment</b>
<b>TRU Determination</b> Undetermined	Will remain potential until the waste stream has been officially determined to be transuranic. If the waste stream is determined to be non-transuranic then it will be removed from the inventory.
<b>Defense Determination</b> Unknown	Will remain potential until the waste stream has been officially determined to be defense waste. If the waste stream is determined to be non-defense then it will be removed from the inventory.
<b>Regulatory Restrictions</b> <ul style="list-style-type: none"> <li>• Surface Dose &gt; 1000 R/hr</li> <li>• Activity &gt;23 Ci/L (or 23,000 Ci/m<sup>3</sup>) averaged over the volume of the canister</li> <li>• Prohibited hazardous constituents</li> <li>• Summary category groups other than S3000, S4000, S5000</li> <li>• And other regulatory restrictions</li> </ul>	Will remain potential until the waste stream meets all acceptance criteria for WIPP. This may involve: <ul style="list-style-type: none"> <li>• Repackaging waste stream</li> <li>• Treating waste stream</li> <li>• Removal of restricted items from waste stream</li> <li>• Any other process that would remediate the regulatory restriction</li> </ul>
<b>Incomplete Data</b> <ul style="list-style-type: none"> <li>• Incomplete or missing radionuclide concentrations</li> <li>• Incomplete or missing WMP</li> </ul>	Will remain potential until the waste stream reports all required data.

Screening Criteria	Comment
densities <ul style="list-style-type: none"> <li>• Incomplete or missing final form container information</li> <li>• Unknown waste stream information</li> <li>• Any other incomplete or missing waste stream information that is required for PA</li> </ul>	
<b>Directed by DOE to move to Potential</b>	Will remain potential until DOE directs to remove waste stream from potential.

DOE/CBFO Compliance Certification Manager



Russ Patterson



Date