



ESHID-601352



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*Date:* **MAR 21 2016**  
*Symbol:* **ADESH-16-037**  
*LA-UR:* **16-21566, 16-21606**  
*Locates Action No.:* **N/A**

Mr. John E. Kieling, Chief  
Hazardous Waste Bureau  
New Mexico Environment Department  
2905 Rodeo Park Drive East, Building 1  
Santa Fe, NM 87505-6303

Dear Mr. Kieling:

**Subject:      Response to Ordered Actions 1.10, 4, and 6, Attachment A to Settlement Agreement and Stipulated Final Order HWB-14-20**

This letter responds to three Ordered Actions in Attachment A to the Settlement Agreement and Stipulated Final Order HWB-14-20 (SFO) entered into by the New Mexico Environment Department (NMED) (Complainant) and the U.S. Department of Energy (DOE) and Los Alamos National Security, LLC (LANS) (Respondents) on January 22, 2016. Paragraph 35 of the SFO requires the Respondents to complete corrective actions (called "Ordered Actions" in the "Topic" column of Attachment A of the SFO) and submit required Evidence of Completion to NMED for approval by the deadlines specified in SFO Attachment A, unless an alternate date is approved in accordance with SFO paragraph 58.

This letter provides a single, combined response to those Ordered Actions pertaining specifically to waste stream characterization - Ordered Actions Nos. 1.10, 4 and 6 (SFO Attachment A pages 5, 9 and 10) - as follows:

Ordered Action no.	Topic (Ordered Action description)	Response Actions
1.10 <sup>1</sup>	No later than 60 days after this Order becomes final, Respondents shall submit to NMED a written report describing any and all actions Respondents have taken to prevent any recurrence of violations described herein. The written report shall include changes to procedures that Respondents have implemented already.	<b>Waste Profile Form Validation for Mixed and Hazardous Waste</b> Review of the characterization of all currently active LANL <sup>2</sup> Hazardous waste streams.
4	Immediately upon this Order becoming final, Respondents shall begin review of every mixed TRU <sup>3</sup> waste stream which is currently managed or generated at LANL to verify that the characterization of the waste streams is accurate, sufficient, and updated. Respondents shall complete and document their review in the Facility Operating Record within 60 days after this Order becomes final.	<b>Summary report</b> describing the MTRU <sup>3</sup> waste stream characterization verification review
6	No later than 60 days after this Order becomes final, Respondents shall submit to NMED any documentation Respondents have entered in the Facility Operating Record for the most recent, annual reevaluation of all hazardous waste streams at LANL.	<b>Copy of Operating Record documentation</b> (selected WCATS <sup>4</sup> printouts) for all active RCRA <sup>5</sup> waste stream profiles

Enclosure 1 to this letter provides the Respondents' submittals in response to each of the above Ordered Actions. Documentation to be submitted as evidence of completion of these Ordered Actions (as specified in Attachment A to the SFO) is provided in the Enclosure and Appendix 1.

<sup>1</sup> Please note that this document addresses Ordered Action 1.10 which pertains specifically to waste stream characterization (as described in the Response Action column). It does not address the remainder of Ordered Action 1. The comprehensive discussion of all other corrective actions responding to Ordered Action 1 will be provided in a separate submittal.

<sup>2</sup> Los Alamos National Laboratory

<sup>3</sup> "MTRU" and "mixed TRU" refer to mixed transuranic waste

<sup>4</sup> Waste Compliance and Tracking System

<sup>5</sup> Resource Conservation and Recovery Act

The Respondents request to meet with NMED-HWB personnel to discuss and explain the documentation included herein. If you have comments or questions regarding this submittal, please contact Mark P. Haagenstad (LANS) at (505) 665-2014 or David Nickless (EM-LA) at (505) 665-6448.

Sincerely,



3/14/16

Michael T. Brandt, DrPH, CIH  
Associate Director  
Environment, Safety & Health  
Los Alamos National Security, LLC  
Los Alamos National Laboratory

Sincerely,



Kimberly Davis Lebak  
Manager  
Los Alamos Field Office  
U.S. Department of Energy

MTB:KDL:MPH/lm

Enclosures: (1) Response to Ordered Actions 1.10, 4, and 6, Attachment A to Settlement Agreement and Stipulated Final Order HWB-14-20

Cy: Ryan Flynn, NMED, Santa Fe, NM, (E-File)  
Kathryn M. Roberts, NMED, Santa Fe, NM, (E-File)  
John E. Kieling, NMED, Santa Fe, NM, (E-File)  
Siona Briley, NMED/HWB, Santa Fe, NM, (E-File)  
Neelam Dhawan, NMED/HWB, Santa Fe, NM, (E-File)  
Todd Shrader, Manager, CBFO, (E-File)  
J.R. Stroble, National TRU Program, CBFO, (E-File)  
Kimberly Davis Lebak, NA-LA, (E-File)  
Douglas E. Hintze, EM-LA, (E-File)  
Lisa Cummings, NA-LA, (E-File)  
Ben Underwood, EM-LA, (E-File)  
Brian Hennessey, EM-LA, (E-File)  
David Nickless, EM-LA, (E-File)  
Jody Pugh, NA-LA, (E-File)  
Jordan Arnsward, NA-LA, (E-File)  
Kirsten M. Laskey, EM-LA, (E-File)  
Craig Leasure, PADOPS, (E-File)  
William Mairson, PADOPS, (E-File)  
Kapil Goyal, NPI-7, (E-File)  
Randall M. Erickson, ADEM, (E-File)  
David Funk, ADEM, (E-File)  
Enrique Torres, ADEM, (E-File)  
Davis Christensen, WD-WPE, (E-File)  
Cheryl D. Cabbil, ADNHHO, (E-File)  
Michael T. Brandt, ADESH, (E-File)  
Raeanna R. Sharp-Geiger, ADESH, (E-File)



Cy (continued):

John McCann, EPC-DO, (E-File)  
Andrew Montoya, WM-DO, (E-File)  
Jackie Hurtle, WM-DO, (E-File)  
Steven Singledecker, WM-SVS, (E-File)  
Ellen Gammon, OIO-DO, (E-File)  
Mark P. Haagenstad, EPC-CP, (E-File)  
Deborah Woitte, LC-ESH, (E-File)  
Susan McMichael, LC-ESH, (E-File)  
Deborah L. Guffee, SI-DC, (E-File)  
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Mr. John E. Kieling, Chief  
Hazardous Waste Bureau  
New Mexico Environment Department  
2905 Rodeo Park Drive East, Building 1  
Santa Fe, NM 87505-6303

**RECEIVED**

MAR 21 2016

Dear Mr. Kieling:

**NMED**  
**Hazardous Waste Bureau**

**Subject: Response to Ordered Actions 1.10, 4, and 6, Attachment A to Settlement Agreement and Stipulated Final Order HWB-14-20**

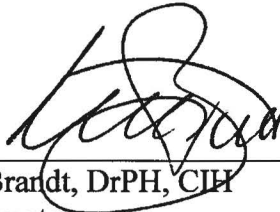
This letter responds to three Ordered Actions in Attachment A to the Settlement Agreement and Stipulated Final Order HWB-14-20 (SFO) entered into by the New Mexico Environment Department (NMED) (Complainant) and the U.S. Department of Energy (DOE) and Los Alamos National Security, LLC (LANS) (Respondents) on January 22, 2016. Paragraph 35 of the SFO requires the Respondents to complete corrective actions (called "Ordered Actions" in the "Topic" column of Attachment A of the SFO) and submit required Evidence of Completion to NMED for approval by the deadlines specified in SFO Attachment A, unless an alternate date is approved in accordance with SFO paragraph 58.

This letter provides a single, combined response to those Ordered Actions pertaining specifically to waste stream characterization - Ordered Actions Nos. 1.10, 4 and 6 (SFO Attachment A pages 5, 9 and 10) - as follows:

Date: March 2016

### CERTIFICATION

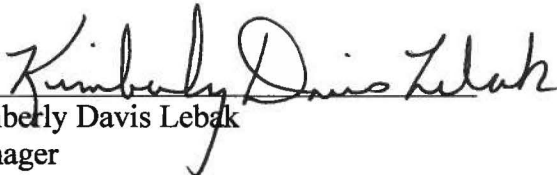
I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.



Michael T. Brandt, DrPH, CIH  
Associate Director  
Environment, Safety, and Health  
Los Alamos National Security, LLC  
Los Alamos National Laboratory  
Operator

3/14/16

Date Signed



Kimberly Davis Lebak  
Manager  
Los Alamos Field Office  
U.S. Department of Energy  
Owner/Operator

3/15/16

Date Signed

# **ENCLOSURE 1**

**Response to Ordered Actions 1.10, 4, and 6  
Attachment A to Settlement Agreement and Stipulated  
Final Order HWB-14-20**

**ADESH-16-037**

**LA-UR-16-21566**

**Date:** MAR 21 2016



**Enclosure 1**  
**Response to Ordered Actions 1.10, 4, and 6**  
**Attachment A to Settlement Agreement and Stipulated Final Order HWB-14-20**

**Introduction**

This letter and Enclosure respond to Ordered Actions 1.10, 4, and 6, respectively, in Attachment A to the Settlement Agreement and Stipulated Final Order HWB-14-20 (SFO) entered into by the New Mexico Environment Department (NMED) (Complainant) and the U.S. Department of Energy (DOE) and Los Alamos National Security, LLC (LANS) (Respondents) on January 22, 2016. The SFO was entered into to resolve the Administrative Compliance Order (ACO) HWB-14-20, issued to Respondents on December 6, 2014. The following sections of this Response address the following Ordered Actions:

- Section 1 responds to Ordered Action 1.10, which pertains specifically to waste stream characterization (i.e., on page 5 in SFO Attachment A). It does not address the remainder of Ordered Action 1.
- Section 2 responds to Ordered Action 4 (page 9-10 in SFO Attachment A).
- Section 3 responds to Ordered Action 6 (pages 10-12 in SFO Attachment A).

Electronic copies of documentation being provided as evidence of completion for each Ordered Action are located in Appendix 1, Tables 1, 2, 3, respectively. Definitions of the table column headings/data fields are included in each of the tables.

## **1.0 Response to Ordered Action 1.10: Waste Profile Form Validation for Mixed and Hazardous Waste**

Ordered Action No. 1.10 requires the Respondents to conduct a “*review of the characterization of all currently active LANL hazardous waste streams,*” and “*provide a report which identifies the list of active hazardous waste streams reviewed by the generator/ WMC*

*<sup>6</sup> teams and WM<sup>7</sup> Division, with Conclusions/Summary.*”

The Respondents have developed and implemented a comprehensive set of corrective actions responding to Ordered Action 1, which will be described in a separate submittal to the NMED. Herein, the Respondents address only Ordered Action 1.10 (Attachment A to the SFO), which pertains specifically to waste stream characterization.

This Section of Enclosure 1 is the requested report on Los Alamos National Laboratory’s (LANL’s or the Laboratory’s) Waste Stream Profile form (WSP) validation effort for mixed and hazardous waste, which was a key corrective action intended to help prevent recurrence of the violations noted in ACO HWB-14-20. The documentation requested as evidence of completion of Ordered Action 1.10 (i.e., the list of active hazardous waste streams reviewed) is provided in Appendix 1, Table 1. Definitions of the table column headings/data fields are included in the table.

### **1.1 Initial Response Actions**

LANL requires that all waste generated within the facility be properly defined and characterized. It is required that prior to generation, all waste streams are described and documented in WSP forms, which are maintained in WCATS and supported with sampling and analysis data and/or acceptable knowledge (AK) documentation. WCATS is a component of the operating record. If there is a change in the information in WCATS regarding generation or management of a waste, it is expected to be revised by the party managing that waste. The process is designed to accurately and completely capture and record the necessary information required to compliantly store, treat, and dispose of waste items.

In response to the ACO, LANL began a comprehensive review of WSPs. When the review was commenced, the Respondents had already begun addressing concerns that in 2010, the historical waste profiles had been migrated from the predecessor waste profile databases into WCATS without a complete review of their associated documentation and usage. A preliminary review of WSPs was initiated in December of 2014 to identify WSPs that had been in place more than five years but had not been used in over a year. As a result of this initial, immediate response to the ACO, 210 inactive WSPs were voided. Early in 2015, a comprehensive review and validation of all currently active hazardous and mixed waste streams (over 700 WSPs) was begun by LANL’s Waste Management Division.

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<sup>6</sup> Waste Management Coordinator

<sup>7</sup> Waste Management

## 1.2 WSP Validation Process

Existing LANL waste characterization requirements were reviewed and WSP surveillance criteria were developed. The criteria included reviews of process information; waste characterization methods and documentation; WSP parameters and controls; and the accuracy and sufficiency of WCATS records, specifically related to the AK documentation associated with each waste stream.

The active hazardous and mixed waste WSPs were then reviewed using a two-step process. In the first step, initiated early in 2015, the WMC and waste generator who were responsible for each WSP compared the surveillance criteria to their WSPs. The second step, which began during spring 2015, was a technical evaluation by the Waste Stream Characterization Team in the Waste Management Division, Waste Services Group (WM-SVS). They evaluated each WSP that had passed the first review to ensure the WSP was sufficiently and accurately characterized and properly classified in accordance with LANL, state, and federal regulations and requirements. WM-SVS documented and formalized the process used in this second review in a new procedure entitled *Reviewing and Approving Waste Stream Profiles (WSP) in WCATS* (WM-SVS-AP-201, R0). A copy of this procedure was provided to NMED in *Response to Ordered Action No. 5, Attachment A to the Settlement Agreement and Stipulated Final Order HWB-14-20*, submitted to the NMED on February 3, 2016 (this document can be accessed at <http://permalink.lanl.gov/object/tr?what=info:lanl-repo/epr/ESHID-601172-01>).

## 1.3 Summary and Conclusions of WSP Validation Results

Appendix 1, Table 1 is a WCATS report that presents the list of active WSPs reviewed and their final status (definitions of the column heading names used are provided in Appendix 1, Table 4). WSPs previously identified and disclosed to NMED by the Permittees as having compliance issues (e.g., for nitrate salt waste streams) had been voided and were not included in this review. The following are the results of the two-step validation process:

- 10% of the WSPs that were confirmed as necessary for continued waste generation met the most rigorous review criteria and were deemed accurate, sufficient and up-to-date;
- 40% of the WSPs reviewed were identified as unnecessary for current or near term operations (i.e., no wastes fitting the profile were expected to be generated in the near future) and their status was changed to void;
- The remaining 50% of WSPs reviewed were also voided and will be replaced with new WSPs if and when needed.

The validation and review process also identified the following opportunities for improvement in the LANL waste characterization system:

- WSP review and verification processes needed better definition and roles and responsibilities related to waste characterization needed clarification (see responses to Ordered Actions 1.9 and 9).
- Better and more effective communication among waste generators, WMCs, and subject matter experts (SMEs) related to waste characterization was needed (see responses to Ordered Actions 1.9, 7, 8 and 9).



- Training on waste characterization, including WSP reviews and extensions needed to be strengthened and updated for WMCs, waste generators, deployed environmental professionals and waste management workers (see response to Ordered Action 1.9).

Corrective actions have already been taken in each of these areas, as discussed in the responses to Ordered Actions 1, 7, 8 and 9 (each provided under a separate cover).

## **2.0 Response to Ordered Action 4: MTRU Waste Stream Characterization Verification Review**

This section of Enclosure 1 is the response to Ordered Action 4 in Attachment A to the SFO (i.e., the “*summary report describing the MTRU waste stream characterization verification review... including development of Lessons Learned (to be described in summary report text).*”

The documentation being provided as evidence of completion of Ordered Action 4 (i.e., the list of MTRU waste streams reviewed) is in Appendix 1, Table 2.

The LANL Waste Stream Profile form validation effort for mixed and hazardous waste, discussed in Section 1 of this Enclosure, was a key corrective action intended to help prevent recurrence of the violations noted in ACO HWB-14-20. In concert with the Ordered Action 1.10 activities, upon receipt of the ACO in December 2014, the Respondents began a comprehensive review of every mixed TRU waste stream currently managed or generated at LANL to verify that the characterization of the waste streams was accurate, sufficient, and updated. As a result of this comprehensive review, a decision was made to replace most of the existing mixed TRU waste stream profiles with new WSPs meeting the most rigorous review criteria applied during the LANL Waste Stream Profile form validation effort. Upon approval, the new mixed TRU WSPs were activated in WCATS which, as discussed in Ordered Action 1.10, is a component of LANL’s Facility Operating Record. Appendix 1, Table 2 is a spreadsheet summarizing the WCATS data for the mixed TRU WSPs. The mixed TRU WSP review process and results, including lessons learned, are discussed below.

### **2.1 Background**

Legacy wastes are mixed hazardous and radioactive wastes remaining from past Laboratory operations related to the Nation’s nuclear production and development programs. Legacy mixed TRU wastes at LANL are primarily stored at Technical Area (TA)-54, where they may need to be repackaged and sometimes remediated in order to meet waste acceptance criteria (WAC) before they can be shipped for disposal at the Waste Isolation Pilot Plant (WIPP). Some mixed TRU wastes continue to be generated due to ongoing LANL nuclear research and development operations, which are primarily taking place at TA-55. These are referred to as newly-generated mixed TRU wastes. In this review effort, both the TA-55 and TA-54 operating organizations conducted reviews of their waste characterization methods and WSPs to ensure they were accurate, sufficient, and updated.

### **2.2 AK Supporting TA-55 Waste Stream Profiles**

Over the years, several waste identification and categorization conventions have been used as part of waste management operations for TRU mixed waste generated at LANL. The waste identification system used for a particular waste container depends largely upon its date of initial placement into storage. One identification convention used at TA-55, both historically and currently, is the Process/Status (P/S) Code, which is a unique identifier assigned to each individual plutonium processing operation at TA-55. These codes are used for the purpose of nuclear material accounting. Waste items are labeled with a unique Item Identification Code that contains information on the waste material parameter (i.e., identifying the matrix of the item) and an embedded P/S Code that corresponds to nuclear materials accountability for the operation that

produced the waste item. The P/S Code refers to a specific part of an operation within the overall plutonium-recovery process. It generally applies to more than one glovebox, or to the same operation carried out in multiple locations or gloveboxes in TA-55.

The P/S Codes provide the finest level of detail available to associate waste items with a specific operation of origin. Therefore, the P/S Code system is used extensively to describe and document AK information for RCRA characterization and to identify chemical constituents for the plutonium-processing derived waste. P/S Codes can be associated with most waste items generated after 1987 and all items generated after 1995.

The documents used to describe, guide, and record the waste generating operations associated with each P/S Code are kept in the TA-55 Documentum document management system. Unclassified Controlled Nuclear Information (UCNI)<sup>8</sup> is contained in these records, which are identified as UCNI in the TA-55 Acceptable Knowledge document files. LANL recognizes the need for accommodations when dealing with classified and sensitive information. When security prohibits inclusion of classified or restricted documentation in WCATS, a unique and traceable identifier must be used to reference the supporting documentation.

Early in development of LANL's program to characterize its mixed TRU waste for WIPP, process AK reports were created for TRU-waste generating activities at TA-55. For convenience in organizing AK reports for plutonium processing at TA-55, the processes and P/S Codes were grouped into seven functional areas:

- Chloride Operations
- Metal Operations
- Nitrate Operations
- Plutonium-238 Operations
- Pyrochemical Processes
- Special Processing
- Miscellaneous Operations.

AK used for mixed TRU waste characterization was extracted from individual P/S-related operating documents at TA-55 and summarized in the seven operations AK documents mentioned above. The summaries are presented by P/S Code and describe the Environmental Protection Agency (EPA) Hazardous Waste Numbers (HWNs) associated with each P/S Code activity. Because of the volume of operational procedures and other associated documents for individual waste-generating processes, it is not practical to attach these internal documents as AK to the mixed TRU WSPs in WCATS. Likewise, the sensitivity of the information contained prevents the Respondents from attaching the process AK reports for classification reasons.

Appendix 2 of TA-55 Administrative Procedure PA-AP-01083 is attached to each of the mixed TRU WSPs in WCATS to provide a bridge to the AK summaries used for characterizing mixed TRU waste at TA-55. PA-AP-01083, *Documenting Acceptable Knowledge for Legacy Waste Items* (see copy in Appendix 2 of this Enclosure) is applicable to newly generated waste as well as legacy waste. It describes how P/S Codes are assigned to waste items and defines waste

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<sup>8</sup> UCNI is a Department of Energy security classification intended to prohibit the inappropriate release of controlled nuclear information.



groups based on common HWNs. Appendix 2 of PA-AP-01083 is a crosswalk between P/S Codes, waste Group assignments, and HWNs, and is attached to each of the mixed TRU WSPs for newly generated and legacy wastes from TA-55 operations to support the EPA HWN assignments in each WSP.

### **2.3 TA-55 Mixed TRU Characterization Review**

The review of TA-55 characterization data began by focusing on ensuring P/S Code information was current and accurate. An independent contractor was tasked to update the seven operations AK reports discussed above by performing a comprehensive review of the current procedures to confirm activity status, changes to processes, chemical lists and/or HWNs, and identify any changes to the suite of active P/S Codes. A total of 372 current procedures were reviewed. P/S Code summaries and HWN assignments were updated as necessary. Of a total of 243 P/S Codes, the review identified that 204 were inactive and 39 remain active. The seven operations AK reports were updated based on the comprehensive AK review. The AK reports were completed in September 2015 and are undergoing final approval for placement in the TA-55 Documentum system.

### **2.4 Newly-Generated WSP Revisions and Updates**

At the outset of this comprehensive review, a decision was made to replace most of the existing mixed TRU WSPs with new WSPs meeting the most rigorous review criteria applied during the LANL Waste Stream Profile form validation effort. Based on the updated P/S data and HWN assignments, old WSPs were reviewed and voided, or replaced and updated with the latest characterization data. Eight new, active WSPs addressing all newly-generated mixed TRU at TA-55 were created by the responsible generator and reviewed by the WMC.

The new profiles were then subjected to a RCRA review by the Waste Management Division, Waste Services Group (WM-SVS) in accordance with WM-SVS-AP-201, R0, *Reviewing and Approving Waste Stream Profiles (WSP) in WCATS* (a copy of this procedure was provided to NMED in *Response to Ordered Action No. 5, Attachment A to the Settlement Agreement and Stipulated Final Order HWB-14-20*, submitted to the NMED on February 3, 2016. This document can be accessed at <http://permalink.lanl.gov/object/tr?what=info:lanl-repo/eprr/ESHID-601172-01>).

Approvals by the generator, WMC, and WM-SVS are all required to activate a new profile for use. All newly generated mixed TRU waste from TA-55 will be managed under the latest updated profiles. Additional future waste streams may require preparation of new profiles.

An additional RCRA compliance review of the updated mixed TRU WSPs was performed as a quality assurance step. As a result of the compliance review, additional enhancements to waste characterization and AK in the mixed TRU WSPs were suggested. Opportunities for improvement identified by the compliance review are discussed under “Lessons Learned” below.

The results of this effort are shown in Table 2 in Appendix 1. Table 2 lists all mixed TRU waste streams currently being generated or managed at LANL. The “Status” column in the spreadsheet contains a “1” (active) or “4” (void) for each WSP. Waste streams with a “4” designation are waste streams which have been voided. While no new waste can be generated under voided WSPs, the voided WSPs are included in the spreadsheet because they still have containers

assigned to the waste stream for management. Active waste streams (with a “1” designation) can be used for new generation of waste items.

## **2.5 Legacy Mixed TRU Characterization Review**

The majority of mixed TRU waste streams managed at TA-54 Area G are legacy wastes from TA-55 operations. They are characterized in accordance with the methods described above for newly generated wastes at TA-55, based on source AK documents in Documentum, the assignment of P/S Codes to waste items, and references to characterization data summarized in operations AK documents and PA-AP-01083. Unlike newly generated TA-55 waste streams, legacy waste streams at TA-54 Area G must maintain links to, and rely on the accuracy and completeness of, additional historical source AK documents describing conditions under which they were generated. Because of this, the versions of the PA-AP-01083 document attached to the legacy mixed TRU WSPs, their operations AK documents, and the referenced P/S Codes and supporting source documents can differ from those currently used for newly-generated mixed TRU waste at TA-55.

Characterization information for all legacy waste streams, such as analysis, due diligence data, and historical documentation is ultimately provided to the Central Characterization Project (CCP), who prepares an AK report for final disposal of the waste at WIPP. In rare and isolated cases, TA-54 Area G operational staff uses CCP-AK reports to document and supplement LANL characterization data in WCATS.

## **2.6 Real Time Radiography (RTR) Review**

Early in the mixed TRU review process, a review of the RTR images for mixed TRU legacy waste containers in storage was conducted to ensure that the RTR data confirmed the waste description in the waste characterization record and to verify that the WSP waste composition field entries properly bounded the waste stream composition. During this RTR review, special attention was given to identifying any liquids in the containers as well as any other potential characterization or WAC vulnerabilities. Nitrate salt and CIN-01 containers identified with liquids were assigned to “storage-only” WSPs having applicable ignitable and corrosive HWNs (D001, D002, and F003) until they can be remediated. Similarly, if RTR identified new constituent data, the WSP assignment would be reviewed and changed if necessary. The RTR of mixed TRU drums in storage did not identify any anomalies. There were several containers that were known to require processing (e.g., segregation) prior to shipment because they contained prohibited items.

## **2.7 Legacy Mixed TRU WSP Revisions and Updates**

After review of a selection of legacy mixed TRU profiles, TA-54 Area G operational staff opted to revise and reissue all of the legacy WSPs. The WSPs for legacy waste from TA-55 operations were assigned the most conservative set of HWNs, based on the historical AK. WSPs for waste from non-TA-55 operations were assigned HWNs in accordance with the relevant CCP AK. As a result of this effort, 15 new, active legacy mixed TRU profiles were created by TA-54 operations personnel and WM-SVS personnel and reviewed by the WMC at TA-54. The profiles were then subjected to a RCRA review by WM-SVS according to the same process as was used for the

newly-generated WSPs. An additional RCRA compliance review of the updated legacy mixed TRU WSPs was performed as a quality assurance step, as discussed above.

Appendix 1, Table 2 includes the new legacy mixed TRU WSPs as well as the newly-generated mixed TRU WSPs. Legacy waste being stored and managed at TA-54 Area G will be transitioned to the new profiles in the WCATS system and labeled per the updated profile data.

## **2.8 Other Mixed TRU Profiles**

In addition to the legacy TA-55 operations waste, TA-54 Area G manages a limited number of mixed TRU waste streams from other sources such as environmental restoration operations. Several active profiles for mixed TRU waste generated or managed at LANL locations other than TA-55 and TA-54 are listed in Appendix 1, Table 2. These include two WSPs (WSP 41744 and WSP 42616) from the TA-03 Chemistry and Metallurgical Research Facility (CMR), one from general areas identified as TA-00 (40691) and one located at TA-54 (WSP 41889). WSP 42616 is an update of WSP 41744 and has gone through reviews by the CMR WMC, WM-SVS, and Environmental Protection and Compliance (EPC-CP) to ensure it is accurate and sufficient. WSP 41744 was voided after approval of its replacement. WSP 40691 covers sealed radioactive sources from off-site and has gone through reviews by WM Division and environmental compliance staff in EPC-CP to ensure it is accurate and sufficient. WSP 41889 is an administrative profile which allows TA-54 personnel to remove prohibited items (aerosol cans) found during RTR. No waste is transported or otherwise managed under WSP 41889. Only waste from segregation activities (i.e. removal of prohibited aerosol cans found during RTR) may be assigned to WSP 41889. Once the cans are removed, they can be accurately characterized and assigned to an active profile or a newly created WSP, if none already exists.

## **2.9 LA-CIN01 Sampling and Analysis**

Liquids identified as having leached from LA-CIN01 containers (LA-CIN01 is a TA-55 cemented waste stream designation used by the Central Characterization Project) were sampled and analyzed to provide data necessary to prepare surrogate samples. The surrogates were tested to determine if the waste was ignitable (due to the material being an oxidizer) or flammable (due to mixing incompatible absorbents with the waste). Analytical data obtained during this effort was used as characterization documentation in the profile updates and helped verify the characteristics of the solid waste streams in storage. WSPs were created for LA-CIN01 wastes that assign D001-D002 and F-listed HWNs, as well as HWNs associated with the P/S Codes, to ensure the most conservative characterization for storage until they can be appropriately processed and disposed.

## **2.10 Nitrate Salt Sampling and Analysis**

Generally it is not technically feasible to sample and analyze most mixed TRU wastes for purposes of characterization. However, as part of the LANL efforts taken in response to the February 2014 WIPP event, samples of nitrate salts were collected and analyzed to aid in the preparation of surrogate samples for determination of ignitability due to the material being an oxidizer. This analytical data was used to verify characterization of the nitrate salt waste streams during the waste profile update process.



## **2.11 Lessons Learned**

- Not all pertinent AK information can be attached to all WSPs in WCATS. AK source information for mixed TRU wastes in particular is voluminous and complicated due to data sensitivity and classification issues.
- Liquids in mixed TRU containers may have chemical compositions meeting the ignitability or corrosivity definitions. Containers in storage awaiting remediation for these characteristics must be labeled with D001 and D002 HWNs.
- Mixed TRU profile deficiencies were not resolved when historical mixed TRU WSPs were migrated into the WCATS system).
- Additional regulatory compliance reviews of new profiles by LANL Subject Matter Experts should be triggered when more difficult, complex, or problematic waste streams will be generated.
- The RCRA WSP review process needed to be formalized and documented.
- The RCRA WSP review process could be bolstered with qualification standards for the reviewers.
- TBD (“to be determined”) profiles were discontinued.
- WMC and waste generator training should be enhanced in presentation of roles and responsibilities and the importance of accurate, sufficient and up-to-date WSPs. These changes are in progress, as will be discussed separately in the Ordered Action 1 submittal.
- Other opportunities for improvement were identified and implemented during the review. They included instituting methods to make navigation from the profiles back to the source AK documents more straightforward and direct; performing independent verification of P/S summary data; and setting the minimum concentration values of toxicity characteristic constituents to zero rather than to minimum toxicity characteristic leaching procedure (TCLP) values in order to better represent the actual concentrations in the waste.

Mixed TRU WSP reviews are complete and have been recorded in the Facility Operating Record. Containers assigned to voided profiles are in the process of being reassigned to the newly updated active profiles.

### 3.0 Response to Ordered Action 6: Operating Record Documentation - Most Recent Annual Reevaluation of All Hazardous Waste Streams

This section of Enclosure 1 is the response to Ordered Action 6 in Attachment A to SFO HWB 14-20, which states that

*“No later than 60 days after this Order becomes final, Respondents shall submit to NMED any documentation Respondents have entered in the Facility Operating Record for the most recent, annual reevaluation of all hazardous waste streams at LANL.”*

Appendix 1, Table 3 contains the requested WCATS printouts, which are provided as evidence of completion of Ordered Action 6. Read-only access to WCATS will be provided upon request.

Ordered Action No.	Response Actions (Complete)	Documentation to Provide as Evidence of Completion	Location in Document
6	Copy of Operating Record documentation (selected WCATS printouts) for all active RCRA waste stream profiles [for the most recent, annual reevaluation of all hazardous waste streams at LANL].	<p>Copy of Operating Record documentation (select WCATS printouts) for all active RCRA waste stream profiles with</p> <ul style="list-style-type: none"> <li>• WSP number</li> <li>• Brief description of the waste stream</li> <li>• Date the WSP was activated</li> <li>• Date of the last annual review</li> </ul> <p>The following WCATS fields were discussed among the technical team and the list updated to provide data:<sup>9,10</sup></p> <ul style="list-style-type: none"> <li>• WS Ancillary,</li> <li>• C_MASTER_TRU.MATRIX_CODE,</li> <li>• WS_COMPOSITION,</li> <li>• access to WS_DOCUMENTATION via the WCATS Application,</li> <li>• access to WS_EDITLOG via the WCATS Application,</li> <li>• relevant summary of WS_EPACODE,</li> <li>• Summary of C_PARAMETER at WSP level,</li> <li>• WS_WORKPATH –active options,</li> <li>• relevant summary of C_SHIPDESC.HM_ID-&gt;DOT_HAZMAT.DOT_ID_NO,</li> </ul> <p>relevant summary of WS_CHAR_METHOD</p>	Appendix 1, Table 3
6		READ-ONLY access to WCATS provided to NMED staff through a LANL WCATS navigator.	Access will be provided upon NMED request

<sup>9</sup> Definitions of the data fields are included in Table 3.

<sup>10</sup> The table below provides a crosswalk of data fields requested by NMED to data fields presented in Appendix 1, Table 3.

This response provides the Respondents' documentation of the annual reviews and reevaluation of LANL hazardous waste streams performed between January 22, 2015 and January 22, 2016. The WSP annual reevaluation process is required by the LANL Hazardous Waste Permit, Section 2.4.7 (1), *Waste Characterization Review*, which states that all hazardous waste streams shall be annually reevaluated to verify the accuracy of characterization results. The reevaluation is to be performed within one year from the date of the initial characterization of the hazardous waste stream or one year from the last annual reevaluation.

LANL's annual waste stream reevaluation process, including methodology, was described in the *Response to Ordered Action No. 5, Attachment A to the Settlement Agreement and Stipulated Final Order HWB-14-20*, submitted to the NMED on February 3, 2016. This document can be accessed at <http://permalink.lanl.gov/object/tr?what=info:lanl-repo/epr/ESHID-601172-01>.

The annual reevaluations for all active WSPs created, re-issued, or due for a reevaluation are documented in Appendix 1, Table 3<sup>11</sup>. Definitions of the data fields are provided in the table.

The table below provides a crosswalk of data fields requested by NMED in SFO Attachment A to the data fields presented in Appendix 1, Table 3.

SFO Appendix A Terminology	WCATS Report Field/Other Reference
WSP number	WS_ID
	LEGACY_WPF_NO
Brief description of the waste stream	WASTE_STREAM_NAME
Date the WSP was activated	ACTIVE_DATE
Date of the last annual review	LAST_ANNUAL_REVIEW
WS_ANCILLARY	ANCILLARY_WTYPES
C_MASTER_TRU.MATRIX_CODE	MATRIX_CODES
WS_COMPOSITION	COMPOSITION_DESC
access to WS_DOCUMENTATION via the WCATS Application	Access will be provided upon NMED request
access to WS_EDITLOG via the WCATS Application	Access will be provided upon NMED request
relevant summary of WS_EPACODE	EPACODES
Summary of C_PARAMETER at WSP level	CON_PARAMS
WS_WORKPATH –active options	WORKPATHS
relevant summary of C_SHIPDESC.HM_ID->DOT_HAZMAT.DOT_ID_NO	DOT_ID_NOS
relevant summary of WS_CHAR_METHOD	CHAR_METHODS

<sup>11</sup> WSPs 24024 and 24245 in Table 3 had their last annual reviews dated in October 2014. The two WSPs were subjected to the WSP Validation Process documented in Section 1. No containers were being managed under either waste stream. Both WSPs were reviewed, amended as a result of the review, re-reviewed and re-approved as active. The record does not show an annual review for 2015 because the WSPs were re-issued as a result of the WSP Validation Process.

**Appendix 1**  
**List of Tables on Electronic Disk**

Table 1	List of Active Mixed and Hazardous Waste Stream Profiles Reviewed
Table 2	List of Active Mixed TRU Waste Stream Profiles Reviewed
Table 3	Most Recent Annual Reevaluation for All Active RCRA Waste Profiles

*NOTE: Definitions of the Table Column Headings/Data Fields are provided in each table.*

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**Appendix 1, Table 1**  
**List of Active Mixed and Hazardous Waste Stream Profiles Reviewed**

WS_ID	WASTE_STREAM_NAME	WTYPE_ABBR	ACTIVE_DATE	EXPIRE_DATE	STATUS
306	ACID DISTILLATES FROM EVAPORATOR GENERATED UNDER PROCEDURE: NMT2-HCP-002, R1. THIS WASTE PROFILE FORM (WPF) REPLACES ...	MTRU-LRWTF	18-Dec-02	07-Apr-15	4
356	CAUSTIC FILTRATES FROM HYDROXIDE PRECIPITATION GENERATED UNDER NMT2-HCP-001, AQUEOUS CHLORIDE OPERATIONS, GENERATED H...	MTRU-LRWTF	22-Oct-07	08-Oct-15	4
418	GENERATOR REFERENCE 10-2-03-02. BASED ON TWCP-AK-2.1-019,R.0/IC1, WASTE STREAMS INCLUDE LA-TA-55-19, AND LA-TA-55-30...	MTRU	07-Nov-07	17-Aug-16	4
458	GENERATOR REFERENCE 11-20-06-01. INSPECTING, PACKAGING, REJECTING AND REMEDIATING TRANSURANIC WASTE FOR WIPP AND FOR...	MTRU	19-Dec-06	04-Nov-16	4
460	GENERATOR REFERENCE 09-22-06-01. INSPECTING, PACKAGING, REJECTING AND REMEDIATING TRANSURANIC WASTE FOR WIPP AND FOR...	MTRU	02-Oct-07	17-Aug-16	4
1736	WASTE CATEGORY = UNUSED TRACE METALS ANALYTICAL STANDARDS CONTAINING ARSENIC, BARIUM, CADMIUM, CHROMIUM, LEAD, MERCUR...	HAZ	25-Oct-95	17-Aug-16	4
1771	THIS WASTE IS DEPLETED SPENT FIXER KODAK RAPID FIXER IT HAS SOME DEGREE OF SILVER HALIDES IN IT. MSDS DOES NOT LIST S...	HAZ	03-Aug-95	13-Oct-15	4
2221	SILVER EPOXY AND SILVER PAINT USED TO SECURE SAMPLES DURING PROCESSING AND TESTING. WASTE INCLUDES MIXING CONTAINERS,...	HAZ	03-Jul-95	25-Jul-16	4
2704	FIBER FILTER FROM A SILVER ELECTROPLATING BATH.	HAZ	04-Aug-95	04-Sep-15	4
2705	ELECTROLYTE SOLUTION CONTAINING SULFURIC, CHROMIC, AND PHOSPHORIC ACIDS FOR ELECTROPOLISHING BERYLLIUM.	HAZ	16-Aug-95	04-Sep-15	4
2748	FIBER FILTER FROM A POTASSIUM GOLD CYANIDE ELECTROPLATING BATH.	HAZ	04-Aug-95	04-Sep-15	4
3048	LEAD STRIPPER SOLUTION CONTAINING ACETIC ACID AND HYDROGEN PEROXIDE WITH A LEAD PRECIPITATE	HAZ	07-Aug-95	04-Sep-15	4
3727	60% METHANOL-REAGENT GRADE-40% 6.25N NAOH SOLUTION. SOLUTION IS USED AS AN ETCHANT ON NEUTRON DETECTORS	HAZ	14-Mar-95	09-Mar-16	4
3843	TOLUENE USED FOR DEGREASING AND CLEANING METAL POWDER RESIDUES FROM SAMPLES AND LABWARE FROM MECHANICAL ALLOYING OPER...	HAZ	08-Apr-96	10-May-16	4
3884	SOLVENTS USED FOR DEGREASING AND CLEANING METAL POWDER RESIDUES FROM SAMPLES AND LABWARE FROM MECHANICAL ALLOYING OPE...	HAZ	08-Apr-96	10-May-16	4
3980	PHENOL / CHLOROFORM / ISOAMYL ALCOHOL SOLID WASTE FROM DNA ISOLATION.	HAZ	22-Apr-96	18-Mar-16	4
3986	ISOPROPANOL WASTE FROM THE PRECIPITATION OF DNA.	HAZ	22-Apr-96	18-Mar-16	4
4197	ETHANOL WASTE FROM DNA PRECIPITATION	HAZ	22-Apr-96	18-Mar-16	4
4462	WASTE GENERATED FROM TRITIUM OPERATIONS. WASTE IS PRINTED CIRCUIT BOARDS (A DISPOSAL PATH FORWARD HAS BEEN DETERMINED...	MLLW	07-Jun-96	15-Apr-16	4
5497	Cleaning Acrylic tubes with Acetone (CH3COCH3)	HAZ	16-May-05	16-Feb-16	4
5601	WASTE LAB TRASH CONTAMINATED WITH OXIDES, OIL, AND SOLVENTS FROM HIGH TEMPERATURE SUPERCONDUCTOR RESEARCH.	HAZ	23-Jan-97	16-Nov-15	4
5675	HIGH EXPLOSIVE POWDER AND CONSOLIDATED PIECES (RDX HMX, TATB, DAAF, PETN).	HAZ-TA16	13-Feb-04	21-Feb-16	4
6281	ORGANIC RINSE SOLUTION WITH PERCHLORIC ACID FROM RINSING ELECTROPOLISHED SAMPLES OF HAFNIUM AND ZIRCONIUM IN ELECTRON...	HAZ	20-Jan-04	15-Dec-15	4
6303	WASTE ACETONE USED FOR CLEANING GLASSWARE.	HAZ	10-Jul-97	17-May-15	4
6348	WASTE HYDROGEN PEROXIDE AND AMMONIUM HYDROXIDE SOLUTION USED FOR SILVER REMOVAL FROM HIGH TEMPERATURE SUPERCONDUCTOR ...	HAZ	14-Aug-97	14-Aug-15	4
7487	QUANTIFYING HOW MUCH OIL RESIDUES ARE LEFT ON METAL COUPONS AFTER CLEANING. WASTE IS GENERATED FROM TWO SOURCES: 1. ...	HAZ	24-Jan-11	24-Jan-14	4
7492	SOLVENT BASED SYNTHETIC AND ANALYTICAL TH-232 CHEMISTRY, INCLUDING NANOPARTICLE SYNTHESSES	MLLW	17-May-11	16-May-16	1
7527	ROUTINE CHEMICAL SYNTHESIS	HAZ	28-Mar-11	24-Mar-15	4
7542	ALKALI SOLUTION MADE OF POTASSIUM HYDROXIDE, SODIUM HYDROXIDE, ETHANOL AND WATER USED FOR REMOVING SILICA.	HAZ	02-Oct-12	02-Oct-15	4
7560	ELECTROPOLISH SOLUTION WITH PHOSPHORIC ACID IN WATER AND ORGANIC SOLVENT FOR ELECTROPOLISHING ALUMINUM OR MAGNESIUM A...	HAZ	29-Mar-11	28-Mar-16	1
7577	PAINT EQUIPMENT IS CLEANED AND FLUSHED WITH LACQUER THINNER.	HAZ	17-Nov-10	17-Nov-15	4
7836	SILVER NITRATE / FORMALDEHYDE USED IN A BIOLOGICAL PROCESS.	HAZ	24-Sep-97	14-Sep-15	4
7843	METHANOL / ACETIC ACID / SILVER NITRATE USED IN STAINING GELS.	HAZ	24-Sep-97	14-Sep-15	4
7859	METHANOL / ACETIC ACID / FORMALDEHYDE FOR STAINING GELS.	HAZ	24-Sep-97	16-Feb-16	4
8336	WASTE LAB TRASH WITH METAL POWDERS AND CUTTING FLUID FROM MECHANICAL ALLOYING OPERATIONS.	HAZ	06-Jan-98	10-May-16	4
8501	OXYGEN CELLS.	HAZ	05-Mar-98	28-Jan-16	4
8672	ABSORBENT MATERIALS (RAGS, KIMWIPES, TERITOWELS, Q-TIPS & SPILL SOCKS) CONTAMINATED W/FERRIC CHLORIDE ETCHER, SODIUM ...	HAZ	06-Jan-98	09-Jun-15	4
8844	PROCESS WASTE GENERATED FROM HALOGENATED ORGANICS RESEARCH.	HAZ	03-Jun-04	23-Sep-15	4
9875	WASTE ORGANIC SOLVENTS FROM PARTICLE SIZING OPERATIONS WITH PRECIPITATES OF METALS. METAL OXIDES AND CERAMICS.	HAZ	23-Mar-98	25-May-16	4
10162	ALCOHOLS, DESTAIN SOLUTION, COOMASSIE BLUE USED IN STAINING GELS.	HAZ	24-Sep-97	14-Sep-15	4



**Appendix 1, Table 1**  
**List of Active Mixed and Hazardous Waste Stream Profiles Reviewed**

WS_ID	WASTE_STREAM_NAME	WTYPE_ABBR	ACTIVE_DATE	EXPIRE_DATE	STATUS
10462	WASTE OXIDES WITH CHROMIUM FROM SOLID STATE ELECTROCHEMICAL MATERIAL RESEARCH.	HAZ	17-Aug-98	26-Jun-16	4
10498	BULK SOLVENTS FROM RESEARCH (NONHALOGENATED)	HAZ	01-Dec-97	01-Dec-15	4
10711	LABORATORY TRASH WITH ABSORBED LIQUIDS. TRASH CONSISTS OF PLASTIC, GLASSWARE, KIMWIPES AND BENCH PAPER WITH PHENOL, ...	HAZ	10-Dec-98	15-Jan-15	4
11056	INERT SIMULANT (900-21) CONSISTING OF BARIUM NITRATE, PLACTICIZERS AND BINDERS. INERTS ARE KNOWN AS "MOCK H.E" (FAKE...	HAZ	30-Oct-98	10-Sep-15	4
11191	RAGS ABSORBED WITH KEROSENE AND ETHANOL FROM CLEANING AND DEGREASING THE 80MM GUN.	HAZ	10-Dec-98	07-Dec-15	4
11301	WASTE SOLVENTS USED FOR DISSOLVING ADHESIVES AND CLEANING SAMPLES IN TEM SAMPLE PREPARATION OPERATIONS.	HAZ	30-Oct-98	15-Dec-15	4
11760	SEPARATION OF AMERICIUM BY ER 110/ER121.[A DISPOSAL PATH FORWARD HAS BEEN DETERMINED BY ANNE WHITE ON 5/4/00. RADIOLO...	MLLW-RLWTF	28-Mar-99	15-Jun-15	4
11782	WASTE STREAM FROM ANALYZER USED TO ANALYZE FOR CYANIDE. (TRAACS-FIA, CYANIDE) *NO DETECTABLE ORGANICS. ORGANICS AR...	MLLW-RLWTF	14-Sep-99	15-Sep-16	4
11882	SOLID TRASH FROM LABORATORY RESEARCH EXPERIMENTS, INCLUDING GLASS VIALS, PIPETS, PAPER TOWELS, PLASTIC, LATEX, METAL,...	HAZ	13-Aug-99	16-Apr-15	4
11907	THIS PROCESS INVOLVES THE USE AND DISPOSAL OF NITRIC ACID (HNO3) FOR THE CONDITIONING AND REGENERATION OF RESIN COLUMNS.	HAZ-RLWTF	26-Apr-99	16-Mar-16	4
11915	W/W 30% OF HYDROGEN PEROXIDE.-(30% H2O2) W/W 70% OF SULFURIC ACID USE TO CLEAN GLASS SURFACE.	HAZ	05-May-99	29-Apr-15	4
11998	BROKEN FLUORESCENT TUBES FROM CONTROLLED AREAS (RCAS)[A DISPOSAL PATH FORWARD HAS BEEN DETERMINED AND APPROVED BY CHR...	MLLW	14-Oct-99	29-Oct-15	4
12089	LIQUID WASTE GENERATED FROM CHEMICAL SEPERATIONS OF SOIL AND ROCK SAMPLES FROM ENVIRONMENTAL AND GEOCHEMICAL RESEARCH...	MLLW-RLWTF	03-May-99	12-Mar-16	4
12100	OXYGEN CELLS. WASTE IS ENCAPSULATED IN A PLASTIC CASING AND LIQUIDS CANNOT BE REMOVED FROM THIS CARCASS. (A DISPOSAL ...	MLLW	14-Apr-98	28-Jan-16	4
12343	ORGANIC SOLVENTS USED FOR CLEANING AND DEGREASING METAL AND CERAMIC SPECIMENS FROM CORROSION STUDY EXPERIMENTS.	HAZ	17-Jun-99	15-Jul-15	4
12345	REFERENCE ELECTRODES AND THERMOMETERS THAT CONTAIN MERCURY FROM CORROSION STUDY EXPERIMENTS.	HAZ	16-Jun-99	15-Jul-15	4
12491	WASTE STREAM FROM ANALYTICAL INSTRUMENT USED TO ANALYZE FOR FLUORIDE (F1). *NO DETECTABLE RCRA ORGANICS. RCRA ORGAN...	MLLW-RLWTF	28-Sep-99	15-Sep-16	4
12492	WASTE STREAM FROM ANALYTICAL INSTRUMENT USED TO ANALYZE FOR AMMONIA. (NH3/N) *NO DETECTABLE RCRA ORGANICS. RCRA OR...	MLLW-RLWTF	02-Nov-99	15-Sep-16	4
12586	H.E FILTER SOCKS GENERATED DURING H.E MACHINING OPERATIONS. THE FILTER SOCKS FILTER H.E FROM THE WATER USED IN MACHIN...	HAZ-TA16	10-Mar-04	10-Sep-15	4
12607	WASTE SOLVENTS USED FOR CLEANING SAMPLES FOR THE ION BEAM MATERIALS LABORATORY.	HAZ	27-Aug-99	23-Jul-15	4
13072	WASTE GENERATED FROM THE ANION EXCHANGE ISOLATION OF PLUTONIUM FROM PREPARED TISSUE SOLUTION. FOR PICK-UP [A DISPOSAL...	MLLW-RLWTF	28-Mar-99	15-Jun-15	4
13238	GLASS SLIDES AND LAB TRASH WITH SILVER EPOXY FROM TARGET ASSEMBLY OPERATIONS.	HAZ	19-Sep-00	19-Sep-15	4
13240	AMINO ACIDS USED IN PROTEIN EXPRESSION.	HAZ	09-Sep-99	14-Sep-15	4
13281	PIPETTES (GLASS AND PLASTIC) WILL BE USED TO DISPENSE HEXANE,TOLUENE, THF, PYRIDINE AND CHLOROFORM SOLUTIONS CONTAINI...	HAZ	01-Nov-06	23-Sep-15	4
13435	GENERAL LAB TRASH CONTAMINATED WITH SOLVENTS, STRIP-X(METHYLENE CHLORIDE), NON-PCB VACUUM PUMP OIL, AND GLASS AND MET...	HAZ	31-Jul-00	20-Sep-15	4
13462	ELECTROPOLISH SOLUTION WITH PHOSPHORIC ACID AND WATER FOR ELECTROPOLISHING COPPER IN ELECTRON MICROSCOPY SAMPLE PREPA...	HAZ	26-Oct-00	21-Aug-15	4
13695	SYNTHESIS OF NANOPARTICLES, NANOPARTICLE ARRAYS AND NANOPARTICLE COMPOSITE MATERIALS, NANOPARTICLE SURFACE MODIFICATI...	HAZ	19-Mar-07	05-Mar-15	4
13700	ELECTROPOLISH SOLUTION WITH ORGANICS AND PERCHLORIC ACID FOR ELECTROPOLISHING VARIOUS STEELS IN ELECTRON MICROSCOPY S...	HAZ	26-Oct-00	21-Aug-15	4
13703	BARIUM INERT SIMULANT CONTAMINATED TRASH FROM MACHINING OPERATIONS.	HAZ	24-Jul-03	07-Apr-16	4
13721	ORGANIC SOLVENTS USED FOR CLEANING AND DEGREASING SAMPLES IN MICROSCOPY SAMPLE PREPARATION OPERATIONS.	HAZ	17-Feb-00	13-Jul-15	4
13742	ELECTROPOLISH SOLUTION WITH METHANOL AND NITRIC ACID FOR ELECTROPOLISHING NICKEL AND NICKEL/COPPER ALLOY IN ELECTRON ...	HAZ	30-Oct-00	21-Aug-15	4
13743	ORGANIC RINSE SOLUTION WITH PERCHLORIC ACID FROM RINSING ELECTROPOLISHED SAMPLES OF VARIOUS STEELS IN ELECTRON MICROSC...	HAZ	30-Oct-00	21-Aug-15	4
14186	RADIOCHEMISTRY PROCEDURES THAT INVOLVE QUANTIFYING BA, CD, AND AG FROM AQUEOUS SOLUTIONS. RESULTING COMPOUNDS ARE BAC...	HAZ	13-Feb-01	16-Feb-16	4
14474	LAB TRASH WITH SILVER PAINT AND EPOXY FROM PREPARING SAMPLES FOR THE ION BEAM MATERIALS LABORATORY.	HAZ	13-Mar-01	15-Jul-15	4
14536	WASTE FROM THE DISSOLUTION, COPRECIPITATION ANION EXCHANGE & EXTRACTION OF URANIUM FOR ENVIRONMENTAL MATRICS FOR WEEK...	MLLW-RLWTF	28-Mar-99	15-Jun-15	4
14564	SPENT SOLVENTS USED FOR CLEANING SAMPLES FOR CRYSTAL GROWTH OPERATIONS.	HAZ	19-Sep-00	19-Sep-15	4
14633	THIS IS A CMR FACILITY WIDE PROFILE FOR LOW-LEVEL RADIOACTIVE INCANDESCENT LAMPS FROM AN RCA. RADIOLOGICAL ANALYSIS W...	MLLW	17-Jul-01	27-Jul-15	4
14974	METHANOL 40-50%, 5-10% ACETIC ACID, 40-59% WATER AND 0.01-1% COMMASSIE BLUE STAIN, USED TO STAIN AND DESTAIN PROTEIN ...	HAZ	08-Feb-01	15-Jan-15	4
15122	DILUTE NITRIC ACID WITH DISSOLVED AND SEDIMENT OF YTTRIUM-BARIUM-COPPER OXIDE FROM ETCHING SUPERCONDUCTING THIN FILMS.	HAZ	25-Apr-02	15-Mar-16	4

**Appendix 1, Table 1**  
**List of Active Mixed and Hazardous Waste Stream Profiles Reviewed**

WS_ID	WASTE_STREAM_NAME	WTYPE_ABBR	ACTIVE_DATE	EXPIRE_DATE	STATUS
15189	SOLID TRASH FROM LABORATORY RESEARCH EXPERIMENTS, INCLUDING GLASS VIAL, PIPETTES, PAPER TOWELS, PLASTIC, LATEX/NITRIL...	HAZ	08-Sep-05	30-Jul-15	4
15213	CLEANING SOLUTION FROM GLASSWARE CLEANING. THE PROCESS INVOLVES A BATH IN HCL AND WATER. THIS WPF REPLACES 30641.	HAZ-RLWTF	18-Apr-02	12-Mar-16	4
15361	AQUEOUS ACID WASTE GENERATED FROM ANALYTICAL INSTRUMENTS. CONSISTS OF INSTRUMENT RINSE AND EXCESS SAMPLE FROM SAMPLE ...	MLLW-RLWTF	23-Aug-01	23-Jul-16	4
15526	FLUORESCENT BULBS REMOVED FROM CONTROLLED AREA. A DISPOSAL PATH FORWARD HAS BEEN DETERMINED AND APPROVED BY SME MARK ...	MLLW	05-Dec-01	30-Nov-15	4
15645	SOLID WASTE GENERATED BY SYNTHESIS AND CLEANING PROCESS INVOLVING ORGANIC & ORGANOMETALLIC PROCEDURE. MAJOR CONSTIT...	HAZ	11-Feb-02	11-Feb-15	4
15697	GLASSWARE AND EQUIPMENT CLEANING SOLUTIONS FROM CHEMICAL SEPARATIONS. INVOLVES A BATH IN HCL AND HNO3.	HAZ-RLWTF	13-Mar-02	15-Jul-16	4
15701	WASTE RESULTS FROM SYNTHESIS OF ORGANOMETALLIC COMPOUNDS. PROCESSES INVOLVE INCLUDE DISTILLATION, FILTRATION, REFLUX ...	HAZ	23-Apr-02	17-Mar-16	4
15720	CMR FACILITY WIDE ELEMENTAL MERCURY.	MLLW	11-Mar-02	20-Apr-15	4
15786	WASTE STREAM FROM MERCURY ANALYSIS USING FIMS.	MLLW-RLWTF	08-May-02	17-Feb-16	4
15837	AQUEOUS WASTE WITH ACIDS AND SODIUM HYDROXIDE USED FOR CLEANING AND ETCHING METALS INCLUDING D38 AND THORIUM-232 FROM...	MLLW-RLWTF	24-Jul-02	24-Jul-16	4
15941	WASTE SOLVENTS INCLUDING ETHANOL, METHANOL, ACETONE, TOLUENE, STRIP-X, ISOPROPANOL, ETC. ALSO SODIUM SILICATE SOLUTI...	HAZ	27-Aug-04	27-Aug-15	4
15948	WASTE LAB TRASH AND EQUIPMENT CONTAMINATED WITH MERCURY FROM LASER PLASMA LIGHT SOURCE EXPERIMENTS.	HAZ	31-Oct-01	03-Aug-15	4
15950	WASTE ORGANIC SOLVENTS USED FOR CLEANING, DEGREASING, AND REMOVING SILVER PAINT FROM METALLOGRAPHIC SAMPLES.	HAZ	27-Nov-01	31-Aug-15	4
16067	SOLID WASTE GENERATED DURING SYNTHESIS AND PURIFICATION OF TRANSITION METAL COMPLEXES (INORGANIC/ORGANOMETALLIC COMPO...	HAZ	23-Oct-02	01-Feb-16	4
16097	SPENT CHEMICALS FROM FILTRATION OF SOLVENTS WITH U238 AND TH232 IN A DRYBOX.	MLLW	23-Oct-08	17-Sep-16	4
16164	WASTE ORGANIC SOLVENTS FROM THE GEL PERMEATION CHROMATOGRAPHY UNIT AND RESEARCH AND DEVELOPMENT OPERATIONS FROM POLYM...	HAZ	10-Jan-02	24-Feb-16	4
16277	METAL CONTAINING HALOGENATED ORGANIC WASTE: THE WASTE CONTAINS BOTH HALOGENATED AND NON-HALOGENATED COMPOUNDS AND ME...	HAZ	17-Dec-01	17-Dec-14	4
16284	METHYL ETHYL KETONE, WATER AND ETHYL ACETATE FORM INERT PROCESSING VACUUM RESERVOIR.	HAZ	04-Oct-01	21-Jun-15	4
16285	CLEANING HEAVILY OXIDIZED & DEPLETED URANIUM FOILS WITH CONCENTRATED NITRIC ACID. WASTE IS NITRIC ACID, WATER, PLUS D...	MLLW	10-Oct-01	17-Aug-15	4
16342	COMBUSTION TUBE FOR ELEMENTAL ANALYZER CONVERTS ORGANIC SOLIDS TO GASES FOR ANALYSIS. TUBE CONTAINS CHROMIUM OXIDE, S...	HAZ	29-Sep-03	15-Sep-15	4
16362	CLEANING OF GLASSWARE FOR ASSAY USE. -SOAK GLASSWARE IN SOLUTION & RINSE WITH WATER. SOLUTION OF NOCHROMIX (PROPRIETA...	MLLW-RLWTF	27-Mar-02	15-Jan-16	4
16363	URANIUM IS DETERMINED BY POTENTIOMETRIC TITRATION. THE URANIUM IS REDUCED TO U(IV) BY EXCESS FE (III) IN A STRONG PHOS...	MLLW-RLWTF	27-Mar-02	15-Jan-16	4
16365	PUO2 IS DISSOLVED WITH HYDROCHLORIC ACID PLUS TRACE AMOUNTS OF HNO3 & HF. ZIRCONIUM IS ADDED TO COMPLEX ANY EXCESS F ...	MLLW-RLWTF	26-Mar-02	15-Jan-16	4
16367	NEPTUNIUM IS OXIDIZED TO NP (VI) USING CE (IV). IT IS THEN REDUCED TO NP (V) AND CE (III) AT A PLATINUM WORKING ELEC...	MLLW-RLWTF	26-Mar-02	15-Jan-16	4
16369	IN A 0.5M SULFURIC ACID ELECTROLYTE, PU IS REDUCED AT A WORKING ELECTRODE AT 0.310V RELATIVE TO A STANDARD ELECTRODE....	MLLW-RLWTF	26-Mar-02	15-Jan-16	4
16416	THE WASTE CONSISTS OF SOLID MATERIAL (CELITE, MOLECULAR SIEVE, GLASSWOOL, SILICA THAT HAS BEEN UTILIZED IN THE SYNTH...	MLLW	05-Jun-03	24-May-16	4
16524	EXCESS LOW ENERGY ELECTROEXPLOSIVE DEVICES (EEDS) CONTAINING A REACTIVE MIXTURE OF LEAD-BASED PRIMARY EXPLOSIVES AND ...	HAZ	17-Feb-04	17-Feb-16	4
16573	WASTE LAB TRASH CONTAMINATED WITH MERCURY, NON-HAZARDOUS POLYMERS, AND NON-PCB HYDRAULIC OIL FROM POROSIMETER OPERATI...	HAZ	26-Sep-02	26-Sep-15	4
16644	WASTE LAB TRASH USED WITH TOXICITY CHARACTERISTIC SOLVENTS AND DEGREASERS FOR CLEANING PARTS AND SAMPLES FOR SUPERCON...	HAZ	07-Jun-02	20-May-16	4
16736	WASTE ORGANIC SOLVENTS WITH WATER FROM EMULSION POLYMERIZATION RESEARCH OPERATIONS.	HAZ	09-Jan-02	15-Jun-16	4
16849	CHROMIC ACID, HYDROFLUORIC ACID, HYDROCHLORIC ACID, NITRIC ACID, WATER USED AS A CHEMICAL POLISH.	HAZ-RLWTF	19-Nov-03	31-Aug-15	4
16850	ELECTRONICS WHICH HAVE LEAD SOLDER, SILVER AND CADMIUM, ALSO PIPE THAT CONTAINS LEAD SOLDER, LEAD SHIELDING.	MLLW	19-May-03	20-Apr-15	4
16867	WASTE LAB TRASH AND RAGS SOAKING WITH KEROSENE USED FOR CLEANING DURING DEPLETED URANIUM ROLLING MILL OPERATIONS.	MLLW	12-Dec-03	17-Nov-15	4
16948	SODIUM HYDROXIDE IN WATER USED FOR TREATING MEMBRANES IN FUEL CELL RESEARCH OPERATIONS.	HAZ	24-Dec-02	10-Nov-15	4
16999	HYDROCHLORIC ACID, NITRIC ACID, HYDROFLUORIC ACID, WATER USED AS A REAGENT.	HAZ-RLWTF	19-Nov-03	31-Aug-15	4
17000	CHROMIC ACID, HYDROFLUORIC ACID, HYDROCHLORIC ACID, LACTIC ACID, NITRIC ACID, WATER USED AS A CHEMICAL POLISH/RINSE.	HAZ	23-Dec-03	15-Oct-15	4
17101	SPENT CHEMICAL SOLUTIONS WITH NITRIC ACID GENERATED DURING STANDARDS PREPARATION.	HAZ	21-Aug-02	21-Aug-15	4
17198	ACID WASTE CONTAINING H2SO4, H2O, AND SOME HYDROGEN PEROXIDE.	HAZ	10-Apr-03	22-Apr-16	4

**Appendix 1, Table 1**  
**List of Active Mixed and Hazardous Waste Stream Profiles Reviewed**

WS_ID	WASTE_STREAM_NAME	WTYPE_ABBR	ACTIVE_DATE	EXPIRE_DATE	STATUS
17243	EXCESS EXPLOSIVES, INCLUDING ANY EXPLOSIVE LISTED IN APPENDIX A OF DOCUMENT NUMBER DX-05-ES-002, INCLUDING BARIUM CON...	HAZ	05-Feb-03	17-Feb-16	4
17265	<100PPM HIGH EXPLOSIVES IN <10% MEQH AND ACETONITRILE IN WATER, NOT EXPLOSIVE IN THIS FORM.	HAZ	02-Oct-03	30-Jul-15	4
17276	SPENT MULTI ELEMENT STANDARD SOLUTION CONSISTING OF INORGANIC METALS, SULFURIC ACID, HYDROCHLORIC ACID.	MLLW	25-Aug-04	18-Aug-15	4
17312	WASTE GENERATED FROM ANALYSIS OF SAMPLES CONTAINING BARIUM NITRATE. WASTE TO GO TO CRWSS.	HAZ	15-Aug-03	29-Apr-16	4
17315	USED LASER DYE. MIXTURE CONSISTING OF 40% ETHYLENE GLYCOL, 60% METHANOL AND RHODAMINE 640 (OR RHODAMINE 101) LASER DY...	HAZ	04-Dec-03	16-Nov-15	4
17365	NONDESTRUCTIVE MATERIAL TESTING.	HAZ	16-Nov-07	23-Apr-15	4
17372	SPENT TRICHLOROETHYLENE (TCE) FROM DEGREASING BATH. MSDS ATTACHED. RADIOLOGICAL INFORMATION WILL ACCOMPANY THE CWDR...	MLLW	21-Apr-03	11-May-16	4
17425	WASTE IS GENERATED DURING HPLC SEPARATION AND PURIFICATION OF PROTEINS, FATTY ACIDS, AND BIOLOGICAL SIDEROPHORE MATER...	HAZ	01-Apr-04	15-Apr-16	4
17444	EXCESS EXPLOSIVES, INCLUDING ANY EXPLOSIVE LISTED IN APPENDIX A DOCUMENT NUMBER DX-005-ES-002, EXCEPT BARIUM CONTAINI...	HAZ	05-Feb-03	17-Feb-16	4
17501	WASTE HALOGENATED AND NON-HALOGENATED SOLVENTS AND BY-PRODUCTS RESULTING FROM THE SYNTHESIS OF ORGANOMETALLIC AND ORG...	MLLW	14-Aug-03	17-Mar-16	4
17502	THE WASTE CONSISTS OF SOLID MATERIAL (CELITE, MOLECULAR SIEVES, GLASS, WOOL, SILICA, ALUMINA, ETC.) THAT HAS BEEN UTI...	MLLW	16-Jul-03	17-Mar-16	4
17510	WASTE INCLUDES SULFURIC ACID, HYDROGEN PEROXIDE, SODIUM CARBONATE, AND WATER (HYDROGEN PEROXIDE WILL BREAK DOWN IN WA...	HAZ	29-Apr-03	17-Feb-16	4
17567	WASTE RESULTS FROM THE SYNTHESIS OF ORGANOMETALLIC AND CO-ORDINATION COMPOUNDS OF DU-238. THE WASTE WILL CONSIST OF O...	MLLW	16-Jul-03	31-Aug-15	4
17677	SPENT AQUEOUS SOLUTIONS GENERATED DURING ANALYSIS OF SAMPLES USING ICP MASS SPECTROMETER.	MLLW-RLWTF	03-Jun-04	13-May-16	4
17730	ACIDIC SOLUTIONS CONTAINING TRACER LEVELS OF RADIONUCLIDES INCLUDING CO57, CO58, CO60, Y88, ZR88, NB91, NB M91, NB92,...	MLLW-RLWTF	08-Oct-03	26-Aug-16	4
17775	SHARPS INCLUDING USED RAZOR BLADES AND SYRINGE NEEDLES ACCOMPANIED BY PLASTIC HOUSING AND POSSIBLY CONTAMINATED WITH ...	HAZ	14-Apr-05	09-Mar-15	4
17782	This is a process waste created through laboratory analysis. Samples analyzed in this process originate mostly (99%)...	MLLW-RLWTF	23-May-05	10-Aug-16	4
17812	NITRIC ACID PASSIVATION SOLUTION (50% WATER/50% NITRIC ACID)	HAZ	19-Aug-04	20-Sep-16	4
17813	ETHANOL SOLUTION	HAZ	17-Aug-04	20-Sep-16	4
17814	WASTE IS VARIOUS MIXTURES AS ETCHING SOLUTIONS. MAX VOLUME OF EACH MIXTURE IS APPROX. 60 ML. LEFT OVER ETCH AND RIN...	HAZ-RLWTF	18-Oct-04	17-Aug-16	4
17815	WASTE IS VARIOUS MIXTURES AS ETCHING SOLUTIONS. MAX VOLUME OF EACH MIXTURE IS APPROX. 60ML. LEFT OVER ETCH AND RINSE...	HAZ-RLWTF	18-Oct-04	31-Aug-15	4
17816	WASTE IS WATER, ALCOHOL, ETHANOL, METHANOL, PERCHLORIC USED FOR RUNNING ELECTROLITIC REACTIONS.	HAZ	25-Aug-04	10-May-16	4
17843	HEXANE/ETOAC, THIS SOLVENT SYSTEM WAS USED IN CHROMATOGRAPHY FOR THE PURIFICATION OF FINAL PRODUCTS. ETHYL ACETATE WA...	HAZ	16-Oct-03	17-Aug-15	4
17849	MIXTURE OF ETHYL ETHER AND HYDROCHLORIC ACID CONTAINING BARIUM AND CHROMIUM COMPOUNDS. ALSO MAY CONTAIN MIXED FISSION...	MLLW	15-Jan-04	16-Nov-15	4
17858	ORGANIC SOLVENT WASTE GENERATED FROM REACTIONS AND WASHING ORGANIC COMPOUNDS FROM GLASSWARE.	HAZ	20-May-03	29-Apr-16	4
17869	WASTE FROM GC-MS ANALYSIS WITH AUTOMATED DERIVATIZATION ROBOT.	HAZ	01-May-08	14-Apr-16	4
17909	ELECTROPOLISH SOLUTION WITH ORGANICS AND PERCHLORIC ACID FOR ELECTROPOLISHING HAFNIUM AND ZIRCONIUM IN ELECTRON MICRO...	HAZ	16-Jan-04	15-Dec-15	4
17988	THIS PROFILE IS FOR WASTE GENERATED BY PROCEDURE ANC214 IN C-AAC. THIS PROCEDURE IS USED TO ASSAY SI AT PPM QUANTITI...	MLLW-RLWTF	07-Jun-04	22-Mar-16	4
18032	SOLVENT WATER MIXTURE FROM PBX SLURRY PROCESS (OTHER THAN PBX 9501) FILTRATE FROM PROCESS WITH TRACE ENERGETIC MATERI...	HAZ	08-Jun-04	14-Oct-15	4
18107	NITRIC ACID FOR CLEANING OF GLASSWARE AND SINTERED GLASS FRITS.	HAZ	22-Jul-03	16-Apr-16	4
18133	LAB TRASH CONTAMINATED WITH SILVER EPOXY & SILVER PAINT.	HAZ	22-Mar-04	22-Mar-16	4
18300	METHANOL/NITRIC ACID MIXTURE	HAZ	19-Aug-03	31-Aug-15	4
18388	HYDROCHLORIC ACID	HAZ	14-Jul-03	23-Jul-15	4
18424	General lab trash from sample prep & equipment maintnace that is contaminated with solvents, degreasers, epoxies, fo...	HAZ	16-Feb-05	15-Jan-16	4
18577	CONVERSION OF BIO-RAD'S AG-MP1 RESIN TO THE NITRATE FORM USING 4M HNO3. CONDITIONING OF THE RESIN PRIOR TO USE WITH ...	HAZ-RLWTF	08-Dec-04	09-Feb-16	4
18590	LAB TRASH WITH TOXIC SOLVENTS USED FOR SAMPLE PREPARTION FROM THERMODYNAMIC AND TRANSPORT CHARACTERIZATION OF MATERIA...	HAZ	31-Mar-05	31-Mar-16	4
18591	SOLVENTS USED FOR CLEANING AND DEGREASING LABWARE, SAMPLES, AND EQUIPMENT FROM THERMODYNAMIC AND TRANSPORT CHARACTERI...	HAZ	30-Mar-05	15-Jul-15	4
18622	CLEANING MACHINE OIL OFF OF MACHINED PARTS.	HAZ	02-Feb-06	02-Mar-16	4
18647	ACETONE IS USED TO DRY MASS SPECTROMETER SOURCE PARTS AFTER FINAL CLEANING. PARTS ARE REMOVED FROM THE MASS SPECTROM...	MLLW	15-Mar-06	03-Aug-16	4
18730	HE- CONTAMINATED LABORATORY DEBRIS INCLUDING WIPES, RAGS, PLASTICS, SWABS, STICKS, AND OTHER COMBUSTIBLES WITH HE IN ...	HAZ-TA16	27-May-04	19-Dec-15	4
18758	WASTE DILUTE HYDROCHLORIC ACID AND NITRIC ACID WITH OXIDES FROM HIGH TEMPERATURE SUPER CONDUCTOR RESEARCH.	HAZ	29-Sep-04	21-Aug-15	4
18759	PBX 9501, PBX 9502, PETN, HMX, RDX, TATB, EXPLOSIVE D, BLACK POWDER, PBXN-110, LX-17, LX-14, AND OTHER EXPLOSIVE MATE...	HAZ-TA16	01-Oct-04	27-Feb-16	4

**Appendix I, Table 1**  
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WS_ID	WASTE_STREAM_NAME	WTYPE_ABBR	ACTIVE_DATE	EXPIRE_DATE	STATUS
18884	KODAK GBX FIXER	HAZ	16-Jul-04	20-Jul-15	4
18893	ELECTROCHEMISTRY RESEARCH OPERATIONS.	HAZ	11-Jan-06	20-Jan-16	4
18917	CR(VI) IN WATER IS DETERMINED BY ION EXCHANGE CHROMATOGRAPHY WITH A POST COLUMN REACTOR. THE RESULTING SOLUTION IS C...	HAZ	21-Feb-06	15-Jan-16	4
18929	CARBON BLACK WITH WATER AND SULFURIC ACID	HAZ	21-Apr-04	11-Mar-16	4
18970	SULFURIC ACID, 5-10%	HAZ	20-Apr-04	01-Mar-16	4
18977	WASTE SOLVENTS OIL, AND WATER FROM CHEMICAL SYNTHESIS RESEARCH OPERATIONS	HAZ	13-Jul-04	16-Feb-16	4
19011	WASTE SLAG FROM LEAD FOUNDRY FURNACE OPERATIONS. THE WASTE CONTAINS PRIMARILY LEAD METAL AND LEAD METAL ALLOYS BUT A...	HAZ	15-Oct-04	15-Oct-15	4
19042	ETHANOL/PERCHLORIC ACID MIXTURE FOR METAL ETCHING.	HAZ	25-Aug-03	10-May-16	4
19114	PRECIPITATION OF PETN EXPLOSIVE AT TA-09-46. IVD/HCP-DX2-09-046-101-0001R0 BATCH RECORDS.	HAZ	01-Feb-06	23-Mar-15	4
19126	SAMPLES FOR TRANSMISSION ELECTRON MICROSCOPY ARE PREPARED BY PLACING DROP (VOLUME ABOUT 2 MICROLITERS) OF SOLUTION CON...	HAZ	30-Jan-06	28-Jun-15	4
19249	ORGANIC WASTE STREAM ORIGINATING FROM NON-AQUEOUS SYNTHESIS OF DEPLETED URANIUM AND THORIUM COMPOUNDS.	MLLW	23-Dec-04	15-Dec-15	4
19257	CLEAN UP MATERIAL RESULTING FROM BROKEN MERCURY THERMOMETER.	HAZ	12-Apr-06	16-Mar-16	4
19263	ELECTROCHEMISTRY RESEARCH OPERATIONS.	HAZ	05-Sep-07	04-Sep-15	4
19274	ABOUT 60% ACETONITRILE, 0.1% TRIFLUOROACETIC ACID, 10% METHANOL, 10% AMMONIUM FORMATE, 10% AMMONIUM ACETATE, 10% AMMO...	HAZ	07-Jan-05	04-Jan-16	4
19355	PHENOL/CHLOROFORM/ISOAMYL ALCOHOL WASTE FROM DNA PURIFICATION.	HAZ	20-Jul-06	15-Apr-16	4
19359	GLASSWARE CLEANING.	HAZ	16-Jul-07	16-Jul-15	4
19375	LX-07 EXPLOSIVE MACHINING OPERATIONS.	HAZ-TA16	17-Dec-07	15-Oct-15	4
19390	EMULSION BREAKING FOR GS20 DNA SEQUENCING USING A COMMERCIAL REAGENT KIT.	HAZ	21-Nov-06	05-Oct-15	4
19419	SYNTHETIC CHEMISTRY AND SAMPLE PREPARATION.	HAZ	18-Jan-07	01-Feb-16	4
19430	RESEARCH, DEVELOPMENT, AND TESTING OF HIGH EXPLOSIVES AND EXPLOSIVE ASSEMBLIES.	HAZ-TA16	22-Jun-07	07-Apr-16	4
19431	RESEARCH, DEVELOPMENT, AND TESTING OF HIGH EXPLOSIVES AND EXPLOSIVE ASSEMBLIES.	HAZ-TA16	18-Jun-07	07-Apr-16	4
19458	POTASSIUM PYROPHOSPHATE, TIN CHLORIDE, AND INDIUM NITRATE WERE MIXED IN AN AQUEOUS ENVIRONMENT. THE PRECIPITATED TIN...	HAZ	02-Nov-06	26-Feb-16	4
19465	RESEARCH, DEVELOPMENT, AND TESTING OF HIGH EXPLOSIVES AND EXPLOSIVE ASSEMBLIES.	HAZ-TA16	27-Jun-07	07-Apr-16	4
19466	RESEARCH, DEVELOPMENT, AND TESTING OF HIGH EXPLOSIVES AND EXPLOSIVE ASSEMBLIES.	HAZ-TA16	18-Jun-07	07-Apr-16	4
19494	GENERAL LAB TRASH GENERATED FROM R&D.	HAZ	21-Jun-06	17-May-15	4
19550	BARIUM TITANATE IS FUNCTIONALIZED WITH PAYROLE IN A SULFURIC ACID SOLUTION.	HAZ	09-Oct-07	13-Nov-15	4
19568	MANUFACTURER STABILIZED TETRAHYDROFURAN USED FOR MOBILE PHASE, POLYSTYRENE STANDARDS, AND SAMPLE DILUTIONS. USED FOR...	HAZ	07-Feb-07	16-Oct-15	4
19577	PROCESS USED TO PRESERVE AND ANALYZE AQUEOUS FIELD SAMPLES THAT MAY CONTAIN SULFIDE.	HAZ	06-Mar-07	15-Jan-16	4
19606	THE WASTE IS GENERATED FROM GENERAL HOUSEKEEPING OF CLEANING THE GLASSWARE USED IN THE PROCESS OF SYNTHESIZING THIOAN...	HAZ	22-Oct-04	23-Sep-15	4
19624	RESEARCH DEVELOPMENT AND TESTING INVOLVING SOLUTIONS OF CONCENTRATED HYDROGEN PEROXIDE.	HAZ	30-Nov-07	30-Nov-15	4
19630	ACETONE USED TO CLEAN HIGH PRESSURE LIQUID CHROMATOGRAPHY (HPLC) COLUMNS AND GLASSWARE WHICH ARE USED IN THE ANALYSIS...	HAZ	08-Feb-07	16-Oct-15	4
19636	THE PROCESS IS INORGANIC SAMPLE DISSOLUTION IN CLOSED ACID DIGESTION VESSELS (PARR BOMBS). SAMPLES ARE FROM TA-55 PR...	MLLW-RLWTF	27-Feb-07	16-Dec-15	4
19644	ETHANOL TO STERILIZE INSTRUMENT.	HAZ	11-Sep-06	05-Oct-15	4
19688	ETHANOL PRECIPITATION OF NUCLEIC ACIDS.	HAZ	03-Jan-07	16-Dec-15	4
19706	SOLUTION OF NAOH USED TO ETCH CR39 PLASTIC.	HAZ	07-Dec-06	13-Oct-15	4
19713	SILICON DIOXIDE LAYERS ON SILICON WAFERS WILL BEETCHED WITH BOE (BUFFERED OXIDE ETCH) THAT CONSIST OF AMMONIUM FLUORI...	HAZ	24-Oct-06	24-Oct-15	4
19714	SPIN COATING SOLUTIONS OF NANOCRYSTALS IN HEXANE ONTO SUBSTRATES. PATTERNING OF METAL FILMS BY DESOLVING RESIST IN S...	HAZ	31-Oct-06	23-Sep-15	4
19806	WASTE HEAT TRANSFER FLUID WITH METHANOL FROM CLEANING LAB EQUIPMENT.	HAZ	30-Aug-04	14-Oct-15	4
19810	KARLFISHER TITRATION (IN KETONES)	HAZ	26-Apr-07	29-Mar-16	4
19828	EXPLOSIVE CHARGE HANDLING AND ASSEMBLY IN HE PREP ROOMS	HAZ-DX	16-Aug-06	21-Oct-15	4
19853	WE PERFORM CHEMICAL DEPOSITION OF METAL PARTICLES AND CLUSTERS BY IMMERSING DOPED POLYANILINE FILMS INTO SOLUTION OF ...	HAZ	26-Jan-07	29-Apr-15	4
19870	HPLC PURIFICATION IN SYNTHETIC/BIOCHEMISTRY RESEARCH OPERATIONS.	HAZ	20-Sep-06	20-Sep-15	4
19874	CLEANING VARIOUS VESSEL PARTS AND INSTRUMENTS.	HAZ	14-Sep-06	17-Sep-15	4
19877	THIS IS A PROCESS WASTE CREATED THROUGH LABORATORY ANALYSIS. SAMPLES ANALYZED IN THIS PROCESS ORIGINATE MOSTLY (99%)...	MLLW-RLWTF	23-May-05	17-Feb-16	4
19900	SAMPLE PREPARATION FOR THERMODYNAMIC TRANSPORT CHARACTERIZATION OF MATERIALS AT LOW TEMPERATURES.	HAZ	15-Jul-09	30-Jul-15	4
19961	RESEARCH, DEVELOPMENT, AND TESTING OF HIGH EXPLOSIVES AND EXPLOSIVE ASSEMBLIES AT TA-40	HAZ-DX	24-Oct-06	13-Nov-15	4
19995	PHENOL, CHLOROFORM AND ISOAMYL WASTE FROM DNA PURIFICATION PROCESSES.	HAZ	05-Jan-07	23-Nov-15	4
20000	CRYSTAL GROWTH/SAMPLE PREPARATION RESEARCH OPERATIONS.	HAZ	12-Jan-07	15-Dec-15	4
20016	CHLOROFORM AND POLYMERS ARE STRAINED THROUGH FILTER PAPER.	HAZ	21-May-08	29-Apr-15	4
20019	EXPLOSIVE CHARGE HANDLING AND ASSEMBLY IN HE PREP ROOMS.	HAZ-DX	14-Aug-06	20-Aug-15	4
20087	STAFF SHOP OPERATIONS.	HAZ	29-Jan-07	29-Jan-16	4

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WS_ID	WASTE_STREAM_NAME	WTYPE_ABBR	ACTIVE_DATE	EXPIRE_DATE	STATUS
20100	EXPLOSIVE CHARGE HANDLING AND ASSEMBLY IN HE PREP ROOMS.	HAZ	22-Aug-07	17-Jun-15	4
20148	ANALYTICAL STANDARDS DISPOSAL.	MLLW	11-Sep-07	25-Aug-16	4
20174	HIGH TEMPERATURE SUPERCONDUCTOR RESEARCH OPERATIONS.	HAZ	12-Jul-06	21-Aug-15	4
20184	WASTE RESULTING FROM ANION EXCHANGE REACTIONS UTILIZING SILVER SALTS. THIS WASTE WILL CONTAIN WATER, INSOLUBLE SILVE...	HAZ	31-Aug-05	17-Jun-15	4
20207	Waste caustic solution generated during the decontamination of containers under NMT15-WJ-127," ARIES Electrolytic Dec...	MLLW-RLWTF	25-Feb-10	25-Feb-16	4
20331	CLEAN OUT OF CATCH TANK ON TWO-STAGE GUN.	HAZ	08-Sep-08	17-Aug-15	4
20337	SYNTHESIS OF NANOPARTICLES, NANOPARTICLE ARRAYS AND NANOPARTICLE COMPOSITE MATERIALS, NANOPARTICLE SURFACE MODIFICATI...	HAZ	20-Feb-07	24-Feb-16	4
20339	HIGH TEMPERATURE SUPERCONDUCTOR RESEARCH OPERATIONS.	HAZ	27-Feb-07	15-Jan-16	4
20358	PHENOL:CLOROFORM:ISOMYL ALCOHOL WASTE FROM NUCLEIC ACID EXTRACTION FROM SOIL.	HAZ	14-Dec-09	14-Dec-15	4
20395	HE OPERATIONS.	HAZ	06-Nov-07	22-Sep-15	4
20411	1,2-DICHLOROETHANE SOLVENT USED TO PREPARE SAMPLES FOR HIGH PRESSURE LIQUID CHROMATOGRAPHY (HPLC) ANALYSIS FOR BOTH H...	HAZ	27-Jan-06	16-Oct-15	4
20412	TATB SATURATED ETHYL PROPIONATE USED IN A GRAVIMETRIC ANALYSIS OF PBX 9902 (95% TATB & 5% KEL-F 800). IF ANY ADDITIO...	HAZ	09-Feb-06	15-Dec-15	4
20441	PREPARATION OF NANO-STRUCTURED FILMS.	HAZ	07-Jun-06	22-Apr-16	4
20442	SYNTHETIC CHEMISTRY AND SAMPLE PREPARATION.	HAZ	30-May-06	22-Apr-16	4
20443	SYNTHETIC CHEMISTRY AND SAMPLE PREPARATION.	HAZ	22-May-06	22-Apr-16	4
20469	ACETONITRILE/WATER USED IN HPLC, WITH TRIFLUOROACETIC ACID METHANOL AND TETRAHYDROFURAN AS MINOR CONSTITUENTS.	HAZ	17-Feb-06	15-Dec-15	4
20471	ETHANOL IS USED TO CLEAN MASS SPECTROMETER PARTS. PARTS ARE REMOVED FROM THE MASS SPECTROMETER AFTER SAMPLES ARE ANA...	MLLW	15-Mar-06	20-Jan-16	4
20483	SYNTHESIS OF NANOPARTICLES, NANOPARTICLE ARRAYS AND NANOPARTICLE COMPOSITE MATERIALS, NANOPARTICLE SURFACE MODIFICATI...	HAZ	18-Feb-10	18-Feb-16	4
20518	WASTE IS GENERATED FROM INORGANIC SAMPLE PREPARATION AND ANALYSIS OPERATIONS. ACID DIGESTIONS ARE CONDUCTED ON WATER...	MLLW	02-Jul-08	28-Apr-15	4
20526	Lab trash including paper wipes, glass, and crucibles with toxic intermetallic materials and oxides from chemical syn...	MLLW	13-Jul-05	06-May-16	4
20538	SYNTHESIS OF NANOPARTICLES, NANOPARTICLE ARRAYS AND NANOPARTICLE COMPOSITE MATERIALS, NANOPARTICLE SURFACE MODIFICATI...	HAZ	22-Aug-07	22-Aug-16	4
20563	This is a process waste created through laboratory analysis. Samples analyzed in this process originate mostly (99%)...	MLLW-RLWTF	23-May-05	17-Feb-16	4
20582	ISOPROPANOL WASTE FROM DNA PRECIPITATION.	HAZ	27-Jun-06	15-Apr-16	4
20583	ETHANOL WASTE FROM DNA PRECIPITATION.	HAZ	26-Jun-06	15-Apr-16	4
20592	HANDLING AND PAINTING OF CATALYST INK	HAZ	06-Jul-10	06-Jul-16	4
20623	WASTE IS GENERATED DURING RESEARCH AND DEVELOPMENT PROCESS OF USING MOCK TO ASSIST IN MECHANICAL CHARACTERIZATION OF ...	HAZ	13-Dec-05	13-Dec-15	4
20636	ALLOY DEVELOPMENT FOR CRYSTAL GROWTH AND PHYSICAL PROPERTIES RESEARCH OPERATIONS.	HAZ	27-Apr-07	27-Apr-16	4
20647	C AND NMT DIVISION ANALYTICAL CHEMISTRY PROCEDURES ON UNKNOWN DU AND NATURAL U SAMPLES	MLLW-RLWTF	13-Feb-06	16-Nov-16	4
20649	THESE CHEMICALS ARE USED TO CLEAN AND CONCENTRATE DNA IN SMALL VOLUMES AND ARE A PART OF A PURCHASED COMMERCIAL KIT.	HAZ	15-Nov-05	21-Sep-15	4
20663	PRIMARILY HCL AND HN03 WITH LOW LEVELS OF (241)AM, (238,239,240,241,242,244) PU,(233,234,235,236,238)U FROM PREPARATI...	MLLW-RLWTF	27-Apr-06	03-Aug-16	4
20664	LX-14 EXPLOSIVE MACHINING OPERATIONS.	HAZ-TA16	10-Apr-07	10-Sep-15	4
20768	MOBILE PHASE USED IN OUR HIGH PRESSURE LIQUID CHROMATOGRAPY FOR THE ANALYSIS OF HIGH EXPLOSIVE SAMPLES OR INERT SAMPL...	HAZ	07-Oct-05	15-Sep-15	4
20769	MOBILE PHASE USED IN OUR HIGH PRESSURE LIQUID CHROMATOGRAPY FOR THE ANALYSIS OF HIGH EXPLOSIVE SAMPLES OR INERT SAMPL...	HAZ	07-Oct-05	16-Oct-15	4
20785	AQUEOUS WASTE WITH ACIDS AND SODIUM HYDROXIDE USED FOR CLEANING AND ETCHING METALS INCLUDING BERYLLIUM, DEPLETED URAN...	MLLW-RLWTF	22-Nov-05	22-Nov-15	4
20857	METHYL ETHYL KETONE IS APPLIED TO A TISSUE OR Q-TIP AND USED TO CLEAN OPTICAL COMPONENTS. THE SOLVENT EVAPORATES DUR...	HAZ	18-Nov-08	16-Nov-15	4
20887	WASTE GENERATED THROUGHOUT LANL ROUTINELY AS UNUSED/UNSPENT PRODUCT.	TBD-NONR	14-Apr-08	14-Apr-16	4
20888	WASTE GENERATED THROUGHOUT LANL NON-ROUTINELY AS UNUSED/UNSPENT PRODUCT.	TBD-NONR	14-Apr-08	14-Apr-16	4
20889	NEW AND UNUSED ELEMENTAL MERCURY IN ORIGINAL CONTAINERS GENERATED THROUGHOUT LANL. NON-RADIOACTIVE AND DOES NOT MEET...	HAZ	15-Apr-08	15-Apr-16	4
20890	SMALL CYLINDERS OR LECTURE BOTTLES (SIZES UP TO 4 INCHES X 24 INCHES) GENERATED THROUGHOUT LANL.	TBD-NONR	14-Apr-08	14-Apr-16	4
20891	MEDIUM TO LARGE CYLINDERS (SIZES OVER 4 INCHES X 24 INCHES) GENERATED THROUGHOUT LANL.	TBD-NONR	14-Apr-08	14-Apr-16	4
20914	EXPLOSIVES HANDLING OPERATIONS.	HAZ-DX	05-Dec-08	20-Jan-16	4
20941	POLISHING SOLDER METALS WITH AN ABRASIVE GRIT MATERIAL WITH WATER. ALL WASTE IS DISCHARGED DIRECTLY INTO AN APPROVED...	HAZ	12-Jan-10	12-Jan-16	4
20944	RESEARCH AND DEVELOPMENT PROCESS SUPPORTING THE WEAPONS PROGRAM.	HAZ	13-Aug-08	08-Jul-15	4
20953	MACHINING AND MECHANICAL CHARACTERIZATION OF MOCK HIGH EXPLOSIVE (HE) MATERIAL.	HAZ	17-Dec-08	22-Jan-16	4
20965	NONDESTRUCTIVE MATERIAL TESTING.	HAZ	12-Dec-07	23-Apr-15	4
20968	MATERIALS PROCESSING AND PRODUCTION OF EXPLOSIVE MATERIAL.	HAZ-DX	16-Apr-08	09-Jun-16	4



**Appendix 1, Table 1**  
**List of Active Mixed and Hazardous Waste Stream Profiles Reviewed**

WS_ID	WASTE_STREAM_NAME	WTYPE_ABBR	ACTIVE_DATE	EXPIRE_DATE	STATUS
20969	MATERIALS PROCESSING AND PRODUCTION	HAZ	07-May-08	16-Jun-15	4
20978	MONOMERS WERE SYNTHESIZED IN CARBON TETRACHLORIDE WITH N-BROMO SUCINIMIDE AND 2,2'-AZOBIS(2-METHYLPROPIONITRILE) AND...	HAZ	05-Aug-08	05-Aug-15	4
20992	CHLORINATED SPENT SOLVENT FROM HIGH PRESSURE LIQUID CHROMATOGRAPHY (HPLC) OR GRAVIMETRIC ANALYSIS.	HAZ	18-Jun-08	29-Apr-16	4
21020	MONOMERS WERE SULFONATED BY USING FUMING SULFONIC ACID, THEN SEPARATED BY SODIUM CARBONATE, WATER, AND DIMETHYLFORMAM...	HAZ	03-Jul-08	14-Oct-15	4
21039	PHENOL/CHLOROFORM/ISOAMYL ALCOHOL WASTE FROM DNA PURIFICATION.	HAZ	11-Oct-07	15-Sep-15	4
21116	HIGH TEMPERATURE SUPERCONDUCTOR RESEARCH OPERATIONS.	HAZ	27-Feb-07	15-Jan-16	4
21123	DYE TAGGING AND SCREENING OF GOLD, SILVER, AND GOLD-SILVER ALLOY NANOPARTICLES.	HAZ	07-Mar-07	15-Sep-15	4
21179	SECURITY FORCE FIRING RANGE ACTIVITIES.	HAZ-DX	19-Jun-08	19-Jun-16	4
21216	ETHANOL AND DEIONIZED WATER MIX USED TO CLEAN CIRCUIT BOARDS.	HAZ	09-Jul-08	15-Apr-15	4
21232	EQUIPMENT CLEANING.	HAZ	21-Sep-07	22-Sep-16	4
21234	HE OPERATIONS	HAZ-DX	12-Sep-07	22-Sep-16	4
21246	WASTE GENERATED THROUGHOUT LANL ROUTINELY AS UNUSED/UNSPENT PRODUCT.	TBD-NONR	14-Apr-08	14-Apr-16	4
21247	WASTE GENERATED THROUGHOUT LANL NON-ROUTINELY AS UNUSED/UNSPENT PRODUCT.	TBD-NONR	14-Apr-08	14-Apr-16	4
21281	PBX 9404 MACHINING OPERATIONS	HAZ-TA16	09-Sep-08	10-Sep-16	4
21289	ACETONITRILE AND TRIFLUOROACETIC ACID USED FOR MALDI MS AND PROTEIN PRECIPITATION.	HAZ	28-Mar-08	16-Feb-16	4
21326	AQUEOUS SOLUTIONS OF DILUTE NITRIC ACID AND DILUTE HYDROCHLORIC ACID CONTAINING VARIOUS METALS FOR ANALYSIS BY AA (AT...	HAZ	01-May-08	29-Mar-16	4
21327	AUTOMATED PEPTIDE SYNTHESIS ON CEM LIBERTY MICROWAVE PEPTIDE SYNTHESIZER.	HAZ	06-May-08	22-Mar-16	4
21336	METAL FASTENERS (NUTS, BOLTS, WASHERS) RECEIVED FROM VENDORS ARE CLEANED OF RESIDUAL LUBRICANTS AND OIL IN AN ULTRASO...	HAZ	15-May-08	15-May-16	4
21440	POLYMER SYNTHESIS	HAZ	23-Jul-08	19-Jul-15	4
21441	POLYMER SYNTHESIS	HAZ	22-Jul-08	19-Jul-15	4
21442	SOLUTION USED FOR CLEANING GLASS WARE	HAZ	21-Jul-08	19-Jul-15	4
21480	PROPOGATION OF ULTRASONIC WAVES THROUGH OIL-WATER EMULSION.	HAZ	13-Mar-08	16-Feb-16	4
21491	GENERAL PEPTIDE SYNTHESIS WITH CLEAVAGE AND ETHER PRECIPITATION IN SYNTHETIC/BIOCHEMISTRY RESEARCH OPERATIONS.	HAZ	15-Feb-08	18-Feb-16	4
21495	WASTE/EXCESS POWDER FROM SPUTTER TARGET PREPARATION.	HAZ	21-Nov-08	16-Oct-15	4
21507	PREPARATION OF CHEMICAL VAPOR DEPOSITION SAMPLES.	HAZ	10-Jan-06	24-Nov-15	4
21557	Excess Aqueous samples from a analytical processes, determining the concentration of metals on filter media.	MLLW-RLWTF	14-Jul-05	18-Aug-16	4
21562	Waste consists of magnesium perchlorate + ascarite II + quartz wool used in a process to pull CO2 out of the air.	HAZ	28-Jul-05	22-Mar-16	4
21567	HE MACHINING AND HE STORAGE OPERATIONS	HAZ-TA16	19-Apr-10	19-Apr-16	4
21570	MIXING THE TWO PARTS, RESIN AND HARDENER, OF THE SILVER EPOXY TO FORM A HOMOGENOUS PASTE. USED FOR GLUING DIFFERENT P...	HAZ	01-Apr-10	01-Apr-16	4
21571	SYNTHESIS OF NANOPARTICLES, NANOPARTICLE ARRAYS AND NANOPARTICLE COMPOSITE MATERIALS, NANOPARTICLE SURFACE MODIFICATI...	HAZ	06-May-10	06-May-16	4
21580	FIRING SITE ACTIVITIES	HAZ	24-Sep-09	24-Sep-15	4
21589	CLEANING OF CUVETTES AND GLASSWARE IN SYNTHETIC/BIOCHEMISTRY RESEARCH OPERATIONS (INCLUDING POTENTIAL NANOMATERIALS).	HAZ	22-Apr-10	22-Apr-16	4
21590	GENERAL PEPTIDE CLEAVAGE FROM PEPTIDE SYNTHESIS RESIN IN SYNTHETIC/BIOCHEMISTRY RESEARCH OPERATIONS (INCLUDING NANOMA...	HAZ	28-Apr-10	28-Apr-16	4
21591	WASTE AZ 400K DEVELOPER USED FOR DEVELOPING AZ 5214 PHOTORESIST IN PHOTOLITHOGRAPHY OPERATIONS.	HAZ	15-Apr-10	15-Apr-15	4
21596	MODIFIED MEMBRANES WERE OBTAINED BY IMMERSING IN THE 1,4-DIAZABICYCLO[2.2.2]OCTANE, 1,8-DIAZABICYCLO[5.4.0] UNDEC-7-E...	HAZ	29-Jun-10	29-Jun-16	4
21620	CLEAN UP OF A LEAD STORAGE AREA.	HAZ	12-Aug-09	12-Aug-15	4
21626	SMALL AMOUNT (5ML) NAOH (SODIUM HYDROXIDE) IS USED TO ELECTROCHEMICALLY ETCH SMALL METAL (TUNGSTEN OR PLATINUM) WIRES.	HAZ	06-Jul-10	06-Jul-16	4
21657	WASTE FROM SDS PAGE	HAZ	19-Apr-10	19-Apr-16	4
21658	HE MACHINING AND HE STORAGE OPERATIONS.	HAZ	01-Apr-10	01-Apr-16	4
21704	AQUEOUS ACID WASTE GENERATED FROM COLD VAPOR ATOMIC FLUORESCENCE ANALYTICAL INSTRUMENTS. CONSISTS OF INSTRUMENT RINS...	MLLW-RLWTF	26-May-09	13-May-16	4
21707	PHENOL/CHLOROFORM/ISOAMYL ALCOHOL SOLUTION WILL BE USED TO EXTRACT DNA FROM A BACTERIAL CELL LYSATE FOR BIOLOGICAL P...	HAZ	20-Apr-09	18-Mar-16	4
21714	MODIFIED POLYMERS WERE OBTAINED BY IMMERSING IN IODOMETHANE, DIMETHYL SULFATE, METHYL TRIFLUOROMETHANESULFONATE, ACET...	HAZ	24-May-10	24-May-16	4
21719	CRYSTAL GROWTH/SAMPLE PREPARATION RESEARCH OPERATIONS.	HAZ	26-Aug-09	26-Aug-15	4
21721	RESEARCH, DEVELOPMENT, AND TESTING OF ENERGETIC MATERIALS.	HAZ-DX	26-Feb-10	26-Feb-16	4
21722	FACILITY CLEANUP OF BROKEN FLUORESCENT LAMPS.	HAZ	19-Apr-10	19-Apr-16	4
21733	SYNTHESIS OF NANOPARTICLES, NANOPARTICLE ARRAYS AND NANOPARTICLE COMPOSITE MATERIALS, NANOPARTICLE SURFACE MODIFICATI...	HAZ	23-Nov-09	23-Nov-15	4
21738	ANHYDROUS MAGNESIUM PERCHLORATE USED AS A DRYING AGENT TO REMOVE WATER VAPOR FROM GASES IN THE ELEMENTAL ANALYZER.	HAZ	06-May-09	27-Jul-16	4
21739	COMBUSTION TUBE USED IN ELEMENTAL ANALYZER CONVERT ORGANIC SOLIDS IN MINERAL MATRICES TO GASES FOR ANALYSIS.	MLLW	14-Apr-09	27-Jul-16	4

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**List of Active Mixed and Hazardous Waste Stream Profiles Reviewed**

WS_ID	WASTE_STREAM_NAME	WTYPE_ABBR	ACTIVE_DATE	EXPIRE_DATE	STATUS
21743	WASTE SOLVENTS FROM HIGH TEMPERATURE SUPERCONDUCTOR SAMPLE PREPARATION	HAZ	06-Jul-10	06-Jul-16	4
21747	WPF FOR ELECTRONICS WHICH HAVE LEAD SOLDER, SILVER, AND CADMIUM. ALSO FOR PIPE THAT CONTAINS SUSPECT RADIOACTIVE CONT...	MLLW	21-Jul-09	27-Jul-15	4
21757	SYNTHESIS OF NANOPARTICLES, NANOPARTICLE ARRAYS AND NANOPARTICLE COMPOSITE MATERIALS, NANOPARTICLE SURFACE MODIFICATI...	HAZ	08-Oct-10	08-Oct-15	4
21759	RESEARCH/DEVELOPMENT/ TESTING EQUIPMENT MAINTENANCE.	HAZ	26-Mar-09	17-Feb-16	4
21760	RESEARCH CONSISTS OF UTILIZING FISHER SCIENTIFIC- CHEMICAL PRODUCTS OF PERCHLORIC ACID AND ACETIC ACID IN AN APPROVED...	HAZ	03-Jun-10	03-Jun-15	4
21764	FIRING SITE ACTIVITIES	HAZ	03-Jun-10	03-Jun-16	4
21791	SPENT COLUMN CHROMATOGRAPHY MATERIAL, AN ENERGETIC MATERIAL IS PASSED THROUGH SILICA WITH SOLVENTS-THE ENERGETIC MATE...	HAZ	06-May-09	15-Apr-16	4
21841	PBX-9407 HE MACHINING OPERATIONS.	HAZ-TA16	07-Apr-09	07-Apr-16	4
21842	CHEMICAL RESEARCH WITH ACTINIDE ELEMENTS, INCLUDING URANIUM (PRIMARILY U-238 BUT ALSO U-235), MEPTUNIUM (PRIMARILY PU...	MLLW	02-Jul-09	15-Jul-16	4
21848	WASTE FROM VARIOUS ANALYTICAL PROCEDURES.	HAZ	26-Mar-09	20-Apr-15	4
21852	HE MACHINING AND HE STORAGE OPERATIONS	HAZ	27-May-09	07-Apr-16	4
21853	HE MACHINING AND HE STORAGE OPERATIONS	HAZ-TA16	29-May-09	07-Apr-16	4
21854	HE MACHINING AND HE STORAGE OPERATIONS.	HAZ-TA16	29-May-09	07-Apr-16	4
21873	HIGH PRESSURE LIQUID CHROMATOGRAPHY (HPLC) ANALYSIS PROCESS.	HAZ	06-May-10	06-May-15	4
21879	ADD 7.5 L OF KYTOM RED TO 100 ML OF METHANE AND THEN ADD SOLUTION TO 3 L OD ETHANE GLYCOL	HAZ	06-Jul-10	06-Jul-15	4
21891	WASTE RESULTS FROM SYNTHESIS OF ORGANIC POLYMERS AND TRANSITION METAL CATALYSTS	HAZ	10-Aug-10	10-Aug-15	4
21901	RNA/DNA ISOLATION RESEARCH AND DEVELOPMENT.	HAZ	18-Nov-09	18-Nov-15	4
21924	HE MACHINING AND HE STORAGE OPERATION	HAZ-TA16	28-May-09	07-Apr-16	4
21925	HE MACHINING AND HE STORAGE OPERATIONS	HAZ-TA16	07-Jan-10	07-Jan-16	4
21928	ETCHANT (SOLUTION MIXTURES) USED TO POLISH ZIRCONIUM AND TITANIUM.	HAZ	07-Jul-10	07-Jul-15	4
21929	VARIOUS MIXTURES USED AS ETCHING SOLUTIONS. MAX. VOLUME OF EACH MIXTURE IS APPROXIMATELY 60 ML. REMAINING SMALL QUANT...	HAZ-RLWTF	18-Apr-11	02-Feb-16	4
21930	RESEARCH SOLUTION (MIXTURE) OF WATER WITH ORGANIC AND INORGANIC CHEMICAL PRODUCTS USED FOR RUNNING ELECTROLITIC REACT...	HAZ	07-Jul-10	07-Jul-16	4
21952	RESEARCH AND DEVELOPMENT.	MLLW	31-Mar-10	01-Apr-16	4
21959	POLYMER FOAMS ARE SUBMERGED IN TOLUENE (90-95%) AND NH4OH (AMMONIUM HYDROXIDE)(5-10%) FOR SEVERAL MONTHS UNDER HOOD. ...	HAZ	21-Jul-10	21-Jul-15	4
21992	HE MACHINING AND HE STORAGE OPERATIONS	HAZ-TA16	29-May-09	07-Apr-16	4
21993	HE MACHINING AND HE STORAGE OPERATIONS	HAZ	27-May-09	07-Apr-16	4
22023	LAB TRASH (WIPES, GLOVES, ETC) CONTAMINATED WITH HALOGENATED AND NON HALOGENATED ORGANIC SOLVENTS (ETHANOL, METHANOL,...	HAZ	11-Sep-09	11-Sep-15	4
22041	ETCHING OF SILVER COATING SUPERCONDUCTOR TAPES RESEARCH SAMPLES.	HAZ	13-Oct-09	14-Oct-15	4
22053	FIRING SITE ACTIVITIES	HAZ	01-Jul-10	01-Jul-15	4
22087	WASTE ORGANIC SOLVENTS WITH PHOTO RESIST USED FOR CLEANING AND DEGREASING SAMPLES IN PHOTOLITHOGRAPHY OPERATIONS.	HAZ	23-Apr-10	23-Apr-15	4
22088	PHOTOLITHOGRAPHY OPERATIONS.	HAZ	19-Apr-10	19-Apr-15	4
22098	BIO-RESEARCH: EXTRACTION NUCLEIC ACID.	HAZ	24-Jun-09	24-Jun-15	4
22106	SOLUTION ARE MADE BY ADDING METALS, POLYETHYLENEIMINE, EDTA TO WATER.	HAZ	10-Aug-09	10-Aug-15	4
22109	WASTE RESULTS FROM SYNTHESIS OF COMPOUNDS. PROCESSES INCLUDE DISTILLATION, FILTRATION, REFLUX AND COLUMN CHROMATOGRA...	HAZ	05-Jan-10	05-Jan-16	4
22191	STAINING OF POLYACRYLAMIDE GELS	HAZ	18-Nov-09	18-Nov-15	4
22200	ALKALINE DIGESTION FOR THE EXTRACTION OF CHROMIUM (VI) IN SEDIMENTS	HAZ	14-Jul-09	14-Jul-15	4
22204	WASTE FROM RNA/DNA ISOLATON	HAZ	17-Mar-10	17-Mar-16	4
22270	COMPACTABLE LAB TRASH CONSISTING OF Q-TIPS, WIPES, GLOVES, ETC., CONTAMINATED WITH SILVER, LEAD SOLDER FLUX, ACETONE,...	HAZ	12-May-10	12-May-16	4
22281	ORGANIC RINSE SOLUTION WITH PHOSPHORIC ACID FROM RINSING ELECTROPOLISHED SAMPLES OF ALUMINUM AND MAGNESIUM ALLOYS IN ...	HAZ	24-Aug-10	24-Aug-15	4
22287	HE MACHINING AND HE STORAGE OPERATIONS	HAZ-TA16	29-May-09	07-Apr-16	4
22289	HE OPERATIONS	HAZ-TA16	04-Oct-10	04-Oct-13	4
22290	PERKIN ELMER 2400 CHN ANALYSIS (CARBON, HYDROGEN & NITROGEN ANALYSIS). REAGENTS USED THE COMBUSTION AND REDUCTION TUB...	HAZ	08-Sep-10	08-Sep-15	4
22300	GENERAL PEPTIDE SYNTHESIS WITH CLEAVAGE AND ETHER PRECIPITATION IN SYNTHETIC/BIOCHEMISTRY RESEARCH OPERATIONS.	HAZ	08-Oct-10	08-Oct-15	4
22301	SYNTHESIS OF NANOPARTICLES, NANOPARTICLE ARRAYS AND NANOPARTICLE COMPOSITE MATERIALS, NANOPARTICLE SURFACE MODIFICATI...	HAZ	22-Nov-10	22-Nov-15	4
22332	COMBUSTION TUBE USED IN ELEMENTAL ANALYZER CONVERTS ORGANIC SOLIDS TO GASES FOR ANALYSIS.	HAZ	06-May-09	27-Nov-15	4
22335	SYNTHESIS OF ORGANIC AND INORGANIC SALTS FOR RESEARCH AND DEVELOPMENT.	HAZ	13-Oct-09	13-Oct-15	4
22349	PROTEIN EXTRACTION FROM CRAMBE SEEDS. EXTRACT THE SEEDS WITH PENTANES/HEXANES TO GET RID OF THE FAT, THEN TAKE THE D...	HAZ	18-Aug-10	18-Aug-14	4
22354	SAMPLE PREPARATION FOR THERMODYNAMIC TRANSPORT CHARACTERIZATION OF MATERIALS AT LOW TEMPERATURES	HAZ	31-Aug-09	31-Aug-15	4

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WS_ID	WASTE_STREAM_NAME	WTYPE_ABBR	ACTIVE_DATE	EXPIRE_DATE	STATUS
22367	ARATHANE, RESIN, HARDNER AND THINNER ARE MIXED FOR CONFORMAL COATING OF SPACE FLIGHT HARDWARE.	HAZ	04-May-10	04-May-16	4
22377	FIRING SITE ACTIVITIES.	HAZ	17-Mar-10	17-Mar-16	4
22384	RAGS ABSORBED WITH SOLVENT ARE USED TO CLEAN OIL BASED PAINT OFF EQUIPMENT.	HAZ	14-Oct-10	14-Oct-15	4
22425	COMPACTABLE LAB TRASH CONSISTING OF Q-TIPS, WIPES, GLOVES, ETC., CONTAMINATED WITH SILVER, LEAD SOLDER FLUX, ISOPROPY...	HAZ	14-May-10	14-May-16	4
22429	BATH (BASE) FOR GLASSWASRE CLEANING.	HAZ	04-May-10	04-May-16	4
22434	REMOVAL OF LEAD P-TRAP BELOW SINK	MLLW	24-Aug-09	24-Aug-15	4
22458	HE PROCESSING OPERATIONS	HAZ	28-Oct-10	28-Oct-15	4
22478	HE MACHINING OPERATIONS	HAZ-TA16	03-Feb-11	01-Nov-15	4
22728	SOL-GEL ORGANIC WASTE	HAZ	08-Dec-10	08-Dec-15	4
22767	EXCESS CHNO EXPLOSIVES - NO TNT, LEAD OR BARIUM	HAZ-DX	13-Dec-10	13-Dec-13	4
22801	ETCHING CABLES BY HAND USING CORROSIVES	HAZ	31-Jan-11	26-Jan-16	4
22952	FOAM TRACER	HAZ	03-Mar-11	02-Mar-15	4
22953	KARL FISHER TITRATOR	HAZ	23-Jun-11	21-Jun-15	4
23032	EXCESS CHNO EXPLOSIVE- NO TNT, LEAD OR BARIUM	HAZ-DX	27-Oct-11	26-Oct-15	4
23034	EXCESS CHNO EXPLOSIVES CONTAINING TNT	HAZ-DX	27-Oct-11	26-Oct-15	4
23036	THE WASTE STREAM CONSISTS OF NUMEROUS INSECTS THAT WERE TAKEN AS SAMPLES OF VARIOUS AQUIFERS. THEY WERE NOT USED IN A...	HAZ	02-Mar-11	29-Feb-16	4
23039	MATERIAL TRANSFER PROJECT - POLYMER WASTE	HAZ	08-Mar-11	17-Mar-16	4
23040	POLYURETHANE ANALYSIS	HAZ	28-Feb-11	28-Feb-15	4
23052	HPLC PROCESS.	HAZ	21-Apr-11	20-Apr-15	4
23075	DNA AND RNA PURIFICATION FROM PLANT AND ALGAE CELLS	HAZ	03-Mar-11	01-Mar-16	4
23132	WASTE FROM RNA/DNA ISOLATION	HAZ	11-May-11	10-May-16	4
23133	NON-DU ANALYSIS	HAZ	24-May-11	12-Mar-16	4
23146	AQUEOUS WASTE CONTAINING BERYLLIUM FROM AQUEOUS STUDIES ON BERYLLIUM SPECIATION IN SOLUTION	HAZ	11-May-11	09-May-14	4
23153	CONVERTING REILLEX RESIN FROM CHLORIDE FORM TO NITRATE FORM	HAZ	30-Mar-11	29-Mar-16	4
23186	LASER DYE	HAZ	10-Mar-11	09-Mar-15	4
23196	METAL POWDERS AND OXIDES	HAZ	09-Mar-11	07-Mar-16	4
23249	ELECTROPLATING ACIDS	HAZ	28-Apr-11	27-Apr-15	4
23250	OAKITE RUST STRIPPER	HAZ	31-Mar-11	29-Mar-15	4
23252	MOP WATER FROM MARX TANK	HAZ	21-Mar-11	20-Mar-15	4
23264	AQUEOUS WASTE WITH IODINE	HAZ	16-Mar-11	15-Mar-15	4
23272	DU LEAD (METAL)	MLLW	18-Mar-11	16-Mar-17	1
23294	BROMINE:ETHANOL ETCH WASTE	HAZ	02-May-11	20-Apr-15	4
23336	SODIUM HYDROXIDE	HAZ	13-Apr-11	29-Mar-15	4
23348	LAB TRASH CONTAMINATED WITH LITHIUM HYDRIDE FROM RESEARCH OPERATIONS	HAZ	21-Apr-11	18-Apr-16	4
23351	PU ASSAY BY CORPEL POTENTIOMETRIC REDOX TITRIMETRY	MLLW-RLWTF	31-Jan-12	12-Aug-16	1
23355	CHEMICAL ETCHING SOLUTION FOR MICROSTRUCTURAL ANALYSIS	HAZ	13-Aug-13	13-Aug-15	4
23356	ELECTROPLATING RESEARCH OPERATIONS CUPRIC SULFATE, CHROMIC ACID.	HAZ	02-May-11	27-Apr-15	4
23373	CHEMISTRY RESEARCH OPERATIONS SULFURIC ACID, AND CHROMIUM (VI) OXIDE	HAZ	24-Mar-11	22-Mar-15	4
23378	SOLID WASTE GENERATED BY SYNTHESIS AND CLEANING PROCESS INVOLVING ORGANIC AND ORGANOMETALLIC PROCEDURES. MAJOR CONSTI...	HAZ	21-Apr-11	18-Apr-15	4
23414	BLASOCUT FROM COLD MACHINING OPERATIONS	HAZ	22-Apr-11	20-Apr-16	4
23425	RESIDUAL HE SOLIDS ON GLASS/PLASTIC.	HAZ	16-Apr-13	16-Apr-16	4
23429	WASTE IS LAB TRASH (RAGS, PAPER, PLASTIC, ETC) WITH "COOLAMP" LUBE PRODUCT USED FOR SILVER COATING OF VARIOUS METALS ...	HAZ	22-Apr-11	21-Apr-15	4
23435	METHANOL, FORMIC ACID, WATER, GLACIAL ACETIC ACID	HAZ	20-Apr-11	18-Apr-14	4
23483	SPENT SOLVENTS USED FOR CLEANING SAMPLES FOR CRYSTAL GROWTH OPERATIONS.	HAZ	01-Dec-11	30-Nov-15	4
23490	CADMIUM VANADATE LABORATORY TRASH	HAZ	28-Apr-11	27-Apr-14	4
23504	DNA EXTRACTION ROOM 136	HAZ	02-May-11	24-Apr-16	4
23507	EXPERIMENTAL PROCESS OF (NEW) GLASS SIDE CLEANING FOR-NANOPARTICLE RESEARCH	HAZ	28-Apr-11	27-Apr-15	4
23512	SOLVENT RECOVERED FROM PARTS CLEANING PROCESS. SOLVENT USED FOR ITS SOLVENT PURPOSE.	HAZ	02-Jun-11	18-Apr-14	4
23513	NON-ROUTINELY SCHEDULED CLEAN-UP OF SMALL MAGNESIUM MACHINING PROJECT	HAZ	14-Apr-11	12-Apr-15	4
23525	MIXTURE OF ORGANIC AND AQUEOUS SOLUTION WASTES IN NANOPARTICLE (QUANTUM DOTS) RESEARCH	HAZ	29-Apr-11	27-Apr-16	1
23528	LAB TRASH FROM POLISHING SOLDER METALS WITH AN ABRASIVE GRIT MATERIAL	HAZ	02-May-11	26-Apr-16	4
23535	OIL TITRATION BY-PRODUCT WASTE	HAZ	21-Mar-12	20-Mar-16	4
23549	ISOPROPYL ALCOHOL DERIVED FROM PROCESSING RADIOACTIVE TARGETS PER PROCEDURE MRDP-PSR82RB-05.	MLLW	02-Jun-11	25-May-15	4
23553	LAB TRASH FROM SYNTHESIS OF NANOPARTICLE (QUANTUM DOT) RESEARCH	HAZ	29-Apr-11	27-Apr-16	1
23620	ACETONE DERIVED FROM DEGREASING RADIOACTIVE TARGETS PER PROCEDURE MRDP-PSR82RB-05.	MLLW	26-May-11	25-May-15	4
23621	OPERATION OF GAS-GUNS AT TA-40 BUILDING 9	HAZ	03-Jun-11	02-Jun-15	4
23653	LIQUID CHROMATOGRAPHY WASTE: WATER, ACETONITRILE, METHANOL, METHANESULFONIC ACID, SODIUM HYDROXIDE,	HAZ	11-May-11	09-May-14	4
23695	ULTRA SONIC CLEANING RINSATE	HAZ	24-May-11	23-May-15	4
23698	SPENT SOLVENTS USED FOR CLEANING SAMPLES FOR FUEL OPERATIONS.	HAZ	02-Jun-11	12-Mar-16	4

**Appendix I, Table 1**  
**List of Active Mixed and Hazardous Waste Stream Profiles Reviewed**

WS_ID	WASTE_STREAM_NAME	WTYPE_ABBR	ACTIVE_DATE	EXPIRE_DATE	STATUS
23705	THIS CHEMISTRY PROCEDURE DESCRIBES THE MAJOR STEPS IN THE DETERMINATION OF RADIOACTIVE IRIIDIUM IN VARIOUS SAMPLES. S...	MLLW	16-Jun-11	14-Jun-15	4
23753	SELENIUM AND METAL CONTAINING HALOGENATED ORGANIC WASTE	HAZ	02-Aug-11	21-Jul-14	4
23779	GLASS WITH LEAD OXIDE - X-RAY SHIELDING GLASS	HAZ	15-Jun-11	14-Jun-15	4
23805	SPENT NICKEL-CADMIUM BATTERIES	MLLW	18-Jul-11	13-Jul-15	4
23809	1 MOLAR HF BATH	HAZ	14-Jul-11	13-Jul-14	4
23818	CONTAMINATED LEAD	MLLW	19-Jul-11	18-Jul-15	4
23824	GALLIUM OXIDE DISSOLUTION FOR IPF	HAZ	21-Jul-11	19-Jul-14	4
23827	VIRGIN SILICON DIOXIDE SUBSTRATE CLEANING FOR ION BEAM PROJECT.	HAZ	20-Jul-11	19-Jul-16	4
23836	SYNTHESIS OF ANTHRACENE AMINE	HAZ	01-Aug-11	31-Jul-14	4
23838	FERRIC CHLORIDE USED TO ETCH COPPER PROBE COMPONENTS.	HAZ	18-Jul-11	17-Jul-15	4
23858	SLAKING SOLUTION.	HAZ	16-Aug-11	15-Aug-14	4
23866	HIGH TEMPERATURE SUPERCONDUCTOR RESEARCH OPERATIONS.	HAZ	16-Aug-11	15-Aug-15	4
23885	WATER-REACTIVE WASTE	HAZ	08-Aug-11	07-Aug-15	4
23890	LEAD ACID BATTERIES WITH BULGING AND/OR CRACKED CASES	HAZ	09-Aug-11	08-Aug-15	4
23903	CHEMICAL ETCHING SOLUTION FOR MICROSTRUCTURAL ANALYSIS	HAZ	14-Aug-13	13-Aug-15	4
23919	HEPA FILTERS CONTAMINATED WITH LEAD BISMUTH EUTECTIC (LBE), A METAL ALLOY OF LEAD AND BISMUTH	HAZ	04-Aug-11	03-Aug-16	1
23928	CIRCUIT BOARD PROCESS GENERATING LEAD SOLDER AND CELLULOSICS CONTAMINATED WITH ETHANOL AND LEAD	HAZ	15-May-12	15-May-16	1
23929	SODIUM NITRATE, AMMONIUM BIFLUORIDE	HAZ	11-Aug-11	10-Aug-15	4
23932	HIGH TEMPERATURE SUPERCONDUCTOR RESEARCH OPERATIONS.	HAZ	22-Aug-11	21-Aug-15	4
23937	SMOKE GENERATING AIR CURRENT TUBES	HAZ	09-Aug-11	08-Aug-15	4
24021	MLLW GENERATED DURING ROUTINE MAINTENANCE ON EMERGENCY LIGHTING AND SPRINKLER SYSTEMS IN THE PROTON STORAGE RING (PSR....	MLLW	05-Jan-12	04-Jan-16	4
24024	LAB TRASH FROM SYNTHESIS OF CARBON NANOTUBES	HAZ	21-Dec-11	01-Nov-16	1
24026	MOBILE PHASE HPLC ANALYSIS OF HIGH EXPLOSIVES SAMPLES	HAZ	30-Aug-11	29-Aug-15	4
24029	THIN FILM DEPOSITION ATTACHED SUBSTRATE WASTE MATERIALS	HAZ	20-Dec-11	19-Dec-15	4
24068	SOLUTION OF NAOH USED TO ETCH CR39 PLASTIC.	HAZ	12-Sep-11	08-Sep-14	4
24072	GREATER THAN 1% BERYLLIUM TRANSURANIC DEBRIS WASTE, GROUP B	MTRU	22-Sep-11	20-Sep-16	4
24103	KODAK FIXER	HAZ	25-Jun-13	05-Jun-16	1
24158	THIS WASTE CONSISTS OF CELLULOSICS (KIMWIPES@, PLASTICS, RUBBER, TYVEC@PPE, MASSLINN@ CLOTH, ETC.) THAT HAVE BEEN CON...	HAZ	05-Jan-12	04-Jan-16	4
24177	WATER WITH HYDROCHLORIC, NITRIC, SULFURIC, PHOSPHORIC AND ACETIC ACIDS.	HAZ	05-Oct-11	03-Oct-15	4
24178	WATER WITH HYDROCHLORIC, NITRIC, SULFURIC, PHOSPHORIC AND ACETIC ACIDS.	HAZ	05-Oct-11	03-Oct-15	4
24179	SPENT CARBON FROM FILTRATION UNITS	HAZ-TA16	17-Jan-12	16-Jan-17	1
24212	CATHODE RAY TUBES AND MISCELLANEOUS ELECTRONICS (RADIOACTIVELY CONTAMINATED)	MLLW	07-Feb-12	06-Feb-15	4
24217	CHLORINATED SPENT SOLVENTS FROM HPLC ANALYSIS FOR PBX 9407	HAZ	08-Mar-12	08-Mar-14	4
24239	SPRAY COATING OF SOLUTIONS CONTAINING POLYBENZIMIDAZOLE BASED POLYMERS ON SUBSTRATES.	HAZ	15-Nov-11	14-Nov-15	4
24241	ORGANIC SOLUTIONS CONTAINING IONIC LIQUIDS	HAZ	15-Nov-11	14-Nov-15	4
24245	ACID WASTE	HAZ	04-Nov-11	17-Aug-16	1
24282	SOLDER FLUX AND ACETONE	HAZ	16-Dec-11	15-Dec-14	4
24286	DOVE 231 SLUDGE DEBRIS	MLLW	16-Feb-12	14-Feb-15	4
24294	SMOKELESS POWDER	HAZ-DX	24-May-12	21-May-16	4
24300	SMOKELESS POWDER, PYRODEX	HAZ-DX	24-May-12	21-May-16	4
24301	MDF	HAZ-DX	19-Jan-12	18-Jan-16	4
24315	WASTE IS LAB TRASH (RAGS, PAPER, PLASTIC, ETC) WITH "COOLAMP" LUBE PRODUCT USED FOR SILVER COATING OF VARIOUS METALS ...	HAZ	15-Dec-11	14-Dec-15	4
24316	COULOMETER SPENT SOLUTIONS	HAZ	21-Dec-11	20-Dec-15	4
24333	LEAD FOR MACRO-ENCAPULATION	MLLW	16-Feb-12	15-Feb-15	4
24342	LINEAR, CYLINDRICAL, OR CONICAL SHAPED CHARGES (NO LEAD)	HAZ-DX	24-Jan-12	22-Jan-16	4
24413	MACHINING OF MAGNESIUM STOCK MATERIAL	HAZ	21-Feb-12	16-Feb-14	4
24420	EXPLOSIVE CONTAMINATED DEBRIS CONTAINING CHNO EXPLOSIVES INCLUDING TNT. NO BARIUM OR LEAD	HAZ-DX	28-Mar-12	28-Mar-16	4
24423	LAB TRASH WITH LEAD SOLDER AND SOLDER FLUXES	HAZ	06-Mar-12	06-Mar-15	4
24436	LIQUID MERCURY WASTE FROM POROSIMETER OPERATION	HAZ	23-Feb-12	22-Feb-16	1
24437	LAB TRASH CONTAMINATED WITH MERCURY FROM POROSIMETER OPERATION	HAZ	23-Feb-12	22-Feb-16	1
24455	ACIDIC SOLUTIONS CONTAINING TRACER LEVELS OF ACTIVATION PRODUCTS AND ACTINIDES	MLLW-RLWTF	21-Mar-13	20-Mar-16	1
35747	RESEARCH, DEVELOPMENT, AND TESTING OF ENERGETIC MATERIALS.	HAZ-DX	28-Mar-12	20-Mar-16	4
35934	CARBON FROM FILTRATION UNITS	HAZ	29-Mar-12	28-Mar-15	4
36110	SILVER TUNGSTEN LAMP SOLID WASTE	HAZ	24-Apr-12	12-Apr-15	4
36130	POTASSIUM HYDROXIDE AND PROPYLENE GLYCOL MIXTURE	HAZ	16-Apr-12	13-Apr-15	4
36151	RESEARCH PROJECT TO IMPROVE LITHIUM BATTERY TYPE(S) COMPONENTS AND CELL LIFE	HAZ	30-Apr-12	26-Apr-16	1
36192	FACILITY MAINTENANCE; PAINTING OPERATIONS.	MLLW	26-Apr-12	25-Apr-15	4
36235	HALOGENATED AND NON-HALOGENATED ORGANIC SOLVENTS PRODUCED BY BENCH SCALE LABORATORY R & D CONTAINS PRECURSORS AND REA...	MLLW	26-Apr-12	25-Apr-15	4
36335	PBX 9501 SLURRY PROCESS	HAZ	03-May-12	03-May-15	4
36353	PLASITE PAINT WASTE, NON RAD	HAZ	14-May-12	14-May-15	4
36376	BROKEN LEADED GLASS FROM VARIOUS OPERATIONS AT55.	HAZ	14-May-12	14-May-14	4
36380	ORGANIC WASTE STREAM ORIGINATING FROM NON-AQUEOUS SYNTHESIS OF DEPLETED URANIUM AND THORIUM COMPOUNDS.	MLLW	12-Sep-12	12-Sep-15	4
36401	SODIUM NITRATE, AMMONIUM BIFLUORIDE, URANIUM	MLLW	14-May-12	14-May-16	4
36408	HE PRESSING OPERATION (XTX 8003)	HAZ-TA16	17-May-12	17-May-15	4



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WS_ID	WASTE_STREAM_NAME	WTYPE_ABBR	ACTIVE_DATE	EXPIRE_DATE	STATUS
36431	HALOGENATED AND NON-HALOGENATED ORGANIC SOLVENTS PRODUCED BY BENCH SCALE LABORATORY R & D CONTAINS PRECURSORS AND REA...	MLLW	26-Jul-12	24-Jul-15	4
36438	COMBINATION OF CLEANING NEW GLASS SLIDES FOR QUATUM DOTS RESEARCH AND KOH REDUCTION OF GRAPHITE OXIDE NANO-MATERIALS	HAZ	21-May-12	21-May-15	4
36440	EXCESS CHNO EXPLOSIVES - NO TNT, LEAD OR BARIUM	HAZ-DX	24-May-12	22-May-15	4
36446	EXCESS CHNO EXPLOSIVES CONTAINING TNT	HAZ-DX	24-May-12	23-May-15	4
36453	DEVELOPMENTAL ENERGETIC MATERIALS	HAZ-DX	29-May-12	29-May-15	4
36455	MACHINE SHOP PARTS CLEANING SOLUTION	HAZ	29-May-12	24-May-16	4
36473	EXPLOSIVE AND OTHER DYNAMIC EXPERIMENTS WITH LEAD AND SILVER CONDUCTED IN P-RAD	HAZ	04-Jun-12	04-Jun-15	4
36573	ROUTINE MAINTENANCE AND HOUSEKEEPING	MLLW	21-Jun-12	19-Jun-16	1
36637	PERKIN ELMER CHN OXYGEN SCRUBBER TUBE	HAZ	25-Jun-12	25-Jun-15	4
36815	INITIATOR	HAZ	03-Jul-12	02-Jul-15	4
36917	WATER CARTRIDGES	HAZ	12-Jul-12	12-Jul-15	4
36997	ELECTROCHEMICAL DISSOLUTION OF STAINLESS STEEL	HAZ	02-Aug-12	02-Aug-15	4
37101	MICROFABRICATION LIQUID WASTE	HAZ	01-Oct-12	01-Oct-15	4
37115	LEAD PIG'S NO LONGER USED FOR SHIELDING RADIOACTIVE SEALED SOURCES DURING MOSSBAUER OPERATIONS	MLLW	15-Aug-12	15-Aug-15	4
37176	AQUEOUS SOLUTION USED AS A SULFUR SOURCE FOR ELECTROCHEMICALLY GROWING SULFIDE FILMS	HAZ	13-Aug-12	13-Aug-15	4
37276	0.1 G/ML OF THEONYLTRIFLUORACETONE (TTA) IN O-XYLENE IS USED AS AN EXTRACTANT FOR NEPTUNIUM. THE NP IS TRANSFERRED T...	MLLW	28-Aug-12	28-Aug-15	4
37385	SOLID TRASH FROM LABORATORY RESEARCH EXPERIMENTS, INCLUDING GLASS VIALS, PIPETS, PAPER TOWELS, PLASTIC, LATEX, METAL,...	HAZ	17-Sep-12	17-Sep-15	4
37497	SPENT ACETONE WITH H2O	HAZ	01-Oct-12	01-Oct-15	4
37515	RINSE PRODUCT FROM SOUND VELOCITY AND DENSITY MEASUREMENTS OF CRUDE OIL SAMPLES	HAZ	14-Aug-14	14-Aug-16	4
37895	AQUEOUS ACID	HAZ	08-Apr-13	05-Apr-15	4
37899	ORGANIC WASTE STREAM ORIGINATING FROM NON-AQUEOUS SYNTHESIS.	HAZ	29-Nov-12	29-Nov-15	4
37900	ACTINIDE AMALGUM	MLLW	20-Nov-12	14-Nov-15	4
37901	MACHINING OF MAGNESIUM STOCK MATERIAL	HAZ	16-Nov-12	16-Nov-15	4
38155	KIMWIPES, CLEAN ROOM WIPES, AND FILTER MEDIA FROM PETN PRECIPITATION ACTIVITIES.	HAZ-TA16	17-Jan-13	10-Jan-16	4
38276	MIXED TRU WASTE SEALED SOURCES GENERATED BY THE OFF-SITE SOURCE RECOVERY PROJECT	MTRU	11-Jan-13	14-Jan-16	1
38355	ROUTINE MAINTENANCE AND HOUSEKEEPING	MLLW	19-Feb-13	13-Feb-17	1
38435	GEU PROPELLANT	HAZ-DX	03-Apr-13	03-Apr-16	4
38495	AQUEOUS ACID WASTE GENERATED FROM ANALYTICAL INSTRUMENTS. CONSISTS OF INSTRUMENT RINSE AND EXCESS SAMPLE FROM SAMPLE ...	MLLW-RLWTF	04-Nov-13	04-Nov-15	4
38615	BONEYARD CLEAN-UP	MLLW	25-Feb-13	25-Feb-15	4
38635	DIESEL FUEL	HAZ	26-Feb-13	25-Feb-16	4
38637	WASTE FUELS	HAZ	26-Feb-13	26-Feb-16	4
38641	#2 DIESEL FUEL	HAZ	27-Feb-13	26-Feb-16	4
38676	HE OPERATIONS	HAZ-DX	25-Apr-13	25-Apr-15	4
38736	ROUTINE MAINTENANCE AND HOUSEKEEPING; MACRO-ENCAPSULATED LEAD CONTAMINATED MATERIAL.	MLLW	27-Jun-13	11-Jun-15	4
38737	RUTHENIUM CHLORIDE IN 0.1M PERCHLORIC ACID	HAZ	26-Mar-13	26-Mar-15	4
38795	SALTS DISSOLVED IN WATER	HAZ	28-Mar-13	26-Mar-15	4
38815	WASTE FROM FERMENTER SAMPLING ROBOT	HAZ	26-Mar-13	26-Mar-14	4
38877	MACHINING OF MAGNESIUM STOCK MATERIAL	HAZ	02-Apr-13	04-Apr-14	4
38895	THIS WASTE IS PRODUCED FROM GUN CLEANING OPERATIONS BY PTLA. THE CONTENTS ARE GUN CLEANING PATCHES, PAPER TOWELS, AND...	HAZ	20-Mar-13	20-Mar-16	4
38935	SULFURIC ACID	HAZ	28-Mar-13	26-Mar-14	4
38955	KEROSENE	HAZ	28-Mar-13	28-Mar-14	4
38956	METHYL CHLOROFORM	HAZ	02-Apr-13	02-Apr-14	4
39015	PALLADIUM POWDER	HAZ	03-Apr-13	03-Apr-14	4
39035	CERIUM POWDER	HAZ	04-Apr-13	03-Apr-14	4
39078	MLLW R&D COMPONENTS	MLLW	15-May-13	09-May-15	4
39095	SYNTHESIS OF NANOPARTICLES, NANOPARTICLE ARRAYS AND NANOPARTICLE COMPOSITE MATERIALS, NANOPARTICLE SURFACE MODIFICATI...	HAZ	11-Feb-14	11-Feb-15	4
39098	ACIDIC WASH FROM GLASSWARE: ORGANIC SOLVENTS	HAZ	16-Apr-13	16-Apr-14	4
39116	ZIRCONIUM METAL	HAZ	17-Apr-13	16-Apr-16	4
39120	MC BOND WASTE SOLUTION	HAZ	10-Jun-13	06-Jun-15	4
39135	AQUEOUS ACID WASTE GENERATED FROM ANALYTICAL INSTRUMENTS. CONSISTS OF INSTRUMENT RINSE AND EXCESS SAMPLE FROM SAMPLE ...	HAZ	16-Apr-13	16-Apr-16	4
39136	TOLUENE CONTAMINATED CELLULOSES	HAZ	18-Apr-13	24-Apr-15	4
39139	ORGANICS	HAZ	02-May-13	02-May-14	4
39176	IN THE COURSE OF DEVELOPING AIR POLLUTION SAMPLING DEVICES, AN ARTIFICIAL AIR POLLUTION IS GENERATED. THESE ARE TINY ...	HAZ	24-Apr-13	24-Apr-16	4
39196	MLLW GENERATED DURING ROUTINE MAINTENANCE IN IPF HOT CELLS	MLLW	23-Apr-13	23-Apr-15	4
39199	WASTE RESULTS FROM THE DEPOSITION OF COMPOUNDS ON POROUS MATERIALS	HAZ	09-May-13	09-May-15	4
39202	FIRE SUPPRESSION SYSTEM SQUIB ASSEMBLY ACTUATORS	HAZ-DX	09-May-13	09-May-14	4
39315	MERCURY CONTAINING BROKEN THERMOMETER(S)	HAZ	06-May-13	06-May-15	4
39375	NONRECOVERABLE SILVER WASTE FROM DECOMMISSIONING OF THERMAL EVAPORATOR EQUIPMENT UNIT	HAZ	08-May-13	08-May-15	4
39415	MERCURY CONTAMINATED WATER	HAZ	14-May-13	14-May-15	4
39435	MERCURY CONTAMINATED PLASTIC, WIPES, GLOVES, WOOD, RUBBER, SPONGE	HAZ	14-May-13	13-May-15	4
39696	DEVELOPMENTAL ENERGETIC MATERIALS	HAZ	29-May-13		2

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WS_ID	WASTE_STREAM_NAME	WTYPE_ABBR	ACTIVE_DATE	EXPIRE_DATE	STATUS
39717	OVERSIZED METALS AND ORGANICS CONTAMINATED TRU WASTE.	MTRU	01-Jul-13	01-Jul-16	4
39729	ALCOHOL, ACETONE, AND METALS	HAZ	01-Aug-13	01-Aug-14	4
39815	OVERSIZED SEG BOX ORGANICS AND METALS CONTAMINATED TRU WASTE.	MTRU	25-Jun-13	25-Jun-16	4
39816	RUBIDIUM PROPANOL HCL	HAZ	20-Jun-13	20-Jun-15	4
39837	MAGNESIUM	MLLW	27-Jun-13	25-Jun-15	4
39897	RUBIDIUM PROPANOL HCL	HAZ	03-Jul-13	01-Jul-14	4
39938	TETRA-ETCH SPENT LIQUID	HAZ	07-Aug-13	01-Aug-15	4
39940	ETHYLENE GLYCOL CHAMBER 9	HAZ	03-Jul-13	03-Jul-16	1
39980	ACIDIC SOLUTIONS CONTAINING TRACER LEVELS OF RADIONUCLIDES	MLLW-RLWTF	27-Aug-13	13-Aug-16	1
40016	SLUDGES FROM TA 50 WASTEWATER PLANT WERE CEMENTED AND THE DRUMS STORED IN AREA G OF TA54 AS TRU. REGULATORY CHANGE M...	MLLW	17-Jul-13	16-Jul-16	1
40055	GL48 FREEZE PROTECTION FLUID TA-15-312 (ROOF TOP)	HAZ	07-Aug-13	07-Aug-15	4
40058	AQUEOUS WASTE CONTAINING BERYLLIUM FROM AQUEOUS STUDIES ON BERYLLIUM SPECIATION IN SOLUTION	HAZ	23-Jul-13	23-Jul-14	4
40255	HALOGENATED AND NON-HALOGENATED ORGANIC SOLVENTS PRODUCED BY BENCH SCALE LABORATORY R & D	HAZ	05-Aug-13	05-Aug-16	4
40279	CIRCUIT BOARDS/CATHODE RAY TUBE CONTAMINATED WITH D(U) FROM SHOP 3-102'S MACHINING OPERATIONS	MLLW	07-Aug-13	05-Aug-15	4
40355	SYNTHESIS OF CARBON NANOTUBES, ACID BASED AQUEOUS SOLUTION	HAZ	05-Sep-13	05-Sep-16	1
40357	LAB TRASH WITH KEROSENE AND URANIUM USED FOR MICROSTRUCTURAL ANALYSIS	MLLW	19-Aug-13	13-Aug-15	4
40358	ELECTROPOLISHING AND ELECTROETCHING SOLUTION FOR MICROSTRUCTURAL ANALYSIS	HAZ	13-Aug-13	13-Aug-15	4
40359	SOLVENTS WITH URANIUM AND THORIUM USED FOR MICROSTRUCTURAL ANALYSIS	MLLW	13-Aug-13	13-Aug-15	4
40363	THERMAL SPRAY OPERATIONS METAL POWDERS AND OXIDES FILTERS	HAZ	14-Aug-13	14-Aug-15	4
40375	SYNTHESIS OF CARBON NANOTUBES, ORGANIC (SOLVENT) BASED AQUEOUS SOLUTION	HAZ	06-Sep-13	06-Sep-16	1
40376	NITROMETHANE, DIETHYLENETRIAMINE AND WATER	HAZ-DX	09-Sep-13	15-Aug-14	4
40377	ELECTROPOLISHING AND ELECTROETCHING SOLUTION FOR MICROSTRUCTURAL ANALYSIS	HAZ	15-Aug-13	13-Aug-15	4
40378	CLEANING AND DEGREASING FOR METAL FABRICATION OPERATIONS	HAZ	15-Aug-13	15-Aug-15	4
40396	ACTIVATED SILVER CHLORIDE	MLLW	19-Aug-13	16-Aug-15	4
40415	ELECTRONICS AND COPPER WITH SOLDER CONTAMINATED WITH URANIUM FROM MAINTENANCE OPERATIONS	MLLW	19-Aug-13	16-Aug-15	4
40416	AREA L - HG CONTAMINATED DEBRIS	HAZ	15-Aug-13	15-Aug-15	4
40420	NITRIC SCID SOLUTION USED IN TARGET FABRICATION OPERATIONS	HAZ	20-Aug-13	19-Aug-15	4
40424	54-G STEELCOTE 962	MLLW	21-Aug-13	21-Aug-15	4
40439	54-G STEELCOTE 597	MLLW	21-Aug-13	21-Aug-15	4
40458	CLOTH/WIPES/PADS USED TO CLEAN WIPE THE FLOOR IN TA-60-86	HAZ	04-Sep-13	04-Sep-14	4
40460	SLUDGES FROM TA 50 WASTEWATER PLANT WERE CEMENTED AND THE DRUMS STORED IN AREA G OF TA54 AS TRU. REGULATORY CHANGE M...	MLLW	29-Aug-13	03-Sep-16	1
40496	LEAD PAINT REMOVAL FROM MAGAZINES IN THE H.E. CORRIDOR DURING ELECTRICAL GROUNDING OPERATIONS	HAZ	16-Sep-13	16-Sep-15	4
40498	SLUDGES FROM TA 55 THAT WERE CEMENTED OR ABSORBED, SALT WASTE AND THE DRUMS STORED IN AREA G OF TA-54 AS TRU	MLLW	18-Sep-13	18-Sep-15	4
40518	SOLVENT - DILUTE ORGANIC ACID	HAZ	24-Oct-13		3
40526	CLEAN UP OF A LEAD STORAGE AREA.	HAZ	22-Oct-13	22-Oct-15	4
40528	LEAD SOLIDS AND LEAD CONTAMINATED MATERIALS FROM ROUTINE HOUSEKEEPING AND MAINTENANCE OPERATIONS	HAZ	08-Oct-13	08-Oct-16	1
40550	CHLOROFORM/PHENOL/GUANIDINIUM THIOCYANATE ETHANOL MIXTURE	HAZ	21-Jan-14	21-Jan-16	4
40552	THERMOSTATIC CONTROLS AND RADIATOR VALVES	HAZ	24-Oct-13	24-Oct-15	4
40553	THIS SOLID LABORATORY TRASH DERIVED FROM THE SYNTHESIS AND PURIFICATION OF ORGANIC AND INORGANIC COMPLEXES. THIS WAS...	HAZ	10-Jul-14	10-Jul-15	4
40580	LEAD CONTAMINATED SILT/SLUDGE AND PAINT CHIPS FROM WATER TANK	HAZ	04-Dec-13	04-Dec-14	4
40581	UNKNOWN LIQUID FOUND AT THE TA-16 PORTAL MONITOR PARKING LOT	HAZ	13-Nov-13	13-Nov-14	4
40582	SCRAP METAL WITH HE CONTAMINATION	HAZ-TA16	18-Dec-13	12-Nov-15	4
40588	LITHIUM HYDRIDE POWDER	HAZ	04-Dec-13	04-Dec-14	4
40593	CADMIUM METAL	HAZ	15-Nov-13	15-Nov-15	4
40600	ECOLINE BLASTER UNITS AIR SYSTEM (FILTERLESS) BAG LINER WASTE	HAZ	21-Nov-13	21-Nov-15	4
40619	MIXED HETEROGENEOUS DEBRIS WASTE GENERATED AT TA-55 AND THE DRUMS STORED IN AREA G OF TA-54 AS TRU	MLLW	02-Dec-13	25-Nov-15	4
40621	RAD PERCHLORIC ACID	MLLW	16-Dec-13	16-Dec-14	4
40631	PPE AND CELLULOSICS	HAZ	03-Dec-13	03-Dec-14	4
40640	PAINT DUST/SILT	HAZ	04-Dec-13	04-Dec-14	4
40667	NITRIC ACID (50%) USED TO CLEAN GLASSWARE (NEW).	HAZ	24-Jul-14	23-Jul-16	4
40668	ORGANOMETALIC SYNTHESIS	HAZ	03-Feb-14	03-Feb-16	4
40677	MIXED HETEROGENEOUS DEBRIS WASTE CONTAINERS FROM THE CMR HOT CELLS	MLLW	20-Dec-13	19-Dec-15	1
40678	SPENT SILICA SAND	HAZ	27-Feb-14	27-Feb-16	4
40684	R&D SYNTHESIS OF SURFACTANT-TEMPLATED GOLD AND SILVER NANOSTRUCTURES	HAZ	08-Jan-14	08-Jan-17	1
40688	HACH TEST KIT 8149 SOLUTION	HAZ	03-Feb-14	28-Jan-16	4
40689	SOLVENT SATURATED RAGS AND MATERIALS FROM AIR COMPRESSOR SERVICING AND CLEAN-UP	HAZ	18-Apr-14	18-Apr-15	4
40691	MIXED TRU WASTE SEALED SOURCES GENERATED BY OSRP- PB	MTRU	13-Jan-14	07-Jan-16	1
40692	HOMEMADE EXPLOSIVE COURSE.	HAZ	20-May-14	16-Aug-16	1
40697	MACHINING OF TITANIUM OR TITANIUM ALLOY STOCK MATERIALS	MLLW	10-Apr-14	10-Apr-15	1
40700	UNUSED ELECTROLYTE (APPROVED R&D MIXTURE) FOR ELECTROLYTIC POLISHING OF METALLOGRAPHIC SPECIMENS	HAZ	10-Jan-14	10-Jan-16	4
40701	MERCURY WASTE	HAZ	16-Jan-14	16-Jan-15	4

**Appendix 1, Table 1**  
**List of Active Mixed and Hazardous Waste Stream Profiles Reviewed**

WS_ID	WASTE_STREAM_NAME	WTYPE_ABBR	ACTIVE_DATE	EXPIRE_DATE	STATUS
40705	KARL FISCHER METHANOL	HAZ	30-Jan-14	29-Jan-15	4
40712	WASTE LASER DYE. VARIOUS DYES ARE PURCHASED IN POWDER FORM, THEN MIXED WITH VARIOUS SOLVENTS. WASTE WILL BE LIQUID....	HAZ	28-Jan-14	21-Jan-16	4
40721	OVERSIZED HETEROGENEOUS WITH BE AND TRITIUM (H3) CONTAMINATION (GENERATOR REFERENCE 01-23-14-01)	MTRU	27-Jan-14	23-Jan-16	4
40724	LEAD PIG CONTAINING CS-137 CHECK SOURCE	MLLW	31-Mar-14	31-Mar-16	4
40725	INERT PART CLEANING PROCESS	HAZ	25-Feb-14	20-Feb-17	1
40727	ABSORBED USED OIL ON WASTE TESTING FOR HALOGENS	HAZ	27-Feb-14	27-Feb-15	4
40732	ORGANICS WITH CHLORINATED AND NONCHLORINATED SOLVENTS	HAZ	30-Jan-14	30-Jan-15	4
40733	HACH TEST KIT 8171 SOLUTION	HAZ	04-Feb-14	04-Feb-15	4
40735	SYNTHESIS OF NANOPARTICLES, NANOPARTICLE ARRAYS AND NANOPARTICLE COMPOSITE MATERIALS, NANOPARTICLE SURFACE MODIFICATI...	HAZ	10-Jul-14	10-Jul-15	4
40743	IN VIVO MEASUREMENT CHECK SOURCES	MLLW-RLWTF	09-Apr-14	31-Mar-15	4
40746	MEDIA BLASTING MATERIAL	HAZ	27-Feb-14	27-Feb-17	1
40748	WASTE RESULTS FROM SYNTHESIS OF COMPOUNDS. PROCESSES INCLUDE DISTILLATION, FILTRATION, REFLUX AND COLUMN CHROMATOGRAP...	HAZ	19-Feb-14	18-Feb-16	4
40750	ACIDIC WASH FROM GLASSWARE: ORGANIC SOLVENTS	HAZ	11-Feb-14	11-Feb-16	4
40752	WASTE IS GENERATED IN THE PROCESS OF PREPARATION OF METAL OXIDE NANOPARTICLES, SUCH AS TiO2 OR ZrO2. THE GENERAL REA...	HAZ	10-Feb-14	06-Feb-16	4
40753	WASTE IS GENERATED IN THE PROCESS OF PREPARATION OF METAL OXIDE NANOPARTICLES, SUCH AS TiO2 OR ZrO2. THE GENERAL REA...	HAZ	10-Feb-14	06-Feb-15	4
40755	SYNTHESIS OF NANOPARTICLES, NANOPARTICLE ARRAYS AND NANOPARTICLE COMPOSITE MATERIALS, NANOPARTICLE SURFACE MODIFICATI...	HAZ	10-Apr-14	10-Apr-16	4
40756	SYNTHESIS OF NANOPARTICLES, NANOPARTICLE ARRAYS AND NANOPARTICLE COMPOSITE MATERIALS, NANOPARTICLE SURFACE MODIFICATI...	HAZ	19-Jun-14	19-Jun-15	4
40766	IRRADIATED SUPERCONDUCTOR RESEARCH FILM AND TAPE SPECIMENS	MLLW	27-Feb-14	27-Feb-15	4
40770	ORGANOMETALLIC SYNTHESIS WITH RADIO NUCLIDES	MLLW	20-Feb-14	19-Feb-16	4
40772	WESTON CELL, WET-CHEMICAL CELL, FOR LABORATORY STANDARDS	HAZ	26-Feb-14	26-Feb-15	4
40773	SPENT NCRW SOLUTION	MLLW	27-Feb-14	24-Feb-16	4
40774	LAB TRASH (GLOVES, PLASTIC, GLASS, WOOD, SHARPS, WIPES, SANDPAPER, ETC) CONTAMINATED WITH SOLVENTS (METHANOL, ETHANOL...	HAZ	13-Mar-14	13-Mar-15	4
40777	SYNTHESIS OF NANOPARTICLES, NANOPARTICLE ARRAYS AND NANOPARTICLE COMPOSITE MATERIALS, NANOPARTICLE SURFACE MODIFICATI...	HAZ	13-Feb-14	10-Aug-16	4
40778	SYNTHESIS OF NANOPARTICLES, NANOPARTICLE ARRAYS AND NANOPARTICLE COMPOSITE MATERIALS, NANOPARTICLE SURFACE MODIFICATI...	HAZ	13-Feb-14	12-Feb-15	4
40780	3M FIRE SUPPRESSION FOAM CONCENTRATE (DARHT)	HAZ	26-Feb-14	25-Feb-16	4
40781	3M FIRE SUPPRESSION FOAM RINSATE (DARHT)	HAZ	26-Feb-14	26-Feb-15	4
40784	SILVER STAIN SOLUTION	HAZ	17-Apr-14	17-Apr-15	4
40785	USED BASE BATH	HAZ	20-Oct-14	20-Oct-15	4
40786	WIPE DOWN OF BAY 3	HAZ	22-Apr-14	22-Apr-15	4
40791	VARIOUS MATERIALS (FLUORESCENT LAMPS, RAGS, TAPE, THERMOMETERS) WITH MERCURY CONTAMINATION. ITEMS ARE NOT AMENABLE T...	MLLW	06-Mar-14	06-Mar-16	4
40792	WASTE RESULTS FROM SYNTHESIS AND PURIFICATION OF TRANSITION METAL AND MAIN GROUP COMPOUNDS.	HAZ	26-Feb-14	26-Feb-16	4
40793	WASTE RESULTS FROM SYNTHESIS OF ORGANOMETALLIC AND ORGANIC COMPOUNDS. PROCESSES INCLUDE DISTILLATION, FILTRATION, RE...	HAZ	26-Feb-14	13-Oct-16	1
40794	WASTE RESULTS FROM THE DEPOSITION OF COMPOUNDS ON POROUS MATERIALS	HAZ	26-Feb-14	26-Feb-16	4
40796	ACID WASTES FROM LABORATORY GLASSWARE CLEANING.	HAZ	19-Jun-14	19-Jun-16	4
40797	METAL CONTAINING HALOGENATED ORGANIC WASTE: THE WASTE CONTAINS BOTH HALOGENATED AND NON-HALOGENATED COMPOUNDS AND ME...	HAZ	01-May-14	01-May-16	4
40798	SOLID WASTE GENERATED BY SYNTHESIS AND CLEANING PROCESS INVOLVING ORGANIC AND ORGANOMETALLIC PROCEDURES. MAJOR CONSTI...	HAZ	30-Apr-14	30-Apr-16	4
40803	GEU PROPELLANT (NWC471:DOE-IMMS-2-1-1-7 ITERATION 5)	HAZ-TA16	07-May-14	17-Mar-16	4
40804	COMBINATION OF THREE SMALL CHEMICAL SYNTHESIS RESEARCH PROJECTS CONSISTING OF DISSOLVING SILVER/GOLD FOIL IN ACID TO ...	HAZ	03-Mar-14	03-Mar-16	4
40809	HPLC SOLVENT WASTE - PIGMENT ANALYSIS	HAZ	04-Apr-14	04-Apr-16	4
40816	WASTE FROM VARIOUS ANALYTICAL PROCEDURES	HAZ	11-Mar-14	11-Mar-15	4
40825	FIRE SQUIB VALVES (ACTUATORS)	MLLW	23-Mar-14	20-Mar-16	1
40826	MIXED HETEROGENEOUS DEBRIS WASTE CONTAINERS FROM TA-21	MLLW	25-Mar-14	20-Mar-17	1
40828	R-306 CHILLER WATER	HAZ	21-Mar-14	21-Mar-17	1
40837	MIXED HETEROGENEOUS DEBRIS WASTE CONTAINERS FROM TA-50	MLLW	27-Mar-14	27-Mar-16	1
40852	HIGH PRESSURE LIQUID CHROMATOGRAPHY PROCESS	HAZ	30-Apr-14	30-Apr-16	4
40855	SLUDGES CONTAINERS FROM TA-03 CMR, ABSORBED SLUDGES	MLLW	31-Mar-14	31-Mar-16	1
40856	FLUORESCENT LAMP FIXTURES WITH LIGHTS AND BALLASTS	MLLW	21-Apr-14	07-Apr-16	4
40858	SHARPS INCLUDING USED RAZOR BLADES AND SYRINGE NEEDLES ACCOMPANIED BY PLASTIC HOUSING AND POSSIBLY CONTAMINATED WITH ...	HAZ	19-Jun-14	19-Jun-16	4
40877	CLEAN UP OF A LEAD STORAGE AREA.	HAZ	15-Apr-14	15-Apr-15	4
40897	GENERAL LAB TRASH FROM SAMPLE PREP & EQUIPMENT MAINTENANCE THAT IS CONTAMINATED WITH SOLVENTS, DEGREASERS, EPOXIES, FO...	HAZ	20-May-14	16-May-16	4

**Appendix 1, Table 1**  
**List of Active Mixed and Hazardous Waste Stream Profiles Reviewed**

WS_ID	WASTE_STREAM_NAME	WTYPE_ABBR	ACTIVE_DATE	EXPIRE_DATE	STATUS
40900	EXPLOSIVE AND OTHER DYNAMIC EXPERIMENTS WITH LEAD/CHROMIUM/SELENIUM/SILVER AND BARIUM	HAZ	14-Apr-14	14-Apr-15	4
40902	MERCURY CONTAINING BROKEN THERMOMETER(S)	HAZ	16-Apr-14	09-Apr-16	1
40903	SYNTHESIS OF NANOPARTICLES, NANOPARTICLE ARRAYS AND NANOPARTICLE COMPOSITE MATERIALS, NANOPARTICLE SURFACE MODIFICATI...	HAZ	10-Apr-14	10-Apr-16	4
40907	GASOLINE AND ABSORBANT	HAZ	17-Apr-14	17-Apr-15	4
40909	MISCELLANEOUS ELECTRONICS AND LIGHTING COMPONENTS	MLLW	21-Apr-14	21-Apr-16	1
40910	LEAD CONTAMINATED BASECOURSE AND SOIL R306	HAZ	18-Apr-14	18-Apr-15	4
40913	MIXED HETEROGENEOUS DEBRIS WASTE CONTAINERS FROM TA-50	MLLW	21-Apr-14	21-Apr-16	4
40914	CO2 WITH TRACE H2S	HAZ	01-May-14	30-Apr-16	4
40936	LITHIUM ALUMINUM HYDRIDE WITH DIETHYL ETHER	HAZ	21-Oct-14	21-Oct-15	4
40937	HE CONTAMINATED DEBRIS	HAZ-DX	22-May-14	22-May-16	4
40939	LEAD SOLIDS AND LEAD CONTAMINATED MATERIALS FROM ROUTINE HOUSEKEEPING AND MAINTENANCE OPERATIONS	MLLW	05-May-14	01-May-16	1
40941	MISCELLANEOUS ELECTRONICS (RADIOACTIVELY CONTAMINATED)	MLLW	12-Jun-14	11-Jun-15	4
40954	ENAMEL PAINT FROM RCA'S	MLLW	15-May-14	14-May-16	1
41012	PYRIDINE AND MOLECULAR SIEVES	HAZ	07-Aug-14	07-Aug-15	4
41015	MACHINING OF MAGNESIUM STOCK MATERIAL	HAZ	16-May-14	16-May-15	4
41016	WASTE AZ 400K DEVELOPER USED FOR DEVELOPING AZ 5214 PHOTORESIST IN PHOTOLITHOGRAPHY OPERATIONS.	HAZ	16-May-14	16-May-15	4
41020	GEL PERMEATION WASTE SOLVENTS WITH TRACE EXPLOSIVES	HAZ	21-May-14		2
41023	GENERAL LAB TRASH FROM SAMPLE PREP & EQUIPMENT MAINTENANCE THAT IS CONTAMINATED WITH SOLVENTS, DEGREASERS, EPOXIES, FO..	HAZ	08-Oct-14	03-Oct-15	4
41027	HACH TEST KIT 8171	HAZ	22-May-14	22-May-16	1
41039	HACH TEST KIT 8149 SOLUTION	HAZ	03-Jun-14	29-May-16	1
41041	DECOMMISSIONING OF TWO VOLUME MEASURING INSTRUMENTS WITH REMOVAL OF MERCURY CONTAMINATED WASTE ITEMS	HAZ	03-Jun-14	03-Jun-15	4
41083	DEBRIS TRU GROUP B, KKG 06/11/2014-01	MTRU	11-Jun-14	12-Jun-16	4
41101	BARIUM INERT SIMULANT CONTAMINATED TRASH FROM MACHINING OPERATIONS.	HAZ	16-Sep-14	16-Sep-16	1
41151	ELECTRONICS, PRINTED CIRCUIT BOARDS, SMALL ELECTRICAL EQUIPMENT ITEMS, CRTS AND WIRING WITH SOLDER	MLLW	16-Jul-14	15-Jul-15	4
41182	PRECIPITATION OF PETN EXPLOSIVE AT TA-09-46.	HAZ	31-Jul-14	30-Jul-16	4
41183	OVER-PACKING OF LEGACY TRU WASTE STREAMS.	MTRU	31-Jul-14	31-Jul-16	4
41188	WASTE FROM VARIOUS ANALYTICAL PROCEDURES	HAZ	03-Sep-14	03-Sep-15	4
41189	OVER-PACKING OF LEGACY TRU WASTE STREAMS.	MTRU	31-Jul-14	31-Jul-16	4
41190	OVER-PACKING OF LEGACY TRU WASTE STREAMS.	MTRU	31-Jul-14	31-Jul-16	4
41222	ELECTROLYTE CONTAINING PERCHLORIC ACID AND ACETIC ACID, GLACIAL FROM ELECTROPOLISHING	HAZ	27-Aug-14	25-Aug-16	1
41223	METHANOL WASH FOR JET ELECTROPOLISHING PROCEDURE	HAZ	27-Aug-14	25-Aug-16	1
41229	LEAD GLASS-BROKEN	HAZ	03-Sep-14	03-Sep-15	4
41234	DEBRIS TRU GROUP C, KKG 8-28-14-01.	MTRU	29-Oct-14	04-Sep-16	4
41255	HACH TEST KITS 8507,8155,8146,8008,8023,8024,8185	HAZ	09-Sep-14	09-Sep-16	1
41307	PF11 FIRE SYSTEM UPGRADES	HAZ	27-Oct-14	27-Oct-15	4
41311	40-5 FIXER KODAK GBX	HAZ	15-Oct-14	15-Oct-16	1
41312	40-5 KODAK DEVELOPER SOLUTION	HAZ	15-Oct-14	15-Oct-16	1
41313	INORGANIC SALTS, OXIDES, ASH, AND OTHER HOMOGENEOUS INORGANIC CONSTITUENTS GROUP B, KKG 10-07-2014 01	MTRU	08-Oct-14	07-Oct-15	4
41314	HACH TEST KIT 8131 SOLUTION / HAZ	HAZ	21-Nov-14	14-Oct-16	1
41319	SULFURIC ACID SOLUTION	HAZ	17-Oct-14	09-Oct-16	1
41320	PERCHLORIC/SULFURIC ACID SOLUTION	HAZ	31-Oct-14	30-Oct-16	1
41321	BROKEN MERCURY THERMOMETER	HAZ	08-Oct-14	08-Oct-16	1
41354	GENERAL LAB TRASH GENERATED FROM R&D.	HAZ	23-Oct-14	23-Oct-15	4
41358	BROMINE MICROBIOCIDES REMOVED FROM COOLING TOWER SYSTEM	HAZ	28-Oct-14	28-Oct-15	4
41361	LITHIUM ALUMINUM HYDRIDE WITH DIETHYL ETHER	HAZ	27-Oct-14	27-Oct-15	4
41362	PETROFLAG TEST REAGENT KIT (USED)	HAZ	28-Oct-14	28-Oct-16	1
41366	SAMARIUM-151	MLLW	06-Nov-14	10-Nov-15	4
41386	SPIN COATING ORGANIC POLYMER	HAZ	12-Nov-14	12-Nov-16	1
41387	SPIN COATING PEROVSKITE SOLAR CELL	HAZ	12-Nov-14	12-Nov-16	1
41398	EXCESS CHNO EXPLOSIVES - NO TNT, LEAD OR BARIUM	HAZ-DX	24-Nov-14	18-Nov-15	4
41399	LEGACY DIRT	MLLW	10-Dec-14	22-Apr-16	4
41402	HE CONTAMINATED DEBRIS	HAZ-DX	24-Nov-14	13-Nov-15	4
41407	ALL OF THE CHEMISTS IN THIS LAB POUR THEIR USED SOLVENT IN TO THE SILICA GEL. ONCE CONTAINER IS FULL IT IS ANALYZED F...	HAZ	24-Nov-14	24-Nov-15	4
41419	40-9 VESSEL CLEAN-OUT	HAZ	04-Dec-14	04-Dec-16	1
41420	BUSTED LEAD ACID BATTERY	HAZ	09-Dec-14	09-Dec-15	4
41421	"EMPTY" DRUMS WITH HOMOGENEOUS SOLIDS, LISTED & CHARACTERISTIC	TBD-LLW	08-Dec-14	08-Dec-16	1
41431	TRU SLUDGE	MTRU	03-Dec-14	03-Dec-15	4
41437	"EMPTY" DRUMS WITH HOMOGENEOUS SOLIDS, CHARACTERISTIC	TBD-LLW	08-Dec-14	08-Dec-16	1
41447	HACH TEST KIT 8171	HAZ	17-Dec-14	15-Dec-16	1
41580	REMOVAL OF PID (AEROSOL CANS) AND REPACKAGE	TBD-LLW	26-Feb-15	26-Feb-16	1



Appendix 1  
Heading Definitions for Table 1

<b>Definitions for Headings that are Included in Appendix 1, Table 1</b>	
<b>WS_ID</b>	WSP number -a unique waste stream identifier generated by the system.
<b>WASTE_STREAM_NAME</b>	A brief discription of the waste stream. A short name that will distinguish it from other waste stream profiles at the generating facility.
<b>WTYPE_ABBR</b>	Waste type abbreviation (e.g., TRU, MTRU, LLW, MLLW, HAZ, INDST).
<b>ACTIVE_DATE</b>	Date the WSP was activated. This is the first active date; it does not change if approvals are revoked or the profile extended. This value should correspond to the date that the final signature was provided for the waste stream.
<b>EXPIRE_DATE</b>	Date on which the waste stream approval expires. The system automatically populates this field based on the date of final approval (i.e., when all signators have provided their review/approval/certification).
<b>STATUS</b>	Record status (1= active/approved, 2= pending approval, 3= cancelled, 4 = void). A record status of void represents a record that was previously considered valid, and may still be considered or referenced for historical purposes prior to the inactivation date and time. A cancelled record is not available for use. It is equivalent to deleting the record. The default value is 2, pending approval.

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[illegible]

Appendix 1  
Header Definitions for Table2

Definitions for Headers that are Included in Appendix 1, Table 2	
<b>WS_ID</b>	WSP number - a unique waste stream identifier generated by the system.
<b>LEGACY_WPF_NO</b>	Number of legacy waste profile form.
<b>STATUS</b>	Record status (1= active/approved, 2= pending approval, 3= cancelled, 4 = void). A record status of void represents a record that was previously considered valid, and may still be considered or referenced for historical purposes prior to the inactivation date and time. A cancelled record is not available for use. It is equivalent to deleting the record. The default value is 2, pending approval.
<b>WTYPE_ABBR</b>	Waste type abbreviation (e.g., TRU, MTRU, LLW, MLLW, HAZ, INDST).
<b>FAC_ABBR</b>	Unique facility abbreviation (e.g., CMR, TA-55).
<b>UNIT_ABBR</b>	Service unit short name or abbreviation (e.g., CEMENT, PACKAGING, ASSAY, etc.). The short name or abbreviation must be unique within the defined facility (e.g., CMR).
<b>ACTIVE_DATE</b>	Date the WSP was activated. This is the first active date; it does not change if approvals are revoked or the profile extended. This value should correspond to the date that the final signature was provided for the waste stream.
<b>EXPIRE_DATE</b>	Date of expiration for the waste stream approval. The system will automatically populate this field based on the date of final approval (i.e., all signators have provided their review/approval/certification).
<b>LAST_ANNUAL_REVIEW</b>	Date of the last annual review. The date the WMC/generator last reviewed the waste stream profile information and extended the expiration date.
<b>WIPP_WS_IDS</b>	The DOE baseline inventory report (BIR) waste stream identifier (e.g., LA-TA-55-19) assigned to containers that remain in inventory at LANL and are associated with the waste stream profile.
<b>CCP_WS_IDS</b>	The CCP waste stream identifier (e.g., LA-MHD02.001) assigned to containers that remain in inventory at LANL and are associated with the waste stream profile.
<b>ANCILLARY_WTYPES</b>	Ancillary waste types associated with the waste stream (e.g., Beryllium, Asbestos-Friable, etc.).
<b>MATRIX_CODES</b>	Baseline inventory report (BIR) waste matrix codes (e.g., S5400) assigned to containers that remain in inventory at LANL and are associated with the waste stream profile.
<b>EPA_CODES</b>	RCRA hazardous waste code associated with the waste stream profile.
<b>CON_PARAMS</b>	Container parameters (e.g., free liquids, nitrate salts, etc.) assigned to containers that remain in inventory at LANL and are associated with the waste stream profile.
<b>WORKPATHS</b>	Active container work paths (e.g., "CON-HAZ, "ITEM-HAZ") associated with the waste stream profile.
<b>DOT_ID_NOS</b>	DOT identification number (e.g., UN1088) assigned to containers that remain in inventory at LANL and are associated with the waste stream profile.
<b>CHAR_METHODS</b>	The methods of waste characterization (e.g., sampling and analysis, acceptable knowledge (AK), material safety data sheet [MSDS], etc.) and references to supporting documentation or analytical results.
<b>WASTE_STREAM_NAME</b>	Short waste stream name that will distinguish it from other waste stream profiles at the generating facility.
<b>COMPOSITION_DESC</b>	Waste stream composition based on AK or sample results. This accounts for 100% of the waste (including inerts), and all chemical constituents not addressed in the hazardous constituent or underlying hazardous constituent descriptions.

UNCLAS_WFV_NO	WASTE_APPR	FAA_ABBR	UNIT_ABBR	ACTIVE_DATE	EXPIRE_DATE	LAST_ANNUAL_REVIEW	WFPV_WFV_IDS	COP_WFV_IDS	ANGLIARY_WFVYES	MATRIX_CODES	EPACODES	CON_PARAMS	WORKNOTES	DOT_ID_NOS	CHAL_METHODS	WASTE_STREAM_NAME	COMPOSITION_DESC
438	9279	MTRU	55-PFA	PACK ITEMS	2007-11-07	2016-08-17	2015-05-18				0004.0001.0001.0007.0008.0009.0010.0011.0012.0013.0014.0015.0016.0017.0018.0019.0020.0021.0022.0023.0024.0025.0026.0027.0028.0029.0030.0031.0032.0033.0034.0035.0036.0037.0038.0039.0040.0041.0042.0043.0044.0045.0046.0047.0048.0049.0050.0051.0052.0053.0054.0055.0056.0057.0058.0059.0060.0061.0062.0063.0064.0065.0066.0067.0068.0069.0070.0071.0072.0073.0074.0075.0076.0077.0078.0079.0080.0081.0082.0083.0084.0085.0086.0087.0088.0089.0090.0091.0092.0093.0094.0095.0096.0097.0098.0099.0100.0101.0102.0103.0104.0105.0106.0107.0108.0109.0110.0111.0112.0113.0114.0115.0116.0117.0118.0119.0120.0121.0122.0123.0124.0125.0126.0127.0128.0129.0130.0131.0132.0133.0134.0135.0136.0137.0138.0139.0140.0141.0142.0143.0144.0145.0146.0147.0148.0149.0150.0151.0152.0153.0154.0155.0156.0157.0158.0159.0160.0161.0162.0163.0164.0165.0166.0167.0168.0169.0170.0171.0172.0173.0174.0175.0176.0177.0178.0179.0180.0181.0182.0183.0184.0185.0186.0187.0188.0189.0190.0191.0192.0193.0194.0195.0196.0197.0198.0199.0200.0201.0202.0203.0204.0205.0206.0207.0208.0209.0210.0211.0212.0213.0214.0215.0216.0217.0218.0219.0220.0221.0222.0223.0224.0225.0226.0227.0228.0229.0230.0231.0232.0233.0234.0235.0236.0237.0238.0239.0240.0241.0242.0243.0244.0245.0246.0247.0248.0249.0250.0251.0252.0253.0254.0255.0256.0257.0258.0259.0260.0261.0262.0263.0264.0265.0266.0267.0268.0269.0270.0271.0272.0273.0274.0275.0276.0277.0278.0279.0280.0281.0282.0283.0284.0285.0286.0287.0288.0289.0290.0291.0292.0293.0294.0295.0296.0297.0298.0299.0300.0301.0302.0303.0304.0305.0306.0307.0308.0309.0310.0311.0312.0313.0314.0315.0316.0317.0318.0319.0320.0321.0322.0323.0324.0325.0326.0327.0328.0329.0330.0331.0332.0333.0334.0335.0336.0337.0338.0339.0340.0341.0342.0343.0344.0345.0346.0347.0348.0349.0350.0351.0352.0353.0354.0355.0356.0357.0358.0359.0360.0361.0362.0363.0364.0365.0366.0367.0368.0369.0370.0371.0372.0373.0374.0375.0376.0377.0378.0379.0380.0381.0382.0383.0384.0385.0386.0387.0388.0389.0390.0391.0392.0393.0394.0395.0396.0397.0398.0399.0400.0401.0402.0403.0404.0405.0406.0407.0408.0409.0410.0411.0412.0413.0414.0415.0416.0417.0418.0419.0420.0421.0422.0423.0424.0425.0426.0427.0428.0429.0430.0431.0432.0433.0434.0435.0436.0437.0438.0439.0440.0441.0442.0443.0444.0445.0446.0447.0448.0449.0450.0451.0452.0453.0454.0455.0456.0457.0458.0459.0460.0461.0462.0463.0464.0465.0466.0467.0468.0469.0470.0471.0472.0473.0474.0475.0476.0477.0478.0479.0480.0481.0482.0483.0484.0485.0486.0487.0488.0489.0490.0491.0492.0493.0494.0495.0496.0497.0498.0499.0500.0501.0502.0503.0504.0505.0506.0507.0508.0509.0510.0511.0512.0513.0514.0515.0516.0517.0518.0519.0520.0521.0522.0523.0524.0525.0526.0527.0528.0529.0530.0531.0532.0533.0534.0535.0536.0537.0538.0539.0540.0541.0542.0543.0544.0545.0546.0547.0548.0549.0550.0551.0552.0553.0554.0555.0556.0557.0558.0559.0560.0561.0562.0563.0564.0565.0566.0567.0568.0569.0570.0571.0572.0573.0574.0575.0576.0577.0578.0579.0580.0581.0582.0583.0584.0585.0586.0587.0588.0589.0590.0591.0592.0593.0594.0595.0596.0597.0598.0599.0600.0601.0602.0603.0604.0605.0606.0607.0608.0609.0610.0611.0612.0613.0614.0615.0616.0617.0618.0619.0620.0621.0622.0623.0624.0625.0626.0627.0628.0629.0630.0631.0632.0633.0634.0635.0636.0637.0638.0639.0640.0641.0642.0643.0644.0645.0646.0647.0648.0649.0650.0651.0652.0653.0654.0655.0656.0657.0658.0659.0660.0661.0662.0663.0664.0665.0666.0667.0668.0669.0670.0671.0672.0673.0674.0675.0676.0677.0678.0679.0680.0681.0682.0683.0684.0685.0686.0687.0688.0689.0690.0691.0692.0693.0694.0695.0696.0697.0698.0699.0700.0701.0702.0703.0704.0705.0706.0707.0708.0709.0710.0711.0712.0713.0714.0715.0716.0717.0718.0719.0720.0721.0722.0723.0724.0725.0726.0727.0728.0729.0730.0731.0732.0733.0734.0735.0736.0737.0738.0739.0740.0741.0742.0743.0744.0745.0746.0747.0748.0749.0750.0751.0752.0753.0754.0755.0756.0757.0758.0759.0760.0761.0762.0763.0764.0765.0766.0767.0768.0769.0770.0771.0772.0773.0774.0775.0776.0777.0778.0779.0780.0781.0782.0783.0784.0785.0786.0787.0788.0789.0790.0791.0792.0793.0794.0795.0796.0797.0798.0799.0800.0801.0802.0803.0804.0805.0806.0807.0808.0809.0810.0811.0812.0813.0814.0815.0816.0817.0818.0819.0820.0821.0822.0823.0824.0825.0826.0827.0828.0829.0830.0831.0832.0833.0834.0835.0836.0837.0838.0839.0840.0841.0842.0843.0844.0845.0846.0847.0848.0849.0850.0851.0852.0853.0854.0855.0856.0857.0858.0859.0860.0861.0862.0863.0864.0865.0866.0867.0868.0869.0870.0871.0872.0873.0874.0875.0876.0877.0878.0879.0880.0881.0882.0883.0884.0885.0886.0887.0888.0889.0890.0891.0892.0893.0894.0895.0896.0897.0898.0899.0900.0901.0902.0903.0904.0905.0906.0907.0908.0909.0910.0911.0912.0913.0914.0915.0916.0917.0918.0919.0920.0921.0922.0923.0924.0925.0926.0927.0928.0929.0930.0931.0932.0933.0934.0935.0936.0937.0938.0939.0940.0941.0942.0943.0944.0945.0946.0947.0948.0949.0950.0951.0952.0953.0954.0955.0956.0957.0958.0959.0960.0961.0962.0963.0964.0965.0966.0967.0968.0969.0970.0971.0972.0973.0974.0975.0976.0977.0978.0979.0980.0981.0982.0983.0984.0985.0986.0987.0988.0989.0990.0991.0992.0993.0994.0995.0996.0997.0998.0999.1000.1001.1002.1003.1004.1005.1006.1007.1008.1009.1010.1011.1012.1013.1014.1015.1016.1017.1018.1019.1020.1021.1022.1023.1024.1025.1026.1027.1028.1029.1030.1031.1032.1033.1034.1035.1036.1037.1038.1039.1040.1041.1042.1043.1044.1045.1046.1047.1048.1049.1050.1051.1052.1053.1054.1055.1056.1057.1058.1059.1060.1061.1062.1063.1064.1065.1066.1067.1068.1069.1070.1071.1072.1073.1074.1075.1076.1077.1078.1079.1080.1081.1082.1083.1084.1085.1086.1087.1088.1089.1090.1091.1092.1093.1094.1095.1096.1097.1098.1099.1100.1101.1102.1103.1104.1105.1106.1107.1108.1109.1110.1111.1112.1113.1114.1115.1116.1117.1118.1119.1120.1121.1122.1123.1124.1125.1126.1127.1128.1129.1130.1131.1132.1133.1134.1135.1136.1137.1138.1139.1140.1141.1142.1143.1144.1145.1146.1147.1148.1149.1150.1151.1152.1153.1154.1155.1156.1157.1158.1159.1160.1161.1162.1163.1164.1165.1166.1167.1168.1169.1170.1171.1172.1173.1174.1175.1176.1177.1178.1179.1180.1181.1182.1183.1184.1185.1186.1187.1188.1189.1190.1191.1192.1193.1194.1195.1196.1197.1198.1199.1200.1201.1202.1203.1204.1205.1206.1207.1208.1209.1210.1211.1212.1213.1214.1215.1216.1217.1218.1219.1220.1221.1222.1223.1224.1225.1226.1227.1228.1229.1230.1231.1232.1233.1234.1235.1236.1237.1238.1239.1240.1241.1242.1243.1244.1245.1246.1247.1248.1249.1250.1251.1252.1253.1254.1255.1256.1257.1258.1259.1260.1261.1262.1263.1264.1265.1266.1267.1268.1269.1270.1271.1272.1273.1274.1275.1276.1277.1278.1279.1280.1281.1282.1283.1284.1285.1286.1287.1288.1289.1290.1291.1292.1293.1294.1295.1296.1297.1298.1299.1300.1301.1302.1303.1304.1305.1306.1307.1308.1309.1310.1311.1312.1313.1314.1315.1316.1317.1318.1319.1320.1321.1322.1323.1324.1325.1326.1327.1328.1329.1330.1331.1332.1333.1334.1335.1336.1337.1338.1339.1340.1341.1342.1343.1344.1345.1346.1347.1348.1349.1350.1351.1352.1353.1354.1355.1356.1357.1358.1359.1360.1361.1362.1363.1364.1365.1366.1367.1368.1369.1370.1371.1372.1373.1374.1375.1376.1377.1378.1379.1380.1381.1382.1383.1384.1385.1386.1387.1388.1389.1390.1391.1392.1393.1394.1395.1396.1397.1398.1399.1400.1401.1402.1403.1404.1405.1406.1407.1408.1409.1410.1411.1412.1413.1414.1415.1416.1417.1418.1419.1420.1421.1422.1423.1424.1425.1426.1427.1428.1429.1430.1431.1432.1433.1434.1435.1436.1437.1438.1439.1440.1441.1442.1443.1444.1445.1446.1447.1448.1449.1450.1451.1452.1453.1454.1455.1456.1457.1458.1459.1460.1461.1462.1463.1464.1465.1466.1467.1468.1469.1470.1471.1472.1473.1474.1475.1476.1477.1478.1479.1480.1481.1482.1483.1484.1485.1486.1487.1488.1489.1490.1491.1492.1493.1494.1495.1496.1497.1498.1499.1500.1501.1502.1503.1504.1505.1506.1507.1508.1509.1510.1511.1512.1513.1514.1515.1516.1517.1518.1519.1520.1521.1522.1523.1524.1525.1526.1527.1528.1529.1530.1531.1532.1533.1534.1535.1536.1537.1538.1539.1540.1541.1542.1543.1544.1545.1546.1547.1548.1549.1550.1551.1552.1553.1554.1555.1556.1557.1558.1559.1560.1561.1562.1563.1564.1565.1566.1567.1568.1569.1570.1571.1572.1573.1574.1575.1576.1577.1578.1579.1580.1581.1582.1583.1584.1585.1586.1587.1588.1589.1590.1591.1592.1593.1594.1595.1596.1597.1598.1599.1600.1601.1602.1603.1604.1605.1606.1607.1608.1609.1610.1611.1612.1613.1614.1615.1616.1617.1618.1619.1620.1621.1622.1623.1624.1625.1626.1627.1628.1629.1630.1631.1632.1633.1634.1635.1636.1637.1638.1639.1640.1641.1642.1643.1644.1645.1646.1647.1648.1649.1650.1651.1652.1653.1654.1655.1656.1657.1658.1659.1660.1661.1662.1663.1664.1665.1666.1667.1668.1669.1670.1671.1672.1673.1674.1675.1676.1677.1678.1679.1680.1681.1682.1683.1684.1685.1686.1687.1688.1689.1690.1691.1692.1693.1694.1695.1696.1697.1698.1699.1700.1701.1702.1703.1704.1705.1706.1707.1708.1709.1710.1711.1712.1713.1714.1715.1716.1717.1718.1719.1720.1721.1722.1723.1724.1725.1726.1727.1728.1729.1730.1731.1732.1733.1734.1735.1736.1737.1738.1739.1740.1741.1742.1743.1744.1745.1746.1747.1748.1749.1750.1751.1752.1753.1754.1755.1756.1757.1758.1759.1760.1761.1762.1763.1764.1765.1766.1767.1768.1769.1770.1771.1772.1773.1774.1775.1776.1777.1778.1779.1780.1781.1782.1783.1784.1785.1786.1787.1788.1789.1790.1791.1792.1793.1794.1795.1796.1797.1798.1799.1800.1801.1802.1803.1804.1805.1806.1807.1808.1809.1810.1811.1812.1813.1814.1815.1816.1817.1818.1819.1820.1821.1822.1823.1824.1825.1826.1827.1828.1829.1830.1831.1832.1833.1834.1835.1836.1837.1838.1839.1840.1841.1842.1843.1844.1845.1846.1847.1848.1849.1850.1851.1852.1853.1854.1855.1856.1857.1858.1859.1860.1861.1862.1863.1864.1865.1866.1867.1868.1869.1870.1871.1872.1873.1874.1875.1876.1877.1878.1879.1880.1881.1882.1883.1884.1885.1886.1887.1888.1889.1890.1891.1892.1893.1894.1895.1896.1897.1898.1899.1900.1901.1902.1903.1904.1905.1906.1907.1908.1909.1910.1911.1912.1913.1914.1915.1916.1917.1918.1919.1920.1921.1922.1923.1924.1925.1926.1927.1928.1929.1930.1931.1932.1933.1934.1935.1936.1937.1938.1939.1940.1941.1942.1943.1944.1945.1946.1947.1948.1949.1950.1951.1952.1953.1954.1955.1956.1957.1958.1959.1960.1961.1962.1963.1964.1965.1966.1967.1968.1969.1970.1971.1972.1973.1974.1975.1976.1977.1978.1979.1980.1981.1982.1983.1984.1985.1986.1987.1988.1989.1990.1991.1992.1993.1994.1995.1996.1997.1998.1999.2000.2001.2002.2003.2004.2005.2006.2007.2008.2009.2010.2011.2012.2013.2014.2015.2016.2017.2018.2019.2020.2021.2022.2023.2024.2025.2026.2027.2028.2029.2030.2031.2032.2033.2034.2035.2036.2037.2038.2039.2040.2041.2042.2043.2044.2045.2046.2047.2048.2049.2050.2051.2052.2053.2054.2055.2056.2057.2058.2059.2060.2061.2062.2063.2064.2065.2066.2067.2068.2069.2070.2071.2072.2073.2074.2075.2076.2077.2078.2079.2080.2081.2082.2083.2084.2085.2086.2087.2088.2089.2090.2091.2092.2093.2094.2095.2096.2097.2098.2099.2100.2101.2102.2103.2104.2105.2106.2107.2108.2109.2110.2111.2112.2113.2114.2115.2116.2117.2118.2119.2120.2121.2122.2123.2124.2125.2126.2127.2128.2129.2130.2131.2132.2133.2134.2135.2136.2137.2138.2139.2140.2141.2142.2143.2144.2145.2146.2147.2148.2149.2150.2151.2152.2153.2154.2155.2156.2157.2158.2159.2160.2161.2162.2163.2164.2165.2166.2167.2168.2169.2170.2171.2172.2173.2174.2175.2176.2177.2178.2179.2180.2181.2182.2183.2184.2185.2186.2187.2188.2189.2190.2191.2192.2193.2194.2195.2196.2197.2198.2199.2200.2201.2202.2203.2204.2205.2206.2207.2208.2209.2210.2211.2212.2213.2214.2215.2216.2217.2218.2219.2220.2221.2222.2223.2224.2225.2226.2227.2228.2229.2230.2231.2232.2233.2234.2235.2236.2237.2238.2239.2240.2241.2242.2243.2244.2245.2246.2247.2248.2249.2250.2251.2252.2253.2254.2255.2256.2257.2258.2259.2260.2261.2262.2263.2264.2265.2266.2267.2268.2269.2270.2271.2272.2273.2274.2275.2276.2277.2278.2279.2280.2281.2282.2283.2284.2285.2286.2287.2288.2289.2290.2291.2292.2293.2294.2295.2296.2297.2298.2299.2300.2301.2302.2303.2304.2305.2306.2307.2308.2309.2310.2311.2312.2313.2314.2315.2316.2317.2318.2319.2320.2321.2322.2323.2324.2325.2326.2327.2328.2329.2330.2331.2332.2333.2334.2335.2336.2337.2338.2339.2340.2341.2342.2343.2344.2345.2346.2347.2348.2349.2350.2351.2352.2353.2354.2355.2356.2357.2358.2359.2360.2361.2362.2363.2364.2365.2366.2367.2368.2369.2370.2371.2372.2373.2374.2375.2376.2377.2378.2379.2380.2381.2382.2383.2384.2385.2386.2387.2388.2389.2390.2391.2392.2393.2394.2395.2396.2397.2398.2399.2400.2401.2402.2403.2404.2405.2406.2407.2408.2409.2410.2411.2412.2413.2414.2415.2416.2417.2418.2419.2420.2421.2422.2423.2424.2425						

[illegible]



[illegible]

[illegible]

42676		HAZ	46	000011	2016-02-01	2017-01-27					0001,0022,P002,P003,P005		ITEM HAZ,CON HAZ	UN1992	ACCEPTABLE KNOWLEDGE DOCUMENTATION	SLIDE WASHING SOLVENTS	67-64-1 - Acetone [1.0E+01 to 2.0E+01 wt%],64-73-5 - Ethanol [1.0E+01 to 2.0E+01 wt%],67-56-1 - Methanol [1.0E+00 to 1.0E+00 wt%],75-09-2 - Methylene chloride [1.0E+00 to 5.0E+00 wt%],108-98-3 - Toluene [1.0E+01 to 2.0E+00 wt%],108-11-3 - N,N-Dimethylformamide [1.0E+01 to 2.0E+00 wt%],7813-13-42-5 - Hexanes [1.0E+00 to 1.0E+01 wt%],141-78-6 - Ethyl acetate [1.0E+00 to 1.0E+01 wt%],67-63-0 - Alcohol(isopropyl) [1.0E+00 to 5.0E+00 wt%],7732-18-5 - Water [1.0E+01 to 1.0E+00 wt%],Lipoidine [1.0E+01 to 1.0E+01 to 5.0E+00 wt%],N-methylpyrrolidone [5.0E+00 to 1.0E+00 wt%],Acetone/ethanol blend [1.0E+01 to 1.0E+00 wt%],
42719		HAZ	89	000102	2016-01-25	2017-01-20					0001		CON HAZ,ITEM HAZ		MATERIAL SAFETY DATA SHEET (MSDS)	METALCON (S-SERIES) GETTABLE SILVER INKS	100-25-1 - Ethylene glycol [1.0E+00 to 1.0E+01 wt%],P002c,inject cartridges [4.0E+01 to 5.0E+01 wt%],Fiber Pads [1.0E+00 to 1.0E+01 wt%],Syringes (blunt tip) [1.0E+01 to 2.0E+01 wt%],Wipes [1.0E+00 to 1.0E+01 wt%],Plastic Vial [1.0E+00 to 5.0E+00 wt%],20 micron syringe filter [5.0E+00 to 1.0E+01 wt%],
42757		HAZ	22	000001	2016-02-02	2017-02-01					0002		CON HAZ	UN1824	MATERIAL SAFETY DATA SHEET (MSDS)	RECIRCULATING WATER WITH SODIUM HYDROXIDE FROM T4-22 ETCHING SHOP	7732-18-5 - Water [0.0E+00 to 1.0E+02 wt%],1310-73-2 - Sodium hydroxide [3.0E+03 to 6.0E+03 wt%],Poly film residue [1.0E+04 to 1.0E+03 wt%]

Appendix 1  
Header Definitions for Table3

Definitions for Headers that are Included in Appendix 1, Table 3	
<b>WS_ID</b>	WSP number - a unique waste stream identifier generated by the system.
<b>LEGACY_WPF_NO</b>	Number of legacy waste profile form.
<b>WTYPE_ABBR</b>	Waste type abbreviation (e.g., TRU, MTRU, LLW, MLLW, HAZ, INDST).
<b>FAC_ABBR</b>	Unique facility abbreviation (e.g., CMR, TA-55).
<b>UNIT_ABBR</b>	Service unit short name or abbreviation (e.g., CEMENT, PACKAGING, ASSAY, etc.). The short name or abbreviation must be unique within the defined facility (e.g., CMR).
<b>ACTIVE_DATE</b>	Date the WSP was activated. This is the first active date; it does not change if approvals are revoked or the profile extended. This value should correspond to the date that the final signature was provided for the waste stream.
<b>EXPIRE_DATE</b>	Date of expiration for the waste stream approval. The system will automatically populate this field based on the date of final approval (i.e., all signators have provided their review/approval/certification).
<b>LAST_ANNUAL_REVIEW</b>	Date of the last annual review. The date the WMC/generator last reviewed the waste stream profile information and extended the expiration date.
<b>WIPP_WS_IDS</b>	The DOE baseline inventory report (BIR) waste stream identifier (e.g., LA-TA-55-19) assigned to containers that remain in inventory at LANL and are associated with the waste stream profile.
<b>CCP_WS_IDS</b>	The CCP waste stream identifier (e.g., LA-MHD02.001) assigned to containers that remain in inventory at LANL and are associated with the waste stream profile.
<b>ANCILLARY_WTYPES</b>	Ancillary waste types associated with the waste stream (e.g., Beryllium, Asbestos-Friable, etc.).
<b>MATRIX_CODES</b>	Baseline inventory report (BIR) waste matrix codes (e.g., S5400) assigned to containers that remain in inventory at LANL and are associated with the waste stream profile.
<b>EPA_CODES</b>	RCRA hazardous waste code associated with the waste stream profile.
<b>CON_PARAMS</b>	Container parameters (e.g., free liquids, nitrate salts, etc.) assigned to containers that remain in inventory at LANL and are associated with the waste stream profile.
<b>WORKPATHS</b>	Active container work paths (e.g., "CON-HAZ, "ITEM-HAZ") associated with the waste stream profile.
<b>DOT_ID_NOS</b>	DOT identification number (e.g., UN1088) assigned to containers that remain in inventory at LANL and are associated with the waste stream profile.
<b>CHAR_METHODS</b>	The methods of waste characterization (e.g., sampling and analysis, acceptable knowledge (AK), material safety data sheet [MSDS], etc.) and references to supporting documentation or analytical results.
<b>WASTE_STREAM_NAME</b>	Short waste stream name that will distinguish it from other waste stream profiles at the generating facility.
<b>COMPOSITION_DESC</b>	Waste stream composition based on AK or sample results. This accounts for 100% of the waste (including inerts), and all chemical constituents not addressed in the hazardous constituent or underlying hazardous constituent descriptions.