

EFFECTIVE DATE: 1/31/06  
EXPIRATION DATE: 12/31/06

## Memorandum of Understanding (MOU)

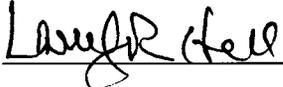
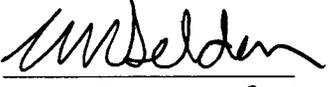
between

Waste Management Area Project (WMAP)

and

Savannah River National Laboratory (SRNL)

For the Establishment of Protocols for Transfer of TRU Waste between the  
SRNL and WMAP for the Purpose of Repackaging at the  
Savannah River National Laboratory

	Signature	Date
Prepared by: SRNL Program Lead (L. R. Hill)		<u>1/23/06</u>
Approvals: SRNL Research Operations Manager (E.R. Selden)		<u>1/24/06</u>
WMAP Operations Manager (P. D. Hunt)		<u>2/1/06</u>
SRNL Chief Engineer (F. M. Grimm)		<u>1/24/06</u>

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## 1.0 Purpose

The purpose of this Memorandum of Understanding (MOU) is to identify the Waste Management Area Project (WMAP) and the Savannah River National Laboratory (SRNL) responsibilities associated with the transfer of TRU and mixed TRU waste drums associated with the repackaging campaign between facilities and the processing of the repackaged drums in the SRNL Laboratory.

This MOU will be reviewed, and revised as needed, after one year or at an earlier time agreed to by both parties.

## 2.0 Scope

SRNL will provide a service to WMAP by receiving transuranic (TRU) waste drums for the purpose of removing Waste Isolation Pilot Plant (WIPP)-prohibited items and returning the processed drums and all WIPP-prohibited items removed to allow SW to later ship the drums to WIPP.

This agreement applies to the operational agreements and transfer of TRU or mixed TRU waste drums between E-Area and SRNL. This includes drums to be processed, additional TRU or mixed TRU waste generated during the repackaging efforts, and two prohibited item drums for aerosol cans – empty and non-empty.

This MOU does not apply to routine TRU or mixed TRU waste generated by the SRNL facility.

## 3.0 Terms and Definitions

DSA – Documented Safety Analysis  
FGE - Fissile Gram Equivalents  
JCO – Justification for Continued Operation  
NRT – Non-Routine Transportation Document  
PEC - Plutonium Equivalent Curies  
RTR – Real Time Radiography  
SRNL– Savannah River National Laboratory  
TRU – Transuranic  
USQ – Unreviewed Safety Question  
WAD Work Authorization Document 112  
WIPP – Waste Isolation Pilot Plant  
WMAP – Waste Management Area Project

## 4.0 Equipment

- 4.1 WMAP will provide Sealand containers for conveyance of TRU drums to and from SRNL during the remediation/repackaging operation. An enclosed van bodied truck will be used when Sealand containers are not required.

## 5.0 Requirements/Responsibilities

- 5.1 WMAP shall determine through site contract objectives and commitments when SRNL TRU Drum Remediation support is no longer required.
  - 5.2 Funding will be provided to SRNL by WMAP for the repackaging operation in accordance with the approved WAD and any subsequent approved modifications.
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- 5.3 WMAP will provide SRNL a "Candidate Drum List" whereby SRNL will select a designated transfer of drums based on SRNL Safety Basis and JCO requirements.
- 5.4 All drums will be transferred between WMAP and SRNL via a Sealand container or enclosed van bodied truck either palletized or unpalletized as authorized per OPAF. Drums shall not be stacked when transported to or from SRNL
- 5.5 WMAP will remove all TIDs from drums before shipping and ensure that the Sealand container has a TID installed before transporting to SRNL. Transport driver shall be "L" or "Q" cleared to eliminate the need for a WSI security escort into the SRNL Technical Area.
- 5.6 Radiological Control procedure 5Q1.1, procedure 522, "Handling Radioactive Material", will be followed for all transfers between WMAP and SRNL.
- 5.7 WMAP will not send "Np Only" waste from HB-Line or F-Area Materials (FAMS) to SRNL due to potentially high dose rates.
- 5.8 All transfers to and from SRNL and WMAP will be coordinated between, and pre-approved by, the following points of contact:

SRNL

Primary contact: TRU Repackaging Coordinator, 725-3243, pager 11978.

Secondary contact: SRNL TRU Operations Job Lead, 725-3656, pager 19287

WMAP

Primary contact: TRU Operations FLM, 507-5062

Secondary contact: SWMF Shift Manager, 507-3289

- 5.9 WMAP will provide to SRNL the following data for each drum prior to shipment:

RTR Quick Screen Data

- Specify prohibited items(s)
- Specify volume of free liquid  $\leq 5$  gallons per NCSE document N-NCS-A-00015, Ref. 2.

WMAP IQ3 Assay confirmatory measurements

Ci and gram quantities for the following; Am-241, Am-243, Cm-244, U-235, U-238, U-233, Np-237, Pu-239, Pu-241, Pu-238, Pu-242, Cf-252

Ci and gram quantities for all measured radionuclides

Uncertainty data from the 1Q3 measurement

Dose Rate at 30 and 5 cms

Confirmation that each drum:

- Does not exceed Lower Flammability Limit (LFL) (Valid head space gas sampling result)
- Contains no evidence of Beryllium
- Has no more than 5 gallons of free liquids
- Contains no evidence of impenetrables
- Contains no evidence of pyrophoric or explosive items
- Has reached equilibrium after purging (Drum aging criteria)

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All drums to be sent to SRNL for remediation shall be sixteen (16) PEC Pu-239 or less. Only drums with vented drum liner lids (or no drum liner lid present) that have been evaluated by WMAP for headspace LFL and determined to be below LFL shall be accepted into SRNL Laboratory.

- 5.11 SRNL will process prohibited items (free liquids up to 5 gallons, aerosol cans, and containerized liquids) using Research Operations Department (formally known as Laboratory Services Department) operating procedure "TRU Drum Remediation Process, SP-18-002. SRNL will remove the entire contents of each drum to address additional prohibited items that may be found.
- 5.12 WMAP shall inspect drums prior to transfer to SRNL to ensure they are "Compliant" per the WMAP Container Management Plan. SRNL personnel shall inspect drums to confirm drum integrity as defined in the WMAP Container Management Plan. Drums found not to be in compliance shall be handled as "Suspect" drums, segregated and returned to WMAP. Once processed, the drums remain compliant unless other deficiencies are identified.
- 5.13 Suspect drums will be transferred from SRNL to WMAP with lid restraining controls (e.g., engineered box) in place. WMAP will maintain an engineered box, transport vehicle, and trained personnel to support discovery of a suspect drum in SRNL. WMAP personnel will respond promptly (in day light hours) to any suspect drum in SRNL. SRNL personnel will load (or assist in loading) suspect drums into an engineered box within the facility. WMAP will be responsible for loading suspect drums into the engineered box outside of the SRNL facility. WMAP will transport all engineered boxes back to WMAP. Once the suspect drum is placed in a covered facility the drum lid restraining controls may be removed.
- 5.14 WMAP will be the primary contact for all interfaces with the South Carolina Department of Health and Environmental Control (SCDHEC) resulting from the TRU Drum Remediation Operation.
- 5.15 SRNL will communicate all Site Item Reportability and Issue Management (SIRIM) events or other reportable issues with WMAP resulting from the TRU Waste Drum Remediation Operation.
- 5.16 WMAP will provide replacement filter vents for TRU drums, additional TRU waste drums, rings, and drum lids as needed.
- 5.17 SRNL transfer and operating procedures will receive WMAP review and concurrence initially and for all revisions via the existing SRNL procedure review and approval process. SRNL will provide WMAP with completed procedure attachments as identified in those procedures documenting the remediation process results, drum closure data, and contents of Prohibited Items drums upon return transfer of the remediated drums.  
  
The WMAP transfer procedure, reference 5, will receive SRNL review and concurrence initially and for all revisions via the WMAP procedure review and approval process.
- 5.19 Any job control waste generated by SRNL during the processing of these drums that is not placed into the parent or companion drum will be characterized by SRNL via WMAP approved Waste streams. Routine job control waste generated outside the glove boxes will be characterized and manifested using the SRNL "Room Waste" waste stream.

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- 5.20 Lexan gloveboxes, glovebox gloves and associated support equipment used during drum processing will be dismantled, characterized by SRNL via WMAP approved Waste streams and disposed of as appropriate.
- 5.21 SRNL will determine that an aerosol can is considered empty when liquid cannot be detected inside the can when tilted back and forth. Empty does not mean the can has been depressurized or is void of residual liquid. Aerosol cans removed during processing will be transferred to WMAP as "undergoing characterization" to be characterized via the WMAP characterization process. The WMAP Generator Certification Official (GCO) will provide SRNL Laboratory GCO with drum numbers for all prohibited item drums (e.g. aerosol cans) prior to their return to SW&I to ensure proper tracking at SW&I.
- 5.22 WMAP will support exercises/drills in SRNL to validate proficiency in responding to a suspect drum as mutually agreed to by both organizations.
- 5.23 Incidental liquid and free flowing liquid found in the drum/drum liner will be absorbed with poly pads (HAZMAT 301). No more than 10 pads will be placed in a single waste cut and the waste cuts will be placed in the top of the drum liner to prevent impenetrability.
- 5.24 WMAP has approved the absorbent material, Nochar, for treatment of containerized liquids and the procedure SRNL is using and will not hold SRNL responsible for any issues that may result from use of this material. WMAP is the CTF for any issues associated with the selection of absorbent material.
- 5.25 Free liquids are assumed to be water based on previous WMAP drum remediation experience and determined by head space gas sampling results. Only PIG Haz Mat pads MAT301, Absorbent sp-400 or equivalent shall be used to absorb free liquids.

## 6.0 Exceptions

N/A

## 7.0 References

- TRU Waste Drum Remediation Operation in Building 773-A (SRNL) Justification for Continued Operation, WSRC-TR-2005-00452
- 2 NCSE TRU Waste Drum Remediation at SRNL, N-NCS-A-00015
- 3 LSD TRU Drum Remediation Process procedure, SP-18-002
- 4 LSD Selection, Receipt, Internal Movement and OnSite Transfer of TRU Waste Drums for Remediation, SP-18-003
- 5 Shipment and Return of Drums with Prohibited Items to SRNL, SW15.3-SOP-SRNL-01
- 6 Onsite Package Authorization Form of Containers with Radioactive Liquid Contents (U), S-OPAF-G-00020
- 7 WMAP Container Management Plan OBU-GSE-2005-00040