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AUG 14 2014

NMED
Hazardous Waste Bureau

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Los Alamos
NATIONAL LABORATORY
EST 1943

Environmental Protection Division
Environmental Compliance Programs (ENV-CP)
PO Box 1663, K490
Los Alamos, New Mexico 87545
(505) 667-0666

National Nuclear Security Administration
Los Alamos Field Office, A316
3747 West Jemez Road
Los Alamos, New Mexico, 87545
(505) 667-5794/Fax (505) 667-5948

Date: AUG 14 2014
Symbol: ENV-DO-14-0217
LAUR: 14-26150
Locates Action No.: N/A

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

Dear Mr. Kieling:

Subject: Transmittal of Remediation and Repackaging Documentation for Nitrate Salt-Bearing Waste Containers – Package 2

The purpose of this letter is to transmit remediation and repackaging documentation as requested via electronic mail (email) by the New Mexico Environment Department (NMED) on June 10, 2014. Written submissions and twice weekly technical phone calls are conducted between the NMED; Los Alamos National Security, LLC (LANS); and the U.S. Department of Energy (DOE) as stipulated by the modified Administrative Order No. 5-19001 issued by the NMED. The documentation contained within Enclosure 1 partially addresses Item # 13 of the *Summary Chart - Requested Information/Pending Issues* included as part of the written daily submissions to the NMED from the DOE and LANS, the Permittees.

The June 10, 2014, email received from Tim Hall, NMED, included a request for additional information for 267 original nitrate salt-bearing waste containers generated by the Permittees and all resulting repackaged/remediated containers. Partial fulfillment of the request was submitted to the NMED on July 9, 2014 and was revised on July 17, 2014. This submittal includes remediation and repackaging documentation for daughter containers resulting from the repackaging and remeditation of the 267 original nitrate salt-bearing waste containers and is the second submittal in response to comment 5 in the June 10, 2014 email request. Because documentation to fulfill the request is still being compiled, the response to comment 5 of the email request will be transmitted in packages as they become available.

Enclosure 1 (LA-UR-14-26150) includes the pertinent documentation for nine of the original 267 parent waste containers and all associated daughter and granddaughter waste containers. The enclosed

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documentation for each parent waste container is separated by a tab and documentation for the daughter containers are highlighted within each tab by colored pages. These parent containers and their daughter and granddaughter containers were listed in the *Nitrate Salt Drums with Associated Waste Stream and Location Data for 267 Original Parent and 707 Current/Remediated Daughter Containers* table (as revised and submitted to the NMED on July 17, 2014).

If you have comments or questions regarding this submittal, please contact Mark P. Haagenstad at (505) 665-2014 or Gene E. Turner at (505) 667-5794.

Sincerely,

Alison M. Dorries
Division Leader
Environmental Protection Division
Los Alamos National Security LLC

Sincerely,

Gene E. Turner
Environmental Permitting Manager
Environmental Projects Office
Los Alamos Field Office
U.S. Department of Energy

AMD:GET:MPH:LVH/kt

Enclosures: (1) Remediation and Repacking Documentation for Nitrate Salt-Bearing Waste Containers – Package 2

Cy: Ryan Flynn, NMED, Santa Fe, NM, (E-File)
Tom Blaine, NMED, Santa Fe, NM, (E-File)
Steve Pullen, NMED/HWB, Santa Fe, NM, (E-File)
Timothy Hall, NMED/HWB, Santa Fe, NM, (E-File)
Trais Kliphuis, NMED, Santa Fe, NM, (E-File)
Peter Maggiore, NA-LA, (E-File)
Lisa Cummings, NA-LA, (E-File)
Gene E. Turner, NA-LA, (E-File)
Eric L. Trujillo, NA-LA, (E-File)
Kirsten Laskey, NA-LA, (E-File)
Carl A. Beard, PADOPS, (E-File to aosburn@lanl.gov)
Michael T. Brandt, ADESH, (E-File)
Raeanna R. Sharp-Geiger, ADESH, (E-File)
Alison M. Dorries, ENV-DO, (E-File)
Jeffery D. Mousseau, ADEP, (E-File)
Daniel R. Cox, ADEP, (E-File)
Victoria A. George, REG-DO, (E-File)

Cy (continued):
Deborah K. Woitte, LC-ESH, (E-File)
Debra S. Nevergold, LTP, (E-File)
Mark P. Haagenstad, ENV-CP, (E-File)
Luciana Vigil-Holterman, ENV-CP, (E-File)
lasomailbox@nnsa.doe.gov, (E-File)
locatesteam@lanl.gov, (E-File)
env-correspondence@lanl.gov, (E-File)

ENCLOSURE 1

Remediation and Repacking Documentation for Nitrate Salt-Bearing Waste Containers – Package 2

ENV-DO-14-0217

LA-UR-14-26150

Date: AUG 1 4 2014

	Intermediate Daughters	PKG_ID	Overpacked Into
S811872		93846	
S811872		93847	
S811872		93848	
S813223		93945	
S813223		93946	
S813223		93947	
S813471	68994	69520	
S813471	68994	69637	
S813471	68994	69641	
S813475		94227	
S813562		68302	SB02097
S813562		68303	SB02096
S813601		94144	SB02086
S813601		94145	SB02081
S813601		94146	
S813676		68541	
S813676		68559	
S814859		93962	
S814859		93965	
S815176		94225	

S811872

S811872

Contai[illegible] Profile 758392

File Options Reports Help

S811872

758392	TBD-TRU	T-TTRU-TEMP	Active	Decommissioned

- General Information
- Weights/Volumes
- Location
- Account Information
- Waste Material Parameters
- Layers of Confinement
- Prohibited Items
- EPA Codes
- UHC
- Radioassay
- Radiological Survey
- Payload Preparation
- Container Closure
- Materials Added
- TRU Information
- TRU Information (TSDF)
- Radiological Calculations
- Shipping Description
- Site Treatment Plan
- Pending Tasks
- Genealogy
- Container Tags
- Task History
- Documentation
- Comment Log
- Edit Log

Genealogy

S811872

S811872
- 93849 – EMPTY
- 93848
- 93847
- 93846

Task History

Transfer Details

Transfer Amount	Transfer Unit	Item	Measured Weight	Measured Wei...
33.33298516666...	%			

Working Copy
Date: 4-18-13a

ATTACHMENT 1
Page 1 of 4

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: S811872

6.2[4] Date Processed: 06-18-13

4.1[6][B] Processing Activity (EP-DIV-AP-0107):
☐ > 190 mrem/hr ☑ PID ☐ Split ☐ Repack

4.1[6][B] Prohibited Items:
☐ Sealed Containers > 4L ☑ Liquids ☐ Pressurized Containers ☐ N/A

4.1[6][B] Parent Waste Container RCRA Designations: D007, D009, D008

4.1[7] Activity Hazard Classification based on Anticipated Extremity Radiation Dose Rate:
☑ Moderate (≤ 10 rem/hr) ☐ High/Complex (> 10 rem/hr)

4.3[1]/4.3[2] ($) TA-50-69 is in the OPERATION or WARM STANDBY MODE (TSR 1.2) ☑ OPERATIONS ☐ WARM STANDBY ☐ N/A

4.3[4][B] Platform Scale: Equipment No.: 019066
Cal. Due Date: 07-31-13

4.3[5][B] ($) Three 1-Liter containers carbon spheroids or MET-L-X in WCG: (SAC 5.10.1.7.1) ☑ YES ☐ NO ☐ N/A

4.3[6] ($) Stationary Fire Watch has been established:
(> 300 PE-Ci Equivalent Combustible)
(SAC 5.10.1.7.2) N/A
(Initial and Date)

4.3[7 [A] Parent Waste Container degraded, loss of integrity, or weighs greater than 468 lb but less than or equal to 624 lb:
☐ YES ☐ NO ☑ N/A

4.3[8][D] WCG glove and bag-in/bag-out bag inspection: ☑ SAT ☐ UNSAT ☐ N/A

Performed By: James S. [illegible] 111602 / 06-18-13
Waste Handling Tech (print) / Signature Z# Date

ATTACHMENT 1
Page 2 of 4

4.1[6][B]	Parent Waste Container No.: S811872	
5.[18]	Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable:	405.1 lb
6.2[5][A]	Parent Drum Lead Blanket Weight (lb):	120.0 lb
6.2[5][B]/ 6.2[6]	Total Parent Drum Weight (lb)	525.1 lb
6.2[7]	($) Total Parent Drum Weight < 624 lb (SR 4.5.1):	☑ SAT ☐ UNSAT
6.2[28]	Approval to leave a parent drum attached to the WCG overnight:	

N/A / / /

EWMO-FOD (print) Signature Z # Date

ATTACHMENT 1
Page 3 of 4

4.1[6][B] Parent Waste Container No.: 501872

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	93846	93847	93848	N/A
10.1[4]	Daughter Drum Filter No. KU-605	~~Km-544~~	Km-533	Km-536	
10.1[4]	Daughter Drum Bag Filter No.	L-6813	L-6831	L-6826	
10.1[4]	Daughter Drum Purchase Order No.	501103	501103	501103	
10.1[13][C]	WCG Fire Watch Stationed		☐ YES	☐ NO	☒ N/A
10.1[14][C][d]3/11.1[3]	WCG Fire Watch Secured		☐ YES	☐ NO	☒ N/A
10.2[4]	POC bag-on bag: Manufacturer				N/A
	Model No.				
	Serial No.				
	Date of Manufacture				
10.2[5]	POC ID No				
10.2[7][B]/10.2[6]	POC Item Description				
10.2[13]	POC Assembly closed per Manufacturer's instructions. (Initial and Z#)				
10.2[14]	POC Assembly Gross Weight (lb)				
10.2[15]	POC Rad. Survey Results (mrem/hr)				
10.3[3][A]	Approx. Containerized Liquid Vol./Units				
10.3[5][A]	Free Liquid Volume/Units	1 gal	1 gal	½ gal	N/A
10.3[7][A]	Opaque/Non-penetrable Item Description:	lead	N/A	lead	
10.3[9][A]	PCB-contaminated Waste Description				
10.3[9][B]	PCB Item ID No.				
10.3[10]	Remaining Waste Description	See Comments	See Comments	See Comments	N/A
10.3[13]/10.4[10]/10.5[4]/10.6[10]	Daughter Drum % Full (%)	40%	30%	90%	
10.5[3]/10.6[2]	Description Waste Added During Processing	Plastic	Plastic	Plastic	

ATTACHMENT 1
Page 4 of 4

4.1[6][B] Parent Waste Container No.: 3811872

Comments: ~~Cemented~~ 6-18-13 Salts, Plastic, ~~Metal Cans~~ 6-18-13
Kitty litter, Acid Neutralizer + lead

11.1[1] Performed By: James Sedel
Waste Handling Tech (print) Signature Z # 113666 Date 06-18-13

11.1[7] Reviewed By: Jose Jerez
SOS or designee (print) Signature Z # 1221452 Date/Time 6/21/13 0835

UET Copy

5/14/13

ATTACHMENT 2
Page 1 of 1

WCRRF OVERPACK DRUM ASSEMBLY PREPARATION DATA SHEET

5.[3] Overpack drum information:

Purchase Order No.: 501012
Lot No.: 233945
Manufacture Date: 2012

5.[8] Overpack filtered vent and 2-in. bung torque wrench information:

	Filtered Vent	2-in. Bung
M&TE No.:	100216	038369
Cal. Expiration Date:	12-18-13	12-18-13
Tolerance:	±4% cw ±6% ccw	±3% cw ±6% ccw

Overpack filtered vent information:

Manufacturer: NUCFIL
Model No.: 013
Serial No.: JL-1845
Manufacture Date: 10/11

5.[9] Torque wrench listed above is within the acceptable ranges as displayed on the calibration certificate. ☑ Yes ☐ No

5. [11] Performed By: Brian Gallegos / B. Gallegos 267129 5-14-13
Waste Handling Technician (print) Signature Z # Date

5.[15] Filtered Vent torque value [120 in-lb (96 to 144 in-lb)]: 120 in-lb

5. [18] 2-in. bung plug torque value: 30 ft-lb

Comments: N/C

8.1[1] Performed By: Brian Gallegos / B. Gallegos 267129 5-14-13
Waste Handling Technician (print) Signature Z # Date

8.1[6] Reviewed By: Jose Jerez / [signature] 221421 6/21/13
Supervisor or designee (print) Signature Z # Date

Working Copy
Date: 6-18-13

ATTACHMENT 5
Page 1 of 1

WCRRF OVERPACK DRUM CLOSURE DATA SHEET

7.[18] Overpack Drum Unique Identifier No.: 93849

7.[24] Overpack drum closure ring torque wrench information:
M&TE No.: 038373
Cal. Expiration Date: 09-11-13
Range in ft-lb: 10-80
Tolerance: +/- 3% cw + +/- 6% ccw

7.[25] Torque wrench listed above is within the acceptable ranges as displayed on the calibration certificate. ☑ Yes ☐ No

Performed By: James [illegible] / [signature] 1116621 06-18-13
Waste Handling Technician (print) Signature Z# Date

7.[27] Overpack drum closure ring torque value: 60 ft-lb

7.[30] Threaded lug of the drum closure ring is not touching the jam nut and the locking ring lugs are not touching. ☑ SAT ☐ UNSAT

7.[35][B] Platform scale serial number: 019065
Platform scale calibration expiration date: 07-31-13

7.[35][D] 85-gal overpack drum gross weight (lb): 171.0 lb

Comments: N/A

8.1[1] Performed By: James [illegible] / [signature] 1116621 06-18-13
Waste Handling Technician (print) Signature Z# Date

8.1[7] Reviewed By: Jose Jerez / [signature] 1214521 6/21/13
Supervisor or designee (print) Signature Z# Date

#7.A

Attachment 1. Checklist for the preparation of a new 55-Gallon Drum Assembly

Drum ID#: 93844

1. Drum/Lid Assembly

- [x] Remove and discard ¾" bung from lid
- [x] Remove Lid
- [x] Inspect drum, lid, and gasket, ring bolt and nut, chines, and paint
  - NOTE: Reject damaged drum/lid assembly
- [x] Place 2" duct tape on vertical seam on interior of drum

RECORD drum information:

Purchase Request #: 501103
Lot #: 0239763
Date of Manufacture: 12

2. Drum Liner Bag/Filter Assembly:

- [x] Place yellow vinyl tape, with smear centered on tape, over filter
- [x] Fill bag with air from compressed air source
- [x] Inspect bag for damage, rolls, or leaks by looking, listening, and feeling
  - NOTE: Reject or repair damaged, cut, or leaking bags
- [x] Stretch bag's bungee cord
- [x] Inspect bungee cord
  - NOTE: Reject bag if bungee cord is broken or damaged

RECORD bag filter information:

Manufacturer: BOP
Model #: 6LPUCL5-25PC
Serial #: L-6813
Date of Manufacture: 13

3. Cardboard Liner/Plastic Liner Drum Liner Bag/Filter Assembly:

- [x] Inspect cardboard liner/plastic liner (circle type of liner used)
  - NOTE: Reject any damaged liners
- [x] Place cardboard/plastic liner into drum liner bag/filter assembly
- [x] Line up filter with drum seam
- [x] Place liner/bag/filter assembly into drum
- [x] Roll excess liner bag into cardboard liner/plastic liner

4. Install Lid/Drum Filter

- [x] Place lid and ring onto drum
- [x] Tighten ring sufficiently to simply hold lid in place
- [x] Torque 2" bung plug
- [x] Apply sealant to filter threads, screw in ¾" bung hole, and torque
- [x] Place this Attachment and blank Attachment 2 into a protective sleeve and tape to top of drum

RECORD drum filter information:

Manufacturer: NUX Fil
Model #: 01905
Serial #: KM-605
Date of Manufacture: 12

RECORD torque wrench information:

Filter torque wrench:		Jam Nut / Bung torque wrench:	
M&TE ID #:	100016	M&TE ID #:	030969
Cal Expiration Date:	12-18-13	Cal Expiration Date:	12-18-13
Range (ft-lbs or in-lbs):	40-200	Range (ft-lbs or in-lbs):	10-80
Tolerance:	±3% of full scale	Tolerance:	±3% of full scale

Torque wrenches listed above are within the acceptable ranges as displayed on the calibration certificate.

[x] Yes [ ] No

Print Name: ADAM Segovia Signature: Adam Segovia ZB: 226702

5. Weigh Drum Assembly

RECORD weight information

Tare weight (lbs) 75.0
File ID #: 019065

- [x] Write the tare weight on drum using permanent marker

6. Label Drum Assembly

- [x] Place 1 barcode drum ID label to the left of the drum seam, ~6" from drum bottom
- [x] Place 1 barcode drum ID label in the center of the drum lid

RECORD drum ID# at the top of Attachments 1 and 2

Operator Print: ADAM Segovia Operator Sign: Adam Segovia ZB: 226702 Date: 6-7-13

Verifier Print: James Sulel Verifier Sign: [signature] ZB: 114062 Date: 06-18-13

Attachment 2. Checklist for the Closing of a 55-Gallon Drum Assembly

DRUM ID#: 933846

1. LID INSTALLATION

NOTE: Install lid per manufacturer's instructions

✓ Mount lid with filter directly over drum seam.

✓ Install ring with bolt positioned downward and directly over drum seam.

✓ Engage bolt and nut and torque per manufactures instructions.

NOTE Seal the ring while tightening using a rubber hammer or dead-blow mallet or a drum lid press.

✓ Tighten jam nut.

Record torque wrench information:

MT&E # : 038373

Cal expiration date: 09-11-13

Range/ Value (ft-lbs): 10-80

Tolerance +/-3/cw + +/-6%cow

2. DRUM LABELING

NOTE: Do not cover the drum seam with any labels.

✓ Place two barcode drum ID labels ~6" from the bottom of the drum ~120° from previously placed ID label.

✓ Place one barcode drum ID label to the right of drum seam between the top two rolling hoops.

✓ Place one yellow radioactive waste label between the top two rolling hoops

✓ Place one yellow radioactive waste label in the center of the drum lid.

RCRA Label:

✓ Place one blue NON-RCRA Regulated Waste label between the top two rolling hoops.

OR

✓ Place one yellow HAZARDOUS Waste label between the top two rolling hoops left of the drum seam. (Ensure EPA waste number and accumulation start date are documented.)

NOTE: Check only one of the above two boxes.

3. WEIGH DRUM ASSEMBLY

Record weight information:

Gross Weight(lbs) 149.6

Scale ID#: 019065

✓ Using a permanent marker, write the gross weight on the drum lid.

4. FINALIZE DOCUMENTATION

✓ Have RCT monitor drum prior to moving to storage area.

✓ Place attachment 1 and 2 and HMPT Tag into a protective sleeve.

✓ Complete TWSR.

Operator Print/Sign: [illegible] Date: 06-18-13

Verifier Print/Sign: [illegible] Date: 6-18-13

2B

Attachment 1. Checklist for the preparation of a new 55-Gallon Drum Assembly

Drum ID#: 93847

1. Drum/Lid Assembly

- [x] Remove and discard ¾" bung from lid
- [x] Remove Lid
- [x] Inspect drum, lid, and gasket, ring bolt and nut, chines, and paint
  NOTE: Reject damaged drum/lid assembly
- [x] Place 2" duct tape on vertical seam on interior of drum

RECORD drum information:
Purchase Request #: 501103
Lot #: 0234765
Date of Manufacture: 2012

2. Drum Liner Bag/Filter Assembly:

- [x] Place yellow vinyl tape, with smear centered on tape, over filter
- [x] Fill bag with air from compressed air source
- [x] Inspect bag for damage, cuts, or leaks by looking, listening, and feeling
  NOTE: Reject or repair damaged, cut, or leaking bags
- [x] Stretch bag's bungee cord
- [x] Inspect bungee cord
  NOTE: Reject bag if bungee cord is broken or damaged

RECORD bag filter information:
Manufacturer: BOP
Model #: LCAVC 1.5-7 SOVL
Serial #: L-6321
Date of Manufacture: 1-13

3. Cardboard Liner/Plastic Liner Drum Liner Bag/Filter Assembly:

- [x] Inspect cardboard liner/plastic liner (circle type of liner used)
  NOTE: Reject any damaged liners
- [x] Place cardboard/plastic liner into drum liner bag/filter assembly
- [x] Line up filter with drum seam
- [x] Place liner/bag/filter assembly into drum
- [x] Roll excess liner bag into cardboard liner/plastic liner

4. Install Lid/Drum Filter

- [x] Place lid and ring onto drum
- [x] Tighten ring sufficiently to simply hold lid in place
- [x] Torque 2" bung plug
- [x] Apply sealant to filter threads, screw in ¾" bung hole, and torque
- [x] Place this Attachment and blank Attachment 2 into a protective sleeve and tape to top of drum

RECORD drum filter information:
Manufacturer: Nucfil
Model #: 019DS
Serial #: 15M-533
Date of Manufacture: 11-12

RECORD torque wrench information:

Filter torque wrench:
M&TE ID #: 100216
Cal Expiration Date: 12-18-13
Range (ft-lbs or in-lbs): 40-200
Tolerance: +/-4% or +/-6 in-lbs

Jam Nut / Bung torque wrench:
M&TE ID #: 038769
Cal Expiration Date: 12-18-13
Range (ft-lbs or in-lbs): 10-50
Tolerance: +/-3% or +/-6 in-lbs

Torque wrenches listed above are within the acceptable ranges as displayed on the calibration certificate.
[x] Yes [ ] No
Print Name: Frederick Adulola Signature: [signature] ZI: 228826

5. Weigh Drum Assembly

RECORD weight information
Tare wtight (lbs) 75.8
File ID #: 019065

- [x] Write the tare weight on drum using permanent marker

6. Label Drum Assembly

- [x] Place 1 barcode drum ID label to the left of the drum seam, ~6" from drum bottom
- [x] Place 1 barcode drum ID label in the center of the drum lid

RECORD drum ID# at the top of Attachments 1 and 2

Operator Print: Frederick Adulola Operator Sign: [signature] ZI: 228826 Date: 6-14-13
Verifier Print: James Sabourin Verifier Sign: [signature] ZI: A16672 Date: 06-18-13

Attachment 2. Checklist for the Closing of a 55-Gallon Drum Assembly

DRUM ID#: 933847

1. LID INSTALLATION

NOTE: Install lid per manufacturer's instructions

✓ Mount lid with filter directly over drum seam.

✓ Install ring with bolt positioned downward and directly over drum seam.

✓ Engage bolt and nut and torque per manufactures instructions.

NOTE Seal the ring while tightening using a rubber hammer or dead-blow mallet or a drum lid press.

✓ Tighten jam nut.

Record torque wrench information:

MT&E # : 038373

Cal expiration date: 09-11-13

Range/ Value (ft-lbs): 10-80

— Tolerance +/- 3 bw +/- 6 / cew

2. DRUM LABELING

NOTE: Do not cover the drum seam with any labels.

✓ Place two barcode drum ID labels ~6" from the bottom of the drum ~120° from previously placed ID label.

✓ Place one barcode drum ID label to the right of drum seam between the top two rolling hoops.

✓ Place one yellow radioactive waste label between the top two rolling hoops

✓ Place one yellow radioactive waste label in the center of the drum lid.

RCRA Label:

✓ Place one blue NON-RCRA Regulated Waste label between the top two rolling hoops.

OR

✓ Place one yellow HAZARDOUS Waste label between the top two rolling hoops left of the drum seam. (Ensure EPA waste number and accumulation start date are documented.)

NOTE: Check only one of the above two boxes.

3. WEIGH DRUM ASSEMBLY

Record weight information:

Gross Weight(lbs): 218.4

Scale ID#: 079065

✓ Using a permanent marker, write the gross weight on the drum lid.

4. FINALIZE DOCUMENTATION

✓ Have RCT monitor drum prior to moving to storage area.

✓ Place attachment 1 and 2 and HMPT Tag into a protective sleeve.

✓ Complete TWSR.

Operator Print/Sign: [illegible] Date: 06-18-13

Verifier Print/Sign: [illegible] Date: 06-18-13

2C

Attachment 1. Checklist for the preparation of a new 55-Gallon Drum Assembly

Drum ID#: 93849

1. Drum/Lid Assembly

- [x] Remove and discard ¾" bung from lid
- [x] Remove Lid
- [x] Inspect drum, lid, and gasket, ring bolt and nut, chines, and paint
  NOTE: Reject damaged drum/lid assembly
- [x] Place 2" duct tape on vertical seam on interior of drum

RECORD drum information:
Purchase Request #: 501103
Lot #: 0233765
Date of Manufacture: 2012

2. Drum Liner Bag/Filter Assembly:

- [ ] Place yellow vinyl tape, with smear centered on tape, over filter
- [ ] Fill bag with air from compressed air source
- [ ] Inspect bag for damage, cuts, or leaks by looking, listening, and feeling
  NOTE: Reject or repair damaged, cut, or leaking bags
- [ ] Stretch bag's bungee cord
- [ ] Inspect bungee cord
  NOTE: Reject bag if bungee cord is broken or damaged

RECORD bag filter information:
Manufacturer: BOP
Model #: 55DVC15 55DVC
Serial #: L-6826
Date of Manufacture: 113

3. Cardboard Liner/Plastic Liner Drum Liner Bag/Filter Assembly:

- [x] Inspect cardboard liner/plastic liner (circle type of liner used)
  NOTE: Reject any damaged liners
- [x] Place cardboard/plastic liner into drum liner bag/filter assembly
- [x] Line up filter with drum seam
- [x] Place liner/bag/filter assembly into drum
- [x] Roll excess liner bag into cardboard liner/plastic liner

4. Install Lid/Drum Filter

- [x] Place lid and ring onto drum
- [x] Tighten ring sufficiently to simply hold lid in place
- [x] Torque 2" bung plug
- [x] Apply sealant to filter threads, screw in ¾" bung hole, and torque
- [x] Place this Attachment and blank Attachment 2 into a protective sleeve and tape to top of drum

RECORD drum filter information:
Manufacturer: Nucfil
Model #: 01-DS
Serial #: RM-536
Date of Manufacture: 11/12

RECORD torque wrench information:

Filter torque wrench:
MATE ID #: 100216
Cal Expiration Date: 12-18-13
Range (ft-lbs or in-lbs): 40-300
Tolerance: ±4% of 3 to 60 in-lbs

Jam Nut / Bung torque wrench:
M&TE ID #: 038369
Cal Expiration Date: 12-18-13
Range (ft-lbs or in-lbs): 10-80
Tolerance: ±3% of 3 to 60 in-lbs

Torque wrenches listed above are within the acceptable ranges as displayed on the calibration certificate.
[x] Yes [ ] No
Print Name: MICHAEL MONTOYA Signature: [signature] ID#: 191352
Kevin Benoit [signature] 338141

5. Weigh Drum Assembly

RECORD weight information
Tare wight (lbs) 762
File ID #: 019065

- [x] Write the tare weight on drum using permanent marker

6. Label Drum Assembly

- [x] Place 1 barcode drum ID label to the lid of the drum seam, ~6" from drum bottom
- [x] Place 1 barcode drum ID label in the center of the drum lid

RECORD drum ID# at the top of Attachments 1 and 2

Operator Print: MICHAEL MONTOYA Operator Sign: [signature] ID#: 191352 Date: 6/11/13
Kevin Benoit [signature] 338141 6-11-13

Verifier Print: [signature] Verifier Sign: [signature] ID#: 116669 Date: 06-18-13

Attachment 2. Checklist for the Closing of a 55-Gallon Drum Assembly

DRUM ID#: 93848

1. LID INSTALLATION

NOTE: Install lid per manufacturer's instructions

✓ Mount lid with filter directly over drum seam.

✓ Install ring with bolt positioned downward and directly over drum seam.

✓ Engage bolt and nut and torque per manufactures instructions.

NOTE Seal the ring while tightening using a rubber hammer or dead-blow mallet or a drum lid press.

✓ Tighten jam nut.

Record torque wrench information:

MT&E #: 058313

Cal expiration date: 09-11-13

Range/ Value (ft-lbs): 10-80

— Tolerance +/- 3% cw + +/- 6% ccw

2. DRUM LABELING

NOTE: Do not cover the drum seam with any labels.

✓ Place two barcode drum ID labels ~6" from the bottom of the drum ~120° from previously placed ID label.

✓ Place one barcode drum ID label to the right of drum seam between the top two rolling hoops.

✓ Place one yellow radioactive waste label between the top two rolling hoops

✓ Place one yellow radioactive waste label in the center of the drum lid.

RCRA Label:

N/A ~~✓ Place~~ one blue NON-RCRA Regulated Waste label between the top two rolling hoops.

OR

✓ Place one yellow HAZARDOUS Waste label between the top two rolling hoops left of the drum seam. (Ensure EPA waste number and accumulation start date are documented.)

NOTE: Check only one of the above two boxes.

3. WEIGH DRUM ASSEMBLY

Record weight information:

Gross Weight(lbs): 318.0

Scale ID#: 019085

✓ Using a permanent marker, write the gross weight on the drum lid.

4. FINALIZE DOCUMENTATION

✓ Have RCT monitor drum prior to moving to storage area.

✓ Place attachment 1 and 2 and HMPT Tag into a protective sleeve.

✓ Complete TWSR.

Operator Print/Sign: James S. [illegible] Date: 06-18-13

Verifier Print/Sign: [illegible] Date: 06-18-13

WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

57

Production Control

Container ID: S811872 Container Type: 55-GAL Gross Weight (lbs): 387

Inner Seal #: 009085 Filter Prefix: None Filter Serial #: None

AK Waste Stream: LA-CIN01.001 Certified RTR BDR: LA-HERTR-12-0079

TWSR Comments: LEACHED SOLIDS, ALSO ROOM 468

Total PE-Ci Activity: 5.67E-01 Equivalent Combustible PE-Ci: 2.13E-01 AM-241 PE-Ci: 4.60E-02

Total Fissile Gram Equivalents: 6.3 Total Surface Dose Rate (mrem/hr): 3

EPA Code(s): D008 D007 D009 VE 12/11/12

NCR RTR/NDA Comment: LANL: remediate-4 GAL. of prohibited liquid at 20" to 32"

RTR Pre-Screen Date: 4/18/2007 Comment: Impenetrable Obj.

Certified RTR Comment: Prohibited Liquid

RTR BDR shows scrap lead VE 12/11/12

Prohibited Items: ☐ Sealed > 4 Liters ☑ Liquid ☐ Pressurized Container ☑ Impenetrable Item ☑ Other

Security Determination: ☑ Green ☐ Yellow

Remediation Determination: ☐ VE ☑ PID ☐ Split ☐ Repack

Estimated 30-cm Dose Rate (mrem/hr): ☐ <100 ☑ >100 and <1,000 ☐ >1,000 and <10,000 ☐ >10,000

TRUCON Code: None Production Control Comments: Nitrate Salts apply mixture + EPA codes

Performed By: Julie Gallegos (Production Control (Print)) / Julie Gallegos (Signature) / 176905 (Z Number) / 10/18/12 (Date)

WDP Engineering

Chemicals Present (e.g., pyrophorics, acids, bases, shock sensitive, organic liquids, peroxides, crown ethers): ☐ Yes ☑ No ☐ Unknown

Processing Determination: ☑ Accept ☐ Reject

WDP Engineering Comments: Nitrate Salts

Net Wt: 32# Generator info shows 11 items of nitrate salts; weights range from 8-39#. RTR BDR shows scrap lead, plastic bags + homogeneous solids. It also shows prohibited liquids. Nitrate salts require repack w/ admixture. They carry waste codes for chromium lead + mercury. No chemicals identified.

Performed By: Valerie Rhodes (WDP Engineering (Print)) / Valerie Rhodes (Signature) / 112609 (Z Number) / 12/11/12 (Date)

TRU Remediation Operations

☑ Waste Container Information Evaluated ☐ Less Than 170 lbs ☐ RTR Video Available

Other Specific Safety Concerns: Do not push or press on waste with hands. Use heavy duty gloves during processing.

Processing Determination: ☑ Accept ☐ Reject

TRU Remediation Operations Comments: GM 5/18/13 USE ~~for~~ Proper PPE. Use proper ratio of kitty litter to waste in accordance with the procedure

Performed By: G Mtz (TRU Remediation Operations (Print)) / G Mtz (Signature) / 1492351 (Z Number) / 5/18/13 (Date)

Jose Jerez / Jose Jerez / 221452 / 5/18/13

IAS Review: RS 266362 12.17.12

Discardable Waste Log Sheet

DrumID: 009085

Item#	ItemID	Net (kg)	Matrix	M Code	NM	MT	Auth	Remarks
1	IXFS-329-F1	5.45	NITRATE SALTS		0	54	5 11	
2	IXFS-330-F1	12.73	NITRATE SALTS		1.9	52	5 11	
3	IXFS-331-F1	10	NITRATE SALTS		0	52	5 11	
4	IXFS-332-F1	10.23	NITRATE SALTS		0	52	5 11	
5	IXFS-333-F1	4.55	NITRATE SALTS		0.38	52	5 11	
6	IXFS-334-F1	4	NITRATE SALTS		0.17	52	5 11	
7	IXFS-336-F1	11.59	NITRATE SALTS		0	52	5 11	
8	IXFS-337-F1	4.55	NITRATE SALTS		1 17	52	5 11	
9	IXFS-338-F1	17.73	NITRATE SALTS		0	52	5 11	
10	IXFS-339-F1	15.91	NITRATE SALTS		0	52	5 11	
11	IXFS-340-F1	13.63	NITRATE SALTS		3.03	52	5 11	
		110.37 kg						

Attachment 2 – CCP Radiography Data Sheet

Section 1: General Information	
☑ RTR Examination ☐ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-HERTR-12-0079
Examination Date:	08/13/12
Waste Container ID:	S811872
Video/Audio Recorded Media Number:	LA-HERTR-12-0079 A
Procedure and Revision No.:	CCP-TP-053 Rev. 11
NCR(s) associated with the container? (e.g., Prohibited Items)	☐ NO ☑ YES NCR No.: NCR-LANL-1478-12 NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 GALLON DRUM
TRUCON Code:	LA226
Waste Matrix Code:	S3150
Waste Stream I.D.:	LA-CIN01.001
Waste Container Weights:	Gross Wt: 182.0 kg. Tare Wt: 35.1 kg. Net Wt: 146.9 kg.
Rigid Liner and Liner Vent Description: (e.g., "90 mil liner – NO Lid" or "NO Liner")	90mil Liner-Vented
Number of Layers of Confinement:	Appears to be 1 layer
Volume Utilization Percentage:	50 %

Attachment 2 – CCP Radiography Data Sheet (Continued)

Waste Container ID: S811872

Section 10: Certain Inorganic Non Combustibles – Indicate by Checkmark
Scrap lead
Plastic bags
Homogeneous solids

Section 11: Packaging Material and Waste Material Parameters	
Packaging Material	Estimated Weight (kg)
Steel (ST):	27.7
Plastics (PP): 90mil Liner and Lid	7.4
Others:	0.0
Total Packaging Weight:	35.1
Waste Material Parameter	Estimated Weight (kg)
Iron-based Metal / Alloys (IM):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	16.0
Other Inorganic Materials (OI):	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	6.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	124.9
Soils (S):	
Total WMP Weight:	146.9

Attachment 2 – CCP Radiography Data Sheet (Continued)

Waste Container ID: S811872

[illegible]	Yes	No
Is there observable liquid?	☑	☐
Is there any observable liquid in internal containers, more than 60 milliliters or 3 percent by volume, whichever is greater?	☐	☑
Is the total volume of observable liquid in the outermost container GREATER than 1% of the container?	☑	☐
Is there observable liquid in payload containers with an EPA Hazardous Waste Number of U134?	☐	☑
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☑
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☑
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does NOT match TRUCON Code[s])?	☐	☑
Is there an indication of wastes containing explosives or compressed gases?	☐	☑
Is there an indication of PCBs liquids?	☐	☑
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA hazardous waste numbers of D001, D002, or D003)?	☐	☑
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☑
[illegible]		
Are there heat-sealed bags (unvented) GREATER than 4 liters and LESS than 390 square inches in the waste, or heat sealed bags not authorized in the RH TRUCON Code?	☐	☑
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☑
Are there sealed containers GREATER than 4 liters?	☐	☑
Are there indications of inadequate protection for heavy and/or sharp objects?	☐	☑

Comments: NCR-LANL-1478-12

RTR Operator:

Eric Lyles		08/13/12
Print Name	Signature	Date

ATTACHMENT 1
Page 1 of 1

TA-54 AREA G WASTE CONTAINER HYDROGEN/VOC SAMPLE ANALYSIS DATA SHEET

5.[1] Sample Date: Feb 21 2013

Container No. (5.[1])	S811872					
Container type sampled (e.g., 55-gal, 85-gal, 110-gal, or SWB) (5.[1])	55 gal					
Filtered Vent Type (5.[1])	73					
Filtered Vent Unobstructed (5.[1])	☑ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT
WIPP-Approved Filtered Vent (5.[2])	☑ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT
Total CCP VOC value (< 7,000 ppm) (5.[4])	0 ppm	ppm	ppm	ppm	ppm	ppm
Hydrogen Reading (< 64,000 ppm) (5.[5])	0 ppm	ppm	ppm	ppm	ppm	ppm
Methane Reading (< 16,000 ppm) (5.[5])	0 ppm	ppm	ppm	ppm	ppm	ppm

5.[7] Certified CCP Technician:

Performed By: Nathan Wales (CCP (Print)), 238866 (Z#)

Reviewed By: Sara Aragon (CCP (Print)), 231975 (Z#)

Comments: n/a

6.1[2][A] WCRRF waste container satisfies the following criteria: ☑ SAT ☐ UNSAT ☐ N/A

- Hydrogen – less than or equal to 3.2% (32,000 ppm)
- VOC – less than or equal to 7,000 ppm

6.1[3] Performed By: Julie Gallegos (Waste Handling Operator (print)), Julie Gallegos (Signature), 176056 (Z#), 2/21/13 (Date)

Quantitation Report (QT Reviewed)

InstName : FGA Unit 12

Data Path : C:\msdchem\1\DATA\130221c\
Data File : S11872.D S811872 2-21-13
Acq On : 21 Feb 2013 1:48 pm (#1); 21 Feb 2013 1:46 pm (#2)
Operator : NW
Sample :
Misc : 55 GAL LFL THROUGH UNOBSTRUCTED 73 (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Feb 21 13:51:47 2013
Quant Method : C:\msdchem\1\METHODS\H2-CH4.M
Quant Title : Flammable Gas Analysis for Transportation Only
QLast Update : Thu Feb 21 08:46:27 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

H2-CH4.M Thu Feb 21 13:51:54 2013 UNIT12

2-21-13 QS
Per E. Loeckell
& qproduction
report drawn
S811872

4-18-13
0600 Assuming WCRRF Operational control - Okolande
0610 Starting inside and outside rounds.
0615 The job being conducted by SOS
0619 Item #4 Unsat, Per CSE okay to proceed.
0627 Item #43 is OOS, POD in place, Okay to proceed.
0630 Completed outside rounds.
0635 Completed inside rounds.
0653 Rounds signed off by SOS.
0722 mode change performed TASD-69 and WCRRF now in Operation
0740 Starting movement out of SD-69.
0751 Bagging on 9813620
0758 Completed movement out of SD-69
0801 Starting staging of drums for shipment to area G.
0802 Bag on complete
0834 Bagging off 1 daughter, Bagging on another, continue to process drum.
0850 Permission granted to lower vehicle access gates for shipment to area g.
0900 PPE check is sat.
0933 vehicle access gates have been restored movement to transport vehicle is complete.
1012 Bagging off daughter, bagging on daughter
1150 Bagging off, Bagging on 9811872
1253 lateralny at 1230 Bag off complete.
1449 Bagging off 1 daughter.
1510 Bag on complete, Bag off complete
1531 Starting outside rounds
1535 Starting inside rounds
1539 Item #3 is unsat, FSR in place okay to proceed
1549 Completed outside rounds.
1551 Item #43 is OOS, POD in place ok to proceed
1600 Inside rounds complete.
1637 Starting movement into SD-69.
1659 movement into SD-69 complete.
1708 starting movement out of SD-69
- Continued on next page - Okolande

1618-13 Continued from previous page entries

1720 movement out of 50-69 complete.

1733 Starting bag off of S811872

1746 bag off complete.

1808 FAST 69 and WCREF yard now warm standby

1813 1830 End of day WCREF operations center secure [illegible]

No further entries this page

PROJECT NAME 6.18.13 NOTEBOOK NO

0600 Assumed the WCRR SOM position. [signature]
0612 Turned over the SOM duties w/I to J. Guardagnoli. [signature]
0612 Assumed the SOM duties w/I from Guardagnoli.
0633 Completed attending the pre-job conducted by the SOS (Jose).
The safety topic discussed was the use of safety glasses when using lacquer.
There is one scheduled transfer to Area G at 21 drums going out.
The SOS discussed roles and responsibilities and station 7 - left and right hand require changing. The SOS focused on taking time changing gloves, ensure there is no gap with the expanders, and ensure no contamination.
The SOS reviewed shift order requirements, and oversight when sliding drums off of the lift table and scale. The SOM reviewed item 3 on Rounds being unsat with weeds greater than 18", this is not a $ step, and comments are on Round sheets. [signature] w/I
0700 Call into TA54 SOM daily brief [signature] w/I
0709 SOS reported that glove changes are not required at this time, further evaluation will be conducted [signature] w/I
0722 Mode Change complete, WCRR YARD / 50.69 from WARM/WARM to Operations/Operational [signature]
0802 1st Bag on completed, for parent drum S81136-20 [signature] w/I
0950 Drum transfers from the Transporters to the transfer vehicle were completed. Twenty one drums total. ES/IH were present in the field and observed the movements - safe and compliant. The transfer was noted as exclusive use by P&T. [signature] w/I
1200 Conducted LEL call in with support personnel - No Issues noted [signature] w/I
1220 Completed daily facility update with SOM and PM. No Issues noted [signature] w/I
1257 Conducted debrief with DOE/FR and SOM. Items noted as needing follow up by SOS and ES/IH are 3 ladders, two of the three do not have annual inspection stickers. ES/IH will follow up. Also several Operators RWDS and postings were checked in the field as a result, posting 015 signoff removed, Operator AID 50.10-02 requires Rev 24 replaced with Rev 25. and 6-6-13 Operator AID 50.10-02 requires updating with version in logbook - Operator AID. Notification was made to the OCD and SOS for correcting. [signature] w/I
1526 Operations reported correcting the Operator AID items identified at 1257 hrs, however could not locate posting #015. DOE/FR was notified and she will review her notes. [signature] w/I
1600 All rounds were completed inside and outside. [signature] w/I
1806 Mode Change complete WCRR YARD and 50.69 Operational/Operational to WARM/WARM.
Operations processed 2 payments, generating 5 daughters and 1 PDC. [signature] w/I
1823 Securing the SOM duties. [signature] w/I

No further entries this page [signature] w/I

SIGNATURE [signature] w/I DATE 6.18 2013
READ AND UNDERSTOOD DATE 20

6/18/13 WCRR SOS Log Book

0600 Assuming SOS position for the day. Jon Fy

0605 Starting Pre-Job. Safety Topic, discussing the use of Lock Tite ensuring that Operators use Ditrite Gloves and Safety Glasses IWD for lock tite identifies this, IWD for Preping daughters does not, this IWD needs to be changed. Gloves on Station 7 needing to be changed. Processing Parents, have one shipment out today. DOE on-site and will be inside of the processing facility to watch procedure use and operations. Also discussed 30/30 for lightning. If you are in the yard and see lightning and hear thunder Stop operations, place everything in a safe configuration, take shelter and notify Operations Center.

0640 Concluded Pre-Job brief.

0653 Reviewed and signed rounds

0702 Mode change complete WCRR yard and 50-69 are in Operations.

0756 Bag on of first Parent drum complete.

0836 Bagging off one daughter, bagging on second daughter, continuing to process first Parent

1012 Bagging off second daughter, bagging on third daughter. Continuing to process first Parent.

1144 Bagging off 1 POC and 3 daughters, Bagging on second parent

1230 Bag off complete

1449 Bagging off one daughter

1510 Bag on Bag off complete

1617 Reviewed and signed off on rounds

1733 Bagging off last drum for the day.

1746 Bag off Complete, Operators stating that station 7 needs to be changed, station 8 left hand needs to be watched. Plastic on the floor in the exclusion area needs to be changed out, Roto Grip is tearing through it.

1808 Mode Change complete WCRR yard and 50-69 are in WARM.

1820 Securing SOS position for the day. Jon Fy

No further entries on this page.

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0087
Examination Date:	6/24/2013
Waste Container ID:	93846
Video/Audio Recorded Media Number:	LA-RTR2-13-0087 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 13
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3150
Waste Stream I.D.:	LA-CIN01.001
Waste Container Weights:	Gross Wt.: 68.0 kg Tare Wt.: 33.4 kg Net Wt.: 34.6 kg
Rigid Liner and Liner Vent Description:	Liner: [X] No [ ] Yes Lid: [X] No [ ] Yes Type: [ ] 30-mil [ ] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [ ] Yes [X] N/A Punctured: [X] No [ ] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [ ] No [X] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 2 layers
Volume Utilization Percentage:	35 %

CCP Radiography Data Sheet

Waste Container ID: 93846

Section 3: Container Inventory and Comments (Detailed descriptions)

IM:

AM:

OM: Scrap lead

OI:

C:

R:

XPM: Plastic bags, plastic lid

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP):Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	15.0
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	6.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	13.6
Soils (S):	
Total WMP Weight:	34.6

CCP Radiography Data Sheet

Waste Container ID: 93846

Section 5: RTR Summary (Questions answered 'Yes' will be explained in the Comment block except for Question 1)	
Is there observable liquid?	☐ Yes ☒ No
Is there any observable liquid in internal containers, more than 60 milliliters or 3 percent by volume, whichever is greater?	☐ Yes ☒ No
Is the total volume of observable liquid in the outermost container GREATER than 1% of the container?	☐ Yes ☒ No
Is there observable liquid in payload containers with an EPA Hazardous Waste Number of U134?	☐ Yes ☒ No
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐ Yes ☒ No
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐ Yes ☒ No
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does NOT match TRUCON Code[s])?	☐ Yes ☒ No
Is there an indication of wastes containing explosives or compressed gases?	☐ Yes ☒ No
Is there an indication of PCBs liquids?	☐ Yes ☒ No
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐ Yes ☒ No
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐ Yes ☒ No
CH or RH TRAMPAC	
Are there heat-sealed bags (unvented) GREATER than 4 liters and LESS than 390 square inches in the waste, or heat sealed bags not authorized in the RH TRUCON Code?	☐ Yes ☒ No
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐ Yes ☒ No
Are there sealed containers GREATER than 4 liters?	☐ Yes ☒ No
Are there indications of inadequate protection for heavy and/or sharp objects?	☐ Yes ☒ No

Comments: N/A

RTR Operator:

Benito Maestas		6/24/2013
Print Name	Signature	Date

```
|-----------------------------------------------------------------------|
|                          NDA 2000 Assay Report                        |
|-----------------------------------------------------------------------|

*************************    Item Information    ************************

Item ID:            93846              Count Sequence Number:  23106
Operator:           D3PW2DK1\operator
Assay Start:        6/27/2013  11:39:28 AM
Description 1:      1LANDA1799
Description 2:      N/A
Location:           LANL TA-54
Comment:            AK-6
Matrix Type:        Homo Sol. S3000
Container Type:     55 gallon drum
Weight:             Net:        34.6   kg        Net:    34.6 kg
Container:          Volume:    208.0   l        Full:    35.0 %
Density:                         0.480 kg /l


************************   System Configuration   ************************

Counter:                        MCS HENC #1
Count Type:                     Item Count
Collimator/Geometry Setting:    All Banks On (GE -  0

Errors quoted at  1.000 sigma
```

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number:	23106	Batch Number:	1LANDA1799
Assay Instrument:	MCS HENC #1	Location:	LANL TA-54
Analysis Method:	CCP-TP-063 v 14	Software Version:	NDA 2000 V.4.0
Item ID:	93846	Analysis Date:	6/27/2013

Net Weight	34600.0 g		
Pu mass	6.42E-001	+- 1.46E-001	g
TRU Alpha Activity	3.45E-001	+- 1.60E-001	Ci
TRU Activity Concentration	9.97E+003	+- 4.61E+003	nCi/g
Pu-239 Equivalent Activity	3.46E-001	+- 1.60E-001	Ci
Pu-239 FGE	6.07E-001	+- 1.37E-001	g
Decay heat	1.14E-002	+- 5.33E-003	W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	8.13E-003	5.80E-006	8.79E-007	5.10E-007
PU238	5.89E-005	1.02E-003	2.32E-004	8.22E-004
PU239	6.03E-001	3.79E-002	8.63E-003	3.06E-002
PU240	3.85E-002	8.86E-003	2.02E-003	7.15E-003
AM241	8.56E-002	2.97E-001	1.59E-001	9.51E-003
PU241	7.50E-004	7.80E-002	1.78E-002	6.29E-002
PU242	1.29E-004	5.10E-007	1.16E-007	0.00E+000
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	1.89E-007
U233	<LLD	<LLD	0.00E+000	9.46E-004
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	2.70E-007
U238	<LLD	<LLD	0.00E+000	4.34E-006

Errors quoted at 1.000 sigma

Operator: _____ Date: 7-9-13

ITR: _____ Date: 7-9-2013

Automated Independent Technical Review

Count Sequence Number: 23106 Batch Number: 1LANDA1799
Counter ID: MCS HENC #1
Container ID: 93846
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 6/27/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis	
Add-a-Source WARNINGS:	
Add-a-Source correction factor is less than one.	Ok
Add-a-Source correction factor was set to one.	Ok
Section 2 - Passive Neutron Analysis	
Analysis Status: No errors.	Ok
No Warnings Reported.	
Section 3 - Data Combiner Analysis	
Override enabled; Passive Neutron Pu and Gamma U data specified as input.	Passive Neutron Pu and Gamma U data specified as input.
Pu results taken from Passive Neutron data, U from Quantitative Gamma data.	
Results comparison test failed.	
Section 4 - MGA Analysis	MGA analysis failed. AK isotopics applied. The AK information utilized was provided by Steve Schafer, AKE, and consists of data from CCP-AK-LANL-006, AK Source Document M237. MT-52.
Results are marked as invalid.	
Section 5 - Gamma Analysis	
Analysis Status: No errors.	Ok
Miscellaneous	No additional nuclides contributing to 95% of the radiological hazard identified.

Expert Review by: Sheri Chandler Date: 7-2-13

Attachment 4 – Flammable Gas Analysis Form

SCO 1049 Add 4 - Win XP SP3/Win 7 SP1
Excel 2003/2007/2010

Waste Container ID: **93846**

BDR Number: **LA13FG12056**

Sampling Date: **6/28/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	15.96	
74-82-8	Methane	9.63	U
67-56-1	Methanol	N/A	U
60-29-7	Ethyl Ether	N/A	U
75-35-4	1,1-Dichloroethylene	N/A	U
67-64-1	Acetone	N/A	U
75-34-3	1,1-Dichloroethane	N/A	U
156-59-2	cis-1,2-Dichloroethene	N/A	U
78-93-3	Methyl ethyl ketone	N/A	U
110-82-7	Cyclohexane	N/A	U
71-43-2	Benzene	N/A	U
107-06-2	1,2-Dichloroethane	N/A	U
71-36-3	1-Butanol	N/A	U
108-10-1	Methyl isobutyl ketone	N/A	U
108-88-3	Toluene	N/A	U
108-90-7	Chlorobenzene	N/A	U
100-41-4	Ethylbenzene	N/A	U
108-38-3/106-42-3	m- and p-Xylene	N/A	U
95-47-6	o-Xylene	N/A	U
108-67-8	1,3,5-Trimethylbenzene	N/A	U
95-63-6	1,2,4-Trimethylbenzene	N/A	U

CAS Number	IDENTIFIED TIC COMPOUND	Est. Amount ppmv
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

Quantitation Report (QT Reviewed)

InstName : FGA Unit 12

Data Path : C:\msdchem\1\DATA\130628c\
Data File : 93846.D
Acq On : 28 Jun 2013 10:17 am (#1); 28 Jun 2013 10:16 am (#2)
Operator : SA
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER, NucFil-019DS (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jun 28 10:21:37 2013
Quant Method : C:\msdchem\1\METHODS\H2-CH4.M
Quant Title : Flammable Gas Analysis for Transportation Only
QLast Update : Thu May 23 08:37:45 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Target Compounds						Qvalue
1) Hydrogen	1.903	GC1	4554m	15.96	ppmv	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0087
Examination Date:	6/24/2013
Waste Container ID:	93847
Video/Audio Recorded Media Number:	LA-RTR2-13-0087 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 13
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3150
Waste Stream I.D.:	LA-CIN01.001
Waste Container Weights:	Gross Wt.: 99.5 kg Tare Wt.: 33.4 kg Net Wt.: 66.1 kg
Rigid Liner and Liner Vent Description:	Liner: [X] No [ ] Yes Lid: [X] No [ ] Yes Type: [ ] 30-mil [ ] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [ ] Yes [X] N/A Punctured: [X] No [ ] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [ ] No [X] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 2 layers
Volume Utilization Percentage:	50 %

CCP Radiography Data Sheet

Waste Container ID: 93847

Section 3: Container Inventory and Comments (Detailed descriptions)

IM:

AM:

OM: Scrap lead

OI:

C:

R:

XPM: Plastic bags

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP):Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	6.0
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	4.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	56.1
Soils (S):	
Total WMP Weight:	66.1

CCP Radiography Data Sheet

Waste Container ID: 93847

Section 5: RTR Summary (Questions answered "Yes" will be explained in the Comment block, except for Question 1)	
Is there observable liquid?	☐ Yes ☒ No
Is there any observable liquid in internal containers, more than 60 milliliters or 3 percent by volume, whichever is greater?	☐ Yes ☒ No
Is the total volume of observable liquid in the outermost container GREATER than 1% of the container?	☐ Yes ☒ No
Is there observable liquid in payload containers with an EPA Hazardous Waste Number of U134?	☐ Yes ☒ No
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐ Yes ☒ No
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐ Yes ☒ No
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does NOT match TRUCON Code[s])?	☐ Yes ☒ No
Is there an indication of wastes containing explosives or compressed gases?	☐ Yes ☒ No
Is there an indication of PCBs liquids?	☐ Yes ☒ No
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐ Yes ☒ No
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐ Yes ☒ No
CH or RH TRAMPAC	
Are there heat-sealed bags (unvented) GREATER than 4 liters and LESS than 390 square inches in the waste, or heat sealed bags not authorized in the RH TRUCON Code?	☐ Yes ☒ No
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐ Yes ☒ No
Are there sealed containers GREATER than 4 liters?	☐ Yes ☒ No
Are there indications of inadequate protection for heavy and/or sharp objects?	☐ Yes ☒ No
Comments: N/A	

RTR Operator:

Benito Maestas		6/24/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	93847	Count Sequence Number:	23091
Operator:	D3PW2DK1\operator		
Assay Start:	6/25/2013 3:00:52 PM		
Description 1:	1LANDA1797		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 66.1 kg	Net:	66.1 kg
Container:	Volume: 208.0 l	Full:	50.0 %
Density:	0.640 kg /l		

System Configuration

Counter:	MCS HENC #1
Count Type:	Item Count
Collimator/Geometry Setting:	All Banks On (GE - 0

Errors quoted at 1.000 sigma

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number:	23091	Batch Number:	1LANDA1797
Assay Instrument:	MCS HENC #1	Location:	LANL TA-54
Analysis Method:	CCP-TP-063 v 14	Software Version:	NDA 2000 V.4.0
Item ID:	93847	Analysis Date:	6/25/2013

Net Weight	66100.0 g		
Pu mass	1.50E+000	+-	2.92E-001 g
TRU Alpha Activity	1.20E+000	+-	5.89E-001 Ci
TRU Activity Concentration	1.82E+004	+-	8.91E+003 nCi/g
Pu-239 Equivalent Activity	1.20E+000	+-	5.89E-001 Ci
Pu-239 FGE	1.42E+000	+-	2.91E-001 g
Decay heat	3.99E-002	+-	1.97E-002 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	1.55E-007
U233	<LLD	<LLD	0.00E+000	2.13E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	6.42E-007
NP237	2.01E-002	1.44E-005	2.54E-006	1.14E-006
PU238	1.38E-004	2.38E-003	5.79E-004	2.79E-004
U238	<LLD	<LLD	0.00E+000	7.46E-006
PU239	1.41E+000	8.87E-002	1.83E-002	1.04E-002
PU240	9.01E-002	2.07E-002	5.19E-003	2.43E-003
AM241	3.14E-001	1.09E+000	5.89E-001	2.41E-002
PU241	1.75E-003	1.82E-001	4.56E-002	2.14E-002
PU242	3.01E-004	1.19E-006	2.99E-007	0.00E+000

Errors quoted at 1.000 sigma

Operator: Jim Barton Date: 7/1/13

ITR: Brit Tupper Date: 7-9-13

Automated Independent Technical Review

Count Sequence Number: 23091 Batch Number: 1LANDA1797
Counter ID: MCS HENC #1
Container ID: 93847
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 6/25/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis No Add-a-Source warnings.	OK
Section 2 - Passive Neutron Analysis Analysis Status: No errors.	OK
Cosmic Ray Rejection Analysis complete with warnings.	
- The CRR High-Z mass Mass Variance is negative, High-Z mass Uncertainty set to zero so analysis could continue.	OK
Section 3 - Data Combiner Analysis Override enabled; Gamma data specified as input. Results taken from Quantitative Gamma data. Results comparison test passed.	Results taken from quantitative gamma data.
Section 4 - MGA Analysis Results are marked as invalid.	Isotopic analysis failed. AK isotopics applied. The AK information utilized was provided by Steve Schafer, AKE, and consists of data from CCP-AK-LANL-006, AK Source Document M237. MT-52.
Section 5 - Gamma Analysis Analysis Status: No errors.	OK
Miscellaneous	No additional nuclides contributing to 95% of the radiological hazard identified.

Expert Review by: _____ Date: 7/1/13

036

Attachment 4 – Flammable Gas Analysis Form

SCO 1049 Add 4 - Win XP SP3/Win 7 SP1
Excel 2003/2007/2010

Waste Container ID: **93847**

BDR Number: **LA13FG12057**

Sampling Date: **7/2/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	68.55	
74-82-8	Methane	9.63	U
67-56-1	Methanol	N/A	U
60-29-7	Ethyl Ether	N/A	U
75-35-4	1,1-Dichloroethylene	N/A	U
67-64-1	Acetone	N/A	U
75-34-3	1,1-Dichloroethane	N/A	U
156-59-2	cis-1,2-Dichloroethene	N/A	U
78-93-3	Methyl ethyl ketone	N/A	U
110-82-7	Cyclohexane	N/A	U
71-43-2	Benzene	N/A	U
107-06-2	1,2-Dichloroethane	N/A	U
71-36-3	1-Butanol	N/A	U
108-10-1	Methyl isobutyl ketone	N/A	U
108-88-3	Toluene	N/A	U
108-90-7	Chlorobenzene	N/A	U
100-41-4	Ethylbenzene	N/A	U
108-38-3/106-42-3	m- and p-Xylene	N/A	U
95-47-6	o-Xylene	N/A	U
108-67-8	1,3,5-Trimethylbenzene	N/A	U
95-63-6	1,2,4-Trimethylbenzene	N/A	U

CAS Number	IDENTIFIED TIC COMPOUND	Est. Amount ppmv
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

Quantitation Report (QT Reviewed)

InstName : FGA Unit 12

Data Path : C:\msdchem\1\DATA\130702c\
Data File : 93847.D
Acq On : 2 Jul 2013 12:46 pm (#1); 2 Jul 2013 12:44 pm (#2)
Operator : NW
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER, NUCFIL-019DS (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 02 12:50:21 2013
Quant Method : C:\msdchem\1\METHODS\H2-CH4.M
Quant Title : Flammable Gas Analysis for Transportation Only
QLast Update : Thu May 23 08:37:45 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Target Compounds						Qvalue
1) Hydrogen	1.900	GC1	19555m	68.55	ppmv	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0087
Examination Date:	6/24/2013
Waste Container ID:	93848
Video/Audio Recorded Media Number:	LA-RTR2-13-0087 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 13
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3150
Waste Stream I.D.:	LA-CIN01.001
Waste Container Weights:	Gross Wt.: 144.5 kg Tare Wt.: 33.4 kg Net Wt.: 111.1 kg
Rigid Liner and Liner Vent Description:	Liner: [X] No [ ] Yes Lid: [X] No [ ] Yes Type: [ ] 30-mil [ ] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [ ] Yes [X] N/A Punctured: [X] No [ ] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [ ] No [X] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 2 layers
Volume Utilization Percentage:	70 %

CCP Radiography Data Sheet

Waste Container ID: 93848

Section 3: Container Inventory and Comments (Detailed descriptions)

IM: Scrap metal

AM:

OM: Scrap lead

OI:

C:

R:

XPM: Plastic bags

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP):Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	2.0
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	10.0
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	4.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	95.1
Soils (S):	
Total WMP Weight:	111.1

CCP Radiography Data Sheet

Waste Container ID: 93848

Section 5: RTR Summary (Questions answered "Yes" will be explained in the Comment block, except for Question 1)	
Is there observable liquid?	☐ Yes ☒ No
Is there any observable liquid in internal containers, more than 60 milliliters or 3 percent by volume, whichever is greater?	☐ Yes ☒ No
Is the total volume of observable liquid in the outermost container GREATER than 1% of the container?	☐ Yes ☒ No
Is there observable liquid in payload containers with an EPA Hazardous Waste Number of U134?	☐ Yes ☒ No
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐ Yes ☒ No
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐ Yes ☒ No
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does NOT match TRUCON Code[s])?	☐ Yes ☒ No
Is there an indication of wastes containing explosives or compressed gases?	☐ Yes ☒ No
Is there an indication of PCBs liquids?	☐ Yes ☒ No
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐ Yes ☒ No
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐ Yes ☒ No
CH or RH TRAMPAC	
Are there heat-sealed bags (unvented) GREATER than 4 liters and LESS than 390 square inches in the waste, or heat sealed bags not authorized in the RH TRUCON Code?	☐ Yes ☒ No
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐ Yes ☒ No
Are there sealed containers GREATER than 4 liters?	☐ Yes ☒ No
Are there indications of inadequate protection for heavy and/or sharp objects?	☐ Yes ☒ No
Comments: N/A	

RTR Operator:

Print Name	Signature	Date
Benito Maestas	[signature]	6/24/2013

NDA 2000 Assay Report

Item Information

Item ID:	93848	Count Sequence Number:	23092
Operator:	D3PW2DK1\operator		
Assay Start:	6/25/2013 3:47:17 PM		
Description 1:	1LANDA1797		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 111.0 kg	Net:	111.0 kg
Container:	Volume: 208.0 l	Full:	70.0 %
Density:	0.760 kg /l		

System Configuration

Counter:	MCS HENC #1
Count Type:	Item Count
Collimator/Geometry Setting:	All Banks On (GE - 0

Errors quoted at 1.000 sigma

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number: 23092
Assay Instrument: MCS HENC #1
Analysis Method: CCP-TP-063 v 14
Item ID: 93848

Batch Number: 1LANDA1797
Location: LANL TA-54
Software Version: NDA 2000 V.4.0
Analysis Date: 6/25/2013

Net Weight	111000.0 g		
Pu mass	2.22E+000	+-	4.88E-001 g
TRU Alpha Activity	3.07E+000	+-	1.59E+000 Ci
TRU Activity Concentration	2.76E+004	+-	1.43E+004 nCi/g
Pu-239 Equivalent Activity	3.07E+000	+-	1.59E+000 Ci
Pu-239 FGE	2.11E+000	+-	4.87E-001 g
Decay heat	1.02E-001	+-	5.30E-002 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	5.80E-007
U233	<LLD	<LLD	0.00E+000	3.75E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	1.05E-006
NP237	4.63E-002	3.30E-005	6.45E-006	1.99E-006
PU238	2.03E-004	3.52E-003	9.38E-004	5.49E-004
U238	<LLD	<LLD	0.00E+000	1.16E-005
PU239	2.08E+000	1.31E-001	3.06E-002	2.04E-002
PU240	1.33E-001	3.06E-002	8.37E-003	4.77E-003
AM241	8.36E-001	2.90E+000	1.59E+000	3.70E-002
PU241	2.59E-003	2.70E-001	7.36E-002	4.20E-002
PU242	4.45E-004	1.76E-006	4.82E-007	0.00E+000

Errors quoted at 1.000 sigma

Operator: Jim Sutton Date: 7/1/13

ITR: Brit Tupletts Date: 7-9-13

Automated Independent Technical Review

Count Sequence Number: 23092 Batch Number: 1LANDA1797
Counter ID: MCS HENC #1
Container ID: 93848
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 6/25/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis No Add-a-Source warnings.	OK
Section 2 - Passive Neutron Analysis Analysis Status: No errors. Ones Rate Analysis complete with warnings. - Error calculating the Ones Rate Pu-240 Effective MDA.	OK Not data affecting.
Section 3 - Data Combiner Analysis Override enabled; Gamma data specified as input. Results taken from Quantitative Gamma data. Results comparison test passed.	Results taken from quantitative gamma data.
Section 4 - MGA Analysis Results are marked as invalid.	Isotopic analysis failed. AK isotopics applied. The AK information utilized was provided by Steve Schafer, AKE, and consists of data from CCP-AK-LANL-006, AK Source Document M237. MT-52.
Section 5 - Gamma Analysis Analysis Status: No errors.	OK
Miscellaneous	No additional nuclides contributing to 95% of the radiological hazard identified.

Expert Review by: [signature] Date: 7/1/13

033

Waste Container ID: **93848**

BDR Number: **LA13FG12056**

Sampling Date: **6/28/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	110.01	
74-82-8	Methane	9.63	U
67-56-1	Methanol	N/A	U
60-29-7	Ethyl Ether	N/A	U
75-35-4	1,1-Dichloroethylene	N/A	U
67-64-1	Acetone	N/A	U
75-34-3	1,1-Dichloroethane	N/A	U
156-59-2	cis-1,2-Dichloroethene	N/A	U
78-93-3	Methyl ethyl ketone	N/A	U
110-82-7	Cyclohexane	N/A	U
71-43-2	Benzene	N/A	U
107-06-2	1,2-Dichloroethane	N/A	U
71-36-3	1-Butanol	N/A	U
108-10-1	Methyl isobutyl ketone	N/A	U
108-88-3	Toluene	N/A	U
108-90-7	Chlorobenzene	N/A	U
100-41-4	Ethylbenzene	N/A	U
108-38-3/106-42-3	m- and p-Xylene	N/A	U
95-47-6	o-Xylene	N/A	U
108-67-8	1,3,5-Trimethylbenzene	N/A	U
95-63-6	1,2,4-Trimethylbenzene	N/A	U

CAS Number	IDENTIFIED TIC COMPOUND	Est. Amount ppmv
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

Quantitation Report (QT Reviewed)

InstName : FGA Unit 12

Data Path : C:\msdchem\1\DATA\130628c\
Data File : 93848.D
Acq On : 28 Jun 2013 2:23 pm (#1); 28 Jun 2013 2:22 pm (#2)
Operator : SA
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER, NucFil-019DS (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jun 28 14:29:18 2013
Quant Method : C:\msdchem\1\METHODS\H2-CH4.M
Quant Title : Flammable Gas Analysis for Transportation Only
QLast Update : Thu May 23 08:37:45 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Target Compounds						Qvalue
1) Hydrogen	1.903	GC1	31381m	110.01	ppmv	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

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Discardable Waste Log Sheet

DrumID: 009085 Q6//650

Item#	ItemID	Net (kg)	Matrix	M Code	NM	MT	Auth	Remarks
1	IXFS-329-F1	5.45	NITRATE SALTS		0	54	5 11	
2	IXFS-330-F1	12.73	NITRATE SALTS		1.9	52	5 11	
3	IXFS-331-F1	10	NITRATE SALTS		0	52	5 11	
4	IXFS-332-F1	10.23	NITRATE SALTS		0	52	5 11	
5	IXFS-333-F1	4.55	NITRATE SALTS		0.38	52	5 11	
6	IXFS-334-F1	4	NITRATE SALTS		0.17	52	5 11	
7	IXFS-336-F1	11.59	NITRATE SALTS		0	52	5 11	
8	IXFS-337-F1	4.55	NITRATE SALTS		1 17	52	5 11	
9	IXFS-338-F1	17.73	NITRATE SALTS		0	52	5 11	
10	IXFS-339-F1	15.91	NITRATE SALTS		0	52	5 11	
11	IXFS-340-F1	13.63	NITRATE SALTS		3.03	52	5 11	
		110.37 kg						

Discardable Waste Log Sheet

DrumID: 011387 Q6/1001

Item#	ItemID	Net (kg)	Matrix	M Code	NM	MT	Auth	Remarks
1	DXFS-446-F1	22.73	NITRATE SALTS		11.41	52	5/11	
2	DXFS-447-F1	23.18	NITRATE SALTS		4.1	52	5/11	
3	DXFS-448-F1	87.5	NITRATE SALTS		10.87	52	5/11	
		133.41 kg						

2

Discardable Waste Log Sheet

DrumID: 009897 Q6/125/

Item#	ItemID	Net (kg)	Matrix	M Code	NM	MT	Auth	Remarks
1	IXFS-360-F1	21.36	NITRATE SALTS		2.15	52	/11	
2	IXFS-361-F1	25.45	NITRATE SALTS		6.53	52	/11	
3	IXFS-362-F1	14.09	NITRATE SALTS		1.36	52	/11	
4	IXFS-363-F1	8.4	NITRATE SALTS		1	52	/11	
5	IXFS-365-F1	20.62	NITRATE SALTS		5.43	52	/11	
6	IXFS-366-F1	17.73	NITRATE SALTS		6	52	/11	
		107.65 kg						

1 7 7 2 0 7 1 7

Discardable Waste Log Sheet

DrumID: 000318 Q6/1253

Item#	ItemID	Net (kg)	Matrix	M Code	NM	MT	Auth	Remarks
1	DXFS-365-F1	20.45	SALTS		0	52	5/11	
		20.45 kg						

Discardable Waste Log Sheet

DrumID: 007499 Q6/1340

ItemF	ItemID	Net (kg)	Matrix	M Code	NM	MT	Auth	Remarks
1	IXFS-284-FI	16.59	NITRATE SALTS		0.6	52	5/11	
2	IXFS-285-FI	37.72	NITRATE SALTS		1.62	42	7/11	
3	IXFS-286-FI	9.09	NITRATE SALTS		1.33	52	5/11G	
4	IXFS-287-FI	10.45	NITRATE SALTS		3.58	52	5/11	
5	IXFS-288-FI	11.81	NITRATE SALTS		0.98	52	5/11	
6	IXFS-289-FI	4.54	NITRATE SALTS		0.38	52	5/11	
7	IXFS-291-FI	9.32	NITRATE SALTS		1.12	52	5/11	
8	IXFS-292-FI	26.36	NITRATE SALTS		0	52	5/11	
		125.88 kg						

2

Discardable Waste Log Sheet

DrumID: 000476 Q6/14./

Item#	ItemID	Net (kg)	Matrix	M Code	NM	MT	Auth	Remarks
1	DOFS-364-FI	43.17	NITRATE SALTS		9	52	5/11	
2	DOFS-367-FI	18.1	NITRATE SALTS		0	52	5/11	
3	DOFS-368-FI	15.9	NITRATE SALTS		0	52	5/11	
4	DOFS-369-FI	20	NITRATE SALTS		0	52	5/11	
5	DOFS-370-FI	39.09	NITRATE SALTS		0	52	5/11	
		136.26 kg						

Discardable Waste Log Sheet

DrumID: 000370 Q6/1454

Item#	ItemID	Net (kg)	Matrix	M Code	NM	MT	Auth	Remarks
1	IXFS-372-F1	36.59	NITRATE SALTS		0	52	5/11	
2	IXFS-374-F1	13.41	NITRATE SALTS		0.42	42	5/11	
3	IXFS-375-F1	11.82	NITRATE SALTS		3	52	5/11	
4	IXFS-376-F1	57.05	NITRATE SALTS		8.05	52	5/11	
5	IXFS-377-F1	9.55	NITRATE SALTS		4.77	52	5/11	
		128.42 kg						

Discardable Waste Log Sheet

DrumID: 008933 Q6/2637

Item#	ItemID	Net (kg)	Matrix	M Code	NM	MT	Auth	Remarks
1	IXFS-233-F1	11.4	NITRATE SALTS		1.67	54	5/11	
2	IXFS-234-F1	15	NITRATE SALTS		2.6	52	5/11	
3	IXFS-235-F1	22.3	NITRATE SALTS		1.67	52	5/11	
4	IXFS-236-F1	2.26	NITRATE SALTS		1.05	52	5/11	
5	IXFS-238	7.3	NITRATE SALTS		2.2	54	5/11	
6	IXFS-239-F1	3.86	NITRATE SALTS		0.41	52	5/11	
7	IXFS-240-F1	13.18	NITRATE SALTS		2	52	5/11	
8	IXFS-241-F1	17.27	NITRATE SALTS		0.95	52	5/11	
9	IXFS-242-F1	14.77	NITRATE SALTS		1.4	52	5/11	
10	IXFS-243-F1	3.41	NITRATE SALTS		0.2	52	5/11	
		110.75 kg						

Discardable Waste Log Sheet

DrumID: 007306 Q6/3/54

Item#	ItemID	Net (kg)	Matrix	M Code	NM	MT	Auth	Remarks
1	IXFS-277-F1	10	NITRATE SALTS		0	52	5/11	
2	IXFS-278-F1	5.9	NITRATE SALTS		1.23	52	5/11	
3	IXFS-279-F1	13.~~56~~ 62	NITRATE SALTS		1	52	5/11	
4	IXFS-280-F1	20.67	NITRATE SALTS		4.55	52	5/11	
5	IXFS-281-F1	10.45	NITRATE SALTS		0	52	5/11	
6	IXFS-282-F1	10.45	NITRATE SALTS		0	52	5/11	
7	IXFS-283-F1	21.81	NITRATE SALTS		0	52	5/11	
		92.64 kg						

S813223

S813223

Container Profile 749523

File Options Reports Help

S813223

749523	TBD-TRU	T-TTRU-TEMP	Active	Decommissioned

- General Information
- Weights/Volumes
- Location
- Account Information
- Waste Material Parameters
- Layers of Confinement
- Prohibited Items
- EPA Codes
- UHC
- Radioassay
- Radiological Survey
- Payload Preparation
- Container Closure
- Materials Added
- TRU Information
- TRU Information (TSDF)
- Radiological Calculations
- Shipping Description
- Site Treatment Plan
- Pending Tasks
- Genealogy
- Container Tags
- Task History
- Documentation
- Comment Log
- Edit Log

Genealogy

S813223

- S813223
  - 93945
  - 93948 — EMPTY
  - 93947
  - 93946

Task History

Transfer Details

Transfer Amount	Transfer Unit	Item	Measured Weight	Measured Weig...
33.3329851666667	%			

Working Copy
Date: 7-2-13

ATTACHMENT 1
Page 1 of 4

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: 5813223

6.2[4] Date Processed: 7-02-13

4.1[6][B] Processing Activity (EP-DIV-AP-0107):
☐ > 190 mrem/hr ☑ PID ☐ Split ☐ Repack

4.1[6][B] Prohibited Items:
☐ Sealed Containers > 4L ☑ Liquids ☐ Pressurized Containers ☐ N/A

4.1[6][B] Parent Waste Container RCRA Designations: D001, D008, D009

4.1[7] Activity Hazard Classification based on Anticipated Extremity Radiation Dose Rate:
☑ Moderate (≤ 10 rem/hr) ☐ High/Complex (> 10 rem/hr)

4.3[1]/4.3[2] ($) TA-50-69 is in the OPERATION or WARM STANDBY MODE (TSR 1.2) ☑ OPERATIONS ☐ WARM STANDBY ☐ N/A

4.3[4][B] Platform Scale: Equipment No.: 019065
Cal. Due Date: 7-31-13

4.3[5][B] ($) Three 1-Liter containers carbon spheroids or MET-L-X in WCG: (SAC 5.10.1.7.1) ☑ YES ☐ NO ☐ N/A

4.3[6] ($) Stationary Fire Watch has been established:
(> 300 PE-Ci Equivalent Combustible)
(SAC 5.10.1.7.2) N/A
(Initial and Date)

4.3[7 [A] Parent Waste Container degraded, loss of integrity, or weighs greater than 468 lb but less than or equal to 624 lb:
☐ YES ☑ NO ☐ N/A

4.3[8][D] WCG glove and bag-in/bag-out bag inspection: ☑ SAT ☐ UNSAT ☐ N/A

Performed By: BRIAN GALLEGOS B. Gallegos / 2167129
Waste Handling Tech (print) Signature Z # Date

ATTACHMENT 1
Page 2 of 4

4.1[6][B]	Parent Waste Container No.: 581320	
5.[18]	Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable:	448.2 lb
6.2[5][A]	Parent Drum Lead Blanket Weight (lb):	0 lb
6.2[5][B]/ 6.2[6]	Total Parent Drum Weight (lb)	448.2 lb
6.2[7]	($) Total Parent Drum Weight < 624 lb (SR 4.5.1):	☑ SAT ☐ UNSAT
6.2[28]	Approval to leave a parent drum attached to the WCG overnight:	

EWMO-FOD (print)	Signature	Z #	Date

ATTACHMENT 1
Page 3 of 4

4.1[6][B] Parent Waste Container No.: 58 13223

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	93945	93946	93947	
10.1[4]	Daughter Drum Filter No.	KM-504	KL-332	KM-521	N/A
10.1[4]	Daughter Drum Bag Filter No.	L-6448	L-6447	L-6867	
10.1[4]	Daughter Drum Purchase Order No.	501103	501103	501103	
10.1[13][C]	WCG Fire Watch Stationed		☐ YES	☐ NO	☑ N/A
10.1[14][C][d]3/11.1[3]	WCG Fire Watch Secured		☐ YES	☐ NO	☑ N/A
10.2[4]	POC bag-on bag: Manufacturer				
	Model No.				
	Serial No.				
	Date of Manufacture				
10.2[5]	POC ID No				
10.2[7][B]/10.2[6]	POC Item Description	N	N/A	N	
10.2[13]	POC Assembly closed per Manufacturer's instructions. (Initial and Z#)			N/A	
10.2[14]	POC Assembly Gross Weight (lb)				
10.2[15]	POC Rad. Survey Results (mrem/hr)				
10.3[3][A]	Approx. Containerized Liquid Vol./Units				
10.3[5][A]	Free Liquid Volume/Units	2 gal	N/A		
10.3[7][A]	Opaque/Non-penetrable Item Description:	LEAD SHIELDING	LEAD SHIELDING	Lead Shielding	
10.3[9][A]	PCB-contaminated Waste Description	N/A	N/A	N/A	A
10.3[9][B]	PCB Item ID No.				
10.3[10]	Remaining Waste Description	See COMMENTS	SEE COMMENTS	see comments	N
10.3[13]/10.4[10]/10.5[4]/10.6[10]	Daughter Drum % Full (%)	60%	70%	60%	
10.5[3]/10.6[2]	Description Waste Added During Processing	BAG OUT STUBS, KITTY LITTER	BAG OUT STUBS, KITTY LITTER	Bag out Stubs Kitty litter	

ATTACHMENT 1
Page 4 of 4

4.1[6][B] Parent Waste Container No.: 5813223

Comments: ROOM TRASH, PLASTICS, HEX ARMOURS GLOVES, POLY PLASTIC, LID, NITRATE SALTS, NEUTRALIZER, WAS UNABLE TO NEUTRALIZE ACID SO KITTY LITTER WAS ADDED TO SOLIDIFY WASTE

11.1[1] Performed By: BRIAN GALLEGOS / B. Gallegos / 1267129 / 7-02-13
Waste Handling Tech (print) Signature Z # Date

11.1[7] Reviewed By: GMK / M / 1498381 / 7/2/13 0740
SOS or designee (print) Signature Z # Date/Time

Working Copy
Date: 6-25-13

ATTACHMENT 2
Page 1 of 1

WCRRF OVERPACK DRUM ASSEMBLY PREPARATION DATA SHEET

5.[3] Overpack drum information:

Purchase Order No.: 501323
Lot No.: 0238052
Manufacture Date: 12

5.[8] Overpack filtered vent and 2-in. bung torque wrench information:

	Filtered Vent	2-in. Bung
M&TE No.:	100216	038369
Cal. Expiration Date:	12-18-13	12-18-13
Tolerance:	±1.4% cw ; 4-60 ccw	±1.3% cw ; 4-60 ccw

Overpack filtered vent information:

Manufacturer: NUCLEAR
Model No.: 013
Serial No.: SC 1567
Manufacture Date: 10/11

5.[9] Torque wrench listed above is within the acceptable ranges as displayed on the calibration certificate. ☑ Yes ☐ No

5: [11] Performed By: IAN MARQUEZ / [signature] 1276781 6-25-13
Waste Handling Technician (print) Signature Z # Date

5.[15] Filtered Vent torque value [120 in-lb (96 to 144 in-lb)]: 110 in-lb

5. [18] 2-in. bung plug torque value: 50 ft-lb

Comments: NA

8.1[1] Performed By: IAN MARQUEZ / [signature] 1276781 6-25-13
Waste Handling Technician (print) Signature Z # Date

8.1[6] Reviewed By: M [illegible] / M [illegible] 149025 7/9/13
Supervisor or designee (print) Signature Z # Date

Working Copy

Date: 7-2-3

ATTACHMENT 5
Page 1 of 1

Working Copy

WCRRF OVERPACK DRUM CLOSURE DATA SHEET

7.[18] Overpack Drum Unique Identifier No.: 93948

7.[24] Overpack drum closure ring torque wrench information:
M&TE No.: 03873
Cal. Expiration Date: 9-11-13
Range in ft-lb: 10-80
Tolerance: ±3% cw ±6% ccw

7.[25] Torque wrench listed above is within the acceptable ranges as displayed on the calibration certificate. ☑ Yes ☐ No

Performed By: Brian Gallegos / B. Gallegos / 267129 7-02-13
Waste Handling Technician (print) Signature Z# Date

7.[27] Overpack drum closure ring torque value: 60 ft-lb

7.[30] Threaded lug of the drum closure ring is not touching the jam nut and the locking ring lugs are not touching. ☑ SAT ☐ UNSAT

7.[35][B] Platform scale serial number: 019065
Platform scale calibration expiration date: 7-31-13

7.[35][D] 85-gal overpack drum gross weight (lb): 191.2 lb

Comments: N/C

8.1[1] Performed By: Brian Gallegos / B. Gallegos / 267129 7-02-13
Waste Handling Technician (print) Signature Z# Date

8.1[7] Reviewed By: G. Uf / G. Uf / 14035 / 7/9/13
Supervisor or designee (print) Signature Z# Date

Attachment 1. Checklist for the preparation of a new 55-Gallon Drum Assembly

Drum ID#: 93945

1. Drum/Lid Assembly

- [x] Remove and discard ¾" bung from lid
- [x] Remove Lid
- [x] Inspect drum, lid, and gasket, ring bolt and nut, chines, and paint
  NOTE: Reject damaged drum/lid assembly
- [x] Place 2" duct tape on vertical seam on interior of drum

RECORD drum information:
Purchase Request #: 501103
Lot #: 0224765
Date of Manufacture: 11/12

2. Drum Liner Bag/Filter Assembly:

- [x] Place yellow vinyl tape, with arrow centered on tape, over filter
- [x] Fill bag with air from compressed air source
- [x] Inspect bag for damage, cuts, or leaks by looking, listening, and feeling
  NOTE: Reject or repair damaged, cut, or leaking bags
- [x] Stretch bag's bungee cord
- [x] Inspect bungee cord
  NOTE: Reject bag if bungee cord is broken or damaged

RECORD bag filter information:
Manufacturer: BOP
Model #: 6SPRC-1-5-2SPVC
Serial #: 6-644B
Date of Manufacture: 1/13

3. Cardboard Liner/Plastic Liner Drum Liner Bag/Filter Assembly:

- [x] Inspect cardboard liner/plastic liner (circle type of liner used)
  NOTE: Reject any damaged liners
- [x] Place cardboard/plastic liner into drum liner bag/filter assembly
- [x] Line up filter with drum seam
- [x] Place liner/bag/filter assembly into drum
- [x] Roll excess liner bag into cardboard liner/plastic liner

4. Install Lid/Drum Filter

- [x] Place lid and ring onto drum
- [x] Tighten ring sufficiently to simply hold lid in place
- [x] Torque 2" bung plug
- [x] Apply sealant to filter threads, screw in ¾" bung hole, and torque
- [x] Place this Attachment and blank Attachment 2 into a protective sleeve and tape to top of drum

RECORD drum filter information:
Manufacturer: NUCFIL
Model #: 019DS
Serial #: KM 504
Date of Manufacture: 11/12

RECORD torque wrench information:

Filter torque wrench:
M&TE ID #: 100216
Cal Expiration Date: 12-18-13
Range (ft-lbs or in-lbs): 40 200
Tolerance: ±4% ft-lbs

Jam Nut / Bung torque wrench:
M&TE ID #: 038569
Cal Expiration Date: 12-18-13
Range (ft-lbs or in-lbs): 10-50
Tolerance: ±3% CW ±6% CCW

Torque wrenches listed above are within the acceptable ranges as displayed on the calibration certificate.
[x] Yes [ ] No
Print Name: MICHAEL MONTOYA Signature [signature] Z#: 191752

5. Weigh Drum Assembly

RECORD weight information
Tare wight (lbs) 79.4
File ID #: 019005

- [x] Write the tare weight on drum using permanent marker

6. Label Drum Assembly

- [x] Place 1 barcode drum ID label to the left of the drum seam, ~6" from drum bottom
- [x] Place 1 barcode drum ID label in the center of the drum lid

RECORD drum ID# at the top of Attachments 1 and 2

Operator Print: MICHAEL MONTOYA Operator Sign: [signature] Z#: 191752 Date: 6/25/13
Verifier Print: BRIAN GALLEGOS Verifier Sign: [signature] Z#: 224712-4 Date: 7-02-13

Attachment 2. Checklist for the Closing of a 55-Gallon Drum Assembly

DRUM ID#: 93945

1. LID INSTALLATION

NOTE: Install lid per manufacturer's instructions

✓ Mount lid with filter directly over drum seam.

✓ Install ring with bolt positioned downward and directly over drum seam.

✓ Engage bolt and nut and torque per manufactures instructions

NOTE Seal the ring while tightening using a rubber hammer or dead-blow mallet or a drum lid press.

✓ Tighten jam nut.

Record torque wrench information:

MT&E #: 038373

Cal expiration date: 9-11-13

Range/ Value (ft-lbs): 10-80

— Tolerance ±3% 0.03360% ccw

2. DRUM LABELING

NOTE: Do not cover the drum seam with any labels.

✓ Place two barcode drum ID labels ~6" from the bottom of the drum ~120° from previously placed ID label.

✓ Place one barcode drum ID label to the right of drum seam between the top two rolling hoops.

✓ Place one yellow radioactive waste label between the top two rolling hoops

✓ Place one yellow radioactive waste label in the center of the drum lid.

RCRA Label:

N/A Place one blue NON-RCRA Regulated Waste label between the top two rolling hoops.

OR

✓ Place one yellow HAZARDOUS Waste label between the top two rolling hoops left of the drum seam. (Ensure EPA waste number and accumulation start date are documented.)

NOTE: Check only one of the above two boxes.

3. WEIGH DRUM ASSEMBLY

Record weight information:

Gross Weight(lbs): 230.2

Scale ID#: 019065

✓ Using a permanent marker, write the gross weight on the drum lid.

4. FINALIZE DOCUMENTATION

✓ Have RCT monitor drum prior to moving to storage area.

✓ Place attachment 1 and 2 and HMPT Tag into a protective sleeve.

✓ Complete TWSR.

Operator Print/Sign: B. Hallig Date 7-02-13

Verifier Print/Sign: Susan Lopez Date: 7-2-13

L-2513 pv

Attachment 1. Checklist for the preparation of a new 55-Gallon Drum Assembly

Drum ID#: 939%6

1. Drum/Lid Assembly

- [x] Remove and discard ¾" bung from lid
- [x] Remove Lid
- [x] Inspect drum, lid, and gasket, ring bolt and nut, chines, and paint
  - NOTE: Reject damaged drum/lid assembly
- [x] Place 2" duct tape on vertical seam on interior of drum

RECORD drum information:

Purchase Request #: 501103
Lot #: 0234765
Date of Manufacture: 2012

2. Drum Liner Bag/Filter Assembly:

- [x] Place yellow vinyl tape, with arrow centered on tape, over filter
- [x] Fill bag with air from compressed air source
- [x] Inspect bag for damage, cuts, or leaks by looking, listening, and feeling
  - NOTE: Reject or repair damaged, cut, or leaking bags
- [x] Stretch bag's bungee cord
- [x] Inspect bungee cord
  - NOTE: Reject bag if bungee cord is broken or damaged

RECORD bag filter information:

Manufacturer: BOP
Model #: 6CPVC 1-5-25PVC
Serial #: L-6447
Date of Manufacture: 1/13

3. Cardboard Liner/Plastic Liner Drum Liner Bag/Filter Assembly:

- [x] Inspect cardboard liner/plastic liner (circle type of liner used)
  - NOTE: Reject any damaged liners
- [x] Place cardboard/plastic liner into drum liner bag/filter assembly
- [x] Line up filter with drum seam
- [x] Place liner/bag/filter assembly into drum
- [x] Roll excess liner bag into cardboard liner/plastic liner

4. Install Lid/Drum Filter

- [x] Place lid and ring onto drum
- [x] Tighten ring sufficiently to simply hold lid in place
- [x] Torque 2" bung plug
- [x] Apply sealant to filter threads, screw in ¾" bung hole, and torque
- [x] Place this Attachment and blank Attachment 2 into a protective sleeve and tape to top of drum

RECORD drum filter information:

Manufacturer: NycFil
Model #: 01905
Serial #: KL-332
Date of Manufacture: 11-11

RECORD torque wrench information:

Filter torque wrench:		Jam Nut / Bung torque wrench:	
M&TE ID #:	100216	M&TE ID #:	038349
Cal Expiration Date:	12-18-13	Cal Expiration Date:	12-18-13
Range (ft-lbs or in-lbs):	40-200	Range (ft-lbs or in-lbs):	10-80
Tolerance:	±4% CW ±6% CCW	Tolerance:	±3% CW ±6% CW

Torque wrenches listed above are within the acceptable ranges as displayed on the calibration certificate.

[x] Yes [ ] No

Print Name: MICHAEL MONTOYA Signature: [signature] Z#: 191352

5. Weigh Drum Assembly

RECORD weight information

Tare weight (lbs) 75-8
File ID #: 0198165

- [x] Write the tare weight on drum using permanent marker

6. Label Drum Assembly

- [x] Place 1 barcode drum ID label to the left of the drum seam, ~6" from drum bottom
- [x] Place 1 barcode drum ID label in the center of the drum lid

RECORD drum ID# at the top of Attachments 1 and 2

Operator Print: MICHAEL MONTOYA Operator Sign: [signature] Z#: 191352 Date: 6/28/13

Verifier Print: BRIAN GALLEGOS Verifier Sign: [signature] Z#: 2607129 Date: 7-02-13

Attachment 2. Checklist for the Closing of a 55-Gallon Drum Assembly

DRUM ID#: 93946

1. LID INSTALLATION

NOTE: Install lid per manufacturer's instructions

✓ Mount lid with filter directly over drum seam.

✓ Install ring with bolt positioned downward and directly over drum seam.

✓ Engage bolt and nut and torque per manufactures instructions

NOTE Seal the ring while tightening using a rubber hammer or dead-blow mallet or a drum lid press.

✓ Tighten jam nut.

Record torque wrench information:

MT&E #: 038373

Cal expiration date: 9-11-13

Range/ Value (ft-lbs): 10-80

— Tolerance ±3% cw ±6% ccw

2. DRUM LABELING

NOTE: Do not cover the drum seam with any labels.

✓ Place two barcode drum ID labels ~6" from the bottom of the drum ~120° from previously placed ID label.

✓ Place one barcode drum ID label to the right of drum seam between the top two rolling hoops.

✓ Place one yellow radioactive waste label between the top two rolling hoops

✓ Place one yellow radioactive waste label in the center of the drum lid.

RCRA Label:

N/A Place one blue NON-RCRA Regulated Waste label between the top two rolling hoops.

OR

✓ Place one yellow HAZARDOUS Waste label between the top two rolling hoops left of the drum seam. (Ensure EPA waste number and accumulation start date are documented.)

NOTE: Check only one of the above two boxes.

3. WEIGH DRUM ASSEMBLY

Record weight information:

Gross Weight(lbs) 304.6

Scale ID#: 019065

✓ Using a permanent marker, write the gross weight on the drum lid.

4. FINALIZE DOCUMENTATION

✓ Have RCT monitor drum prior to moving to storage area.

✓ Place attachment 1 and 2 and HMPT Tag into a protective sleeve.

✓ Complete TWSR.

Operator Print/Sign: Bri Hollie Date 7-02-13

Verifier Print/Sign: Justin Cooper Date: 7-2-13

Attachment 1. Checklist for the preparation of a new 55-Gallon Drum Assembly

Drum ID#: 93947

1. Drum/Lid Assembly

- [x] Remove and discard ¾" bung from lid
- [x] Remove Lid
- [x] Inspect drum, lid, and gasket, ring bolt and nut, chines, and paint
  - NOTE: Reject damaged drum/lid assembly
- [x] Place 2" duct tape on vertical seam on interior of drum

RECORD drum information:
- Purchase Request #: 501103
- Lot #: 0294765
- Date of Manufacture: B

2. Drum Liner Bag/Filter Assembly:

- [x] Place yellow vinyl tape, with smear centered on tape, over filter
- [x] Fill bag with air from compressed air source
- [x] Inspect bag for damage, cuts, or leaks by looking, listening, and feeling
  - NOTE: Reject or repair damaged, cut, or leaking bags
- [x] Stretch bag's bungee cord
- [x] Inspect bungee cord
  - NOTE: Reject bag if bungee cord is broken or damaged

RECORD bag filter information:
- Manufacturer: BOP
- Model #: BLAR 1.5-25 PE
- Serial #: 1-68367
- Date of Manufacture: 1-13

3. Cardboard Liner/Plastic Liner Drum Liner Bag/Filter Assembly:

- [ ] Inspect cardboard liner/plastic liner (circle type of liner used)
  - NOTE: Reject any damaged liners
- [x] Place cardboard/plastic liner into drum liner bag/filter assembly
- [x] Line up filter with drum seam
- [x] Place liner/bag/filter assembly into drum
- [ ] Roll excess liner bag into cardboard liner/plastic liner

4. Install Lid/Drum Filter

- [x] Place lid and ring onto drum
- [x] Tighten ring sufficiently to simply hold lid in place
- [x] Torque 2" bung plug
- [x] Apply sealant to filter threads, screw in ¾" bung hole, and torque
- [x] Place this Attachment and blank Attachment 2 into a protective sleeve and tape to top of drum

RECORD drum filter information:
- Manufacturer: MicFIL
- Model #: 01SDS
- Serial #: KM-521
- Date of Manufacture: 11-12

RECORD torque wrench information:

Filter torque wrench:		Jam Nut / Bung torque wrench:	
M&TE ID #:	100216	M&TE ID #:	073364
Cal Expiration Date:	12-18-2015	Cal Expiration Date:	12-11-2013
Range (ft-lbs or in-lbs):	40-200	Range (ft-lbs or in-lbs):	10-50
Tolerance:	±4% cw + 6% ccw	Tolerance:	±3% cw + 6% ccw

Torque wrenches listed above are within the acceptable ranges as displayed on the calibration certificate.
- [x] Yes
- [ ] No

Print Name: IAN MARQUEZ Signature: [signature] ZR# 276708

5. Weigh Drum Assembly

RECORD weight information
- Tare weight (lbs) 76.2
- File ID #: 019065
- [x] Write the tare weight on drum using permanent marker

6. Label Drum Assembly

- [x] Place 1 barcode drum ID label to the left of the drum seam, ~6" from drum bottom
- [x] Place 1 barcode drum ID label in the center of the drum lid

RECORD drum ID# at the top of Attachments 1 and 2

Operator Print: IAN MARQUEZ Operator Sign: [signature] ZR: 276708 Date: 7-1-13

Verifier Print: Brandon Chavez Verifier Sign: [signature] ZR: 304782 Date: 7-2-13

Attachment 2. Checklist for the Closing of a 55-Gallon Drum Assembly

DRUM ID#: 93947

1. LID INSTALLATION

NOTE: Install lid per manufacturer's instructions

✓ Mount lid with filter directly over drum seam.

✓ Install ring with bolt positioned downward and directly over drum seam.

✓ Engage bolt and nut and torque per manufactures instructions

NOTE Seal the ring while tightening using a rubber hammer or dead-blow mallet or a drum lid press.

✓ Tighten jam nut.

Record torque wrench information:

MT&E #: 038373

Cal expiration date: 9-11-13

Range/ Value (ft-lbs): 10-80

-- Tolerance ±3% cw ±6% ccw

2. DRUM LABELING

NOTE: Do not cover the drum seam with any labels.

✓ Place two barcode drum ID labels ~6" from the bottom of the drum ~120° from previously placed ID label.

✓ Place one barcode drum ID label to the right of drum seam between the top two rolling hoops.

✓ Place one yellow radioactive waste label between the top two rolling hoops

✓ Place one yellow radioactive waste label in the center of the drum lid.

RCRA Label:

✓ Place one blue NON-RCRA Regulated Waste label between the top two rolling hoops.

OR

✓ Place one yellow HAZARDOUS Waste label between the top two rolling hoops left of the drum seam. (Ensure EPA waste number and accumulation start date are documented.)

NOTE: Check only one of the above two boxes.

3. WEIGH DRUM ASSEMBLY

Record weight information:

Gross Weight(lbs) 288.2

Scale ID#: 018065

✓ Using a permanent marker, write the gross weight on the drum lid.

4. FINALIZE DOCUMENTATION

✓ Have RCT monitor drum prior to moving to storage area.

✓ Place attachment 1 and 2 and HMPT Tag into a protective sleeve.

✓ Complete TWSR.

Operator Print/Sign: Brandon Chavez Date 7-2-13

Verifier Print/Sign: [illegible] Date: 7-2-13

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WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Production Control

Container ID: S813223 Container Type: 55-GAL Gross Weight (lbs): 489
Inner Seal #: 011387 Filter Prefix: None Filter Serial #: None
AK Waste Stream: LA-CIN01.001 Certified RTR BDR: No BDR
TWSR Comments: LEACHED SOLIDS
Total PE-Ci Activity: 2.26E+00 Equivalent Combustible PE-Ci: 8.46E-01 AM-241 PE-Ci: 1.83E-01
Total Fissile Gram Equivalents: 24.9 Total Surface Dose Rate (mrem/hr): 1
EPA Code(s): D008 D007 D009 ne 12/11/12
NCR RTR/NDA Comment: None
RTR Pre-Screen Date: 2/27/2012 Comment: Liquid; unvented lid; lead liner
Certified RTR Comment: None

Prohibited Items: ☐ Sealed > 4 Liters ☑ Liquid ☐ Pressurized Container ☐ Impenetrable Item ☐ Other
Security Determination: ☑ Green ☐ Yellow
Remediation Determination: ☐ VE ☑ PID ☐ Split ☐ Repack
Estimated 30-cm Dose Rate (mrem/hr): ☐ <100 ☑ >100 and <1,000 ☐ >1,000 and <10,000 ☐ >10,000
TRUCON Code: None Production Control Comments: Nitrate Salts apply mixture + EPA codes

Performed By: Julie Gallegos (Production Control (Print)) / Julie Gallegos (Signature) / 176905 (Z Number) / 10/18/12 (Date)

WDP Engineering

Chemicals Present (e.g., pyrophorics, acids, bases, shock sensitive, organic liquids, peroxides, crown ethers): Yes ☑ No Unknown
Processing Determination: ☑ Accept Reject
WDP Engineering Comments: Nitrate Salts
Net Wt: 429# Generator info shows 3 items of nitrate salts; weights range from 50-193#. No RTR BDR available for review. Nitrate salts commonly packaged in plastic bags for contain undocumented liquids. They carry waste codes for chromium lead + mercury. Nitrate salts require repack w/ admixture. No chemicals identified. RTR PS shows presence of liquids, unvented lid, + lead liner.

Performed By: Valerie Rhodes (WDP Engineering (Print)) / Valerie Rhodes (Signature) / 112609 (Z Number) / 12/12/12 (Date)

TRU Remediation Operations

☑ Waste Container Information Evaluated ☐ Less Than 170 lbs ☐ RTR Video Available
Other Specific Safety Concerns: Do not push or press on waste with hands. Use heavy duty gloves during processing.
Processing Determination: ☑ Accept Reject
TRU Remediation Operations Comments: USE Proper PPE. Use proper ratio of kitty litter to waste in accordance with the procedure.
Performed By: G Mt (TRU Remediation Operations (Print)) / A Mt (Signature) / 149235 (Z Number) / 5/18/13 (Date)
Jose Jerez / Jose Jerez / 221452 / 5/18/13

HS Review: AB 2003602 12.17.12

Discardable Waste Log Sheet

DrumID: 011387

Item#	ItemID	Net (kg)	Matrix	M Code	NM	MT	Auth	Remarks
1	DXFS-446-F1	22.73	NITRATE SALTS		11.41	52	5/11	
2	DXFS-447-F1	23.18	NITRATE SALTS		4.1	52	5/11	
3	DXFS-448-F1	87.5	NITRATE SALTS		10.87	52	5/11	
		133.41 kg						

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ATTACHMENT 1
Page 1 of 1

TA-54 AREA G WASTE CONTAINER HYDROGEN/VOC SAMPLE ANALYSIS DATA SHEET

5.[1] Sample Date: Feb 13 2013

Container No. (5.[1])	S813223					
Container type sampled (e.g., 55-gal, 85-gal, 110-gal, or SWB) (5.[1])	55gal					
Filtered Vent Type (5.[1])	12					
Filtered Vent Unobstructed (5.[1])	☑ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT
WIPP-Approved Filtered Vent (5.[2])	☑ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT
Total CCP VOC value (< 7,000 ppm) (5.[4])	0 ppm	ppm	2-13-13 ppm	ppm	ppm	ppm
Hydrogen Reading (< 64,000 ppm) (5.[5])	676.16 ppm	ppm	ppm	ppm	ppm	ppm
Methane Reading (< 16,000 ppm) (5.[5])	1214 ppm	ppm	ppm	ppm	ppm	ppm

5.[7] Certified CCP Technician:

Performed By: Gabe Romero (CCP (Print)) 236973 (Z#)

Reviewed By: Rick Jagielski (CCP (Print)) 266088 (Z#)

Comments: n/a

6.1[2][A] WCRRF waste container satisfies the following criteria: ☑ SAT ☐ UNSAT ☐ N/A

- Hydrogen – less than or equal to 3.2% (32,000 ppm)
- VOC – less than or equal to 7,000 ppm

6.1[3] Performed By: Julie Gallegos (Waste Handling Operator (print)) Julie Gallegos (Signature) 176405 (Z#) 2-13-13 (Date)

Quantitation Report (QT Reviewed)

InstName : FGA Unit 12

Data Path : C:\msdchem\1\DATA\130213I\
Data File : S813223.D
Acq On : 13 Feb 2013 3:30 pm (#1); 13 Feb 2013 3:29 pm (#2)
Operator : GR
Sample :
Misc : 55 GAL DRUM THROUGH UNOBSTRUCTED NUCFIL-072 (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Feb 13 15:35:22 2013
Quant Method : C:\msdchem\1\METHODS\H2-CH4.M
Quant Title : Flammable Gas Analysis for Transportation Only
QLast Update : Wed Feb 13 14:42:56 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Target Compounds						Qvalue
1) Hydrogen	1.933	GC1	190969	676.16	ppmv	100
2) Methane	3.843	GC1	1608	12.14	ppmv	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

H2-CH4.M Wed Feb 13 15:35:49 2013 UNIT12

7-2-13 Continued from previous page. JColeman
0115 Operators back from lunch. Resuming operations.
0246 Bagging off 1 daughter and bagging on another daughter.
0300 Bag off/on complete.
0502 Bagging off 1 daughter and 1 POC, bagging on S813223.
0529 Bag off/on complete. PRE check Sat.
0535 Beginning inside rounds.
0538 Beginning outside rounds.
0548 Item #3 is unsat, okay to proceed, FSR in place.
0555 Inside rounds complete.
0556 Late entry at 0552, item #63 is OOS, okay to proceed. POD in place. JC
0604 Outside rounds complete.
7-2-13 0609 Shift turnover brief with Clarissa Velarde (CCO). JColeman

No further entries this page.

7-2-13

0610 Assuming WCRRF operations center Velarde
0620 The job being conducted by SOS.
0623 Rounds signed off by SOS
0705 Starting movement out of 50-69
0800 Completed movement out of 50-69
0806 Permission granted to lower vehicle access gates for movement out of WCRRF
0811 Bagging off 1 daughter.
0849 RCTs pausing work due contamination found by RCTs while performing weekly smears, SOS has been notified above RWP's.
0850 EP-WCRR-RM-AOP-0910 entered, Readings from RCTs are 246 alpha, 24.6 Beta. Operations have been suspended. Operators performing controlled exit per RCT's. SOM and OM have been notified. Energy solutions OM notified WCA pressure reading at .44
0926 vehicle access gates have been restored, movement to transport vehicle is complete
0930 late entry 0917 RCTs entering 50-69 to perform clean and further surveys.
0955 Permission granted to lower vehicle access gates to receive shipment from area G.
1002 RCTs notified ops center that RCTs have found 4-5K alpha on pre filter cover. smears are being sent to HPAL.
1020 Contamination on pre filter cover is fixed contaminat
1027 RCTs have found 10K north end rail on mezzanine
1037 Being relieved by OCO Brian Fordham - Velarde
1038 Assuming WCRRF operations center B. FORDHAM
1050 SHIPMENT RECIVED TO WCRRF Complete
1245 Turning ops center over to Clarissa Velarde —— B. F.
1246 Assuming WCRRF Operations center Velarde
1250 Bagging off 1 daughter.
1311 Bag on, Bag off complete of daughter
[illegible] Velarde

2-13 —Continued from previous page-Crelands.
1315 late entry 1140 RCTs received results from HPAL results were NDA. Exited EP-WCRR-RM-AOP-0210.
1356 Entering EP-WCRR-RM-AOP-0207 lightening observed by operators starting 30 minutes, suspended outside operations
1427 Exiting EP-WCRR-RM-AOP-0207 OK to resume outside operations.
1430 Starting inside rounds.
1444 Starting outside rounds
1451 Item #3 is unsat, FSR in place, okay to proceed.
1452 Inside rounds complete.
1454 Bagging off, Bagging on S811613
1510 Completed outside rounds.
1520 Bag on, Bag off complete.
1522 Starting movement into 5069.
1600 Completed movement into 5069.
1620 Starting movement out of 5069
1638 Rounds have been signed off by SOS
1650 Lights for outdoor evening shift has been approved by Lank IH and okay to use.
2-15 1805 performed Shift turnover with OCO Terri Coleman.

no further entries this page.

7-2-13

1805 Assuming WCRR operations center. - Coleman
1815 Pre-job being conducted by SOS.
1835 Pre-job concluded.
1910 Per the OM, we are now given permission to perform drum movements in and out of the facility at Right.
5 OM Cancelling shift order WCRR-SH-13-004. Operators entering 50-69 to begin operations with drum # S811613 already bagged on by dayshift.
1933 Bagging off S811613, bagging on #62201.
1958 Bag off/on complete. PPE check Sat.
2055 Bagging off 62201, bagging on 60179.
2121 Bag off/on complete. PPE check Sat.
2150 Bagging off 60179, bagging on S832590.
2215 Bag off/on complete. PPE check Sat.
2241 Initiating a drum movement from transportainer to 50-69.
2243 Operators beginning a 30 minute wait period for a sealed 30 gallon container they have encountered in the WCS. All receptacles locked out and the waste package is grounded.
2257 Drum movement into 50-69 complete.
2330 30 minute wait time has elapsed. Resuming operations.
7-3-13 0004 Initiating a drum movement from 50-69 to a transportainer.
0015 Bagging off S832590, bagging on S802621.
0028 Drum movement out of facility complete.
0030 SOS and OM report that the outer roll-up door to 50-69 was not seating correctly when it is lowered. If you are on the outside looking into the highbay, it would be on the bottom left corner. They had to manipulate it several times to get it to seat properly.
0039 Bag off/on complete. PPE check Sat.
0050 Operators out for lunch.
0201 Operators back from lunch. Resuming operations.
0323 Benesting drum # 56896, then bagging it on.
0404 Bag on complete. PPE check Sat.
0440 Initiating a drum movement from 50-69 to a transportainer.

(continued) on next page - Coleman

0611 Assumed the SOM duties at WCRR John Gendagnol
0620 Completed attending shift turnover with operations. The watch bill was reviewed and approved prior to Night Shift leaving. Night shift indicated there was one container of neutralizer left. Lights were efficient and secured.
0642 Completed attending the pre-job brief. The lift table was (new unit) was noted to be too long to utilize under the GB - There is one scheduled TRU drum transfer in, and transfer out.
0746 Communicated with Eng. (V. Rhodes) entering isotopics for the receipt of 5 drums. Eng. indicated they would support, however the procedure will require a change and the responsibility is with production control.
0750 Completed review of status board in Ops Center, on-coming shift document review, and rounds. All noted SAT.
0849 RP-1 supervision notified the Operations Center, that during weekly RMI's, removable contamination was noted from surveys on the mezzanine of FE-003 Flex duct work area. Removable contamination results were 246 alpha dpm and 24.6 Beta. The RWP Limit for alpha is <20dpm.
0850 The Ops Center Operator entered AOP-0210, loss of Glovebox Integrity. Contamination detected during radiological survey. There were no CAM alarms, Operations were suspended in 50/69 WCG. Workers were instructed to exit. Notification was made to the OM, ES/IH, SOS. The WCG pressure reading was 1.64 in wc. - within range.
0915 RCTs initiated entrance to perform decon and additional surveys
0935 Courtesy call provided to DOE/FR - provided him an update
1002 RCTs reported additional surveys were taken, 4-5K was detected with the probe. Noted contamination was noted on the cover of the pre-filter located between the WCG and exhaust fan - (i.e. downstream side) surveys are being counted to determine if contamination is fixed or removable.
1020 RP-1 supervisor reports the pre-filter contamination of 4-5K is fixed, and RCTs will tape and label appropriately.
1027 RP-1 supervisor reports the North East Rail of the mezzanine was noted to have 10K direct additional tape and labeling is being conducted for the fixed area.
1050 Receipt of 5 drums from ABEAG (GGT type) were completed, estimated dose estimates were noted to be with the SEDs. Review of SEDs were conducted by ES/IH, per request from SOM, based on chemicals noted.
1140 RP-1 reports that all survey conducted noting NDA and notification made to Operations to allow entry and continue operations. AOP-0210 was exited.
1150 Completed walk down at diesel generator lights with OM and crafts to observe relocation of light stand. Eximo (L.E.) was notified and she will visit site for final review.
1350 Operations report the last daughter BAG off for 5813223. This drum is reported to have contained 7 gallons of liquid.
1356 Operations Center operator entered AOP-0207 for Severe Weather due to lightning. The 30/30 rule is in effect.
1427 Operation Center Operator exited AOP-0207 for Severe weather -

continued next page

PROJECT NAME 7-2-13 DAYSHIFT Continued. NOTEBOOK NO

1506 DOE/FR visited area and identified a few discrepancies, there was one label coming off of a LLW box in the LLW staging area, and two boxes were not labeled, the signs had blown off.
One caution tag at the battery charging station required information to be rewritten on the TAG. (it was faded). One Operator AID posting was noted on the Vehicle Barrier Gate - The other sign was not attached at the vehicle Barrier Gate - Operator AID Posting 50-07-0004. Two fire extinguishers were not attached to portable generator lights, one had an extinguisher yet was not tagged that it was inspected. - Follow up with Email on extinguishers was presented to Fire Protection Engineers.
1515 The OM provided guidance on WCRF YARD Illumination Values - see E-mail and LANL/IH, indicates the yard is more than adequate.
1602 Conducted Shift turnover with oncoming Night Shift SOM -
1605 Late entry for 0643 - during shift turnover discussed Shift Order, WCRR-SH-13-003 R2 - Drum Movements and WCRR-SH-13-004-R0 Night Operations. Discussion focused on the lift table, not using the New lift and getting the versa lift in to support drum movements.
1813 Secured the DAYSHIFT SOM responsibilities and turned the shift over to the night shift SOM [signature]

No further entries this page

SIGNATURE DATE 20

7/2/13 WCKR SOS LOG BOOK

0600 Assuming Position [illegible] M.J

0615 Conducted shift brief Recieved ~~[illegible]~~ [illegible] 7/2/13 turn over from offgoing crew.

0710 Conducted shift brief

0623 Found reviewed by off going shift SOS

0705 Started movement out of SO-69

0800 Movement Complete Continuing operation on 5813227

0811 Bagging off 1 daughter

0849 RCT's pausing work due to Contamination Found while performing Weekly RMES

0850 EP-WCKR-RM-AOP-0210 entered, Readings From RCTs Are 246 Alpha, 24.6 beta Operation have been suspended Operator's performing controlled exit Per RCT's SOM and OM have been notified ES and notified. WCG pressure reads At 44.

0926 Vehicle Access restored Late entric RCts entering SO-69 To Perform Decon efforts

1002 RCts notified that they Found 4-5K Alpha on Pre Filter cover smears. are being sent to HPal

1020 RCT's noted that contamination was [illegible] 7/2/13 Fixed.

1022 RCts noted more contamination on north rail sheet metal bage. 10,000 Alpha direct.

1036 RCT noted north rail is also Fixed contamination

1050 shipment Complete

1140 RCT's Released room For operation All smears NDA. And decon Complete

1250 Bagging off 1 daughter

1311 Bag on Bag off Complete

1350 Entering EP-WCKR-RM-AOP-0207 30-30 rule

1427 Exiting EP-WCKR-RM-AOP-0207 ok to resume operation outside

1454 Bagging off bagging on 5811613

1520 Bag on/off complete

1638 Reviewed Inside And outside Rounds

1650 Out door lights approved by land [illegible]

1755 operators exiting Facility

Continued from next page

7/2/13
1800 Turning over SOS position to Clayton Mullins
1800 Assuming SOS position. CM
1815 Beginning turnover from day shift. In Pre-Job discussed second night being cautions of yourself and co workers. Also processing the priority drums first.
1855 Completed Pre-Job.
1910 Per the OM, permission has been given to perform movements in and out of 50-69 at night. SOM cancelling shift order WCRR-SH-13-004.
1933 Bagging off 1 daughter and bagging on 62201.
1958 Bag off/on complete.
2055 Bagging off 1 ~~day~~ cm 7-2-13 daughter and bagging on 60179.
2120 Bag off/on complete
2149 Bagging off 1 daughter and bagging on 5832590
2214 Bag off/on complete.
2241 Starting movement into 50-69
2257 Movement into 50-69 complete.
0004 Starting movement out of 50-69.
0015 Bagging off 1 daughter and bagging on 5802621.
0028 Movement out of 50-69 complete.
0030 Outter roll-up door of highbay doesn't always close completely. Noticed a few times that on side was down and the other side stayed up a few inches off the ground.
0039 Bag off/on complete
0321 Bagging off 1 daughter cm 7-3-13 ~~and~~ and de-nesting then bagging on 56896.
0348 De-nested 56896, now bagging on drum.
0404 Bag off/on complete.
0440 Started movement out of 50-69.
0456 Movement out of 50-69 complete.
0543 Bagging off 1 daughter.
0548 Signed off on the rounds.
0601 Bag off complete

Continued on Next Page. C Mullins

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0090
Examination Date:	7/10/2013
Waste Container ID:	93945
Video/Audio Recorded Media Number:	LA-RTR2-13-0090 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 13
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3150
Waste Stream I.D.:	LA-CIN01.001
Waste Container Weights:	Gross Wt.: 104.5 kg Tare Wt.: 33.4 kg Net Wt.: 71.1 kg
Rigid Liner and Liner Vent Description:	Liner: [X] No [ ] Yes Lid: [X] No [ ] Yes Type: [ ] 30-mil [ ] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [ ] Yes [X] N/A Punctured: [X] No [ ] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [ ] No [X] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 2 layers
Volume Utilization Percentage:	65 %

CCP Radiography Data Sheet

Waste Container ID: 93945

Section 3: Container Inventory and Comments (Detailed descriptions)

IM:

AM:

OM: Scrap lead

OI:

C:

R:

XPM: Plastic bags, liner lid

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP) : Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	4.0
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	3.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	64.1
Soils (S):	
Total WMP Weight:	71.1

CCP Radiography Data Sheet

Waste Container ID: 93945

Section 5: RTR Summary (Questions answered "Yes" will be explained in the Comment block, except for Question 1)	
Is there observable liquid?	☐ Yes ☒ No
Is there any observable liquid in internal containers, more than 60 milliliters or 3 percent by volume, whichever is greater?	☐ Yes ☒ No
Is the total volume of observable liquid in the outermost container GREATER than 1% of the container?	☐ Yes ☒ No
Is there observable liquid in payload containers with an EPA Hazardous Waste Number of U134?	☐ Yes ☒ No
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐ Yes ☒ No
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐ Yes ☒ No
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does NOT match TRUCON Code[s])?	☐ Yes ☒ No
Is there an indication of wastes containing explosives or compressed gases?	☐ Yes ☒ No
Is there an indication of PCBs liquids?	☐ Yes ☒ No
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐ Yes ☒ No
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐ Yes ☒ No
CH or RH TRAMPAC	
Are there heat-sealed bags (unvented) GREATER than 4 liters and LESS than 390 square inches in the waste, or heat sealed bags not authorized in the RH TRUCON Code?	☐ Yes ☒ No
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐ Yes ☒ No
Are there sealed containers GREATER than 4 liters?	☐ Yes ☒ No
Are there indications of inadequate protection for heavy and/or sharp objects?	☐ Yes ☒ No

Comments: N/A

RTR Operator:

Eric Lyles		7/10/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	93945	Count Sequence Number:	23200
Operator:	D3PW2DK1\operator		
Assay Start:	7/11/2013 11:38:45 AM		
Description 1:	1LANDA1807		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 71.1 kg	Net:	71.1 kg
Container:	Volume: 208.0 l	Full:	65.0 %
Density:	0.530 kg /l		

System Configuration

Counter:	MCS HENC #1
Count Type:	Item Count
Collimator/Geometry Setting:	All Banks On (GE - 0

Errors quoted at 1.000 sigma

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number:	23200	Batch Number:	1LANDA1807
Assay Instrument:	MCS HENC #1	Location:	LANL TA-54
Analysis Method:	CCP-TP-063 v 14	Software Version:	NDA 2000 V.4.0
Item ID:	93945	Analysis Date:	7/11/2013

Net Weight	71100.0 g		
Pu mass	8.92E-001	+-	1.41E-001 g
TRU Alpha Activity	1.38E+000	+-	7.05E-001 Ci
TRU Activity Concentration	1.95E+004	+-	9.91E+003 nCi/g
Pu-239 Equivalent Activity	1.39E+000	+-	7.05E-001 Ci
Pu-239 FGE	8.48E-001	+-	1.40E-001 g
Decay heat	4.61E-002	+-	2.36E-002 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	3.58E-007
U233	<LLD	<LLD	0.00E+000	2.33E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	7.03E-007
NP237	2.31E-002	1.65E-005	2.62E-006	1.25E-006
PU238	8.17E-005	1.41E-003	2.98E-004	2.96E-004
U238	<LLD	<LLD	0.00E+000	6.88E-006
PU239	8.37E-001	5.27E-002	8.82E-003	1.10E-002
PU240	5.35E-002	1.23E-002	2.70E-003	2.58E-003
AM241	3.79E-001	1.32E+000	7.05E-001	2.77E-002
PU241	1.04E-003	1.08E-001	2.37E-002	2.26E-002
PU242	1.79E-004	7.09E-007	1.55E-007	0.00E+000

Errors quoted at 1.000 sigma

Operator: Maria [illegible] Date: 7·16·13

ITR: [illegible] Date: 7-18-13

Automated Independent Technical Review

Count Sequence Number: 23200 Batch Number: 1LANDA1807
Counter ID: MCS HENC #1
Container ID: 93945
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 7/11/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis No Add-a-Source warnings.	Ok
Section 2 - Passive Neutron Analysis Analysis Status: No errors. No Warnings Reported.	Ok
Section 3 - Data Combiner Analysis Override enabled; Gamma data specified as input. Results taken from Quantitative Gamma data. Results comparison test passed.	Results taken from quantitative gamma data.
Section 4 - MGA Analysis Results are marked as invalid.	MGA analysis failed. AK isotopics applied. The AK information utilized was provided by Steve Schafer, AKE, and consists of data from CCP-AK-LANL-006, AK Source Document M237. MT-52.
Section 5 - Gamma Analysis Analysis Status: No errors.	Ok
Miscellaneous	No additional nuclides contributing to 95% of the radiological hazard identified.

Expert Review by: Sheri Chamberlin Date: 7-15-13

Attachment 4 – Flammable Gas Analysis Form

SCO 1049 Add 4 - Win XP SP3/Win 7 SP1
Excel 2003/2007/2010

Waste Container ID: **93945**

BDR Number: **LA13FG12061**

Sampling Date: **7/12/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	87.02	
74-82-8	Methane	9.63	U
67-56-1	Methanol	N/A	U
60-29-7	Ethyl Ether	N/A	U
75-35-4	1,1-Dichloroethylene	N/A	U
67-64-1	Acetone	N/A	U
75-34-3	1,1-Dichloroethane	N/A	U
156-59-2	cis-1,2-Dichloroethene	N/A	U
78-93-3	Methyl ethyl ketone	N/A	U
110-82-7	Cyclohexane	N/A	U
71-43-2	Benzene	N/A	U
107-06-2	1,2-Dichloroethane	N/A	U
71-36-3	1-Butanol	N/A	U
108-10-1	Methyl isobutyl ketone	N/A	U
108-88-3	Toluene	N/A	U
108-90-7	Chlorobenzene	N/A	U
100-41-4	Ethylbenzene	N/A	U
108-38-3/106-42-3	m- and p-Xylene	N/A	U
95-47-6	o-Xylene	N/A	U
108-67-8	1,3,5-Trimethylbenzene	N/A	U
95-63-6	1,2,4-Trimethylbenzene	N/A	U

CAS Number	IDENTIFIED TIC COMPOUND	Est. Amount ppmv
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

Quantitation Report (QT Reviewed)

InstName : FGA Unit 12

Data Path : C:\msdchem\1\DATA\130712c\
Data File : 93945.D
Acq On : 12 Jul 2013 10:04 am (#1); 12 Jul 2013 10:02 am (#2)
Operator : SA
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER, NucFil-019DS (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 12 10:07:50 2013
Quant Method : C:\msdchem\1\METHODS\H2-CH4.M
Quant Title : Flammable Gas Analysis for Transportation Only
QLast Update : Thu May 23 08:37:45 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Target Compounds						Qvalue
1) Hydrogen	1.903	GC1	24823m	87.02	ppmv	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination	[ ] RTR Replicate Scan [ ] RTR Independent Observation
Site ID:	LANL
Batch Number:	LA-RTR2-13-0090
Examination Date:	7/10/2013
Waste Container ID:	93946
Video/Audio Recorded Media Number:	LA-RTR2-13-0090 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 13
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3150
Waste Stream I.D.:	LA-CIN01.001
Waste Container Weights:	Gross Wt.: 138.0 kg Tare Wt.: 33.4 kg Net Wt.: 104.6 kg
Rigid Liner and Liner Vent Description:	Liner: [X] No [ ] Yes Lid: [X] No [ ] Yes Type: [ ] 30-mil [ ] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [ ] Yes [X] N/A Punctured: [X] No [ ] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [ ] No [X] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 2 layers
Volume Utilization Percentage:	75 %

CCP Radiography Data Sheet

Waste Container ID: 93946

Section 3: Container Inventory and Comments (Detailed descriptions)

IM:

AM:

OM:

OI:

C:

R:

XPM: Plastic bag

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP) : Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	2.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	102.6
Soils (S):	
Total WMP Weight:	104.6

CCP Radiography Data Sheet

Waste Container ID: 93946

Section 5: RTR Summary (Questions answered "Yes" will be explained in the Comment block, except for Question 1)	
Is there observable liquid?	[X] Yes [ ] No
Is there any observable liquid in internal containers, more than 60 milliliters or 3 percent by volume, whichever is greater?	[ ] Yes [X] No
Is the total volume of observable liquid in the outermost container GREATER than 1% of the container?	[ ] Yes [X] No
Is there observable liquid in payload containers with an EPA Hazardous Waste Number of U134?	[ ] Yes [X] No
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	[ ] Yes [X] No
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	[ ] Yes [X] No
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does NOT match TRUCON Code[s])?	[ ] Yes [X] No
Is there an indication of wastes containing explosives or compressed gases?	[ ] Yes [X] No
Is there an indication of PCBs liquids?	[ ] Yes [X] No
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	[ ] Yes [X] No
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	[ ] Yes [X] No
CH or RH TRAMPAC	
Are there heat-sealed bags (unvented) GREATER than 4 liters and LESS than 390 square inches in the waste, or heat sealed bags not authorized in the RH TRUCON Code?	[ ] Yes [X] No
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	[ ] Yes [X] No
Are there sealed containers GREATER than 4 liters?	[ ] Yes [X] No
Are there indications of inadequate protection for heavy and/or sharp objects?	[ ] Yes [X] No
Comments: N/A	

RTR Operator:

Eric Lyles		7/10/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	93946	Count Sequence Number:	23204
Operator:	D3PW2DK1\operator		
Assay Start:	7/11/2013 3:20:21 PM		
Description 1:	1LANDA1807		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 105.0 kg	Net:	105.0 kg
Container:	Volume: 208.0 l	Full:	75.0 %
Density:	0.670 kg /l		

System Configuration

Counter:	MCS HENC #1
Count Type:	Item Count
Collimator/Geometry Setting:	All Banks On (GE - 0

Errors quoted at 1.000 sigma

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number: 23204
Assay Instrument: MCS HENC #1
Analysis Method: CCP-TP-063 v 14
Item ID: 93946

Batch Number: 1LANDA1807
Location: LANL TA-54
Software Version: NDA 2000 V.4.0
Analysis Date: 7/11/2013

Net Weight	105000.0 g		
Pu mass	3.58E+000	+-	1.99E+000 g
TRU Alpha Activity	2.91E+000	+-	1.44E+000 Ci
TRU Activity Concentration	2.77E+004	+-	1.37E+004 nCi/g
Pu-239 Equivalent Activity	2.92E+000	+-	1.44E+000 Ci
Pu-239 FGE	3.39E+000	+-	1.86E+000 g
Decay heat	9.66E-002	+-	4.80E-002 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	5.01E-002	3.58E-005	6.48E-006	2.07E-006
PU238	3.28E-004	5.67E-003	3.15E-003	3.36E-005
PU239	3.36E+000	2.11E-001	1.17E-001	1.25E-003
PU240	2.15E-001	4.93E-002	2.74E-002	2.93E-004
AM241	7.61E-001	2.64E+000	1.43E+000	4.73E-002
PU241	4.17E-003	4.33E-001	2.41E-001	2.57E-003
PU242	7.16E-004	2.84E-006	1.58E-006	0.00E+000
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	5.45E-007
U233	<LLD	<LLD	0.00E+000	4.08E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	1.22E-006
U238	<LLD	<LLD	0.00E+000	1.32E-005

Errors quoted at 1.000 sigma

Operator: Maria [illegible] Date: 7-16-13

ITR: [illegible] Date: 7-18-13

Automated Independent Technical Review

Count Sequence Number: 23204 Batch Number: 1LANDA1807
Counter ID: MCS HENC #1
Container ID: 93946
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 7/11/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis No Add-a-Source warnings.	Ok
Section 2 - Passive Neutron Analysis Analysis Status: No errors.	Ok
Ones Rate Analysis complete with warnings. - Error calculating the Ones Rate Pu-240 Effective MDA.	Not data affecting.
Section 3 - Data Combiner Analysis Override enabled; Passive Neutron Pu and Gamma U data specified as input. Pu results taken from Passive Neutron data, U from Quantitative Gamma data. Results comparison test passed.	Passive Neutron Pu and Gamma U data specified as input.
Section 4 - MGA Analysis Results are marked as invalid.	MGA analysis failed. AK isotopics applied. The AK information utilized was provided by Steve Schafer, AKE, and consists of data from CCP-AK-LANL-006, AK Source Document M237. MT-52.
Section 5 - Gamma Analysis Analysis Status: No errors.	Ok
Miscellaneous	No additional nuclides contributing to 95% of the radiological hazard identified.

Expert Review by: Sheri Chamberlin Date: 7-15-13

Attachment 4 – Flammable Gas Analysis Form

SCO 1049 Add 4 - Win XP SP3/Win 7 SP1
Excel 2003/2007/2010

Waste Container ID: **93946**

BDR Number: **LA13FG12061**

Sampling Date: **7/12/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	157.52	
74-82-8	Methane	9.63	U
67-56-1	Methanol	N/A	U
60-29-7	Ethyl Ether	N/A	U
75-35-4	1,1-Dichloroethylene	N/A	U
67-64-1	Acetone	N/A	U
75-34-3	1,1-Dichloroethane	N/A	U
156-59-2	cis-1,2-Dichloroethene	N/A	U
78-93-3	Methyl ethyl ketone	N/A	U
110-82-7	Cyclohexane	N/A	U
71-43-2	Benzene	N/A	U
107-06-2	1,2-Dichloroethane	N/A	U
71-36-3	1-Butanol	N/A	U
108-10-1	Methyl isobutyl ketone	N/A	U
108-88-3	Toluene	N/A	U
108-90-7	Chlorobenzene	N/A	U
100-41-4	Ethylbenzene	N/A	U
108-38-3/106-42-3	m- and p-Xylene	N/A	U
95-47-6	o-Xylene	N/A	U
108-67-8	1,3,5-Trimethylbenzene	N/A	U
95-63-6	1,2,4-Trimethylbenzene	N/A	U

CAS Number	IDENTIFIED TIC COMPOUND	Est. Amount ppmv
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

Quantitation Report (QT Reviewed)

InstName : FGA Unit 12

Data Path : C:\msdchem\1\DATA\130712c\
Data File : 93946.D
Acq On : 12 Jul 2013 10:24 am (#1); 12 Jul 2013 10:22 am (#2)
Operator : SA
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER, NucFil-019DS (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 12 12:56:59 2013
Quant Method : C:\msdchem\1\METHODS\H2-CH4.M
Quant Title : Flammable Gas Analysis for Transportation Only
QLast Update : Thu May 23 08:37:45 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Target Compounds						Qvalue
1) Hydrogen	1.903	GC1	44932m	157.52	ppmv	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

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CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0090
Examination Date:	7/10/2013
Waste Container ID:	93947
Video/Audio Recorded Media Number:	LA-RTR2-13-0090 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 13
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3150
Waste Stream I.D.:	LA-CIN01.001
Waste Container Weights:	Gross Wt.: 130.5 kg Tare Wt.: 33.4 kg Net Wt.: 97.1 kg
Rigid Liner and Liner Vent Description:	Liner: [X] No [ ] Yes Lid: [X] No [ ] Yes Type: [ ] 30-mil [ ] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [ ] Yes [X] N/A Punctured: [X] No [ ] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [ ] No [X] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 1 layer
Volume Utilization Percentage:	50 %

CCP Radiography Data Sheet

Waste Container ID: 93947

Section 3: Container Inventory and Comments (Detailed descriptions)

IM:

AM:

OM: Scrap lead

OI:

C:

R:

XPM: Plastic bags

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP) : Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	6.0
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	2.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	89.1
Soils (S):	
Total WMP Weight:	97.1

CCP Radiography Data Sheet

Waste Container ID: 93947

Section 5: RTR Summary (Questions answered "Yes" will be explained in the Comment block except for Question 1)	
Is there observable liquid?	☐ Yes ☒ No
Is there any observable liquid in internal containers, more than 60 milliliters or 3 percent by volume, whichever is greater?	☐ Yes ☒ No
Is the total volume of observable liquid in the outermost container GREATER than 1% of the container?	☐ Yes ☒ No
Is there observable liquid in payload containers with an EPA Hazardous Waste Number of U134?	☐ Yes ☒ No
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐ Yes ☒ No
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐ Yes ☒ No
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does NOT match TRUCON Code[s])?	☐ Yes ☒ No
Is there an indication of wastes containing explosives or compressed gases?	☐ Yes ☒ No
Is there an indication of PCBs liquids?	☐ Yes ☒ No
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐ Yes ☒ No
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐ Yes ☒ No
CH or RH TRAMPAC	
Are there heat-sealed bags (unvented) GREATER than 4 liters and LESS than 390 square inches in the waste, or heat sealed bags not authorized in the RH TRUCON Code?	☐ Yes ☒ No
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐ Yes ☒ No
Are there sealed containers GREATER than 4 liters?	☐ Yes ☒ No
Are there indications of inadequate protection for heavy and/or sharp objects?	☐ Yes ☒ No
Comments: N/A	

RTR Operator:

Eric Lyles		7/10/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	93947	Count Sequence Number:	23198
Operator:	D3PW2DK1\operator		
Assay Start:	7/11/2013 10:14:20 AM		
Description 1:	1LANDA1807		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 97.1 kg	Net:	97.1 kg
Container:	Volume: 208.0 l	Full:	50.0 %
Density:	0.930 kg /l		

System Configuration

Counter:	MCS HENC #1
Count Type:	Item Count
Collimator/Geometry Setting:	All Banks On (GE - 0

Errors quoted at 1.000 sigma

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number:	23198	Batch Number:	1LANDA1807
Assay Instrument:	MCS HENC #1	Location:	LANL TA-54
Analysis Method:	CCP-TP-063 v 14	Software Version:	NDA 2000 V.4.0
Item ID:	93947	Analysis Date:	7/11/2013

Net Weight	97100.0 g		
Pu mass	7.58E+000	+-	1.29E+000 g
TRU Alpha Activity	2.30E+000	+-	9.69E-001 Ci
TRU Activity Concentration	2.37E+004	+-	9.98E+003 nCi/g
Pu-239 Equivalent Activity	2.32E+000	+-	9.70E-001 Ci
Pu-239 FGE	7.16E+000	+-	1.21E+000 g
Decay heat	7.56E-002	+-	3.24E-002 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	3.96E-002	2.83E-005	6.23E-006	1.90E-006
PU238	6.95E-004	1.20E-002	2.04E-003	3.36E-005
PU239	7.12E+000	4.48E-001	7.59E-002	1.25E-003
PU240	4.55E-001	1.05E-001	1.77E-002	2.93E-004
AM241	5.00E-001	1.74E+000	9.66E-001	3.80E-002
PU241	8.84E-003	9.19E-001	1.56E-001	2.57E-003
PU242	1.52E-003	6.03E-006	1.02E-006	0.00E+000
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	4.98E-007
U233	<LLD	<LLD	0.00E+000	3.59E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	1.05E-006
U238	<LLD	<LLD	0.00E+000	1.05E-005

Errors quoted at 1.000 sigma

Operator: Maria [illegible] Date: 7-16-13

ITR: [illegible] Date: 7-18-13

Automated Independent Technical Review

Count Sequence Number: 23198 Batch Number: 1LANDA1807
Counter ID: MCS HENC #1
Container ID: 93947
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 7/11/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis No Add-a-Source warnings.	Ok
Section 2 - Passive Neutron Analysis Analysis Status: No errors. No Warnings Reported.	Ok
Section 3 - Data Combiner Analysis Override enabled; Passive Neutron Pu and Gamma U data specified as input. Pu results taken from Passive Neutron data, U from Quantitative Gamma data. Results comparison test passed.	Passive Neutron Pu and Gamma U data specified as input.
Section 4 - MGA Analysis Results are marked as invalid.	MGA analysis failed. AK isotopics applied. The AK information utilized was provided by Steve Schafer, AKE, and consists of data from CCP-AK-LANL-006, AK Source Document M237. MT-52.
Section 5 - Gamma Analysis Analysis Status: No errors.	Ok
Miscellaneous	No additional nuclides contributing to 95% of the radiological hazard identified.

Expert Review by: Sherri Chamberlin Date: 7-15-13

Waste Container ID: **93947**

BDR Number: **LA13FG12061**

Sampling Date: **7/12/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	31.47	
74-82-8	Methane	9.63	U
67-56-1	Methanol	N/A	U
60-29-7	Ethyl Ether	N/A	U
75-35-4	1,1-Dichloroethylene	N/A	U
67-64-1	Acetone	N/A	U
75-34-3	1,1-Dichloroethane	N/A	U
156-59-2	cis-1,2-Dichloroethene	N/A	U
78-93-3	Methyl ethyl ketone	N/A	U
110-82-7	Cyclohexane	N/A	U
71-43-2	Benzene	N/A	U
107-06-2	1,2-Dichloroethane	N/A	U
71-36-3	1-Butanol	N/A	U
108-10-1	Methyl isobutyl ketone	N/A	U
108-88-3	Toluene	N/A	U
108-90-7	Chlorobenzene	N/A	U
100-41-4	Ethylbenzene	N/A	U
108-38-3/106-42-3	m- and p-Xylene	N/A	U
95-47-6	o-Xylene	N/A	U
108-67-8	1,3,5-Trimethylbenzene	N/A	U
95-63-6	1,2,4-Trimethylbenzene	N/A	U

CAS Number	IDENTIFIED TIC COMPOUND	Est. Amount ppmv
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

Quantitation Report (QT Reviewed)

InstName : FGA Unit 12

Data Path : C:\msdchem\1\DATA\130712c\
Data File : 93947.D
Acq On : 12 Jul 2013 10:11 am (#1); 12 Jul 2013 10:09 am (#2)
Operator : SA
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER, NucFil-019DS (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 12 10:14:55 2013
Quant Method : C:\msdchem\1\METHODS\H2-CH4.M
Quant Title : Flammable Gas Analysis for Transportation Only
QLast Update : Thu May 23 08:37:45 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Target Compounds						Qvalue
1) Hydrogen	1.903	GC1	8977m	31.47	ppmv	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

S813471

S813471

Container Profile 773190

File Options Reports Help

S813471

773190	TBD-TRU	T-TTRU-TEMP	Active	Decommissioned

- General Information
- Weights/Volumes
- Location
- Account Information
- Waste Material Parameters
- Layers of Confinement
- Prohibited Items
- EPA Codes
- UHC
- Radioassay
- Radiological Survey
- Payload Preparation
- Container Closure
- Materials Added
- TRU Information
- TRU Information (TSDF)
- Radiological Calculations
- Shipping Description
- Site Treatment Plan
- Pending Tasks
- Genealogy
- Container Tags
- Task History
- Documentation
- Comment Log
- Edit Log

Genealogy

S813471

- S813471
  - LA00000068994
    - LA00000069641
    - LA00000069520
    - LA00000069637
    - LA00000069622 – EMPTY
  - W801643–EMPTY

Task History

Transfer Details

Transfer Amount	Transfer Unit	Item	Measured Weight	Measured Weig...
0.0010	%			

Working Copy
Date: 4/18/14

ATTACHMENT 1
Page 1 of 4

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: 68994

6.2[4] Date Processed: 4/18/14

4.1[6][B] Prohibited Items:
☐ Sealed Containers > 4L ☑ Liquids ☐ Pressurized Containers ☐ N/A

4.1[6][B] Parent Waste Container RCRA Designations: D007, D008, D009

4.3[1]/4.3[2] ($) TA-50-69 is in the OPERATION or WARM STANDBY MODE (TSR 1.2) ☑ OPERATIONS ☐ WARM STANDBY

4.3[4][B] Platform Scale: Equipment No.: 019065
Cal. Due Date: 10/14/14

4.3[5][B] ($) Three 1-Liter containers carbon spheroids or MET-L-X in WCG: (SAC 5.10.1.7.1) JQ 4/18/14 (Initial and Date)

4.3[6] ($) Stationary Fire Watch has been established: (> 300 PE-Ci Equivalent Combustible) (SAC 5.10.1.7.2) ☑ N/A (Initial and Date)

4.3[7 [A] Parent Waste Container degraded, loss of integrity, or weighs greater than 468 lb but less than or equal to 624 lb:
☐ YES ☐ NO ☑ N/A

4.3[8][D] WCG glove and bag-in/bag-out bag inspection: ☑ SAT ☐ UNSAT ☐ N/A

Performed By: JOE QUINTANA, Joe Q 239987, 4/18/14
Waste Handling Tech (print) Signature Z # Date

ATTACHMENT 1
Page 2 of 4

4.1[6][B]	Parent Waste Container No.: _____	
5.[18]	Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable:	399.0 lb
6.2[5][A]	Parent Drum Lead Blanket Weight (lb):	0 lb ☐ N/A
6.2[5][B]/ 6.2[6]	Total Parent Drum Weight (lb)	399.0 lb
6.2[7]	**($)** Total Parent Drum Weight < 624 lb (SR 4.5.1):	☑ SAT ☐ UNSAT
6.2[16]	Retaining clips in place	☑ SAT ☐ UNSAT
6.2[18][D]	Drum lift hinge pin retaining clip replaced. _____ / _____ / _____ (Initials / Z# / Date)	☑ N/A
6.2[26]	Approval to leave a parent drum attached to the WCG overnight:	

N/A / _____ / _____ / _____
EWMO-FOD (print) Signature Z # Date

ATTACHMENT 1
Page 3 of 4

4.1[6][B] Parent Waste Container No.: 68994

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	69641	69520	69637	N/A
10.1[4]	Daughter Drum Filter No.	KL313	N/A	KL312	
10.1[4]	Daughter Drum Bag Filter No.	L10185		L10212	
10.1[4]	Daughter Drum Purchase Order No.	501578		501578	
10.1[19][C]	WCG Fire Watch Stationed		☐ YES	☐ NO	☑ N/A
10.1[20][C][d]3/11.1[3]	WCG Fire Watch Secured		☐ YES	☐ NO	☑ N/A
10.2[4]	POC bag-on bag: Manufacturer	N/A	BOP	N/A	
	Model No.		6CPUCL-5/25PUL		
	Serial No.		L10182		
	Date of Manufacture		5/13		
10.2[5]	POC ID No		69520		
10.2[6]/10.2[7][B]	POC Item Description		PLASTICS, NITRATE SALT		
10.2[13]	POC Assembly closed per Manufacturer's instructions. (Initial and Z#)		JQ239987		
10.2[14]	POC Assembly Gross Weight (lb)		345.4		
10.2[15]	POC Rad. Survey Results (mrem/hr)		1200.5		
10.3[3][A]	Approx. Containerized Liquid Vol./Units		N/A		
10.3[5][A]	Free Liquid Volume/Units		N/A		
10.3[7][A]	Opaque/Non-penetrable Item Description:		N/A		
10.3[9][A]	PCB-contaminated Waste Description		N/A		
10.3[9][B]	PCB Item ID No.		N/A		
10.3[10]	Remaining Waste Description	See Comments	PLASTICS NITRATE SALTS	See Comments	
10.3[13]/10.4[10]/ 10.5[4]/10.6[10]	Daughter Drum % Full (%)	75	95	100	
10.5[3]/10.6[2]	Description Waste Added During Processing	KITTY LITTER	KITTY LITTER	KITTY LITTER	

ATTACHMENT 1
Page 4 of 4

4.1[6][B] Parent Waste Container No.: 68994

Comments: 1/2 GAL FREE LIQUID, (4 PH WAS ADJUSTED WITH NEUTRALIZER) LEAD, PLASTICS, STUBOUTS, NITRATE SALTS, HexARMOR GLOVES

11.1[1] Performed By: JOE QUINTANA, Joe Z 239987, 4/18/14
Waste Handling Tech (print) Signature Z # Date

11.1[8] Reviewed By: / / /
SOS or designee (print) Signature Z # Date/Time

ATTACHMENT 1
Page 1 of 1

Working Copy
Date: 3/20/14 HS

WCRRF OVERPACK DRUM ASSEMBLY PREPARATION DATA SHEET

5.[3] Overpack drum information:

Purchase Order No.: 501563
Lot No.: 0240323
Manufacture Date: 2013

5.[8] Overpack filtered vent and 2-in. bung torque wrench information:

	Filtered Vent	2-in. Bung
M&TE No.:	101310	036245
Cal. Expiration Date:	11/24/14	08/05/14
Tolerance:	±4% cw ±6% ccw	±3% cw ±6% ccw

Overpack filtered vent information:

Manufacturer: NUCFIL
Model No.: 013
Serial No.: HL-903
Manufacture Date: 8/11

5.[9] Torque wrench listed above is within the acceptable ranges as displayed on the calibration certificate. ☑ Yes ☐ No

5. [11] Performed By: MICHAEL MONTOYA / [signature] 191352 / 3-20-14
Waste Handling Technician (print) Signature Z # Date

5.[15] Filtered Vent torque value [120 in-lb (96 to 144 in-lb)]: 120 in-lb

5. [18] 2-in. bung plug torque value: 30 ft-lb

Comments: N/C

8.1[1] Performed By: MICHAEL MONTOYA / [signature] 191352 / 3-20-14
Waste Handling Technician (print) Signature Z # Date

8.1[6] Reviewed By: Jose Jerez / [signature] 221452 / 4-21-14
Supervisor or designee (print) Signature Z # Date

Working Copy
Date: 4/18/14

ATTACHMENT 4
Page 1 of 1

WCRRF OVERPACK DRUM CLOSURE DATA SHEET

7.[17] Overpack Drum Unique Identifier No.: 69622

7.[23] Overpack drum closure ring torque wrench information:
M&TE No.: 038370
Cal. Expiration Date: 8/2/14
Range in ft-lb: 16-80
Tolerance: +/- 3% CW
+/- 6% CCW

7.[24] Torque wrench listed above is within the acceptable ranges as displayed on the calibration certificate. ☑ Yes ☐ No

Performed By: JOE QUINTANA / Joe Q 239987, 4/18/14
Waste Handling Technician (print) Signature Z # Date

7.[26] Overpack drum closure ring torque value: 60 ft-lb

7.[29] Threaded lug of the drum closure ring is not touching the jam nut and the locking ring lugs are not touching. ☑ SAT ☐ UNSAT

7.[34][B] Platform scale serial number: 019065
Platform scale calibration expiration date: 10/14/14

7.[34][D] 85-gal overpack drum gross weight (lb): 179.2 lb

Comments: N/C

8.1[1] Performed By: JOE QUINTANA / Joe Q 239987, 4/18/14
Waste Handling Technician (print) Signature Z # Date

8.1[7] Reviewed By: Jose Jerez / [signature] 1221452, 4/21/14
Supervisor or designee (print) Signature Z # Date

Working Copy
Date: 4-3-14 jr

ATTACHMENT 1
Page 1 of 2

WCRRF DRUM PREPARATION DATA SHEET

5.[34][E] Drum ID No.: 69637

5.[3] Drum information:
Purchase Order No.: 501578
Lot No.: 0240118
Manufacture Date: 2013

5.[17] Drum Liner Bag/Filter Assembly:
Manufacturer: BOP
Model No.: 6cpvc 1.5-2 Spvc
Serial No.: L-10212
Manufacture Date: 2013

5.[19] Filtered vent and 2 in. bung torque wrench information:

	Filtered Vent	2 in. Bung
M&TE No.:	101310	036245
Cal. Expiration Date:	11-12-14	08-05-14
Range:	40-200 in-lb	16-80 ft-lb
Tolerance (+/-):	+/- 4% cw +/- 6% ccw	+/- 3% cw +/- 6% ccw

5.[20] Torque wrench listed above is within the acceptable ranges as displayed on the calibration certificate. ☑ YES ☐ NO

Performed By: Steven Mandragon / Steven Mandragon 1047411 4-3-14
Operator (print) Signature Z # Date

5.[23] Filtered vent information:
Manufacturer: Nucfil
Model No.: 019DS
Serial No.: KL 312
Manufacture Date: 11/11

5.[26] Filtered vent torque value [120 in-lb (96 to 144 in-lb)]: 120 in-lb

5.[29][B] 2 in. bung plug torque value: 30 ft-lb

5.[30] Scale File ID number: 019065

ATTACHMENT 1
Page 2 of 2

5.[31] Scale is within the calibration frequency. ☑ SAT ☐ UNSAT

5.[32] Drum tare weight (lbs): 76 lbs

5.[34][E] Drum ID No.: 69637

Comments: N/C

5.[35] Performed By: Steven Mondragon / Steven Mondragon / 1047471 / 4-3-14
Operator (print) / Signature / Z # / Date

7.1[4] Reviewed By: Jose Jorer / [signature] / 1221521 / 4-21-14
Supervisor or designee (print) / Signature / Z # / Date

ATTACHMENT 2
Page 1 of 2

WCRRF DRUM CLOSURE DATA SHEET

6.[3] Drum ID No.: 69637

6.[9] Drum closure ring torque wrench information:

M&TE No.: 038370
Cal. Expiration Date: 8/2/14
Range: 16-80 ft-lb
Tolerance (+/-): +/- 3% cw
+/- 6% ccw

6.[10] Torque wrench listed above is within the acceptable ranges as displayed on the calibration certificate. ☑ YES ☐ NO

Performed By: JOE QUINTANA, [signature] 239987 4/18/14
Operator (print) Signature Z # Date

6.[12] Drum closure ring torque value: 60 ft-lb

6.[15] Threaded lug of the drum closure ring is not touching the jam nut and the locking ring lugs are not touching. ☑ SAT ☐ UNSAT

6.[17][A] Filtered vent and 2 in. bung torque wrench information: ☑ N/A

	Filtered Vent	2 in. Bung
M&TE No.:		
Cal. Expiration Date:	N/A	N/A
Range:	in-lb	ft-lb
Tolerance (+/-):		

6.[17][B] Torque wrench listed above is within the acceptable ranges as displayed on the calibration certificate. ☐ YES ☐ NO ☑ N/A

Performed By: N/A / / /
Operator (print) Signature Z # Date

6.[17][C] 2 in. bung plug torque value: _____ ft-lb ☑ N/A

6.[17][D] Filtered vent torque value [120 in-lb (96 to 144 in-lb)]: _____ in-lb ☑ N/A

ATTACHMENT 2
Page 2 of 2

6.[3] Drum ID No.: 69637

6.[26] Scale File ID number: 019065

6.[27] Scale is within the calibration frequency. ☑ SAT ☐ UNSAT

6.[28] Drum gross weight: 301.4 lbs

6.[29] Drum gross weight recorded on drum lid in approximately 1/2 in. lettering: ☑ SAT ☐ UNSAT

Comments: N/L

6.[32] Performed By: JOE QUINTANA, Joe Q 239987, 4/18/14
Operator (print) Signature Z # Date

7.1[4] Reviewed By: Jose Jerez, Jose J 1221452 4/21/14
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 1
Page 1 of 2

Working Copy
Date: 4/3/14 4s

WCRRF DRUM PREPARATION DATA SHEET

5.[34][E] Drum ID No.: 69641

5.[3] Drum information:
Purchase Order No.: 501578
Lot No.: 0240118
Manufacture Date: 2013

5.[17] Drum Liner Bag/Filter Assembly:
Manufacturer: BOP
Model No.: 6CPVC 1:5-2 SPVC
Serial No.: L-10185
Manufacture Date: 5/13

5.[19] Filtered vent and 2 in. bung torque wrench information:

	Filtered Vent	2 in. Bung
M&TE No.:	101310	036245
Cal. Expiration Date:	11-12-14	08-05-14
Range:	40-200 in-lb	16-80 ft-lb
Tolerance (+/-):	+4%cw+6%ccw	+3%cw+6%ccw

5.[20] Torque wrench listed above is within the acceptable ranges as displayed on the calibration certificate. ☑ YES ☐ NO

Performed By: Steven Mondragon (Operator (print)) / Steven Mondragon (Signature) / 1104741 (Z #) / 4-3-14 (Date)

5.[23] Filtered vent information:
Manufacturer: Nucfil
Model No.: 019DS
Serial No.: KL-313
Manufacture Date: 11/11

5.[26] Filtered vent torque value [120 in-lb (96 to 144 in-lb)]: 120 in-lb

5.[29][B] 2 in. bung plug torque value: 30 ft-lb

5.[30] Scale File ID number: 019065

ATTACHMENT 1
Page 2 of 2

5.[31] Scale is within the calibration frequency. ☑ SAT ☐ UNSAT

5.[32] Drum tare weight (lbs): 76 lbs

5.[34][E] Drum ID No.: 69641

Comments: N/C

5.[35] Performed By: Steven Mondragon / Steven Mondragon / 1047411 / 4-3-14
Operator (print) / Signature / Z # / Date

7.1[4] Reviewed By: Jose Jerez / [signature] / 2214521 / 4-21-14
Supervisor or designee (print) / Signature / Z # / Date

ATTACHMENT 2
Page 1 of 2

WCRRF DRUM CLOSURE DATA SHEET

6.[3] Drum ID No.: 69641

6.[9] Drum closure ring torque wrench information:

M&TE No.: 038370
Cal. Expiration Date: 8/2/14
Range: 16-80 ft-lb
Tolerance (+/-): +/- 3% CW
+/- 6% CCW

6.[10] Torque wrench listed above is within the acceptable ranges as displayed on the calibration certificate. ☑ YES ☐ NO

Performed By: JOE QUINTANA / Joe Z / 239987
Operator (print) Signature Z # Date

6.[12] Drum closure ring torque value: 60 ft-lb

6.[15] Threaded lug of the drum closure ring is not touching the jam nut and the locking ring lugs are not touching. ☑ SAT ☐ UNSAT

6.[17][A] Filtered vent and 2 in. bung torque wrench information: ☑ N/A

	Filtered Vent	2 in. Bung
M&TE No.:		
Cal. Expiration Date:	N/A	N/A
Range:	in-lb	ft-lb
Tolerance (+/-):		

6.[17][B] Torque wrench listed above is within the acceptable ranges as displayed on the calibration certificate. ☐ YES ☐ NO ☑ N/A

Performed By: N/A / / /
Operator (print) Signature Z # Date

6.[17][C] 2 in. bung plug torque value: _____ ft-lb ☑ N/A

6.[17][D] Filtered vent torque value [120 in-lb (96 to 144 in-lb)]: _____ in-lb ☑ N/A

ATTACHMENT 2
Page 2 of 2

6.[3] Drum ID No.: 69641

6.[26] Scale File ID number: 019065

6.[27] Scale is within the calibration frequency. ☑ SAT ☐ UNSAT

6.[28] Drum gross weight: 319.4 lbs

6.[29] Drum gross weight recorded on drum lid in approximately 1/2 in. lettering: ☑ SAT ☐ UNSAT

Comments: N/C

6.[32] Performed By: JOE QUINTANA (Operator (print)) [signature] (Signature) 239987 (Z #) 4/18/14 (Date)

7.1[4] Reviewed By: Jose Jarez (Supervisor or designee (print)) [signature] (Signature) 221452 (Z #) 4/21/14 (Date)

Working Copy
Date: 4/8/14

ATTACHMENT 2
Page 1 of 1

WCRRF PARENT 55-GAL DRUM PREPARATION DATA SHEET

6.3[21] Prepared Parent 55-Gal Drum Number: 68994

6.3[15] ($) 55-gal drum wrapped in protective covering: (ISI 6.3.6) ☑ SAT ☐ UNSAT

6.3[16] Platform scale serial number: 019065
Platform scale calibration expiration date: 10/14/14

6.3[18] Prepared parent 55-gal drum weight (lb): 399.0

6.3[19] ($) Prepared parent 55-gal drum weighs < 624 lb: (SR 4.5.1) ☑ SAT ☐ UNSAT

Comments: N/A

8.1[1] Performed By: JOE QUINTANA, [signature] 239987, 4/18/14
Waste Handling Technician (print) Signature Z # Date

8.1[7] Reviewed By: Jose Jerez, [signature] 221454 4/21/14
Supervisor or designee (print) Signature Z # Date

8.1[8][B] Acceptance criteria satisfied: ☑ YES ☐ NO

8.1[8][D] Approved by: Gilbert Martinez, [signature] 249235 4-22-14 0803
SOS/SOM or designee (print) Signature Z # Date Time

1972 SP78 Nrx-GG

Vented

LTP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Drum # 68994

Planning and Technical Solutions

Container ID: S813471 Container Type: 85 GAL DRUM Gross Weight (lbs): 457.9785
Total PE-Ci Activity: 1.92E+00 Equivalent Combustible PE-Ci: 7.19E-01
Total Fissile Gram Equivalents: 2.12E+01 Total Surface Dose Rate (mrem/hr): 40
EPA Code(s): D007; D008; D009
Waste Description: Nitrate salts

Remediation/Characterization Activities: Ensure EPA Codes D007, D008, and D009 are indicated on the Haz Waste Label. A minimum of 1.2 volumes of kitty litter/zeolite must be mixed with 1.0 volume of nitrate salts.

Drum venting and gas sampling completed on 3/11/13. Attachment 3 of DOP-1030 is attached. RTR pre-screen indicates liquids in 90 mil liner, lead liner, and rigid liner in the drum.

Potential Safety Risks: Nitrate salt drums often contain free liquids and are packaged in individual plastic bags. Net weight is ~237 lbs. and generator data shows 6 items of nitrate salts with weights ranging from ~18-56 lbs.

Performed By: Susan Ramsey (LTP-PTS (Print)) Signature: Susan S. Ramsey Z#: 100681 Date: 8/15/13

IHS Representative

Potential IHS Safety ~~Risks~~: May contain D007, D008, and D009 contain free liquids, No other hazards Noted

Performed By: Johnny Smallwood (IHS Representative (Print)) Signature: Johnny Smallwood Z#: 241659 Date: 8-21-13

LTP Engineering

Waste container remediation compliant with applicable facility safety basis requirements: ☒ Yes ☐ No

Engineering Comments: NA

Performed By: Valerie Rhodes (LTP Engineering (Print)) Signature: Valerie Rhodes Z#: 112609 Date: 9/30/13

TRU Remediation Operations

Potential Safety Risks: follow procedures.

Performed By: Vanessa Velarde (TRU Operations (Print)) Signature: [signature] Z#: 234079 Date: 4/7/14

Operations Manager or designee

Processing Determination: ☒ Accept ☐ Reject

OM or designee Comments: Follow current procedures and IWD's.

Approved By: Daniel L. Blair (OM or designee (Print)) Signature: Daniel L. Blair Z#: 218069 Date: 4-7-14

Not-GG
Vented

WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Production Control

Container ID: S813471 Container Type: 85-GAL Gross Weight (lbs): 458
Inner Seal #: 009897 Filter Prefix: None Filter Serial #: None
AK Waste Stream: LA-MIN02-V.001 Certified RTR BDR: No BDR
TWSR Comments: LECHED SOLIDS 434
Total PE-Ci Activity: 1.92E+00 Equivalent Combustible PE-Ci: 7.19E-01 AM-241 Total Ci No data
Total Fissile Gram Equivalents: 21.2 Total Surface Dose Rate (mrem/hr): 40
EPA Code(s): D007; D008; D009
NCR RTR/NDA Comment: None
RTR Pre-Screen Date: 7/12/2012 Comment: Not in AK. Impenetrable (Lead Liner). Internal unvented 55 gal, unvented 90mil Rigid Liner. >1% liquid in 90 mil liner.
Certified RTR Comment: None
Prohibited Items: ☐ Sealed > 4 Liters ☑ Liquid ☐ Pressurized Container ☑ Impenetrable Item ☐ Other
Security Determination: ☑ Green ☐ Yellow
Remediation Determination: ☐ VE ☐ PID ☐ Split ☐ Repack
Estimated 30-cm Dose Rate (mrem/hr): ☐ <100 ☐ >100 and <1,000 ☐ >1,000 and <10,000 ☐ >10,000
TRUCON Code: Production Control Comments: Ensure EPA Codes D007, D008, and D009 are on the label. A minimum of 1.2 volumes of kitty litter/zeolite must be mixed with 1.0 volume of nitrate salts.

Performed By: Susan Ramsey / / 100681 /
Production Control (Print) Signature Z Number Date

WDP Engineering

Chemicals Present (e.g., pyrophorics, acids, bases, shock sensitive, organic liquids, peroxides, crown ethers): ☐ Yes ☐ No ☐ Unknown
Processing Determination: ☐ Accept ☐ Reject
WDP Engineering Comments:

Performed By: / / /
WDP Engineering (Print) Signature Z Number Date

TRU Remediation Operations

☐ Waste Container Information Evaluated ☐ Less Than 170 lbs ☐ RTR Video Available
Other Specific Safety Concerns:

Processing Determination: ☐ Accept ☐ Reject
TRU Remediation Operations Comments:

Performed By: / / /
TRU Remediation Operations (Print) Signature Z Number Date

Discardable Waste Log Sheet

DrumID: 009897

Item#	ItemID	Net (kg)	Matrix	M Code	NM	MT	Auth	Remarks
1	IXFS-360-F1	21.36	NITRATE SALTS		2.15	52	/11	
2	IXFS-361-F1	25.45	NITRATE SALTS		6.53	52	/11	
3	IXFS-362-F1	14.09	NITRATE SALTS		1.36	52	/11	
4	IXFS-363-F1	8.4	NITRATE SALTS		1	52	/11	
5	IXFS-365-F1	20.62	NITRATE SALTS		5.43	52	/11	
6	IXFS-366-F1	17.73	NITRATE SALTS		6	52	/11	
		107.65 kg						

1 7 7 2 0 7 1 7

ATTACHMENT 1
Page 1 of 1

TA-54 AREA G DRUM VENTING PREREQUISITE ACTION DATA SHEET

4.1[9]	Drum Containment Cabinet inspection last performed: 2-19-12 (Date)		
	Drum Containment Cabinet inspection successfully completed.	☑ SAT	☐ UNSAT
4.1[10][B]	($) > 480 PE-Ci Equivalent Combustible Waste Container DOUBLEPACK criteria have been satisfied. (SAC 5.6.4.2)	☐ SAT	☐ UNSAT ☑ N/A
4.3[1]	EP-AREAG-FO-DOP-0208 Work Release complete.	☑ SAT	☐ UNSAT
4.3[2]	($) 30-ft standoff distance has been established. (SAC 5.6.4.3)	☑ SAT	☐ UNSAT
4.3[4]	Support-services subcontractor prerequisites complete.	☑ SAT	☐ UNSAT
	($) Non-sparking tools are available and in good working order (SAC 5.6.4.1)	☑ SAT	☐ UNSAT
4.3[6]	Overhead space heaters in the proximity of the NFT-DVS platform and Drum Containment Cabinet are OFF.	☑ SAT	☐ UNSAT

Comments: N/A

4.3[7] Performed by: Chris Vigil (LTP-DDP Supervisor/designee (print)) [signature] (Signature) 168082 (Z #) 3-11-13 1040 (Date/Time)

10.1[4] Reviewed by: Chris Vigil (LTP-DDP Supervisor/designee (print)) [signature] (Signature) 168082 (Z #) 3-11-13 (Date)

ATTACHMENT 2
Page 1 of 2

TA-54 AREA G DRUM VENTING PROCESS DRUM RECEIPT DATA SHEET

5.[3] 6.[3] Waste Container Unique Identifier: 5813471
PE-Ci Content: 1.916987368
PE-Ci Equivalent Combustible content: 1.66777901
FGE content: 21.17221951
Weight (lb): 457.9785
Outermost Waste Container configuration:
☑ Vented 85-gal ☐ Unvented 85-gal ☐ Unvented 55-gal

5.[3] 6.[3] Performed By: Chris Vigil [signature] 163082 3-11-13
LTP-DDP Supervisor designee (Print) Signature Z # Date

NOTE *Satisfactory inspection is indicated by a SAT answer for each inspection criteria below.*

	TRU Waste Container Bottom (5.[7] 6.[18])	TRU Waste Container (except bottom) (5.[9] 6.[6])
(S) No obvious container degradation? [AC 5.6.8(9c)]	☑ SAT ☐ UNSAT	☐ SAT ☐ UNSAT
(S) No evidence that the container is, or has been, pressurized? [AC 5.6.8(9c)]	☑ SAT ☐ UNSAT	☐ SAT ☐ UNSAT
(S) No significant rust or corrosion such that wall thinning, pin holes, or breaches are likely or the load bearing capacity is suspect? [AC 5.6.8(9c)]	☑ SAT ☐ UNSAT	☐ SAT ☐ UNSAT
(S) No split seams, tears, obvious holes, punctures (of any size), creases, broken welds, or cracks? [AC 5.6.8(9c)]	☑ SAT ☐ UNSAT	☐ SAT ☐ UNSAT
(S) Container properly closed? [AC 5.6.8(9c)]		☐ SAT ☐ UNSAT
(S) No dents, scrapes, or scratches that make the container's structural integrity questionable or prevent the top and bottom surfaces from being parallel? [AC 5.6.8(9c)]	☑ SAT ☐ UNSAT	☐ SAT ☐ UNSAT
(S) No discoloration, which would indicate leakage or other evidence of leakage of material from the container? [AC 5.6.8(9c)]	☑ SAT ☐ UNSAT	☐ SAT ☐ UNSAT
(S) No evidence of container bulging [AC 5.6.8(9c)]	☑ SAT ☐ UNSAT	☐ SAT ☐ UNSAT
(S) Container determined to be constructed of non-combustible material (e.g., container is constructed of metal or concrete) [AC 5.6.8(9c)]	☑ SAT ☐ UNSAT	☐ SAT ☐ UNSAT

(S) Drum lid restraint inspected for degradation (e.g., no indication of cracked parts, missing fasteners, loose or bowed parts, excessive wear or any other deformation) [SAC 5.6.4.5.1] ☐ SAT ☐ UNSAT ☑ N/A

ATTACHMENT 2
Page 2 of 2

5.[3], 6.[3] Waste Container Unique Identifier: 5813471

6.[10] (S) Drum-lid restraint installed: (SAC 5.6.4.5.1) ☐ SAT ☐ UNSAT ☑ N/A

6.[16] (S) UNVENTED WASTE CONTAINER STORAGE AREA SRs are satisfied and current:

(S)

- UNVENTED DRUMS are not stacked. (e.g., are in a singular planar array). (SR 4.6.1 and NCS-CSLA-12-016) ☐ SAT ☐ UNSAT ☑ N/A
- UNVENTED DRUMS containing MAR ≥ 300 PE-Ci are separated from each other by at least 10 ft. (SR 4.6.3) ☐ SAT ☐ UNSAT ☑ N/A
- Distance between the posted perimeter of the UNVENTED WASTE CONTAINER STORAGE AREA and areas where normal operations occur is at least 15 ft [AC 5.6.8(9a)] ☐ SAT ☐ UNSAT ☑ N/A
- Access restrictions for the UNVENTED WASTE CONTAINER STORAGE AREA are in place. (SR 4.6.2) ☐ SAT ☐ UNSAT ☑ N/A

Comments:

N/A

5.[19] / 6.[28] Performed By: Chris Vigil [signature] 163082 3-11-13
LTP-DDP Supervisor/designee (Print) Signature / # Date

6.[3] Reviewed By: Chris Vigil [signature] 163082 3-11-13
LTP-DDP Supervisor/designee (Print) Signature / # Date

6.[6] Acceptance criteria satisfied ☑ YES ☐ NO

Approved By: Chris Vigil [signature] 163082 3-11-13 1401
SOTP Manager (Print) Signature / # Date

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ATTACHMENT 3
Page 1 of 3

TA-54 AREA G DRUM VENTING DATA SHEET

7.[2] Waste Container Unique Identifier: S813471

7.[3] Personnel stationed to prevent unauthorized entry into the 30-ft standoff distance outside of dome. ☑ SAT ☐ UNSAT ☐ N/A

7.[5]/ **($)** Personnel have exited the 30-ft standoff distance. (SAC 5.6.4.3)

55-gal drum:	☑ SAT	☐ UNSAT	☐ N/A
85-gal drum:	☐ SAT	☐ UNSAT	☑ N/A

NOTE *All of the following data spaces may or may not be completed based on the drum configuration. For example, an unvented 55-gal drum without an 85-gal overpack drum would use a short-stem, filtered vent (NucFil-7DS) and the 85-gal overpack drum information is N/A. An unvented 55-gal drum overpacked into an unvented 85-gal overpack drum requires the completion of all of the following data spaces.*

7.[9] Head Space Gas sample results:

	85-gal (☑ N/A)	55-gal (☐ N/A)
Hydrogen	_____ %	CV 3-11-13 ~~32.23~~ % 2.968471
Methane	_____ ppm	0.000 ppm
VOC	_____ ppm	32.23 ppm
Filter Vent Unique Identifier No.:	_____	AN-324
Filter Vent Installed:		
Stub Stem (e.g., NucFil-007S)	☐ (☑ N/A)	☐ (☑ N/A)
Short Stem (e.g., NucFil-7DS)	☐ (☑ N/A)	☐ (☑ N/A)
Long Stem (e.g., NucFil-08DS)	☐ (☑ N/A)	☑ (☐ N/A)

ATTACHMENT 3
Page 2 of 3

7.[2] Waste Container Unique Identifier: S813471

7.[10] (S) Waste container VENTED DRUM criteria: (TSR 1.1)

- Stub Stem (e.g., NucFil-007S) (Acceptance Criteria: WIPP-Approved Filtered Vent installed, < 6.4% H_2, < 7,000 ppm VOC, and < 16,000 ppm Methane)
  - 55-gal drum: ☐ SAT ☐ UNSAT ☑ N/A
  - 85-gal drum: ☐ SAT ☐ UNSAT ☑ N/A
- Short Stem (e.g., NucFil-7DS) (Acceptance Criteria: WIPP-Approved Filtered Vent installed, < 6.4% H_2, < 7,000 ppm VOC, and < 16,000 ppm Methane)
  - 55-gal drum: ☐ SAT ☐ UNSAT ☑ N/A
  - 85-gal drum: ☐ SAT ☐ UNSAT ☑ N/A
- Long Stem (e.g., NucFil-08DS) (Acceptance Criteria: WIPP-Approved Filtered Vent installed, < 4.8% H_2, < 5,250 ppm VOC, and < 12,000 ppm Methane)
  - 55-gal drum: ☑ SAT ☐ UNSAT ☐ N/A
  - 85-gal drum: ☐ SAT ☐ UNSAT ☑ N/A

7.[11][A] Waste drum venting status: ☐ UNVENTED ☑ N/A

7.[11][B][a] Number of required WIPP-approved filtered vents:

- 85-gal Waste Container _____ ☑ N/A
- 55-gal Waste Container _____ ☐ N/A

7.[11][B][c] (S) Personnel have exited the 30-ft standoff distance. (SAC 5.6.4.3)

Filter Vent	1	2	3	4	5	6	7	8
85-gal		☐ SAT ☐ UNSAT ☐ N/A	☐ SAT ☐ UNSAT ☐ N/A	☐ SAT ☐ UNSAT ☐ N/A	N/A			
55-gal		☐ SAT ☐ UNSAT ☐ N/A	☐ SAT ☐ UNSAT ☐ N/A	☐ SAT ☐ UNSAT ☐ N/A	☐ SAT ☐ UNSAT ☐ N/A	☐ SAT ☐ UNSAT ☐ N/A	☐ SAT ☐ UNSAT ☐ N/A	☐ SAT ☐ UNSAT ☐ N/A

ATTACHMENT 3
Page 3 of 3

7.[2] Waste Container Unique Identifier: 5813471

7.[11][B][f] Number of WIPP-approved filtered vents installed:

- 85-gal Waste Container 1 ☐ N/A
- 55-gal Waste Container ☒ N/A

Filter Vent		1	2	3	4	5	6	7	8
85-gal	Type								
	Unique Identifier No.				N/A				
55-gal	Type								
	Unique Identifier No.								

7.[11][F] Drum-lid restraint inspected for degradation (e.g., no indication of cracked parts, missing fasteners, loose or frayed parts, excessive wear, or unusual deformation): (SAC 5.6.4.5.1) ☐ SAT ☐ UNSAT ☑ N/A

7.[11][H] Drum-lid restraint installed: (SAC 5.6.4.5.1) ☐ SAT ☐ UNSAT ☑ N/A

7.[12] Waste drum status:
85-gal Waste Container ☐ VENTED ☑ N/A
55-gal Waste Container ☑ VENTED ☐ N/A

7.[13][A] ($) 55-gal waste containers to be transferred to WCRRF satisfy the following criteria (WCRRF SAC 5.10.2.3.4.a): ☑ SAT ☐ UNSAT ~~☑ N/A~~ 3/4/14

- Hydrogen concentration less than or equal to 2.4% (24,000 ppm)
- VOC less than or equal to 5,250 ppm

Comments: UNSAT 3RD DRUM OF THE DAY
Meets WCRR requirements. 3/4/14

7.[11][M]/ 7.[23] Performed By: Chris Vigil 163082 3-11-13
LTP-DDP Supervisor/designee (Print) Signature Z # Date

10.1[3] Overhead space heaters ON and thermostat set: ☐ SAT ☑ UNSAT

10.1[4] Reviewed by: Chris Vigil 163082 3-11-13
LTP-DDP Supervisor/designee (print) Signature Z # Date

4-18-14
0530 Assuming WCRR operations center - JColeman
0535 Beginning outside rounds.
0555 Outside rounds complete.
JC 4-18-14 0617 Beginning inside rounds.
JC 4-18-14 0644 ~~0654~~ Inside rounds complete.
0646 Both rounds reviewed by SOS.
0655 Mode changed to operations in WCRRF yard and 5069.
0701 Surveillance 4.1.1 performed. Received notification from inventory test execute completed.
0715 Initiating a drum movement from transportainer to 5069.
0725 Drum movement into 5069 complete.
0755 Operators moving 7 JC 4-18-14 drums to LLW staging area.
0810 Operators denesting 2 drums.
0852 Denesting complete. Bagged on S851418.
0958 Bagging off 1 daughter, bagging on another daughter. PPE Sat.
1015 Bag off/on complete.
1134 Bagging off 2nd daughter and a POC, bagging on 68994. PPE Sat
1210 Bag off/on complete.
1335 Beginning outside rounds.
1356 PPE check is Sat.
1400 Outside rounds complete.
1406 Per JH - he has deposted the Berthold and JH table in the High Bay area.
1444 Bagging off 1 Daughter and 1 POC.
1506 Bag off/on complete.
1515 Beginning inside rounds.
1532 Inside rounds complete.
1533 Bagging off last daughter of the day. Placing port cover on.
1558 Permission granted to move drums from 5069 to a transportainer.
1559 Late entry - at 1548, bag off complete (JC) Everything is in a safe configuration.
1623 Both rounds reviewed by SOS.
1625 Drum ~~movement~~ JC 4-18-14 movement complete
Continued on next page. - JColeman

4-18-14 Continued from previous page

1627 Mode changed to cold in 5069, warm in WCRRF yard

4-18-14 1630 End of day. OCO position secured. T Coleman

HS

No further entries this page.

4-18-14

1700 Assuming WCRRF Operations Center. CA

1705 Starting Pre-Job, discussed maintenance activities and briefed to RWP.

1721 Pre-Job complete.

2000 Breaker maintenance complete.

2010 Securing Operations Center. CA

HH

No Further Entries on this Page

4/18/14 WCRR SOS Log Book

0600 Assuming SOS position for the day.

0615 Starting Pre-Solo brief. Safety Topic discussed pedestrians walking to Chimayo for Holy Week especially today Outside Crew moving out LLW drums that have been aproved by SOM as being able to be Stored in LLW area. Picking in two Parents for D-Nesting and processing. Skeleton Crew today as half of them are working nights supporting maintenance activities.

0630 Pre-Solo complete

0646 Inside and outside rounds have been Completed and S

0655 WCRR yard and 50-69 are now in Operations mode

0700 Starting Movement into the facility of 2 Parents
5851418 5P72 5816768 5P72

0710 Operators identified that 58167768 is the parent that is wrapped in lead around the outside. Swapping it for 68994.

0722 Movement into the facility complete

0810 Starting to D-Nest

0852 D-Nesting and Bag on Complete. Bagged on 5851418 PPE check is SAT.

0957 Bagging off one daughter, Bagging on second daughter.

1008 Bag on Bag off Complete

1133 Bagging off one POC, one daughter Bagging on 68994 PPE

1210 Bag on Bag off complete

1230 Operators Breaking for lunch

1335 Operators returning to continue processing.

1444 Bagging off one daughter and one POC and will continu to process.

1533 Bagging off Parent and daughter. Placing port cover on Final drum for the day.

1622 Reviewed and signed rounds

1627 Mode change WCRR yard in WARM 50-69 is in Cold.

4/18/14 1630 Securing SOS position for the day Jw Jg

No further entries.

WCRRF SOS Log Book

4/15/14

1657 Assuming SOS position. CJ

1658 All entries for tonights shift will be made in the Operations Center, log book.

1659 Securing SOS position. CJ

No Further Entries on this Page

4-18-14 WCRR SOM Dayshift

0545 Reviewed logs and assumed the WCRR SOM position John Lundgren.
0630 Completed attending the pre-job brief conducted by the SOS (Jose) The safety topic was to watch out for the pilgrimage walkers Due to only 2 open locations in the transportainers. Eleven Low Level locations were identified (LLW Room trash-non-BE) and (Empty 85-non BE) which will be moved to the LL staging area Operations will move 2 drums into the facility SP-72 for processing. One operator reported that the fire blanket was bulky and requested ordering a tungsten type blanket. Information will require obtaining prior to ordering and having ALARA Center check. One shift order was briefed.
0655 Mode Change: 50/69 and Yard transition from cold/warm to Operation/Operation
0707 Completed the daily phone call to the AREA G SOM updating WCRR POD.
0725 Movement into 50/69 completed - two drums total, SP-72-5851418 and 68994 which require denesting.
0755 Two Outside Operators initiate movement of LLW drums from the transportainer to the LLW Staging area. Also observed ES/IH taking samples from the transportainers (BE) also the Berthold. All proper PPE and protocol was observed.
0810 Inside Operators initiate denesting.
0830 Movement to the LLW staging area is completed 7 drums total. The OCO initiates updating the TSD paperwork.
0852 Inside Operators complete the de nest and bag on of SP-72-5851418
0956 Inside Operators initiate bag off of 1 daughter, bag on another daughter and continue
1009 Bag off and Bag On is noted completed
1033 inside Operations report of a POC
1134 Inside Operators initiate bag off of 1 daughter, 1 POC, empty parent and will bag on Parent 68994.
1157 Discussed with ES/IH and all BE samples taken will be shipped offsite today.
1210 Inside Operations complete bag offs and bag On's.
1355 Inside Operations report various POCs in WCG
1405 ES/IH completed depositing 50/69 Rm 104 BE signage on Table and Berthold.
1444 Operations are bagging off 1 daughter, 1 POC and continue to process
1506 Bag off inside is completed
1532 Inside Operations initiate bag off of daughter and Parent and secure WCG
1549 Bag offs completed and Outside Operators initiate procedure

4-18 H WCRR SOM DAYSHIFT (cont)

1558 Outside Operations initiated from movement from 50 69 to the transportainers

1625 Movement out of the facility is completed

1627 Mode Change: 50/69 and yard transition from Operations/Operations to Cold/Vacuum

1630 Secured the WCRR SOM position [signature]

No Further Entries this Page

[signature]

4/18/14 WCRR SOM Night Shift

1438 Reviewed Shift Turnover checklist and assumed the WCRR SOM position.

1715 Breaker Crew Supervisor conducted pre job brief - discussed work remaining which will require LO/TO of LP-1 and PPB for breaker removals / testing. Part of crew will also be working demobilization of equipment - will require RP-1 surveys. RP1 covered RWP brief, CSE J. Sims on site and will sign off PMT when work complete. Ventilation system will not have to be secured tonight. Briefed and released WO#486432-01 50-69 (3y-) Breaker Maintenance.

2000 Breaker crew has completed all testing. Closed out work package including PMT signature for CSE. Crew is finishing with last part of demobilization.

2030 Verified all locks/tags returned to ops center. As in night before turned over removed tags to MSS to place in completed work package at their request. Breaker crew has removed all equipment, trailers and ~~[illegible]~~ 4/18/14 generator from WCRR.

2045 Secured the SOM position.

No further entries this page

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination	[ ] RTR Replicate Scan [ ] RTR Independent Observation
Site ID:	LANL
Batch Number:	LA-RTR2-14-0040
Examination Date:	4/25/2014
Waste Container ID:	69520
Video/Audio Recorded Media Number:	LA-RTR2-14-0040 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 14
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3110
Waste Stream I.D.:	LA-MIN02-V.001
Waste Container Weights:	Gross Wt.: 156.5 kg Tare Wt.: 145.1 kg Net Wt.: 11.4 kg
Rigid Liner and Liner Vent Description:	Liner: [ ] No [X] Yes Lid: [ ] No [X] Yes Type: [ ] 30-mil [X] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [X] Yes [ ] N/A Punctured: [ ] No [X] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [X] No [ ] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 2 layers
Volume Utilization Percentage:	65 %

CCP Radiography Data Sheet

Waste Container ID: 69520

Section 3: Container Inventory and Comments (Detailed descriptions)

IM:

AM:

OM:

OI:

C:

R:

XPM: Plastic bags

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	109.0
Plastics (PP): Rigid Liner/Lid, Liner Bag (Inside POC)	8.1
Other: Fiberboard (CP), Liner/Sleeve (Inside POC)	28.0
Total Packaging Weight	145.1
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	2.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	9.4
Soils (S):	
Total WMP Weight:	11.4

CCP Radiography Data Sheet

Waste Container ID: 69520

Section 5: RTR Summary (Questions answered "Yes" will be explained in the Comment block, except for Question 1)	
Is there observable liquid?	☐ Yes ☒ No
Is there any observable liquid in internal containers, more than 60 milliliters or 3 percent by volume, whichever is greater?	☐ Yes ☒ No
Is the total volume of observable liquid in the outermost container GREATER than 1% of the container?	☐ Yes ☒ No
Is there observable liquid in payload containers with an EPA Hazardous Waste Number of U134?	☐ Yes ☒ No
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐ Yes ☒ No
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐ Yes ☒ No
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does NOT match TRUCON Code[s])?	☐ Yes ☒ No
Is there an indication of wastes containing explosives or compressed gases?	☐ Yes ☒ No
Is there an indication of PCBs liquids?	☐ Yes ☒ No
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐ Yes ☒ No
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐ Yes ☒ No
CH or RH TRAMPAC	
Are there heat-sealed bags (unvented) GREATER than 4 liters and LESS than 390 square inches in the waste, or heat sealed bags not authorized in the RH TRUCON Code?	☐ Yes ☒ No
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐ Yes ☒ No
Are there sealed containers GREATER than 4 liters?	☐ Yes ☒ No
Are there indications of inadequate protection for heavy and/or sharp objects?	☐ Yes ☒ No

Comments: Standard Pipe Overpack Container (P.O.C.)
There is separation between liner lid and liner therefore liner is vented.

RTR Operator:

Thad Hasselstrom	Thad Hasselstrom	4/25/2014
Print Name	Signature	Date

```
|-----------------------------------------------------------------------|
|                          NDA 2000 Assay Report                        |
|-----------------------------------------------------------------------|

************************    Item Information    ************************

Item ID:            6952C              Count Sequence Number:  24601
Operator:           D3PW2DK1\operator
Assay Start:        4/28/2014   9:21:24 AM
Description 1:      1LANDA1935
Description 2:      POC 156.5
Location:           LANL TA-54
Comment:            AK-6
Matrix Type:        Homo Sol. S3000
Container Type:     55 gallon drum
Weight:             Net:        11.4   kg        Net:    11.4 kg
Container:          Volume:    208.0   l        Full:    95.0 %
Density:                         0.652 kg /l

************************   System Configuration   ************************

Counter:                        MCS HENC #1
Count Type:                     Item Count
Collimator/Geometry Setting:    All Banks On (GE -  0

Errors quoted at  1.000 sigma
```

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number:	24601	Batch Number:	1LANDA1935
Assay Instrument:	MCS HENC #1	Location:	LANL TA-54
Analysis Method:	CCP-TP-063 v 15	Software Version:	NDA 2000 V.4.0
Item ID:	69520	Analysis Date:	4/28/2014

Net Weight	11400.0 g		
Pu mass	2.18E+000	+-	7.14E-001 g
TRU Alpha Activity	4.99E+000	+-	2.61E+000 Ci
TRU Activity Concentration	4.38E+005	+-	2.29E+005 nCi/g
Pu-239 Equivalent Activity	5.00E+000	+-	2.61E+000 Ci
Pu-239 FGE	2.08E+000	+-	7.12E-001 g
Decay heat	1.66E-001	+-	8.69E-002 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	7.18E-007
U233	<LLD	<LLD	0.00E+000	4.91E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	1.47E-006
NP237	9.50E-002	6.69E-005	1.19E-005	2.56E-006
PU238	1.98E-004	3.39E-003	1.26E-003	5.85E-004
U238	<LLD	<LLD	0.00E+000	1.27E-005
PU239	2.04E+000	1.27E-001	4.41E-002	2.19E-002
PU240	1.31E-001	2.96E-002	1.11E-002	5.12E-003
AM241	1.41E+000	4.83E+000	2.61E+000	5.23E-002
PU241	2.44E-003	2.51E-001	9.46E-002	4.35E-002
PU242	4.36E-004	1.72E-006	6.47E-007	0.00E+000

Errors quoted at 1.000 sigma

Operator: [signature] Date: 4.30.14

ITR: [signature] Date: 4-30-14

Automated Independent Technical Review

Count Sequence Number: 24601
Batch Number: 1LANDA1935
Counter ID: MCS HENC #1
Container ID: 69520
Waste Matrix Code: Homo Sol. S3000
Count Type:
Sequence Type:
Assay Date: 4/28/2014

Comments	Disposition
Section 1 - Add-A-Source Analysis	
No Add-a-Source warnings.	Ok
Section 2 - Passive Neutron Analysis	
Analysis Status: No errors.	Ok
Ones Rate Analysis complete with warnings.	
- Error calculating the Ones Rate Pu-240 Effective MDA.	Not data affecting.
Curium/Californium Neutron Analysis complete with warnings.	
- The Cm/Cf Mass Variance is negative, Cm/Cf Mass Uncertainty set to zero so analysis could continue.	Ok
- The Pu-240 Eff. Mass Variance is negative, Pu-240 Eff. Mass Uncertainty set to zero so analysis could continue.	Ok
Cosmic Ray Rejection Analysis complete with warnings.	
- The CRR High-Z mass Mass Variance is negative, High-Z mass Uncertainty set to zero so analysis could continue.	Ok
Section 3 - Data Combiner Analysis	
Override enabled; Gamma data specified as input.	Results taken from quantitative gamma data.
Results taken from Quantitative Gamma data.	
Results comparison test passed.	

Comments	Disposition
Section 4 - MGA Analysis Results are marked as invalid.	MGA analysis failed. AK isotopics applied. The AK information utilized was provided by Steve Schafer, AKE, and consists of data from CCP-AK-LANL-006, AK Source Document M237. MT-52.
Section 5 - Gamma Analysis Analysis Status: No errors.	Ok
Miscellaneous	No additional nuclides contributing to 95% of the radiological hazard identified.

Expert Review by: Sheri Chamberlin Date: 4-30-14

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-14-0040
Examination Date:	4/25/2014
Waste Container ID:	69637
Video/Audio Recorded Media Number:	LA-RTR2-14-0040 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 14
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3110
Waste Stream I.D.:	LA-MIN02-V.001
Waste Container Weights:	Gross Wt.: 136.5 kg Tare Wt.: 33.4 kg Net Wt.: 103.1 kg
Rigid Liner and Liner Vent Description:	Liner: [X] No [ ] Yes Lid: [X] No [ ] Yes Type: [ ] 30-mil [ ] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [ ] Yes [X] N/A Punctured: [X] No [ ] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [ ] No [X] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 2 layers
Volume Utilization Percentage:	75 %

CCP Radiography Data Sheet

Waste Container ID: 69637

Section 3: Container Inventory and Comments (Detailed descriptions)

IM:

AM:

OM: *Scrap lead*

OI:

C: Leather gloves

R:

XPM: Plastic bag

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP): Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	5.0
Other Inorganic Materials (OI)	
Cellulosics (C):	1.5
Rubber (R):	
Plastics (waste materials) (XPM):	2.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	94.6
Soils (S):	
Total WMP Weight:	103.1

CCP Radiography Data Sheet

Waste Container ID: 69637

Section 5: RTR Summary (Questions answered "Yes" will be explained in the Comment block, except for Question 1)	
Is there observable liquid?	☐ Yes ☒ No
Is there any observable liquid in internal containers, more than 60 milliliters or 3 percent by volume, whichever is greater?	☐ Yes ☒ No
Is the total volume of observable liquid in the outermost container GREATER than 1% of the container?	☐ Yes ☒ No
Is there observable liquid in payload containers with an EPA Hazardous Waste Number of U134?	☐ Yes ☒ No
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐ Yes ☒ No
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐ Yes ☒ No
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does NOT match TRUCON Code[s])?	☐ Yes ☒ No
Is there an indication of wastes containing explosives or compressed gases?	☐ Yes ☒ No
Is there an indication of PCBs liquids?	☐ Yes ☒ No
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐ Yes ☒ No
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐ Yes ☒ No
CH or RH TRAMPAC	
Are there heat-sealed bags (unvented) GREATER than 4 liters and LESS than 390 square inches in the waste, or heat sealed bags not authorized in the RH TRUCON Code?	☐ Yes ☒ No
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐ Yes ☒ No
Are there sealed containers GREATER than 4 liters?	☐ Yes ☒ No
Are there indications of inadequate protection for heavy and/or sharp objects?	☐ Yes ☒ No

Comments: N/A

RTR Operator:

Thad Hasselstrom	Thad Hasselstrom	4/25/2014
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	69637	Count Sequence Number:	24608
Operator:	D3PW2DK1\operator		
Assay Start:	4/28/2014 2:33:48 PM		
Description 1:	1LANDA1935		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 103.0 kg	Net:	103.0 kg
Container:	Volume: 208.0 l	Full:	75.0 %
Density:	0.660 kg /l		

System Configuration

Counter:	MCS HENC #1
Count Type:	Item Count
Collimator/Geometry Setting:	All Banks On (GE - 0

Errors quoted at 1.000 sigma

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number:	24608	Batch Number:	1LANDA1935
Assay Instrument:	MCS HENC #1	Location:	LANL TA-54
Analysis Method:	CCP-TP-063 v 15	Software Version:	NDA 2000 V.4.0
Item ID:	69637	Analysis Date:	4/28/2014

Net Weight	103000.0 g		
Pu mass	5.47E+000	+-	1.10E+000 g
TRU Alpha Activity	6.56E+000	+-	3.33E+000 Ci
TRU Activity Concentration	6.37E+004	+-	3.23E+004 nCi/g
Pu-239 Equivalent Activity	6.57E+000	+-	3.33E+000 Ci
Pu-239 FGE	5.19E+000	+-	1.10E+000 g
Decay heat	2.17E-001	+-	1.11E-001 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	8.18E-007
U233	<LLD	<LLD	0.00E+000	5.60E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	1.58E-006
NP237	1.13E-001	7.94E-005	1.42E-005	2.97E-006
PU238	4.98E-004	8.51E-003	2.12E-003	6.92E-004
U238	<LLD	<LLD	0.00E+000	1.22E-005
PU239	5.13E+000	3.18E-001	6.81E-002	2.59E-002
PU240	3.28E-001	7.44E-002	1.91E-002	6.05E-003
AM241	1.80E+000	6.16E+000	3.33E+000	5.74E-002
PU241	6.13E-003	6.32E-001	1.62E-001	5.13E-002
PU242	1.09E-003	4.32E-006	1.11E-006	0.00E+000
AM243	6.74E-005	1.35E-005	3.04E-006	6.51E-006

Errors quoted at 1.000 sigma

Operator: Marla Gr Date: 4.29.14

ITR: Brit Upton Date: 4-30-14

Automated Independent Technical Review

Count Sequence Number: 24608 Batch Number: 1LANDA1935
Counter ID: MCS HENC #1
Container ID: 69637
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 4/28/2014

Comments	Disposition
Section 1 - Add-A-Source Analysis	
No Add-a-Source warnings.	Ok
Section 2 - Passive Neutron Analysis	
Analysis Status: No errors.	Ok
Ones Rate Analysis complete with warnings.	
- Error calculating the Ones Rate Pu-240 Effective MDA.	Not data affecting.
Curium/Californium Neutron Analysis complete with warnings.	
- The Cm/Cf Mass Variance is negative, Cm/Cf Mass Uncertainty set to zero so analysis could continue.	Ok
- The Pu-240 Eff. Mass Variance is negative, Pu-240 Eff. Mass Uncertainty set to zero so analysis could continue.	Ok
Cosmic Ray Rejection Analysis complete with warnings.	
- The CRR High-Z mass Mass Variance is negative, High-Z mass Uncertainty set to zero so analysis could continue.	Ok
Section 3 - Data Combiner Analysis	
Override enabled; Gamma data specified as input.	Results taken from quantitative gamma data.
Results taken from Quantitative Gamma data.	
Results comparison test passed.	

Comments	Disposition
Section 4 - MGA Analysis Results are marked as invalid.	MGA analysis failed. AK isotopics applied. The AK information utilized was provided by Steve Schafer, AKE, and consists of data from CCP-AK-LANL-006, AK Source Document M237. MT-52.
Section 5 - Gamma Analysis Analysis Status: No errors.	Ok
Miscellaneous	No additional nuclides contributing to 95% of the radiological hazard identified.

Expert Review by: Sheri Chamberlin Date: 4-29-14

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-14-0040
Examination Date:	4/25/2014
Waste Container ID:	69641
Video/Audio Recorded Media Number:	LA-RTR2-14-0040 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 14
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3110
Waste Stream I.D.:	LA-MIN02-V.001
Waste Container Weights:	Gross Wt.: 146.0 kg Tare Wt.: 33.4 kg Net Wt.: 112.6 kg
Rigid Liner and Liner Vent Description:	Liner: [X] No [ ] Yes Lid: [X] No [ ] Yes Type: [ ] 30-mil [ ] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [ ] Yes [X] N/A Punctured: [X] No [ ] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [ ] No [X] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 2 layers
Volume Utilization Percentage:	70 %

CCP Radiography Data Sheet

Waste Container ID: 69641

Section 3: Container Inventory and Comments (Detailed descriptions)

IM: Drum vent

AM:

OM: Scrap lead

OI:

C:

R:

XPM: Plastic bags, liner lid

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP): Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	0.1
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	15.0
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	5.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	92.5
Soils (S):.	
Total WMP Weight:	112.6

CCP Radiography Data Sheet

Waste Container ID: 69641

Section 5: RTR Summary (Questions answered "Yes" will be explained in the Comment block, except for Question 1)	
Is there observable liquid?	☐ Yes ☒ No
Is there any observable liquid in internal containers, more than 60 milliliters or 3 percent by volume, whichever is greater?	☐ Yes ☒ No
Is the total volume of observable liquid in the outermost container GREATER than 1% of the container?	☐ Yes ☒ No
Is there observable liquid in payload containers with an EPA Hazardous Waste Number of U134?	☐ Yes ☒ No
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐ Yes ☒ No
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐ Yes ☒ No
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does NOT match TRUCON Code[s])?	☐ Yes ☒ No
Is there an indication of wastes containing explosives or compressed gases?	☐ Yes ☒ No
Is there an indication of PCBs liquids?	☐ Yes ☒ No
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐ Yes ☒ No
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐ Yes ☒ No
CH or RH TRAMPAC	
Are there heat-sealed bags (unvented) GREATER than 4 liters and LESS than 390 square inches in the waste, or heat sealed bags not authorized in the RH TRUCON Code?	☐ Yes ☒ No
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐ Yes ☒ No
Are there sealed containers GREATER than 4 liters?	☐ Yes ☒ No
Are there indications of inadequate protection for heavy and/or sharp objects?	☐ Yes ☒ No
Comments: N/A	

RTR Operator:

Thad Hasselstrom	[signature]	4/25/2014
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	69641	Count Sequence Number:	24607
Operator:	D3PW2DK1\operator		
Assay Start:	4/28/2014 1:51:46 PM		
Description 1:	1LANDA1935		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 113.0 kg	Net:	113.0 kg
Container:	Volume: 208.0 l	Full:	70.0 %
Density:	0.780 kg /l		

System Configuration

Counter:	MCS HENC #1
Count Type:	Item Count
Collimator/Geometry Setting:	All Banks On (GE - 0

Errors quoted at 1.000 sigma

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number:	24607	Batch Number:	1LANDA1935
Assay Instrument:	MCS HENC #1	Location:	LANL TA-54
Analysis Method:	CCP-TP-063 v 15	Software Version:	NDA 2000 V.4.0
Item ID:	69641	Analysis Date:	4/28/2014

Net Weight	113000.0 g		
Pu mass	5.35E+000	+-	1.17E+000 g
TRU Alpha Activity	8.93E+000	+-	4.68E+000 Ci
TRU Activity Concentration	7.91E+004	+-	4.14E+004 nCi/g
Pu-239 Equivalent Activity	8.95E+000	+-	4.68E+000 Ci
Pu-239 FGE	5.09E+000	+-	1.17E+000 g
Decay heat	2.96E-001	+-	1.55E-001 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	1.14E-006
U233	<LLD	<LLD	0.00E+000	8.60E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	2.58E-006
NP237	1.64E-001	1.16E-004	2.29E-005	4.56E-006
PU238	4.87E-004	8.33E-003	2.21E-003	1.02E-003
U238	<LLD	<LLD	0.00E+000	1.64E-005
PU239	5.02E+000	3.11E-001	7.24E-002	3.82E-002
PU240	3.21E-001	7.29E-002	1.98E-002	8.94E-003
AM241	2.49E+000	8.54E+000	4.68E+000	1.04E-001
PU241	6.00E-003	6.18E-001	1.68E-001	7.58E-002
PU242	1.07E-003	4.23E-006	1.15E-006	0.00E+000

Errors quoted at 1.000 sigma

Operator: Maria [signature] Date: 4.29.14

ITR: Bert [signature] Date: 4-30-14

Automated Independent Technical Review

Count Sequence Number: 24607 Batch Number: 1LANDA1935
Counter ID: MCS HENC #1
Container ID: 69641
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 4/28/2014

Comments	Disposition
Section 1 - Add-A-Source Analysis	
No Add-a-Source warnings.	Ok
Section 2 - Passive Neutron Analysis	
Analysis Status: No errors.	Ok
Ones Rate Analysis complete with warnings.	
- Error calculating the Ones Rate Pu-240 Effective MDA.	Not data affecting.
Curium/Californium Neutron Analysis complete with warnings.	
- The Cm/Cf Mass Variance is negative, Cm/Cf Mass Uncertainty set to zero so analysis could continue.	Ok
- The Pu-240 Eff. Mass Variance is negative, Pu-240 Eff. Mass Uncertainty set to zero so analysis could continue.	Ok
Cosmic Ray Rejection Analysis complete with warnings.	
- The CRR High-Z mass Mass Variance is negative, High-Z mass Uncertainty set to zero so analysis could continue.	Ok
Section 3 - Data Combiner Analysis	
Override enabled; Gamma data specified as input.	Results taken from quantitative gamma data.
Results taken from Quantitative Gamma data.	
Results comparison test passed.	

Comments	Disposition
Section 4 - MGA Analysis Results are marked as invalid.	MGA analysis failed. AK isotopics applied. The AK information utilized was provided by Steve Schafer, AKE, and consists of data from CCP-AK-LANL-006, AK Source Document M237. MT-52.
Section 5 - Gamma Analysis Analysis Status: No errors. Spectrum Validity Check engine has suggested data review.	 Ok After EA review, spectrum valid.
Miscellaneous	No additional nuclides contributing to 95% of the radiological hazard identified.

Expert Review by: Sheri Chamberlin Date: 4-29-14

S813475

S813475

Container Profile 754401

File Options Reports Help

S813475

754401	TBD-TRU	T-TTRU-TEMP	Active	Decommissioned

- General Information
- Weights/Volumes
- Location
- Account Information
- Waste Material Parameters
- Layers of Confinement
- Prohibited Items
- EPA Codes
- UHC
- Radioassay
- Radiological Survey
- Payload Preparation
- Container Closure
- Materials Added
- TRU Information
- TRU Information (TSDF)
- Radiological Calculations
- Shipping Description
- Site Treatment Plan
- Pending Tasks
- Genealogy
- Container Tags
- Task History
- Documentation
- Comment Log
- Edit Log

Genealogy

S813475
- S813475
  - 94228 – EMPTY
  - 94227
    - LASB02221

Task History

Transfer Details

Transfer Amount	Transfer Unit	Item	Measured Weight	Measured Weig...
100.0	%	94227	0.0	kg

Working Copy
Date: 8/20/13 HCA

ATTACHMENT 1
Page 1 of 4

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: 9813475

6.2[4] Date Processed: 08-20-13

4.1[6][B] Processing Activity (EP-DIV-AP-0107):
☐ > 190 mrem/hr ☑ PID ☐ Split ☐ Repack

4.1[6][B] Prohibited Items:
☑ Sealed Containers > 4L ☐ Liquids ☐ Pressurized Containers ☐ N/A

4.1[6][B] Parent Waste Container RCRA Designations: D008

4.1[7] Activity Hazard Classification based on Anticipated Extremity Radiation Dose Rate:
☑ Moderate (≤ 10 rem/hr) ☐ High/Complex (> 10 rem/hr)

4.3[1]/4.3[2] ($) TA-50-69 is in the OPERATION or WARM STANDBY MODE (TSR 1.2) ☑ OPERATIONS ☐ WARM STANDBY ☐ N/A

4.3[4][B] Platform Scale: Equipment No.: 019065
Cal. Due Date: 10-14-14

4.3[5][B] ($) Three 1-Liter containers carbon spheroids or MET-L-X in WCG: (SAC 5.10.1.7.1) ☑ YES ☐ NO ☐ N/A

4.3[6] ($) Stationary Fire Watch has been established:
(> 300 PE-Ci Equivalent Combustible)
(SAC 5.10.1.7.2) N/A
(Initial and Date)

4.3[7 [A] Parent Waste Container degraded, loss of integrity, or weighs greater than 468 lb but less than or equal to 624 lb:
☑ YES ☐ NO ☐ N/A

4.3[8][D] WCG glove and bag-in/bag-out bag inspection: ☑ SAT ☐ UNSAT ☐ N/A

Performed By: James [illegible] [signature] 116662 / 08-20-13
Waste Handling Tech (print) Signature Z # Date

ATTACHMENT 1
Page 2 of 4

4.1[6][B] Parent Waste Container No.: S813475

5.[18] Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable: 205.6 lb

6.2[5][A] Parent Drum Lead Blanket Weight (lb): 160.0 lb

6.2[5][B]/ 6.2[6] Total Parent Drum Weight (lb) 365.6 lb

6.2[7] ($) Total Parent Drum Weight < 624 lb (SR 4.5.1): ☑ SAT ☐ UNSAT

6.2[28] Approval to leave a parent drum attached to the WCG overnight:

EWMO-FOD (print)	Signature	Z #	Date
		/	/

ATTACHMENT 1
Page 3 of 4

4.1[6][B] Parent Waste Container No.: S813475

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	94227			
10.1[4]	Daughter Drum Filter No.	KL-530		N	
10.1[4]	Daughter Drum Bag Filter No.	L-663D		A	
10.1[4]	Daughter Drum Purchase Order No.	501321			
10.1[13][C]	WCG Fire Watch Stationed		☐ YES	☐ NO	☑ N/A
10.1[14][C][d]3/11.1[3]	WCG Fire Watch Secured		☐ YES	☐ NO	☑ N/A
10.2[4]	POC bag-on bag: Manufacturer				
	Model No.				
	Serial No.				
	Date of Manufacture				
10.2[5]	POC ID No				
10.2[7][B]/10.2[6]	POC Item Description		N	A	
10.2[13]	POC Assembly closed per Manufacturer's instructions. (Initial and Z#)				
10.2[14]	POC Assembly Gross Weight (lb)				
10.2[15]	POC Rad. Survey Results (mrem/hr)				
10.3[3][A]	Approx. Containerized Liquid Vol./Units				
10.3[5][A]	Free Liquid Volume/Units	1 Gallon			
10.3[7][A]	Opaque/Non-penetrable Item Description:	lead		N	
10.3[9][A]	PCB-contaminated Waste Description			A	
10.3[9][B]	PCB Item ID No.				
10.3[10]	Remaining Waste Description	See Attachment			
10.3[13]/10.4[10]/ 10.5[4]/10.6[10]	Daughter Drum % Full (%)	95%		N	
10.5[3]/10.6[2]	Description Waste Added During Processing	Plastic + Room Trash		A	

ATTACHMENT 1
Page 4 of 4

4.1[6][B] Parent Waste Container No.: S813475

Comments: 30 Gallon Metal Can, Nitrate Salts, Kitty litter lead, Plastic and Room Trash

11.1[1] Performed By: James [illegible] [signature] 1116662 / 08-20-13
Waste Handling Tech (print) Signature Z # Date

11.1[7] Reviewed By: G [illegible] [signature] 1492351 8/21/13 0655
SOS or designee (print) Signature Z # Date/Time

ATTACHMENT 2
Page 1 of 1

Working Copy
Date: 8/20/13 HSD.

WCRRF OVERPACK DRUM ASSEMBLY PREPARATION DATA SHEET

5.[3] Overpack drum information:

Purchase Order No.: 501323
Lot No.: 0238025
Manufacture Date: 2013

5.[8] Overpack filtered vent and 2-in. bung torque wrench information:

	Filtered Vent	2-in. Bung
M&TE No.:	N/A	N/A
Cal. Expiration Date:		
Tolerance:		

Overpack filtered vent information:

Manufacturer: Nucfil
Model No.: 019DS
Serial No.: EK-1113
Manufacture Date: 5-10

5.[9] Torque wrench listed above is within the acceptable ranges as displayed on the calibration certificate. ☐ Yes ☐ No N/A

5. [11] Performed By: N / A / /
Waste Handling Technician (print) Signature Z # Date

5.[15] Filtered Vent torque value [120 in-lb (96 to 144 in-lb)]: N/A in-lb

5. [18] 2-in. bung plug torque value: N/A ft-lb

Comments: Not Prepped AT WCRRF

8.1[1] Performed By: James Smith [signature] 116662 / 08-20-13
Waste Handling Technician (print) Signature Z # Date

8.1[6] Reviewed By: [signature] [signature] 119235 8/21/13
Supervisor or designee (print) Signature Z # Date

Working Copy
Date: 8/20/13 HS

ATTACHMENT 5
Page 1 of 1

WCRRF OVERPACK DRUM CLOSURE DATA SHEET

7.[18] Overpack Drum Unique Identifier No.: 94228

7.[24] Overpack drum closure ring torque wrench information:
M&TE No.: 038373
Cal. Expiration Date: 09-11-13
Range in ft-lb: 10-80
Tolerance: +/-3% CW + +/-6% CCW

7.[25] Torque wrench listed above is within the acceptable ranges as displayed on the calibration certificate. ☑ Yes ☐ No

Performed By: James Sudd [signature] [illegible] 08-20-13
Waste Handling Technician (print) Signature Z# Date

7.[27] Overpack drum closure ring torque value: 60 ft-lb

7.[30] Threaded lug of the drum closure ring is not touching the jam nut and the locking ring lugs are not touching. ☑ SAT ☐ UNSAT

7.[35][B] Platform scale serial number: 019065
Platform scale calibration expiration date: 10-14-14

7.[35][D] 85-gal overpack drum gross weight (lb): 166.6 lb

Comments: N/C

8.1[1] Performed By: James Sudd [signature] [illegible] 08-20-13
Waste Handling Technician (print) Signature Z# Date

8.1[7] Reviewed By: G Mh [signature] 14925 8/21/13
Supervisor or designee (print) Signature Z# Date

#3A

Attachment 1. Checklist for the preparation of a new 55-Gallon Drum Assembly

Drum ID#: 94227

1. Drum/Lid Assembly

- [x] Remove and discard ¾" bung from lid
- [x] Remove Lid
- [x] Inspect drum, lid, and gasket, ring bolt and nut, chines, and paint
  NOTE: Reject damaged drum/lid assembly
- [x] Place 2" duct tape on vertical seam on interior of drum

RECORD drum information:
Purchase Request #: 501321
Lot #: 0237720
Date of Manufacture: 2013

2. Drum Liner Bag/Filter Assembly:

- [x] Place yellow vinyl tape, with smear centered on tape, over filter
- [x] Fill bag with air from compressed air source
- [x] Inspect bag for damage, cuts, or leaks by looking, listening, and feeling
  NOTE: Reject or repair damaged, cut, or leaking bags
- [x] Stretch bag's bungee cord
- [x] Inspect bungee cord
  NOTE: Reject bag if bungee cord is broken or damaged

RECORD bag filter information:
Manufacturer: BOP
Model #: 60PVC1.5-2SPVC
Serial #: L-6630
Date of Manufacture: 01/13

3. Cardboard Liner/Plastic Liner Drum Liner Bag/Filter Assembly:

- [x] Inspect cardboard liner/plastic liner (circle type of liner used)
  NOTE: Reject any damaged liners
- [x] Place cardboard/plastic liner into drum liner bag/filter assembly
- [x] Line up filter with drum seam
- [x] Place liner/bag/filter assembly into drum
- [x] Roll excess liner bag into cardboard liner/plastic liner

4. Install Lid/Drum Filter

- [x] Place lid and ring onto drum
- [x] Tighten ring sufficiently to simply hold lid in place
- [x] Torque 2" bung plug
- [x] Apply sealant to filter threads, screw in ¾" bung hole, and torque
- [x] Place this Attachment and blank Attachment 2 into a protective sleeve and tape to top of drum

RECORD drum filter information:
Manufacturer: NUCFIL
Model #: 019DS
Serial #: KL-530
Date of Manufacture: 11/11

RECORD torque wrench information:

Filter torque wrench:		Jam Nut / Bung torque wrench:	
M&TE ID #:	100214	M&TE ID #:	038369
Cal Expiration Date:	12-18-13	Cal Expiration Date:	12-18-13
Range (ft-lbs or in-lbs):	40-200	Range (ft-lbs or in-lbs):	10-80
Tolerance:	±4% CW ±6% CCW	Tolerance:	±3% CW ±6% CCW

Torque wrenches listed above are within the acceptable ranges as displayed on the calibration certificate.
[x] Yes [ ] No
Print Name: BRIAN GALLEGOS Signature: [signature] Z#: 267129

5. Weigh Drum Assembly

RECORD weight information
Tare witght (lbs) 76.2
File ID #: 019065

- [x] Write the tare weight on drum using permanent marker

6. Label Drum Assembly

- [x] Place 1 barcode drum ID label to the left of the drum seam, ~6" from drum bottom
- [x] Place 1 barcode drum ID label in the center of the drum lid

RECORD drum ID# at the top of Attachments 1 and 2

Operator Print: BRIAN GALLEGOS Operator Sign: [signature] Z#: 267129 Date: 8-15-13
Verifier Print: James Sandoval Verifier Sign: [signature] Z#: 116682 Date: 08-20-13

Attachment 2. Checklist for the Closing of a 55-Gallon Drum Assembly

DRUM ID# 94227

1. LID INSTALLATION

NOTE: Install lid per manufacturer's instructions

✓ Mount lid with filter directly over drum seam.

✓ Install ring with bolt positioned downward and directly over drum seam.

✓ Engage bolt and nut and torque per manufactures instructions

NOTE Seal the ring while tightening using a rubber hammer or dead-blow mallet or a drum lid press.

✓ Tighten jam nut.

Record torque wrench information:

MT&E # : 038373

Cal expiration date: 09-11-13

Range/ Value (ft-lbs): 10-80

Tolerance +/-3% cw +/-6% ccw

2. DRUM LABELING

NOTE: Do not cover the drum seam with any labels.

✓ Place two barcode drum ID labels ~6" from the bottom of the drum ~120° from previously placed ID label.

✓ Place one barcode drum ID label to the right of drum seam between the top two rolling hoops.

✓ Place one yellow radioactive waste label between the top two rolling hoops

✓ Place one yellow radioactive waste label in the center of the drum lid.

RCRA Label:

N/A Place one blue NON-RCRA Regulated Waste label between the top two rolling hoops.

OR

✓ Place one yellow HAZARDOUS Waste label between the top two rolling hoops left of the drum seam. (Ensure EPA waste number and accumulation start date are documented.)

NOTE: Check only one of the above two boxes.

3. WEIGH DRUM ASSEMBLY

Record weight information:

Gross Weight(lbs): 214.4

Scale ID#: 019065

✓ Using a permanent marker, write the gross weight on the drum lid.

4. FINALIZE DOCUMENTATION

✓ Have RCT monitor drum prior to moving to storage area.

✓ Place attachment 1 and 2 and HMPT Tag into a protective sleeve.

✓ Complete TWSR.

Operator Print/Sign: [illegible] Date 08-2013

Verifier Print/Sign: [illegible] Date 8-20-13

Working Copy
Date: 8-20-13a

ATTACHMENT 3
Page 1 of 1

WCRRF PARENT 55-GAL DRUM PREPARATION DATA SHEET

6.3[21] Prepared Parent 55-Gal Drum Number: S813475

6.3[15] ($) 55-gal drum wrapped in protective covering: (ISI 6.3.6) ☑ SAT ☐ UNSAT

6.3[16] Platform scale serial number: 019065
Platform scale calibration expiration date: 10-14-14

6.3[18] Prepared parent 55-gal drum weight (lb): 205.6

6.3[19] ($) Prepared parent 55-gal drum weighs < 624 lb: (SR 4.5.1) ☑ SAT ☐ UNSAT

Comments: N/C

8.1[1] Performed By: James [illegible] / [illegible] / 1[illegible] / 08-20-13
Waste Handling Technician (print) Signature Z # Date

8.1[7] Reviewed By: G M [illegible] / [illegible] / 149235 / 8/21/13
Supervisor or designee (print) Signature Z # Date

8.1[8][B] Acceptance criteria satisfied: ☑ YES ☐ NO

8.1[8][D] Approved by: G M [illegible] / [illegible] / 149235 / 8/21/13 / 0653
SOS/SOM or designee (print) Signature Z # Date Time

57

WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Production Control

Container ID: S813475 Container Type: 55-GAL Gross Weight (lbs): 200
Inner Seal #: 000318 Filter Prefix: None Filter Serial #: None
AK Waste Stream: LA-CIN01.001 Certified RTR BDR: No BDR
TWSR Comments: LEACHED SOLIDS YELLOW TAGGED
Total PE-Ci Activity: ~~0.00E+00~~ 2.04E+00 Equivalent Combustible PE-Ci: ~~0.00E+00~~ AM-241 PE-Ci: ~~0.00E+00~~ 1.97E+00 1.31.15 AY
Total Fissile Gram Equivalents: 0.0 Total Surface Dose Rate (mrem/hr): 1
EPA Code(s): D008
NCR RTR/NDA Comment: None
RTR Pre-Screen Date: 6/22/2012 Comment: Sealed 30 Gal Drum, Impenetrable
Certified RTR Comment: None
Prohibited Items: ☑ Sealed > 4 Liters ☐ Liquid ☐ Pressurized Container ☑ Impenetrable Item ☐ Other
Security Determination: ☑ Green ☐ Yellow
Remediation Determination: ☐ VE ☑ PID ☐ Split ☐ Repack
Estimated 30-cm Dose Rate (mrem/hr): ☐ <100 ☐ >100 and <1,000 ☑ >1,000 and <10,000 ☐ >10,000
TRUCON Code: LA125M Production Control Comments: Nitrate Salts apply mixture & EPA codes.

Performed By: Julie Gallegos (Production Control (Print)) Julie Gallegos (Signature) 176905 (Z Number) 10 15 12 (Date)

WDP Engineering

Chemicals Present (e.g., pyrophorics, acids, bases, shock sensitive, organic liquids, peroxides, crown ethers): ☐ Yes ☑ No ☐ Unknown
Processing Determination: ☑ Accept ☐ Reject
WDP Engineering Comments: Nitrate Salts
Net Wt: 140#. Generator info show 1 item of salts, weighing 45#. It also shows waste packaged into 30-gal then into 55-gal; liner + lead lined drum identified. RTR PS identifies sealed 30-gal drum (>4L sealed container) + impenetrable. Waste likely comprised of nitrate salts based on generation date + glovebox source, radionuclide content of PuO2, + lead lined drum packaging. Nitrate salts commonly contain documented liquids and carry waste codes for chromium lead + mercury. ~~Radionuclides are 0's in database May require RWP for 2 MR 10/25/12 because gamma spec of lead lined drum.~~ 1/31/13 AY

Performed By: Valerie Rhodes (WDP Engineering (Print)) Valerie Rhodes (Signature) 112609 (Z Number) 10/25/12 (Date)

TRU Remediation Operations

☑ Waste Container Information Evaluated ☐ Less Than 170 lbs ☐ RTR Video Available
Other Specific Safety Concerns: Do not push on press on waste with hands. Use heavy duty gloves during processing.
Processing Determination: ☑ Accept ☐ Reject
TRU Remediation Operations Comments: USE Proper PPE. Nitrate salts, ensure proper ratio of kitty litter is added in accordance with procedures

Performed By: G Mtz (TRU Remediation Operations (Print)) G Mtz (Signature) 1492351 (Z Number) 5/18/15 (Date)
Jose Jerez (Signature) 221052 5/18/15

HS Review. RB 206362 10.30.12

Discardable Waste Log Sheet

DrumID: 000318

Item#	ItemID	Net (kg)	Matrix	M Code	NM	MT	Auth	Remarks
1	DXFS-365-F1	20.45	SALTS		0	52	5/11	
		20.45 kg						

ATTACHMENT 1

Page 1 of 1

TA-54 AREA G WASTE CONTAINER HYDROGEN/VOC SAMPLE ANALYSIS DATA SHEET

5.[1] Sample Date: Jan 29 2013

Container No. (5.[1])	S813475					
Container type sampled (e.g., 55-gal, 85-gal, 110-gal, or SWB) (5.[1])	55 gal					
Filtered Vent Type (5.[1])	72					
Filtered Vent Unobstructed (5.[1])	☑ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT
WIPP-Approved Filtered Vent (5.[2])	☑ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☑ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT
Total CCP VOC value (< 7,000 ppm) (5.[4])	0 ppm	ppm	ppm	ppm	ppm	ppm
Hydrogen Reading (< 64,000 ppm) (5.[5])	136.82 ppm	ppm	ppm	ppm	ppm	ppm
Methane Reading (< 16,000 ppm) (5.[5])	0 ppm	ppm	ppm	ppm	ppm	ppm

N/A 130 [illegible]

5.[7] Certified CCP Technician:

Performed By: Sara Aragon (CCP (Print)) 1237975 (Z#)

Reviewed By: Nathan Wales (CCP (Print)) [illegible] (Z#)

Comments: n/a

6.1[2][A] WCRRF waste container satisfies the following criteria: ☑ SAT ☐ UNSAT ☐ N/A

- Hydrogen – less than or equal to 3.2% (32,000 ppm)
- VOC – less than or equal to 7,000 ppm

6.1[3] Performed By: Julie Gallegos (Waste Handling Operator (print)) Julie Gallegos (Signature) 176905 (Z#) 1-30-13 (Date)

Quantitation Report (QT Reviewed)

InstName : FGA Unit 12

Data Path : C:\msdchem\1\DATA\130129c\
Data File : S813475.D
Acq On : 29 Jan 2013 1:49 pm (#1); 29 Jan 2013 1:47 pm (#2)
Operator : SA
Sample :
Misc : 55 GAL LFL THROUGH UNOBSTRUCTED FILTER-072 (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jan 29 13:52:49 2013
Quant Method : C:\msdchem\1\METHODS\H2-CH4.M
Quant Title : Flammable Gas Analysis for Transportation Only
QLast Update : Thu Oct 04 08:07:46 2012
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Target Compounds						Qvalue
1) Hydrogen	1.933	GC1	38643m	136.82	ppmv	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

H2-CH4.M Tue Jan 29 13:52:54 2013 UNIT12

8-20-13

0634 Assuming WCRRF Operations Center. Cvelander
0636 late entry at 0620 pre job being performed by SOS - Cvelander
0700 Operators setting 50-69 and will continue processing 3802959.
0850 per preliminary indications and IH determination was made that the drum handler is in a Sat condition. Caution tag has been removed.
0914 Bagging off 3802959, bagging on 3815176 after denesting.
1011 Bag on, Bag off is complete and also denesting
1230 Operators leaving facility for lunch.
1339 Operators continuing to process.
1442 ASSUMING OPERATIONS CENTER TO TRAINING HASMITH
1445 BAGGING OFF S 815176 BAGGING ON ~~S 5813475~~ 8/20/13 S 813475
1515 BAG ON BAG OFF COMPLETE.
1522 STARTING INSIDE ROUNDS
1537 ENTERING EP-WCRR-RM-AOP-0207 DUE TO LIGHTNING ACTIVITY
1538 #63 ITEM, OOS INSIDE ROUNDS, POD IN PLACE OK TO PROCEED
1545 INSIDE ROUNDS COMPLETE
1605 RESET TIME FOR EP-WCRR-RM-AOP-0207 DUE TO LIGHTNING ACTIVITY
1608 OPERATORS NOTIFIED TO PAUSE OPERATION. AND PUT INVENTORY IN SAFE CONFIGURATION, WITH LPOS ON PARENT DRUM, INTERMITTEN POWER LOSS. STILL IN EP-WCRR-RM-AOP-0207, ALL GOOD IN TA 50-69
1624 OPERATORS ADVISED BY SOS TO RESUME PROCESSING
1652 30-30 RESTARTED STARTED DUE TO THUNDER
1707 EXITING EP-WCRR-RM-AOP-0207
1710 BEGIN OUT SIDE ROUNDS
1715 BAGGING OFF S 813475
1717 ITEM #3 UNSAT. FSR IN PLACE, OKAY TO CONTINUE
1728 ITEM #19 UNSAT. FSR IN PLACE, OKAY TO CONTINUE

CONTINUED ON NEXT PAGE HASMITH

8/20/13 CONTINUE FROM PREVIOUS PAGE HA SMITH
1732 OUTSIDE ROUNDS COMPLETE
1747 BAG OFF S 213475 COMPLETE
1747 MODE CHANGE TO WARM IN TA50-69 AND YARD
1800 INSIDE AND OUTSIDE ROUNDS SIGNED BY SOS.
1810 End of day w/ CRRF operations center is secure - C Valerde

No further entries this page

8-20-13 DAYSHIFT

0601 Reviewed the shift turnover checklist, and assumed the WCRR dayshift SOM responsibilities. John Guadagnol

0616 Reviewed and approved the dayshift watchbill.

0658 Completed attending the pre-job brief conducted by Gilbert the SOS. He provided an update to the facility, with lead windows - station 3, and the Roto Grip wheel was cracked and operators caution tagged it out. The PHTS brief was given by the SOM to all in attendance, shift orders are still effective.

0701 Completed the daily phone call with AREA G - SOM - per POD.

0704 Operations entering 50/69 and will continue processing S802959.

0850 Per proficiency instructions and IH determination was made that the drum handler is in a SAT condition. The caution tag was removed by the SOS.

0914 Inside Operations initiated bag off of Parent drum S802959 and Bag on of Parent drum S815176.

1011 Operations complete bag off, bag on and denesting

1210 Inside operations break for lunch.

1250 Completed weekly LFL teleconference and daily update with AM/PM, others.

1430 Completed debrief with ES QA, LANL QA, ES SOS, ES PM regarding ML-2 storage and requirements to Meet P330 Chapters 11, 12, 13. Energy Solutions will initiate corrective actions Actions include training on ES procedure, ensuring documentation for all items on shelves. - otherwise they default to ML-4, Reorganizing ML-components together. Primary custodians need to take ownership/and LOQ1 should include list of qualified personnel. ES - will work on adding personnel (qualified ML custodian) to LOQ1

1441 Operations initiated bagging off parent S815176 and bag on of Parent S813475

1515 BAG on/Bag off noted completed

1537 Due to Severe weather lightening, OCD entered EP-WCRR-RM-AOP-0207

1608 Operations notified to pause operations due to lightening strikes in the immediate area and requesting inside Ops to put the glovebox in a safe configuration. Currently Ventilation is;

1707 Operations Center exited EP-WCRR-RM-AOP-0207

1708 Late entry for 1624 - Operations advised by SOS and concurrence from OM to commence operations.

Continued on Next Page

8-20-13 DAYSHIFT (Cont)

1715 Inside Operations notify the Operations Center of initiating Bag offs which will include PARENT DRUM 5813475

1744 Inside Operations report Bag offs completed, and the glovebox is in a safe configuration.

1747 Mode Change: 50/69 and ~~Opera~~ 8-20-13 and transition from Operations/Operations to WARM/WARM

1805 Completed Checklist turnover with Nightshift SOM

~1820 Secured the Day shift WCRR SOM position [signature]

cl
8-22-13

No further Entries this page
[signature]

8/20/13 WCRRF SOS Log Book

1816 Assuming SOS position. CA

1817 Will be attending WCATS training.

2358 Back from training.

0105 Starting Pre-Job, discussed hearing protection as well as hand placement, especially our un-qualified operator. Mode change performed, WCRRF yard and 50-69 are now in Operations.

0135 Pre-Job complete.

0241 Denesting and bagging on 5846084

0316 Denesting and bag on complete.

0514 Signed off on the rounds.

0517 Bagging off 2 daughters to complete processing.

0552 Bag off complete

0612 Mode change complete, WCRRF yard and 50-69 are now in Warm Standby.

8/21/13 0616 Turning over SOS position to Gilbert Martinez. CA

No Further Entries on this Page

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0135
Examination Date:	12/12/2013
Waste Container ID:	94227
Video/Audio Recorded Media Number:	LA-RTR2-13-0135 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 14
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA225
Waste Matrix Code:	S5400
Waste Stream I.D.:	LA-MHD01.001
Waste Container Weights:	Gross Wt.: 94.5 kg Tare Wt.: 33.4 kg Net Wt.: 61.1 kg
Rigid Liner and Liner Vent Description:	Liner: [X] No [ ] Yes Lid: [X] No [ ] Yes Type: [ ] 30-mil [ ] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [ ] Yes [X] N/A Punctured: [X] No [ ] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [ ] No [X] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 2 layers
Volume Utilization Percentage:	100 %

CCP Radiography Data Sheet

Waste Container ID: 94227

Section 3: Container Inventory and Comments (Detailed descriptions)

IM: Open 30 gal drum, drum lid

AM:

OM: Scrap lead

OI:

C:

R:

XPM: Plastic bag, liner lid

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP): Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	22.0
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	20.0
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	3.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	16.1
Soils (S):	
Total WMP Weight:	61.1

CCP Radiography Data Sheet

Waste Container ID: 94227

Section 5: RTR Summary (Questions answered "Yes" will be explained in the Comment block except for Question 1)	
Is there observable liquid?	☐ Yes ☒ No
Is there any observable liquid in internal containers, more than 60 milliliters or 3 percent by volume, whichever is greater?	☐ Yes ☒ No
Is the total volume of observable liquid in the outermost container GREATER than 1% of the container?	☐ Yes ☒ No
Is there observable liquid in payload containers with an EPA Hazardous Waste Number of U134?	☐ Yes ☒ No
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐ Yes ☒ No
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐ Yes ☒ No
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does NOT match TRUCON Code[s])?	☐ Yes ☒ No
Is there an indication of wastes containing explosives or compressed gases?	☐ Yes ☒ No
Is there an indication of PCBs liquids?	☐ Yes ☒ No
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐ Yes ☒ No
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐ Yes ☒ No
CH or RH TRAMPAC	
Are there heat-sealed bags (unvented) GREATER than 4 liters and LESS than 390 square inches in the waste, or heat sealed bags not authorized in the RH TRUCON Code?	☐ Yes ☒ No
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐ Yes ☒ No
Are there sealed containers GREATER than 4 liters?	☐ Yes ☒ No
Are there indications of inadequate protection for heavy and/or sharp objects?	☐ Yes ☒ No

Comments: This drum contains metal cans with material, which may require additional Project Office review.

RTR Operator:

Thad Hasselstrom	Thad Hasselstrom	12/12/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	94227	Count Sequence Number:	24007
Operator:	D3PW2DK1\operator		
Assay Start:	12/17/2013 2:44:41 PM		
Description 1:	1LANDA1881		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Debris S5000		
Container Type:	55 gallon drum		
Weight:	Net: 61.1 kg	Net:	61.1 kg
Container:	Volume: 208.0 l	Full:	100.0 %
Density:	0.290 kg /l		

System Configuration

Counter:	MCS HENC #1
Count Type:	Item Count
Collimator/Geometry Setting:	All Banks On (GE - 0

Errors quoted at 1.000 sigma

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number:	24007	Batch Number:	1LANDA1881
Assay Instrument:	MCS HENC #1	Location:	LANL TA-54
Analysis Method:	CCP-TP-063 v 15	Software Version:	NDA 2000 V.4.0
Item ID:	94227	Analysis Date:	12/17/2013

Net Weight	61100.0 g			
Pu mass	3.73E+000	+-	9.52E-001	g
TRU Alpha Activity	1.27E+000	+-	5.25E-001	Ci
TRU Activity Concentration	2.08E+004	+-	8.59E+003	nCi/g
Pu-239 Equivalent Activity	1.28E+000	+-	5.25E-001	Ci
Pu-239 FGE	3.52E+000	+-	8.94E-001	g
Decay heat	4.16E-002	+-	1.74E-002	W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	1.57E-002	1.11E-005	1.29E-006	7.41E-007
PU238	3.40E-004	5.82E-003	1.49E-003	3.21E-005
PU239	3.50E+000	2.17E-001	5.54E-002	1.20E-003
PU240	2.24E-001	5.08E-002	1.30E-002	2.80E-004
AM241	2.90E-001	9.95E-001	5.22E-001	1.24E-002
PU241	4.26E-003	4.38E-001	1.12E-001	2.42E-003
PU242	7.47E-004	2.95E-006	7.53E-007	0.00E+000
CO60	2.84E-011	3.20E-008	1.08E-008	3.09E-008
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	2.39E-007
U233	<LLD	<LLD	0.00E+000	1.40E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	3.76E-007
U238	<LLD	<LLD	0.00E+000	4.18E-006

Errors quoted at 1.000 sigma

Operator: _____ Date: 12/19/13

ITR: _____ Date: 12·19·13

Automated Independent Technical Review

Count Sequence Number: 24007
Batch Number: 1LANDA1881
Counter ID: MCS HENC #1
Container ID: 94227
Waste Matrix Code: Debris S5000
Count Type:
Sequence Type:
Assay Date: 12/17/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis No Add-a-Source warnings.	Ok
Section 2 - Passive Neutron Analysis Analysis Status: No errors. No Warnings Reported.	Ok
Section 3 - Data Combiner Analysis Override enabled; Passive Neutron Pu and Gamma U data specified as input. Pu results taken from Passive Neutron data, U from Quantitative Gamma data. Results comparison test passed.	Passive Neutron Pu and Gamma U data specified as input.
Section 4 - MGA Analysis Results are marked as invalid.	MGA analysis failed. AK isotopics applied. The AK information utilized was provided by Steve Schafer, AKE, and consists of data from CCP-AK-LANL-006, AK Source Document M237. MT-52.
Section 5 - Gamma Analysis Analysis Status: No errors.	Ok
Miscellaneous	No additional nuclides contributing to 95% of the radiological hazard identified.

Expert Review by: Sheri Chamberlin Date: 12-19-13

Attachment 4 – Flammable Gas Analysis Form

SCO 1049 Add 4 - Win XP SP3/Win 7 SP1
Excel 2003/2007/2010

Waste Container ID: **94227**

BDR Number: **LA13FG12133**

Sampling Date: **12/20/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	3.39	U
74-82-8	Methane	6.56	U
67-56-1	Methanol	9.63	
60-29-7	Ethyl Ether	0.12	U
75-35-4	1,1-Dichloroethylene	0.20	U
67-64-1	Acetone	0.42	U
75-34-3	1,1-Dichloroethane	0.72	U
156-59-2	cis-1,2-Dichloroethene	0.09	U
78-93-3	Methyl ethyl ketone	0.90	U
110-82-7	Cyclohexane	0.59	U
71-43-2	Benzene	0.17	U
107-06-2	1,2-Dichloroethane	0.56	U
71-36-3	1-Butanol	0.38	U
108-10-1	Methyl isobutyl ketone	0.66	U
108-88-3	Toluene	0.93	U
108-90-7	Chlorobenzene	0.67	U
100-41-4	Ethylbenzene	0.59	U
108-38-3/106-42-3	m- and p-Xylene	0.38	U
95-47-6	o-Xylene	0.36	U
108-67-8	1,3,5-Trimethylbenzene	0.65	U
95-63-6	1,2,4-Trimethylbenzene	0.78	U

CAS Number	IDENTIFIED TIC COMPOUND	Est. Amount ppmv
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

14
~~15~~
EL 1-15-14

Quantitation Report (QT Reviewed)

InstName : FGA Unit 12

Data Path : C:\msdchem\1\DATA\131220c\
Data File : 94227.D
Acq On : 20 Dec 2013 12:50 pm
Operator : SA
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Dec 20 12:59:24 2013
Quant Method : C:\msdchem\1\METHODS\VOCGAS.M
Quant Title : Flammable Gas Analysis for Transportation Only
QLast Update : Tue Dec 03 09:52:38 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
3) Fluorobenzene	4.060	96	8003617	207.75	ppmv	0.00
15) Chlorobenzene-d5	6.636	117	6288638	178.75	ppmv	0.00
Target Compounds						Qvalue
4) Methanol	0.831	31	4072	9.63	ppmv	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

34
~~36~~
EL 1-15-14

S813562

S813562

Container Profile 751189

File Options Reports Help

S813562

751189	TBD-TRU	T-TTRU-TEMP	Active	Decommissioned

- General Information
- Weights/Volumes
- Location
- Account Information
- Waste Material Parameters
- Layers of Confinement
- Prohibited Items
- EPA Codes
- UHC
- Radioassay
- Radiological Survey
- Payload Preparation
- Container Closure
- Materials Added
- TRU Information
- TRU Information (TSDF)
- Radiological Calculations
- Shipping Description
- Site Treatment Plan
- Pending Tasks
- Genealogy
- Container Tags
- Task History
- Documentation
- Comment Log
- Edit Log

Genealogy

S813562

- S813562
  - LA00000068302
    - LASB02097
  - LA00000068303
    - LASB02096
  - LA00000068306—EMPTY

Task History

Transfer Details

Transfer Amount	Transfer Unit	Item	Measured Weight	Measured Weig...
0.02	%			

Working Copy
Date: 9/4/13 HS

ATTACHMENT 1
Page 1 of 4

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: S813562

6.2[4] Date Processed: 9-04-13

4.1[6][B] Processing Activity (EP-DIV-AP-0107):
☐ > 190 mrem/hr ☑ PID ☐ Split ☐ Repack

4.1[6][B] Prohibited Items:
☐ Sealed Containers > 4L ☑ Liquids ☐ Pressurized Containers ☐ N/A

4.1[6][B] Parent Waste Container RCRA Designations: D007, D008, D009

4.1[7] Activity Hazard Classification based on Anticipated Extremity Radiation Dose Rate:
☑ Moderate (≤ 10 rem/hr) ☐ High/Complex (> 10 rem/hr)

4.3[1]/4.3[2] ($) TA-50-69 is in the OPERATION or WARM STANDBY MODE (TSR 1.2) ☑ OPERATIONS ☐ WARM STANDBY ☐ N/A

4.3[4][B] Platform Scale: Equipment No.: 019065
Cal. Due Date: 10-14-14

4.3[5][B] ($) Three 1-Liter containers carbon spheroids or MET-L-X in WCG: (SAC 5.10.1.7.1) ☑ YES ☐ NO ☐ N/A

4.3[6] ($) Stationary Fire Watch has been established: ☐ N/A
(> 300 PE-Ci Equivalent Combustible)
(SAC 5.10.1.7.2) N/A (Initial and Date)

4.3[7 [A] Parent Waste Container degraded, loss of integrity, or weighs greater than 468 lb but less than or equal to 624 lb:
☑ YES ☐ NO ☐ N/A

4.3[8][D] WCG glove and bag-in/bag-out bag inspection: ☑ SAT ☐ UNSAT ☐ N/A

Performed By: Brian Gallegos / B. Gallegos / 260129 9-04-13
Waste Handling Tech (print) Signature Z # Date

ATTACHMENT 1
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4.1[6][B]	Parent Waste Container No.:	58135562
5.[18]	Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable:	426.4 lb
6.2[5][A]	Parent Drum Lead Blanket Weight (lb):	0 lb
6.2[5][B]/ 6.2[6]	Total Parent Drum Weight (lb)	426.4 lb
6.2[7]	**(S)** Total Parent Drum Weight < 624 lb (SR 4.5.1):	☑ SAT ☐ UNSAT
6.2[17][D]	Drum lift hinge pin retaining clip replaced.	N/A / / Initials Z# Date

6.2[28] Approval to leave a parent drum attached to the WCG overnight:

N/A / / EWMO-FOD (print) Signature Z # Date

ATTACHMENT 1
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4.1[6][B] Parent Waste Container No.: 58135162

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	68302	68303	N	
10.1[4]	Daughter Drum Filter No.	KL-544	KL-642		
10.1[4]	Daughter Drum Bag Filter No.	L-6627	L-6783	A	
10.1[4]	Daughter Drum Purchase Order No.	501321	501321		
10.1[13][C]	WCG Fire Watch Stationed	☐ YES		☐ NO	☑ N/A
10.1[14][C][d]3/11.1[3]	WCG Fire Watch Secured	☐ YES		☐ NO	☑ N/A
10.2[4]	POC bag-on bag: Manufacturer				
	Model No.				
	Serial No.				
	Date of Manufacture				
10.2[5]	POC ID No		N		
10.2[7][B]/10.2[6]	POC Item Description				
10.2[13]	POC Assembly closed per Manufacturer's instructions. (Initial and Z#)			A	
10.2[14]	POC Assembly Gross Weight (lb)				
10.2[15]	POC Rad. Survey Results (mrem/hr)				
10.3[3][A]	Approx. Containerized Liquid Vol./Units	N/A			
10.3[5][A]	Free Liquid Volume/Units	3 GALLONS			
10.3[7][A]	Opaque/Non-penetrable Item Description:	LEAD SHIELDING	LEAD SHIELDING		
10.3[9][A]	PCB-contaminated Waste Description	N/A	N/A		
10.3[9][B]	PCB Item ID No.			N	
10.3[10]	Remaining Waste Description	SEE COMMENTS	SEE COMMENTS		A
10.3[13]/10.4[10]/10.5[4]/10.6[10]	Daughter Drum % Full (%)	100%	45%		
10.5[3]/10.6[2]	Description Waste Added During Processing	BAG OUT STUBS	BAG OUT STUBS		

LA00000068302 LA00000068303

ATTACHMENT 1
Page 4 of 4

4.1[6][B] Parent Waste Container No.: S8135562

Comments: ROOM TRASH, PLASTICS, NITRATE SALTS, KITTY LITTER, LEAD SHIELDING

11.1[1] Performed By: BRIAN GALLEGOS / [signature] / 2671129 9-04-13
Waste Handling Tech (print) Signature Z # Date

11.1[8] Reviewed By: Jose Jerez / [signature] / 12214521 9/4/13 0147
SOS or designee (print) Signature Z # Date/Time

ATTACHMENT 2
Page 1 of 1

Working Copy
Date: 8/27/13 HS

WCRRF OVERPACK DRUM ASSEMBLY PREPARATION DATA SHEET

5.[3] Overpack drum information:

Purchase Order No.: 501323
Lot No.: 0238025
Manufacture Date: 13

5.[8] Overpack filtered vent and 2-in. bung torque wrench information:

	Filtered Vent	2-in. Bung
M&TE No.:	100216	038369
Cal. Expiration Date:	12-18-13	12-18-13
Tolerance:	±4%cw ± 6%ccw	±3%cw ± 6%ccw

Overpack filtered vent information:

Manufacturer: NUCFIL
Model No.: 013
Serial No.: JL-1893
Manufacture Date: 10/11

5.[9] Torque wrench listed above is within the acceptable ranges as displayed on the calibration certificate. ☑ Yes ☐ No

5. [11] Performed By: MICHAEL MONTOYA / [signature] / 191352 / 8/27/13
Waste Handling Technician (print) Signature Z# Date

5.[15] Filtered Vent torque value [120 in-lb (96 to 144 in-lb)]: 120 in-lb

5. [18] 2-in. bung plug torque value: 30 ft-lb

Comments: N/C

8.1[1] Performed By: MICHAEL MONTOYA / [signature] / 191352 / 8/27/13
Waste Handling Technician (print) Signature Z# Date

8.1[6] Reviewed By: Joe Jerez / [signature] / 122452 / 9-4-13
Supervisor or designee (print) Signature Z# Date

ATTACHMENT 5
Page 1 of 1

Working Copy
Date: 9-4-13

WCRRF OVERPACK DRUM CLOSURE I

LA00000068306

7.[17] Overpack Drum Unique Identifier No.:

7.[23] Overpack drum closure ring torque wrench information:

M&TE No.: 019065
Cal. Expiration Date: 10-14-14
Range in ft-lb: 10-80
Tolerance: ±3% cw ±6% ccw

7.[24] Torque wrench listed above is within the acceptable ranges as displayed on the calibration certificate. ☑ Yes ☐ No

Performed By: BRIAN GALLEGOS / [signature] / 2671729 9-04-13
Waste Handling Technician (print) Signature Z # Date

7.[26] Overpack drum closure ring torque value: 60 ft-lb

7.[29] Threaded lug of the drum closure ring is not touching the jam nut and the locking ring lugs are not touching. ☑ SAT ☐ UNSAT

7.[34][B] Platform scale serial number: 019065
Platform scale calibration expiration date: 10-14-14

7.[34][D] 85-gal overpack drum gross weight (lb): 190.4 lb

Comments: N/C

8.1[1] Performed By: BRIAN GALLEGOS / [signature] / 2671729 9-04-13
Waste Handling Technician (print) Signature Z # Date

8.1[7] Reviewed By: Jose Perez / [signature] / 2214521 9/4/13
Supervisor or designee (print) Signature Z # Date

Attachment 1. Checklist for the preparation of a new 55-Gallon Drum Assembly

Drum ID#: 68302

1. Drum/Lid Assembly

- ☑ Remove and discard ¾" bung from lid
- ☑ Remove Lid
- ☑ Inspect drum, lid, and gasket, ring bolt and nut, chines, and paint
  - NOTE: Reject damaged drum/lid assembly
- ☑ Place 2" duct tape on vertical seam on interior of drum

RECORD drum information:

Purchase Request #: 501321
Lot #: 623 7720
Date of Manufacture: 13

2. Drum Liner Bag/Filter Assembly:

- ☑ Place yellow vinyl tape, with smear centered on tape, over filter
- ☑ Fill bag with air from compressed air source
- ☑ Inspect bag for damage, cuts, or leaks by looking, listening, and feeling
  - NOTE: Reject or repair damaged, cut, or leaking bags
- ☑ Stretch bag's bungee cord
- ☑ Inspect bungee cord
  - NOTE: Reject bag if bungee cord is broken or damaged

RECORD bag filter information:

Manufacturer: BOP
Model #: UCAC-1.5-2 SAC
Serial #: 1-16627
Date of Manufacture: 1-13

3. Cardboard Liner/Plastic Liner Drum Liner Bag/Filter Assembly:

- ☑ Inspect cardboard liner/plastic liner (circle type of liner used)
  - NOTE: Reject any damaged liners
- ☑ Place cardboard/plastic liner into drum liner bag/filter assembly
- ☑ Line up filter with drum seam
- ☑ Place liner/bag/filter assembly into drum
- ☑ Roll excess liner bag into cardboard liner/plastic liner

4. Install Lid/Drum Filter

- ☑ Place lid and ring onto drum
- ☑ Tighten ring sufficiently to simply hold lid in place
- ☑ Torque 2" bung plug
- ☑ Apply sealant to filter threads, screw in ¾" bung hole, and torque
- ☑ Place this Attachment and blank Attachment 2 into a protective sleeve and tape to top of drum

RECORD drum filter information:

Manufacturer: Nucfil
Model #: 019DS
Serial #: KL-544
Date of Manufacture: 11-11

RECORD torque wrench information:

Filter torque wrench:		Jam Nut / Bung torque wrench:	
M&TE ID #:	100216	M&TE ID #:	038369
Cal Expiration Date:	12-18-13	Cal Expiration Date:	12-18-13
Range (ft-lbs or in-lbs):	40-200	Range (ft-lbs or in-lbs):	10-80
Tolerance:	+/- 4% CW +/- 6% CCW	Tolerance:	+/- 3% CW +/- 6% CCW

Torque wrenches listed above are within the acceptable ranges as displayed on the calibration certificate.

☑ Yes ☐ No

Print Name: Frederick Adelek Signature: [signature] Z#: 228826

5. Weigh Drum Assembly

RECORD weight information

Tare witght (lbs) 760
File ID #: 019065

- ☑ Write the tare weight on drum using permanent marker

6. Label Drum Assembly

- ☑ Place 1 barcode drum ID label to the left of the drum seam, ~6" from drum bottom
- ☑ Place 1 barcode drum ID label in the center of the drum lid

RECORD drum ID# at the top of Attachments 1 and 2

Operator Print: Frederick Adelek Operator Sign: [signature] Z#: 228826 Date: 8-19-13

Verifier Print: BRIAN GALLEGOS Verifier Sign: B. Hallinger Z#: 267129 Date: 9-04-13

Attachment 2. Checklist for the Closing of a 55-Gallon Drum Assembly

DRUM ID#: 68302

1. LID INSTALLATION

NOTE: Install lid per manufacturer's instructions

✓ Mount lid with filter directly over drum seam.

✓ Install ring with bolt positioned downward and directly over drum seam.

✓ Engage bolt and nut and torque per manufactures instructions

NOTE Seal the ring while tightening using a rubber hammer or dead-blow mallet or a drum lid press.

✓ Tighten jam nut.

Record torque wrench information:

MT&E #: 038373

Cal expiration date: 9-11-13

Range/ Value (ft-lbs): 10-80

Tolerance ±3%-CW ±10%-CCW

2. DRUM LABELING

NOTE: Do not cover the drum seam with any labels.

✓ Place two barcode drum ID labels ~6" from the bottom of the drum ~120° from previously placed ID label.

✓ Place one barcode drum ID label to the right of drum seam between the top two rolling hoops.

✓ Place one yellow radioactive waste label between the top two rolling hoops

✓ Place one yellow radioactive waste label in the center of the drum lid.

RCRA Label:

N/A Place one blue NON-RCRA Regulated Waste label between the top two rolling hoops.

OR

✓ Place one yellow HAZARDOUS Waste label between the top two rolling hoops left of the drum seam. (Ensure EPA waste number and accumulation start date are documented.)

NOTE: Check only one of the above two boxes.

3. WEIGH DRUM ASSEMBLY

Record weight information:

Gross Weight(lbs): 358.8

Scale ID#: 0190165

✓ Using a permanent marker, write the gross weight on the drum lid.

4. FINALIZE DOCUMENTATION

✓ Have RCT monitor drum prior to moving to storage area

✓ Place attachment 1 and 2 and HMPT Tag into a protective sleeve.

✓ Complete TWSR.

Operator Print/Sign: [illegible] Date: 9-04-13

Verifier Print/Sign: [illegible] Date: 9-4-13

Attachment 1. Checklist for the preparation of a new 55-Gallon Drum Assembly

Drum ID#: 68303

1. Drum/Lid Assembly

- ☑ Remove and discard ¾" bung from lid
- ☑ Remove Lid
- ☑ Inspect drum, lid, and gasket, ring bolt and nut, chines, and paint
  - NOTE: Reject damaged drum/lid assembly
- ☑ Place 2" duct tape on vertical seam on interior of drum

RECORD drum information:

Purchase Request #: 501321
Lot #: 023 7720
Date of Manufacture: 2013

2. Drum Liner Bag/Filter Assembly:

- ☑ Place yellow vinyl tape, with smear centered on tape, over filter
- ☑ Fill bag with air from compressed air source
- ☑ Inspect bag for damage, cuts, or leaks by looking, listening, and feeling
  - NOTE: Reject or repair damaged, cut, or leaking bags
- ☑ Stretch bag's bungee cord
- ☑ Inspect bungee cord
  - NOTE: Reject bag if bungee cord is broken or damaged

RECORD bag filter information:

Manufacturer: BOP
Model #: 60CPVC 1.5 25 PVC
Serial #: L-6783
Date of Manufacture: 1/13

3. Cardboard Liner/Plastic Liner Drum Liner Bag/Filter Assembly:

- ☑ Inspect cardboard liner/plastic liner (circle type of liner used)
  - NOTE: Reject any damaged liners
- ☑ Place cardboard/plastic liner into drum liner bag/filter assembly
- ☑ Line up filter with drum seam
- ☑ Place liner/bag/filter assembly into drum
- ☑ Roll excess liner bag into cardboard liner/plastic liner

4. Install Lid/Drum Filter

- ☑ Place lid and ring onto drum
- ☑ Tighten ring sufficiently to simply hold lid in place
- ☑ Torque 2" bung plug
- ☑ Apply sealant to filter threads, screw in ¾" bung hole, and torque
- ☑ Place this Attachment and blank Attachment 2 into a protective sleeve and tape to top of drum

RECORD drum filter information:

Manufacturer: MULFIL
Model #: 019DS
Serial #: KL-642
Date of Manufacture: 11/11

RECORD torque wrench information:

Filter torque wrench:
M&TE ID #: 100216
Cal Expiration Date: 12-15-13
Range (ft-lbs or in-lbs): 40-200
Tolerance: +/- 4% cw, +/- 6% ccw

Jam Nut / Bung torque wrench:
M&TE ID #: 038369
Cal Expiration Date: 12-15-13
Range (ft-lbs or in-lbs): 10-50
Tolerance: +/- 3% cw, +/- 6% ccw

Torque wrenches listed above are within the acceptable ranges as displayed on the calibration certificate.
☑ Yes ☐ No
Print Name: IAN MARQUEZ Signature: [signature] Z#: 276708

5. Weigh Drum Assembly

RECORD weight information
Tare witght (lbs) 76.0
File ID #: 019065

- ☑ Write the tare weight on drum using permanent marker

6. Label Drum Assembly

- ☑ Place 1 barcode drum ID label to the left of the drum seam, ~6" from drum bottom
- ☑ Place 1 barcode drum ID label in the center of the drum lid

RECORD drum ID# at the top of Attachments 1 and 2

Operator Print: IAN MARQUEZ Operator Sign: [signature] Z#: 276708 Date: 8-27-13
Verifier Print: BRIAN GALLEGOS Verifier Sign: [signature] Z#: 267129 Date: 9-04-13

Attachment 2. Checklist for the Closing of a 55-Gallon Drum Assembly

DRUM ID#: 68303

1. LID INSTALLATION

NOTE: Install lid per manufacturer's instructions

✓ Mount lid with filter directly over drum seam.

✓ Install ring with bolt positioned downward and directly over drum seam.

✓ Engage bolt and nut and torque per manufactures instructions.

NOTE Seal the ring while tightening using a rubber hammer or dead-blow mallet or a drum lid press.

✓ Tighten jam nut.

Record torque wrench information:

MT&E # : 038373

Cal expiration date: 9-11-13

Range/ Value (ft-lbs): 10-80

--- Tolerance ±3% CW ±6% CCW

2. DRUM LABELING

NOTE: Do not cover the drum seam with any labels.

✓ Place two barcode drum ID labels ~6" from the bottom of the drum ~120° from previously placed ID label.

✓ Place one barcode drum ID label to the right of drum seam between the top two rolling hoops.

✓ Place one yellow radioactive waste label between the top two rolling hoops

✓ Place one yellow radioactive waste label in the center of the drum lid.

RCRA Label:

N/A Place one blue NON-RCRA Regulated Waste label between the top two rolling hoops.

OR

✓ Place one yellow HAZARDOUS Waste label between the top two rolling hoops left of the drum seam. (Ensure EPA waste number and accumulation start date are documented.)

NOTE: Check only one of the above two boxes.

3. WEIGH DRUM ASSEMBLY

Record weight information: KB 9-4-13

Gross Weight(lbs): ~~190.4~~ 254.0

Scale ID#: 019065

Using a permanent marker, write the gross weight on the drum lid.

4. FINALIZE DOCUMENTATION

✓ Have RCT monitor drum prior to moving to storage area.

✓ Place attachment 1 and 2 and HMPT Tag into a protective sleeve.

✓ Complete TWSR.

Operator Print/Sign: [illegible] Date 9-04-13

Verifier Print/Sign: [illegible] Date: 9-4-13

ATTACHMENT 3
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Working Copy
Date: 9/4/13 HSA

WCRRF PARENT 55-GAL DRUM PREPARATION DATA SHEET

6.3[21] Prepared Parent 55-Gal Drum Number: 58135562

6.3[15] (S) 55-gal drum wrapped in protective covering: (ISI 6.3.6) ☑ SAT ☐ UNSAT

6.3[16] Platform scale serial number: 019065
Platform scale calibration expiration date: 10-14-14

6.3[18] Prepared parent 55-gal drum weight (lb): 426.4

6.3[19] (S) Prepared parent 55-gal drum weighs < 624 lb: (SR 4.5.1) ☑ SAT ☐ UNSAT

Comments: N/A

8.1[1] Performed By: BRIAN GALLEGOS / Bri Gallegos / 2071279 9-04-13
Waste Handling Technician (print) Signature Z # Date

8.1[7] Reviewed By: Jose Perez / [signature] / R21452 / 9/4/13
Supervisor or designee (print) Signature Z # Date

8.1[8][B] Acceptance criteria satisfied: ☑ YES ☐ NO

8.1[8][D] Approved by: Jose Perez / [signature] / R21452 / 9/4/13 / 0145
SOS/SOM or designee (print) Signature Z # Date Time

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WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Production Control

Container ID: S813562 Container Type: 55-GAL Gross Weight (lbs): 428

Inner Seal #: 007499 Filter Prefix: None Filter Serial #: None

AK Waste Stream: LA-CIN01.001 Certified RTR BDR: No BDR

TWSR Comments: None

Total PE-Ci Activity: 1.12E+00 Equivalent Combustible PE-Ci: 4.19E-01 AM-241 PE-Ci: 2.19E-01

Total Fissile Gram Equivalents: 7.6 Total Surface Dose Rate (mrem/hr): 1

EPA Code(s): D008 D007 D009 ~~D002~~ 12/11/12

NCR RTR/NDA Comment: None

RTR Pre-Screen Date: 5/22/2012 Comment: >1% Liquid

Certified RTR Comment: None

Prohibited Items: ☐ Sealed > 4 Liters ☑ Liquid ☐ Pressurized Container ☐ Impenetrable Item ☑ Other

Security Determination: ☑ Green ☐ Yellow

Remediation Determination: ☐ VE ☑ PID ☐ Split ☐ Repack

Estimated 30-cm Dose Rate (mrem/hr): ☐ <100 ☑ >100 and <1,000 ☐ >1,000 and <10,000 ☐ >10,000

TRUCON Code: None Production Control Comments: ~~MT 11/12/12~~ Nitrate Salts apply mixture & EPA codes. Package MT42 separately from MT5X-Material Split

Performed By: Julie Gallegos (Production Control (Print)) / Julie Gallegos (Signature) / 176905 (Z Number) / 10/18/12 (Date)

WDP Engineering

Chemicals Present (e.g., pyrophorics, acids, bases, shock sensitive, organic liquids, peroxides, crown ethers): ☐ Yes ☒ No ☐ Unknown

Processing Determination: ☒ Accept ☐ Reject

WDP Engineering Comments: Nitrate Salts
Net Wt: 368# Generator info shows 8 items of nitrate salts; weights range from 10-83#. No RTR BDR available for review. Nitrate salts are typically packaged in plastic bucp + can contain undocumented liquids. RTR PS shows presence of liquids. Nitrate salts require repack w/ admixture. No chemicals identified; nitrate salts carry waste codes for chromium, lead, + mercury.

Performed By: Valerie Rhodes (WDP Engineering (Print)) / Valerie Rhodes (Signature) / 112209 (Z Number) / 12/12/12 (Date)

TRU Remediation Operations

☑ Waste Container Information Evaluated ☐ Less Than 170 lbs ☐ RTR Video Available

Other Specific Safety Concerns: Do not push or press on waste with hands use heavy duty gloves during processing.

Processing Determination: ☑ Accept ☐ Reject

TRU Remediation Operations Comments: USE Proper PPE. Ensure proper ratio of kitty litter as applied in accordance with procedures

Performed By: Gilbert Martinez (TRU Remediation Operations (Print)) / Gilbert Martinez (Signature) / 149235 (Z Number) / 5/18/13 (Date)

Jose Jerez / Jose Jerez / 221452 / 5/18/13

HS Review: RD 206362 12/17/12

Discardable Waste Log Sheet

DrumID: 007499

ItemF	ItemID	Net (kg)	Matrix	M Code	NM	MT	Auth	Remarks
1	IXFS-284-FI	16.59	NITRATE SALTS		0.6	52	5/11	
2	IXFS-285-FI	37.72	NITRATE SALTS		1.62	42	7/11	
3	IXFS-286-FI	9.09	NITRATE SALTS		1.33	52	5/11G	
4	IXFS-287-FI	10.45	NITRATE SALTS		3.58	52	5/11	
5	IXFS-288-FI	11.81	NITRATE SALTS		0.98	52	5/11	
6	IXFS-289-FI	4.54	NITRATE SALTS		0.38	52	5/11	
7	IXFS-291-FI	9.32	NITRATE SALTS		1.12	52	5/11	
8	IXFS-292-FI	26.36	NITRATE SALTS		0	52	5/11	
		125.88 kg						

ATTACHMENT 1
Page 1 of 1

TA-54 AREA G WASTE CONTAINER HYDROGEN/VOC SAMPLE ANALYSIS DATA SHEET

5.[1] Sample Date: Jan 29 2013

Container No. (5.[1])	38135462					
Container type sampled (e.g., 55-gal, 85-gal, 110-gal, or SWB) (5.[1])	55 gal					
Filtered Vent Type (5.[1])	72					
Filtered Vent Unobstructed (5.[1])	☑ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT
WIPP-Approved Filtered Vent (5.[2])	☑ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT
Total CCP VOC value (< 7,000 ppm) (5.[4])	0 ppm	ppm	N/A 30 ppm	ppm	ppm	ppm
Hydrogen Reading (< 64,000 ppm) (5.[5])	0 ppm	ppm	ppm	ppm	ppm	ppm
Methane Reading (< 16,000 ppm) (5.[5])	0 ppm	ppm	ppm	ppm	ppm	ppm

5.[7] Certified CCP Technician:

Performed By: Sara Aragon (CCP (Print)) 1237975 (Z#)

Reviewed By: Nathan Wales (CCP (Print)) 1238866 (Z#)

Comments: n/a

6.1[2][A] WCRRF waste container satisfies the following criteria: ☑ SAT ☐ UNSAT ☐ N/A

- Hydrogen – less than or equal to 3.2% (32,000 ppm)
- VOC – less than or equal to 7,000 ppm

6.1[3] Performed By: Julie Gallegos (Waste Handling Operator (print)) Julie Gallegos (Signature) 176905 (Z#) 1-30-13 (Date)

Quantitation Report (QT Reviewed)

InstName : FGA Unit 12

Data Path : C:\msdchem\1\DATA\130129c\
Data File : S813562.D
Acq On : 29 Jan 2013 2:25 pm (#1); 29 Jan 2013 2:24 pm (#2)
Operator : SA
Sample :
Misc : 55 GAL LFL THROUGH UNOBSTRUCTED FILTER-072 (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jan 29 14:29:30 2013
Quant Method : C:\msdchem\1\METHODS\H2-CH4.M
Quant Title : Flammable Gas Analysis for Transportation Only
QLast Update : Thu Oct 04 08:07:46 2012
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

H2-CH4.M Tue Jan 29 14:29:41 2013 UNIT12

9-4-13

0615 Assuming WCRRF Operations center checked

0615 ASSUMING WCRRF OPERATIONS IN TRAINING HSMITH

0616 PRE-JOB ~~BE~~ 9/3/13 HS BRIEFING BY SOS. BRIEFING ALSO IN REVISIONS IN PROCEDURE EP-WCRR-WO-DOP-022

0715 PRE-JOB COMPLETED

0730 TECH ENTER TO BEGIN PROCESSING

0908 BAG OFF DAUGHTER, BAG OFF POC, BAG ON POC

0934 BAG OFF COMPLETE, BAG ON

1129 BAGGING OFF 1 POC, BAGGING ON 1 POC

1147 ~~1217~~ 9/4/13 HS BAG ON BAG OFF COMPLETE

1215 BAGGING OFF 2 POC's & ~~DAUGHTER~~ 9/4/13 HS BAGGIN ON 1 DAUGHTER

1238 BAG OFF COMPLETE

1355 STARTING INSIDE ROUNDS

1430 ITEM #63 INSIDE ROUNDS OOS, POD IN PLACE, OKAY TO PROCEED

1432 INSIDE ROUNDS COMPLETE

1439 BAGGING OFF, 1 DAUGHTER DENESTING ONE DRUM DENESTING 581356 2

1524 BAG ON AND DENESTING COMPLETE

1635 STARTING OUTSIDE ROUNDS

1646 BAGGING OFF ONE DAUGHTER, BAGGING ON ONE DAUGHTER AND CONTINUING TO PROCESS

1656 #19 OUTSIDE ROUND UNSAT, FSR IN PLACE OK TO PROCEED PER CSE DOCUMENTATION

1657 BAG OFF COMPLETE

1704 OUTSIDE ROUNDS COMPLETE

1710 OPERATORS SAID RCT's LAY PLASTIC ON FLOOR DUE TO PAINT CHIPPING ON FLOOR

1720 BEGIN MOVEMENT INTO TASD-69 FROM 194/75

1750 MOVEMENT IN TASD-69 FROM TRANSPORTAINERS COMPLETE

9/4/11 1815 END OF DAY - OPERATION CENTER SECURE HSMITH

NO FURTHER ENTRIES ON THIS PAGE HSMITH

9-4-13 Dayshift WCRR SOM

0618 ASSUMED 9-4-13 WCRR Dayshift SOM.

0620 PREJOB BRIEF BY SOS. STRESSING SLOW START.

0640 MANAGEMENT CALL IN.

0705 PRE JOB COMPLETE. TRAINED TO WCRR ~~of~~ of 9-4-13 WO-008-221.

0730 TECHS ENTER FACILITY

0908 BAG OFF DAUGHTER, BAG OFF POC, BAG ON POC (ANOTHER)

0934 BAG OFF COMPLETE.

0936 QUALIFIED WCATS USERS NEED LEVEL A ACCESS WITH A CRYPTO CARD. OPS MANAGER SIGNS OFF ON 3 WORKERS CURRENTLY Q CLEARED. OTHER PAPERWORK IS SUBMITTED FOR THE REMAINDER.

1129 BAG OFF COMMENCES TOC

1147 BAG ON COMPLETE

1205 BAG OFF 2 POCS BAG ON DAUGHTER

1439 BAGS COMPLET 4 POCS, 2 DAUGHTERS SP57

1445 CONTACTED WASTE HELP OVER MAR REPORTS. MAR REPORTS INCONSISTANT WITH INVENTORY. APPROXIMATELY 2 PECi OF ADDITIONAL MAR IS FOUND WHEN ADDING UP ALL THE STORAGE LOCATIONS WHILE INDIVIDUALLY THE LOCALS ARE CORRECT. THE POSSIBLE ANSWER IS THAT ONE LOCATION SO-0069-0 IS/MAYBE INCUDED AND THIS IS THE LLW STORAGE AREA - WHICH SHOULD NOT BE INCLUDED IN THE YARD MAR.

1515 WASTE HELP CONTACTS (INNITIAL CONTACT WAS AN EMAIL REQUEST) SOM TO TRY AND RESOLVE THE ISSUE BUT COULD NOT.

1712 RP REPORTS PAINT ~~REMOVE~~ of 9-4-13 PEELING BY WCG. SURVEYS CLEAN. TAPING PLASTIC DOWN. THIS OCCURED WHEN A DRUM ROLLED OVER THE PAINT

1800 SECURE DAY SHIFT.

NO FURTHER ENTRIES THIS PAGE

9/4/13 WCCLF SOS LOG Book

0600 Assuming SOS Position [illegible]

0615 Conducted shift brief briefed to EP-WCCR-WO-DOP-0221, R.8 Reviewed with operators to take It slow And IF they need help with Wcatr to get help desk involved.

0710 Concluded shift brief

0730 Operators entering Facility

0958 Bagging off daughter And POL bagging another POL

0934 Bag on/off Complete

1129 Bagging off 1 POL bagging on Another

1147 Bag on/off complete

1215 Bagging off 2 POL's Bagging on a daughter

1238 Bag on/off complete

1355 Starting Rounds

1434 Bagging off 1 Daughter Degasting 5613562

1524 Bag on And degasting Complete

1635 started Rounds

1640 Bagging off one Daughter Bag on Another

1657 Bag off complete

1710 Operators And ECTS Laying Plastic on floor Paint chipping Did not stay right.

1726 Reviewed Inside And outside Rounds.

1800 operators exiting while Contractors ECTS Take smears on floor where Paint Is Peeling off right shift may have to Continue to Lay Plastic.

1800 SOS Turn over with Jose Perez

no further entries on this Page

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0108
Examination Date:	9/12/2013
Waste Container ID:	68302
Video/Audio Recorded Media Number:	LA-RTR2-13-0108 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 13
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3150
Waste Stream I.D.:	LA-CIN01.001
Waste Container Weights:	Gross Wt.: 162.5 kg Tare Wt.: 33.4 kg Net Wt.: 129.1 kg
Rigid Liner and Liner Vent Description:	Liner: [X] No [ ] Yes Lid: [X] No [ ] Yes Type: [ ] 30-mil [ ] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [ ] Yes [X] N/A Punctured: [X] No [ ] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [ ] No [X] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 2 layers
Volume Utilization Percentage:	90 %

CCP Radiography Data Sheet

Waste Container ID: 68302

Section 3: Container Inventory and Comments	(Detailed descriptions)
IM:	
AM:	
OM:	Scrap lead
OI:	
C:	Tape roll
R:	
XPM:	Plastic bag, liner lid
OR:	
IN:	Homogeneous solids
S:	

Section 4: Packaging Material and Waste Material Parameters	
Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP): Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	5.0
Other Inorganic Materials (OI)	
Cellulosics (C):	0.2
Rubber (R):	
Plastics (waste materials) (XPM):	7.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	116.9
Soils (S):	
Total WMP Weight:	129.1

CCP Radiography Data Sheet

Waste Container ID: 68302

Section 5: RTR Summary (Questions answered "Yes" will be explained in the Comment block, except for Question 1)	
Is there observable liquid?	☐ Yes ☒ No
Is there any observable liquid in internal containers, more than 60 milliliters or 3 percent by volume, whichever is greater?	☐ Yes ☒ No
Is the total volume of observable liquid in the outermost container GREATER than 1% of the container?	☐ Yes ☒ No
Is there observable liquid in payload containers with an EPA Hazardous Waste Number of U134?	☐ Yes ☒ No
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐ Yes ☒ No
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐ Yes ☒ No
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does NOT match TRUCON Code[s])?	☐ Yes ☒ No
Is there an indication of wastes containing explosives or compressed gases?	☐ Yes ☒ No
Is there an indication of PCBs liquids?	☐ Yes ☒ No
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐ Yes ☒ No
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐ Yes ☒ No
CH or RH TRAMPAC	
Are there heat-sealed bags (unvented) GREATER than 4 liters and LESS than 390 square inches in the waste, or heat sealed bags not authorized in the RH TRUCON Code?	☐ Yes ☒ No
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐ Yes ☒ No
Are there sealed containers GREATER than 4 liters?	☐ Yes ☒ No
Are there indications of inadequate protection for heavy and/or sharp objects?	☐ Yes ☒ No

Comments: N/A

RTR Operator:

Thad Hasselstrom	Thad Hasselstrom	9/12/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	68302	Count Sequence Number:	16585
Operator:	DCLTD231\Operator		
Assay Start:	10/2/2013 12:29:59 PM		
Description 1:	2LANDA1229		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gal Drum		
Weight:	Net: 129.0 kg	Net:	129.0 kg
Container:	Volume: 208.0 l	Full:	90.0 %
Density:	0.690 kg /l		

System Configuration

Counter:	HENC #2
Count Type:	Item Count
Collimator/Geometry Setting:	All Banks on GEO - 0

Errors quoted at 1.000 sigma

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number:	16585	Batch Number:	2LANDA1229
Assay Instrument:	HENC #2	Location:	LANL TA-54
Analysis Method:	CCP-TP-063 v 15	Software Version:	NDA 2000 V.4.0
Item ID:	68302	Analysis Date:	10/2/2013

Net Weight	129000.0 g		
Pu mass	3.73E+000	+-	7.01E-001 g
TRU Alpha Activity	2.14E+000	+-	9.90E-001 Ci
TRU Activity Concentration	1.66E+004	+-	7.68E+003 nCi/g
Pu-239 Equivalent Activity	2.15E+000	+-	9.90E-001 Ci
Pu-239 FGE	2.97E+000	+-	5.49E-001 g
Decay heat	7.05E-002	+-	3.29E-002 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	3.05E-002	2.15E-005	3.97E-006	1.61E-006
PU238	4.44E-003	7.60E-002	1.43E-002	8.94E-005
PU239	2.92E+000	1.81E-001	3.40E-002	2.13E-004
PU240	2.27E-001	5.15E-002	9.67E-003	6.06E-005
AM241	5.32E-001	1.82E+000	9.90E-001	2.18E-002
PU241	1.06E-002	1.09E+000	2.04E-001	1.28E-003
PU242	5.67E-001	2.24E-003	4.21E-004	0.00E+000
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	3.28E-007
U233	<LLD	<LLD	0.00E+000	2.97E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	9.28E-007
U238	<LLD	<LLD	0.00E+000	1.14E-005
AM243	9.85E-004	1.97E-004	3.61E-005	2.19E-006

Errors quoted at 1.000 sigma

Operator: [illegible] Date: 10/3/13

ITR: Maria [illegible] Date: 10/4/13

Automated Independent Technical Review

Count Sequence Number: 16585 Batch Number: 2LANDA1229
Counter ID: HENC #2
Container ID: 68302
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 10/2/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis No Add-a-Source warnings.	Ok
Section 2 - Passive Neutron Analysis Analysis Status: No errors. No Warnings Reported.	Ok
Section 3 - Data Combiner Analysis Override enabled; Passive Neutron Pu and Gamma U data specified as input. Pu results taken from Passive Neutron data, U from Quantitative Gamma data. Results comparison test passed.	Passive Neutron Pu and Gamma U data specified as input.
Section 4 - MGA Analysis Results are marked as invalid.	MGA analysis failed. AK isotopics applied. The AK information utilized was provided by Steve Schafer, AKE, and consists of data from CCP-AK-LANL-006, AK Source Document M237. MT-52,42.
Section 5 - Gamma Analysis Analysis Status: No errors.	Ok
Miscellaneous	No additional nuclides contributing to 95% of the radiological hazard identified.

Expert Review by: Sherri Chamberlin Date: 10-3-13

Waste Container ID: **68302**

BDR Number: **LA13FG12105**

Sampling Date: **10/3/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	92.42	
74-82-8	Methane	9.63	U
67-56-1	Methanol	N/A	U
60-29-7	Ethyl Ether	N/A	U
75-35-4	1,1-Dichloroethylene	N/A	U
67-64-1	Acetone	N/A	U
75-34-3	1,1-Dichloroethane	N/A	U
156-59-2	cis-1,2-Dichloroethene	N/A	U
78-93-3	Methyl ethyl ketone	N/A	U
110-82-7	Cyclohexane	N/A	U
71-43-2	Benzene	N/A	U
107-06-2	1,2-Dichloroethane	N/A	U
71-36-3	1-Butanol	N/A	U
108-10-1	Methyl isobutyl ketone	N/A	U
108-88-3	Toluene	N/A	U
108-90-7	Chlorobenzene	N/A	U
100-41-4	Ethylbenzene	N/A	U
108-38-3/106-42-3	m- and p-Xylene	N/A	U
95-47-6	o-Xylene	N/A	U
108-67-8	1,3,5-Trimethylbenzene	N/A	U
95-63-6	1,2,4-Trimethylbenzene	N/A	U

CAS Number	IDENTIFIED TIC COMPOUND	Est. Amount ppmv
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

Quantitation Report (QT Reviewed)

InstName : FGA Unit 12

Data Path : C:\msdchem\1\DATA\131003C\
Data File : 68302.D
Acq On : 3 Oct 2013 3:14 pm (#1); 3 Oct 2013 3:12 pm (#2)
Operator : SA
Sample :
Misc : 55 GALLON DRUM THROUGH ~~DRUM~~ FILTERNucFil-019D~~S~~ (Sig #1); ~~55 GALLON DRUM THROUGH DRUM FILTERNucFil-019DS~~ (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

10-3-13 SA

Quant Time: Oct 03 15:36:13 2013
Quant Method : C:\msdchem\1\METHODS\H2-CH4.M
Quant Title : Flammable Gas Analysis for Transportation Only
QLast Update : Thu May 23 08:37:45 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Target Compounds						Qvalue
1) Hydrogen	1.903	GC1	26362m	92.42	ppmv	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

20

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0108
Examination Date:	9/12/2013
Waste Container ID:	68303
Video/Audio Recorded Media Number:	LA-RTR2-13-0108 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 13
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3150
Waste Stream I.D.:	LA-CIN01.001
Waste Container Weights:	Gross Wt.: 115.5 kg Tare Wt.: 33.4 kg Net Wt.: 82.1 kg
Rigid Liner and Liner Vent Description:	Liner: [X] No [ ] Yes Lid: [X] No [ ] Yes Type: [ ] 30-mil [ ] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [ ] Yes [X] N/A Punctured: [X] No [ ] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [ ] No [X] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 2 layers
Volume Utilization Percentage:	65 %

CCP Radiography Data Sheet

Waste Container ID: 68303

Section 3: Container Inventory and Comments	(Detailed descriptions)
IM:	
AM:	
OM:	Scrap lead
OI:	
C:	
R:	Rubber gloves
XPM:	Plastic bags
OR:	
IN:	Homogeneous solids
S:	

Section 4: Packaging Material and Waste Material Parameters	
Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP): Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	5.0
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	4.0
Plastics (waste materials) (XPM):	4.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	69.1
Soils (S):	
Total WMP Weight:	82.1

CCP Radiography Data Sheet

Waste Container ID: 68303

Section 5: RTR Summary (Questions answered "Yes" will be explained in the Comment block, except for Question 1)	
Is there observable liquid?	☐ Yes ☒ No
Is there any observable liquid in internal containers, more than 60 milliliters or 3 percent by volume, whichever is greater?	☐ Yes ☒ No
Is the total volume of observable liquid in the outermost container GREATER than 1% of the container?	☐ Yes ☒ No
Is there observable liquid in payload containers with an EPA Hazardous Waste Number of U134?	☐ Yes ☒ No
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐ Yes ☒ No
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐ Yes ☒ No
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does NOT match TRUCON Code[s])?	☐ Yes ☒ No
Is there an indication of wastes containing explosives or compressed gases?	☐ Yes ☒ No
Is there an indication of PCBs liquids?	☐ Yes ☒ No
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐ Yes ☒ No
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐ Yes ☒ No
CH or RH TRAMPAC	
Are there heat-sealed bags (unvented) GREATER than 4 liters and LESS than 390 square inches in the waste, or heat sealed bags not authorized in the RH TRUCON Code?	☐ Yes ☒ No
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐ Yes ☒ No
Are there sealed containers GREATER than 4 liters?	☐ Yes ☒ No
Are there indications of inadequate protection for heavy and/or sharp objects?	☐ Yes ☒ No

Comments: N/A

RTR Operator:

Thad Hasselstrom	Thad Hasselstrom	9/12/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	68303	Count Sequence Number:	23657
Operator:	D3PW2DK1\operator		
Assay Start:	9/26/2013 11:47:29 AM		
Description 1:	1LANDA1849		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6, Not Precision		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 82.1 kg	Net:	82.1 kg
Container:	Volume: 208.0 l	Full:	65.0 %
Density:	0.610 kg /l		

System Configuration

Counter:	MCS HENC #1
Count Type:	Item Count
Collimator/Geometry Setting:	All Banks On (GE - 0

Errors quoted at 1.000 sigma

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number:	23657	Batch Number:	1LANDA1849
Assay Instrument:	MCS HENC #1	Location:	LANL TA-54
Analysis Method:	CCP-TP-063 v 15	Software Version:	NDA 2000 V.4.0
Item ID:	68303	Analysis Date:	9/26/2013

Net Weight	82100.0 g		
Pu mass	3.19E+000	+- 4.25E-001	g
TRU Alpha Activity	1.37E+000	+- 5.98E-001	Ci
TRU Activity Concentration	1.67E+004	+- 7.29E+003	nCi/g
Pu-239 Equivalent Activity	1.39E+000	+- 5.98E-001	Ci
Pu-239 FGE	2.53E+000	+- 3.33E-001	g
Decay heat	4.53E-002	+- 1.99E-002	W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	1.77E-002	1.25E-005	2.15E-006	1.05E-006
PU238	3.79E-003	6.49E-002	8.65E-003	8.46E-005
PU239	2.50E+000	1.55E-001	2.06E-002	2.02E-004
PU240	1.93E-001	4.39E-002	5.85E-003	5.72E-005
AM241	3.23E-001	1.11E+000	5.98E-001	1.86E-002
PU241	9.02E-003	9.29E-001	1.24E-001	1.21E-003
PU242	4.84E-001	1.91E-003	2.55E-004	0.00E+000
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	3.30E-007
U233	<LLD	<LLD	0.00E+000	1.97E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	5.47E-007
U238	<LLD	<LLD	0.00E+000	1.10E-005

Errors quoted at 1.000 sigma

Operator: Brittlight Date: 10-1-13

ITR: D Date: 10.1.13

Automated Independent Technical Review

Count Sequence Number: 23657 Batch Number: 1LANDA1849
Counter ID: MCS HENC #1
Container ID: 68303
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 9/26/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis No Add-a-Source warnings.	Ok
Section 2 - Passive Neutron Analysis Analysis Status: No errors. No Warnings Reported.	Ok
Section 3 - Data Combiner Analysis Override enabled; Passive Neutron Pu and Gamma U data specified as input. Pu results taken from Passive Neutron data, U from Quantitative Gamma data. Results comparison test passed.	Passive Neutron Pu and Gamma U data specified as input.
Section 4 - MGA Analysis Results are marked as invalid.	MGA analysis failed. AK isotopics applied. The AK information utilized was provided by Steve Schafer, AKE, and consists of data from CCP-AK-LANL-006, AK Source Document M237. MT-52,42.
Section 5 - Gamma Analysis Analysis Status: No errors.	Ok
Miscellaneous	No additional nuclides contributing to 95% of the radiological hazard identified.

Expert Review by: Sherri Chambers Date: 9-30-13

Attachment 4 – Flammable Gas Analysis Form

SCO 1049 Add 4 - Win XP SP3/Win 7 SP1
Excel 2003/2007/2010

Waste Container ID: **68303**

BDR Number: **LA13FG12105**

Sampling Date: **10/3/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	42.80	
74-82-8	Methane	9.63	U
67-56-1	Methanol	N/A	U
60-29-7	Ethyl Ether	N/A	U
75-35-4	1,1-Dichloroethylene	N/A	U
67-64-1	Acetone	N/A	U
75-34-3	1,1-Dichloroethane	N/A	U
156-59-2	cis-1,2-Dichloroethene	N/A	U
78-93-3	Methyl ethyl ketone	N/A	U
110-82-7	Cyclohexane	N/A	U
71-43-2	Benzene	N/A	U
107-06-2	1,2-Dichloroethane	N/A	U
71-36-3	1-Butanol	N/A	U
108-10-1	Methyl isobutyl ketone	N/A	U
108-88-3	Toluene	N/A	U
108-90-7	Chlorobenzene	N/A	U
100-41-4	Ethylbenzene	N/A	U
108-38-3/106-42-3	m- and p-Xylene	N/A	U
95-47-6	o-Xylene	N/A	U
108-67-8	1,3,5-Trimethylbenzene	N/A	U
95-63-6	1,2,4-Trimethylbenzene	N/A	U

CAS Number	IDENTIFIED TIC COMPOUND	Est. Amount ppmv
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

Quantitation Report (QT Reviewed)

InstName : FGA Unit 12

Data Path : C:\msdchem\1\DATA\131003C\
Data File : 68303.D
Acq On : 3 Oct 2013 3:07 pm (#1); 3 Oct 2013 3:05 pm (#2)
Operator : SA
Sample :
Misc : 55 GALLON DRUM THROUGH ~~DRUM~~ 10-3-13 SA FILTER-NucFil-019 DS (Sig #1); ~~55-GALLON DRUM THROUGH D~~ 10-3-13 SA
ALS Vial : 1 Sample Multiplier: 1 10-3-13 SA

Quant Time: Oct 03 15:11:34 2013
Quant Method : C:\msdchem\1\METHODS\H2-CH4.M
Quant Title : Flammable Gas Analysis for Transportation Only
QLast Update : Thu May 23 08:37:45 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Target Compounds						Qvalue
1) Hydrogen	1.903	GC1	12210m	42.80	ppmv	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

H2-CH4.M Thu Oct 03 15:34:42 2013 UNIT12

S813601

S813601

Container Profile 754446

File Options Reports Help

S813601

754446	TBD-TRU	T-TTRU-TEMP	Active	Decommissioned

- General Information
- Weights/Volumes
- Location
- Account Information
- Waste Material Parameters
- Layers of Confinement
- Prohibited Items
- EPA Codes
- UHC
- Radioassay
- Radiological Survey
- Payload Preparation
- Container Closure
- Materials Added
- TRU Information
- TRU Information (TSDF)
- Radiological Calculations
- Shipping Description
- Site Treatment Plan
- Pending Tasks
- Genealogy
- Container Tags
- Task History
- Documentation
- Comment Log
- Edit Log

Genealogy

S813601
- S813601
  - 94147—EMPTY
  - 94146
  - 94145
    - LASB02081
  - 94144
    - LASB02086

Task History

Transfer Details

Transfer Amount	Transfer Unit	Item	Measured Weight	Measured Weig...
100.0	%	94144	0.0	kg

Working Copy
Date: 8/7/13

ATTACHMENT 1
Page 1 of 4

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: 5813601

6.2[4] Date Processed: 8-07-13

4.1[6][B] Processing Activity (EP-DIV-AP-0107):
☐ > 190 mrem/hr ☑ PID ☐ Split ☐ Repack

4.1[6][B] Prohibited Items:
☑ Sealed Containers > 4L ☑ Liquids ☐ Pressurized Containers ☐ N/A

4.1[6][B] Parent Waste Container RCRA Designations: D007, D008, D009

4.1[7] Activity Hazard Classification based on Anticipated Extremity Radiation Dose Rate:
☑ Moderate (≤ 10 rem/hr) ☐ High/Complex (> 10 rem/hr)

4.3[1]/4.3[2] ($) TA-50-69 is in the OPERATION or WARM STANDBY MODE (TSR 1.2) ☑ OPERATIONS ☐ WARM STANDBY ☐ N/A

4.3[4][B] Platform Scale: Equipment No.: 019065
Cal. Due Date: 10-14-14

4.3[5][B] ($) Three 1-Liter containers carbon spheroids or MET-L-X in WCG: (SAC 5.10.1.7.1) ☑ YES ☐ NO ☐ N/A

4.3[6] ($) Stationary Fire Watch has been established:
(> 300 PE-Ci Equivalent Combustible)
(SAC 5.10.1.7.2) N/A (Initial and Date)

4.3[7 [A] Parent Waste Container degraded, loss of integrity, or weighs greater than 468 lb but less than or equal to 624 lb:
☑ YES ☐ NO ☐ N/A

4.3[8][D] WCG glove and bag-in/bag-out bag inspection: ☑ SAT ☐ UNSAT ☐ N/A

Performed By: Brian Gallegos / B. Gallegos / 2067124 8-07-13
Waste Handling Tech (print) Signature Z # Date

ATTACHMENT 1
Page 2 of 4

4.1[6][B] Parent Waste Container No.: S813601

5.[18] Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable: 421.6 lb

6.2[5][A] Parent Drum Lead Blanket Weight (lb): .0 lb

6.2[5][B]/ 6.2[6] Total Parent Drum Weight (lb) 421.6 lb

6.2[7] (S) Total Parent Drum Weight < 624 lb (SR 4.5.1): ☑ SAT ☐ UNSAT

6.2[28] Approval to leave a parent drum attached to the WCG overnight:

N/A

EWMO-FOD (print)	Signature	Z #	Date
	/	/	/

ATTACHMENT 1
Page 3 of 4

4.1[6][B] Parent Waste Container No.: 58136001

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	94144	94145	94146	
10.1[4]	Daughter Drum Filter No.	KL-454	KL-463	KL-457	N/A
10.1[4]	Daughter Drum Bag Filter No.	L-8248	L-6754	L-8245	
10.1[4]	Daughter Drum Purchase Order No.	501103	501103	501103	
10.1[13][C]	WCG Fire Watch Stationed	☐ YES		☐ NO	☑ N/A
10.1[14][C][d]3/11.1[3]	WCG Fire Watch Secured	☐ YES		☐ NO	☑ N/A
10.2[4]	POC bag-on bag: Manufacturer				
	Model No.				
	Serial No.				
	Date of Manufacture				
10.2[5]	POC ID No			N/A	
10.2[7][B]/10.2[6]	POC Item Description				
10.2[13]	POC Assembly closed per Manufacturer's instructions. (Initial and Z#)				
10.2[14]	POC Assembly Gross Weight (lb)				
10.2[15]	POC Rad. Survey Results (mrem/hr)				
10.3[3][A]	Approx. Containerized Liquid Vol./Units				
10.3[5][A]	Free Liquid Volume/Units	1 1/2 gallons	2 gallons	5 ounces	
10.3[7][A]	Opaque/Non-penetrable Item Description:	N	N	Lead Shielding	
10.3[9][A]	PCB-contaminated Waste Description	A	A	N/A	N/A
10.3[9][B]	PCB Item ID No.				
10.3[10]	Remaining Waste Description	See comments	See comments	See comments	
10.3[13]/10.4[10]/ 10.5[4]/10.6[10]	Daughter Drum % Full (%)	45%	70%	100%	
10.5[3]/10.6[2]	Description Waste Added During Processing	Stub outs Plastic, Kitty litter Hex armors	Stub outs Kitty litter hex armors	metal scoop Stub outs Kitty litter	

ATTACHMENT 1
Page 4 of 4

4.1[6][B] Parent Waste Container No.: S813601

Comments: Lead, plastic, poly liner, liquid, salts, metal scoop

11.1[1] Performed By: Kevin Baluscak / Kevin Baluscak / 1338145 / 08/08/13
Waste Handling Tech (print) Signature Z # Date

11.1[7] Reviewed By: Jose Jerez / [signature] / 221452 / 8/14/13 0408
SOS or designee (print) Signature Z # Date/Time

Working Copy
Date: 8/7/13

ATTACHMENT 2
Page 1 of 1

WCRRF OVERPACK DRUM ASSEMBLY PREPARATION DATA SHEET

5.[3] Overpack drum information:

Purchase Order No.: 414996
Lot No.: 217570
Manufacture Date: 2011

5.[8] Overpack filtered vent and 2-in. bung torque wrench information:

	Filtered Vent	2-in. Bung
M&TE No.:	N/A	N/A
Cal. Expiration Date:		
Tolerance:		

Overpack filtered vent information:

Manufacturer: Nacfil
Model No.: 019DS
Serial No.: EK 1158
Manufacture Date: 05/10

5.[9] Torque wrench listed above is within the acceptable ranges as displayed on the calibration certificate. N/A ☐ Yes ☐ No

5. [11] Performed By: N/A / N/A / N/A / N/A
Waste Handling Technician (print) Signature Z # Date

5.[15] Filtered Vent torque value [120 in-lb (96 to 144 in-lb)]: N/A in-lb

5. [18] 2-in. bung plug torque value: N/A ft-lb

Comments: Drum not prepped at TA50

8.1[1] Performed By: Kevin Belusak / Kevin Belusak / 123HK / 08/08/13
Waste Handling Technician (print) Signature Z # Date

8.1[6] Reviewed By: Jose Jerez / [signature] / 22452 / 8-14-13
Supervisor or designee (print) Signature Z # Date

Working Copy
Date: 8-6-13

ATTACHMENT 5
Page 1 of 1

WCRRF OVERPACK DRUM CLOSURE DATA SHEET

7.[18] Overpack Drum Unique Identifier No.: 94147

7.[24] Overpack drum closure ring torque wrench information:
M&TE No.: 038373
Cal. Expiration Date: 09/11/13
Range in ft-lb: 10-80
Tolerance: +/- 3% CW and +/- 6% CCW

7.[25] Torque wrench listed above is within the acceptable ranges as displayed on the calibration certificate. ☑ Yes ☐ No

Performed By: Kevin Bekuscak / Kevin Bekuscak / 1238144 / 08/08/13
Waste Handling Technician (print) Signature Z # Date

7.[27] Overpack drum closure ring torque value: 60 ft-lb

7.[30] Threaded lug of the drum closure ring is not touching the jam nut and the locking ring lugs are not touching. ☑ SAT ☐ UNSAT

7.[35][B] Platform scale serial number: 019065
Platform scale calibration expiration date: KB 9-9-13 ~~01~~ 10-14-14

7.[35][D] 85-gal overpack drum gross weight (lb): 182.0 lb

Comments: N/C

8.1[1] Performed By: Kevin Bekuscak / Kevin Bekuscak / 1238144 / 08/08/13
Waste Handling Technician (print) Signature Z # Date

8.1[7] Reviewed By: Jose Juarez / [signature] / 1221452 / 8-14-13
Supervisor or designee (print) Signature Z # Date

Attachment 1. Checklist for the preparation of a new 55-Gallon Drum Assembly

Drum ID#: 94144

1. Drum/Lid Assembly

- [x] Remove and discard ¾" bung from lid
- [x] Remove Lid
- [x] Inspect drum, lid, and gasket, ring bolt and nut, chines, and paint
  - NOTE: Reject damaged drum/lid assembly
- [x] Place 2" duct tape on vertical seam on interior of drum

RECORD drum information:
Purchase Request #: 501103
Lot #: 0239766
Date of Manufacture: 12

2. Drum Liner Bag/Filter Assembly:

- [x] Place yellow vinyl tape, with smear centered on tape, over filter
- [x] Fill bag with air from compressed air source
- [x] Inspect bag for damage, cuts, or leaks by looking, listening, and feeling
  - NOTE: Reject or repair damaged, cut, or leaking bags
- [x] Stretch bag's bungee cord
- [x] Inspect bungee cord
  - NOTE: Reject bag if bungee cord is broken or damaged

RECORD bag filter information:
Manufacturer: DOP
Model #: 6CPVC1.52SPVC
Serial #: L 82416
Date of Manufacture: 9/13

3. Cardboard Liner/Plastic Liner Drum Liner Bag/Filter Assembly:

- [x] Inspect cardboard liner/plastic liner (circle type of liner used)
  - NOTE: Reject any damaged liners
- [x] Place cardboard/plastic liner into drum liner bag/filter assembly
- [x] Line up filter with drum seam
- [x] Place liner/bag/filter assembly into drum
- [x] Roll excess liner bag into cardboard liner/plastic liner

4. Install Lid/Drum Filter

- [x] Place lid and ring onto drum
- [x] Tighten ring sufficiently to simply hold lid in place
- [x] Torque 2" bung plug
- [x] Apply sealant to filter threads, screw in ¾" bung hole, and torque
- [x] Place this Attachment and blank Attachment 2 into a protective sleeve and tape to top of drum

RECORD drum filter information:
Manufacturer: NUCFIL
Model #: 0190.5
Serial #: KL 41541
Date of Manufacture: 11/11

RECORD torque wrench information:

Filter torque wrench:		Jam Nut / Bung torque wrench:	
M&TE ID #:	100216	M&TE ID #:	038369
Cal Expiration Date:	12-18-13	Cal Expiration Date:	12-18-13
Range (ft-lbs or in-lbs):	40-200	Range (ft-lbs or in-lbs):	10-80
Tolerance:	±6% cw ±6% ccw	Tolerance:	±6% cw ±6% ccw

Torque wrenches listed above are within the acceptable ranges as displayed on the calibration certificate
[x] Yes [ ] No
Print Name: Ian Marquez Signature: [signature] ID: 276208

5. Weigh Drum Assembly 8-8-13
RECORD weight information
Tare weight (lbs): ~~75.8~~ 75.8
File ID #: 01406
- [x] Write the tare weight on drum using permanent marker

6. Label Drum Assembly

- [x] Place 1 barcode drum ID label to the left of the drum seam, ~6" from drum bottom
- [x] Place 1 barcode drum ID label in the center of the drum lid

RECORD drum ID# at the top of Attachments 1 and 2

Operator Print: Ian Marquez Operator Sign: [signature] ID: 276208 Date: 8-8-13
Verifier Print: Kevin Belanger Verifier Sign: Kevin Belanger ID: 238191 Date: 8-8-13

Attachment 2. Checklist for the Closing of a 55-Gallon Drum Assembly

DRUM ID#: 94144

1. LID INSTALLATION

NOTE: Install lid per manufacturer's instructions

✓ Mount lid with filter directly over drum seam.

✓ Install ring with bolt positioned downward and directly over drum seam.

✓ Engage bolt and nut and torque per manufactures instructions

NOTE Seal the ring while tightening using a rubber hammer or dead-blow mallet or a drum lid press.

✓ Tighten jam nut.

Record torque wrench information:

MT&E #: 038383

Cal expiration date 9-11-13

Range/ Value (ft-lbs): 10-80

Tolerance +/-3% cw and +/ 6% ccw

2. DRUM LABELING

NOTE: Do not cover the drum seam with any labels.

✓ Place two barcode drum ID labels ~6" from the bottom of the drum ~120° from previously placed ID label.

✓ Place one barcode drum ID label to the right of drum seam between the top two rolling hoops.

✓ Place one yellow radioactive waste label between the top two rolling hoops

✓ Place one yellow radioactive waste label in the center of the drum lid.

RCRA Label:

NA Place one blue NON-RCRA Regulated Waste label between the top two rolling hoops.

OR

✓ Place one yellow HAZARDOUS Waste label between the top two rolling hoops left of the drum seam. (Ensure EPA waste number and accumulation start date are documented.)

NOTE: Check only one of the above two boxes.

3. WEIGH DRUM ASSEMBLY

Record weight information:

Gross Weight(lbs): 142.4

Scale ID#: 019065

✓ Using a permanent marker, write the gross weight on the drum lid.

4. FINALIZE DOCUMENTATION

✓ Have RCT monitor drum prior to moving to storage area

✓ Place attachment 1 and 2 and HMPT Tag into a protective sleeve.

✓ Complete TWSR.

Operator Print/Sign: Kevin Bennett Date: 08/08/13

Verifier Print/Sign: Justin Colet Date: 8-8-13

B

Attachment 1. Checklist for the preparation of a new 55-Gallon Drum Assembly

Drum ID#: 94145

1. Drum/Lid Assembly

- [x] Remove and discard ¾" bung from lid
- [x] Remove Lid
- [x] Inspect drum, lid, and gasket, ring bolt and nut, chines, and paint
  - NOTE: Reject damaged drum/lid assembly
- [x] Place 2" duct tape on vertical seam on interior of drum

RECORD drum information:

Purchase Request #: 50103
Lot #: 08397866
Date of Manufacture: 12

2. Drum Liner Bag/Filter Assembly:

- [x] Place yellow vinyl tape, with smear centered on tape, over filter
- [x] Fill bag with air from compressed air source
- [x] Inspect bag for damage, cuts, or leaks by looking, listening, and feeling
  - NOTE: Reject or repair damaged, cut, or leaking bags
- [x] Stretch bag's bungee cord
- [x] Inspect bungee cord
  - NOTE: Reject bag if bungee cord is broken or damaged

RECORD bag filter information:

Manufacturer: BOP
Model #: 6CPIL1525PVC
Serial #: L E 2-6754
Date of Manufacture: 1/13
8/8/13

3. Cardboard Liner/Plastic Liner Drum Liner Bag/Filter Assembly:

- [x] Inspect cardboard liner/plastic liner (circle type of liner used)
  - NOTE: Reject any damaged liners
- [x] Place cardboard/plastic liner into drum liner bag/filter assembly
- [x] Line up filter with drum seam
- [x] Place liner/bag/filter assembly into drum
- [x] Roll excess liner bag into cardboard liner/plastic liner

4. Install Lid/Drum Filter

- [x] Place lid and ring onto drum
- [x] Tighten ring sufficiently to simply hold lid in place
- [x] Torque 2" bung plug
- [x] Apply sealant to filter threads, screw in ¾" bung hole, and torque
- [x] Place this Attachment and blank Attachment 2 into a protective sleeve and tape to top of drum

RECORD drum filter information:

Manufacturer: NUCFIL
Model #: 01905
Serial #: KC 2163
Date of Manufacture: 11/11

RECORD torque wrench information:

Filter torque wrench:		Jam Nut / Bung torque wrench:	
M&TE ID #:	100216	M&TE ID #:	038369
Cal Expiration Date:	12-18-13	Cal Expiration Date:	12-18-13
Range (ft-lbs or in-lbs):	40-200	Range (ft-lbs or in-lbs):	10-80
Tolerance:	±4%cw ±6%ccw	Tolerance:	±3%cw ±2%ccw

Torque wrenches listed above are within the acceptable ranges as displayed on the calibration certificate.

[x] Yes [ ] No

Print Name: Ian Manuel Signature: [signature] ID#: 276708

5. Weigh Drum Assembly

RECORD weight information

Tare wight (lbs) 76.2
File ID #: cx19065

- [x] Write the tare weight on drum using permanent marker

6. Label Drum Assembly

- [x] Place 1 barcode drum ID label to the left of the drum seam, ~6" from drum bottom
- [x] Place 1 barcode drum ID label in the center of the drum lid

RECORD drum ID# at the top of Attachments 1 and 2

Operator Print: Ian Manuel Operator Sign: [signature] ID#: 276708 Date: 8-8-13

Verifier Print: Kevin Belusca Verifier Sign: Kevin Belusca ID#: 238199 Date: 8-8-13

Attachment 2. Checklist for the Closing of a 55-Gallon Drum Assembly

DRUM ID#: 94145

1. LID INSTALLATION

NOTE: Install lid per manufacturer's instructions

✓ Mount lid with filter directly over drum seam.

✓ Install ring with bolt positioned downward and directly over drum seam.

✓ Engage bolt and nut and torque per manufactures instructions

NOTE Seal the ring while tightening using a rubber hammer or dead-blow mallet or a drum lid press.

✓ Tighten jam nut.

Record torque wrench information:

MT&E #: 038373

Cal expiration date 09/11/13

Range/ Value (ft-lbs): 10-80

--- Tolerance +/- 3% cw and +/- 6% ccw

2. DRUM LABELING

NOTE: Do not cover the drum seam with any labels.

✓ Place two barcode drum ID labels ~6" from the bottom of the drum ~120° from previously placed ID label.

✓ Place one barcode drum ID label to the right of drum seam between the top two rolling hoops.

✓ Place one yellow radioactive waste label between the top two rolling hoops

✓ Place one yellow radioactive waste label in the center of the drum lid.

RCRA Label:

✓ Place one blue NON-RCRA Regulated Waste label between the top two rolling hoops.

OR

✓ Place one yellow HAZARDOUS Waste label between the top two rolling hoops left of the drum seam. (Ensure EPA waste number and accumulation start date are documented.)

NOTE: Check only one of the above two boxes.

3. WEIGH DRUM ASSEMBLY

Record weight information:

Gross Weight(lbs): 231.0

Scale ID#: 014065

✓ Using a permanent marker, write the gross weight on the drum lid.

4. FINALIZE DOCUMENTATION

✓ Have RCT monitor drum prior to moving to storage area

✓ Place attachment 1 and 2 and HMPT Tag into a protective sleeve.

✓ Complete TWSR.

Operator Print/Sign: Kevin Brunick Date 08/08/13

Verifier Print/Sign: Justin Gate Date 8-8-13

1C

Attachment 1. Checklist for the preparation of a new 55-Gallon Drum Assembly

Drum ID#: 94146

1. Drum/Lid Assembly

- [x] Remove and discard ¾" bung from lid
- [x] Remove Lid
- [x] Inspect drum, lid, and gasket, ring bolt and nut, chines, and paint
  - NOTE: Reject damaged drum/lid assembly
- [x] Place 2" duct tape on vertical seam on interior of drum

RECORD drum information:
- Purchase Request #: 501103
- Lot #: 0238726
- Date of Manufacture: 12

2. Drum Liner Bag/Filter Assembly:

- [x] Place yellow vinyl tape, with smear centered on tape, over filter
- [x] Fill bag with air from compressed air source
- [x] Inspect bag for damage, cuts, or leaks by looking, listening, and feeling
  - NOTE: Reject or repair damaged, cut, or leaking bags
- [x] Stretch bag's bungee cord
- [x] Inspect bungee cord
  - NOTE: Reject bag if bungee cord is broken or damaged

RECORD bag filter information:
- Manufacturer: BOP
- Model #: 6CBX1.52.SPXC
- Serial #: E-8143
- Date of Manufacture: 3/13

3. Cardboard Liner/Plastic Liner Drum Liner Bag/Filter Assembly:

- [x] Inspect cardboard liner/plastic liner (circle type of liner used)
  - NOTE: Reject any damaged liners
- [x] Place cardboard/plastic liner into drum liner bag/filter assembly
- [x] Line up filter with drum seam
- [x] Place liner/bag/filter assembly into drum
- [x] Roll excess liner bag into cardboard liner/plastic liner

4. Install Lid/Drum Filter

- [x] Place lid and ring onto drum
- [x] Tighten ring sufficiently to simply hold lid in place
- [x] Torque 2" bung plug
- [x] Apply sealant to filter threads, screw in ¾" bung hole, and torque
- [x] Place this Attachment and blank Attachment 2 into a protective sleeve and tape to top of drum

RECORD drum filter information:
- Manufacturer: NUCFIL
- Model #: 0190
- Serial #: NC 457
- Date of Manufacture: 1111

RECORD torque wrench information:

Filter torque wrench:
- M&TE ID #: 100216
- Cal Expiration Date: 12-18-13
- Range (ft-lbs or in-lbs): 40-200
- Tolerance: ±1% or ±6%/cm

Jam Nut / Bung torque wrench:
- M&TE ID #: 038369
- Cal Expiration Date: 12-18-13
- Range (ft-lbs or in-lbs): 10-80
- Tolerance: ±3% or ±6%/cm

Torque wrenches listed above are within the acceptable ranges as displayed on the calibration certificate.
[x] Yes [ ] No
Print Name: IAN MARQUEZ Signature: [signature] ZS: 276708

5. Weigh Drum Assembly

RECORD weight information
- Tare wight (lbs) 76.4
- File ID #: 090165
- [x] Write the tare weight on drum using permanent marker

6. Label Drum Assembly

- [x] Place 1 barcode drum ID label to the left of the drum seam, ~6" from drum bottom
- [x] Place 1 barcode drum ID label in the center of the drum lid

RECORD drum ID# at the top of Attachments 1 and 2

Operator Print: IAN MARQUEZ Operator Sign: [signature] ZS: 276708 Date: 8-5-13

Verifier Print: Kevin Belcher Verifier Sign: [signature] ZS: 238199 Date: 8-8-13

Attachment 2. Checklist for the Closing of a 55-Gallon Drum Assembly

DRUM ID#: 941416

1. LID INSTALLATION

NOTE: Install lid per manufacturer's instructions

✓ Mount lid with filter directly over drum seam.

✓ Install ring with bolt positioned downward and directly over drum seam.

✓ Engage bolt and nut and torque per manufactures instructions

NOTE Seal the ring while tightening using a rubber hammer or dead-blow mallet or a drum lid press.

✓ Tighten jam nut.

Record torque wrench information:

MT&E #: 038372

Cal expiration date 08/11/13

Range/ Value (ft-lbs): 10-80

— Tolerance +/-3% cw and +/ 6% ccw

2. DRUM LABELING

NOTE: Do not cover the drum seam with any labels.

✓ Place two barcode drum ID labels ~6" from the bottom of the drum ~120° from previously placed ID label.

✓ Place one barcode drum ID label to the right of drum seam between the top two rolling hoops.

✓ Place one yellow radioactive waste label between the top two rolling hoops

✓ Place one yellow radioactive waste label in the center of the drum lid.

RCRA Label:

NA Place one blue NON-RCRA Regulated Waste label between the top two rolling hoops.

OR

✓ Place one yellow HAZARDOUS Waste label between the top two rolling hoops left of the drum seam. (Ensure EPA waste number and accumulation start date are documented.)

NOTE: Check only one of the above two boxes.

3. WEIGH DRUM ASSEMBLY

Record weight information:

Gross Weight(lbs) 428.6

Scale ID#: 019065

✓ Using a permanent marker, write the gross weight on the drum lid.

4. FINALIZE DOCUMENTATION

✓ Have RCT monitor drum prior to moving to storage area

✓ Place attachment 1 and 2 and HMPT Tag into a protective sleeve.

✓ Complete TWSR.

Operator Print/Sign: Kevin Delgado Date 08/08/13

Verifier Print/Sign: [illegible] Date 8-8-13

UET Working Copy
Date: 8-7-13 MZ

ATTACHMENT 3
Page 1 of 1

WCRRF PARENT 55-GAL DRUM PREPARATION DATA SHEET

6.3[21] Prepared Parent 55-Gal Drum Number: 5813601

6.3[15] ($) 55-gal drum wrapped in protective covering: (ISI 6.3.6) ☑ SAT ☐ UNSAT

6.3[16] Platform scale serial number: 019065
Platform scale calibration expiration date: 10-14-14

6.3[18] Prepared parent 55-gal drum weight (lb): 421.6

6.3[19] ($) Prepared parent 55-gal drum weighs < 624 lb: (SR 4.5.1) ☑ SAT ☐ UNSAT

Comments: N/C

8.1[1] Performed By: Kevin Beloscak / Kevin Beloscak / 238149 / 08/08/13
Waste Handling Technician (print) Signature Z # Date

8.1[7] Reviewed By: Jose Jerez / [signature] / 221452 / 8/14/13
Supervisor or designee (print) Signature Z # Date

8.1[8][B] Acceptance criteria satisfied: ☑ YES ☐ NO

8.1[8][D] Approved by: Jose Jerez / [signature] / 221452 / 8/14/13 / 0400
SOS/SOM or designee (print) Signature Z # Date Time

WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Production Control

Container ID: S813601 Container Type: 55-GAL Gross Weight (lbs): 412
Inner Seal #: 000476 Filter Prefix: None Filter Serial #: None
AK Waste Stream: LA-CIN01.001 Certified RTR BDR: LA-HERTR-12-0094
TWSR Comments: LEACHED SOLIDS YELLOW TAGGED
Total PE-Ci Activity: 7.67E-01 Equivalent Combustible PE-Ci: 2.88E-01 AM-241 PE-Ci: 6.23E-02
Total Fissile Gram Equivalents: 8.5 Total Surface Dose Rate (mrem/hr): 5
EPA Code(s): D008 D007 D009 WC 12/11/12
NCR RTR/NDA Comment: LANL: remediate-4 Gallons of prohibited liquid in plastic bags from 20" to 32."
RTR Pre-Screen Date: 3/21/2007 Comment: Liquids, Impenetrable Obj Liquid Location: 26"
Certified RTR Comment: Prohibited liquid
Prohibited Items: ✓ Sealed > 4 Liters ✓ Liquid ☐ Pressurized Container ✓ Impenetrable Item ✓ Other
Security Determination: ✓ Green ☐ Yellow
Remediation Determination: ☐ VE ☑ PID ☐ Split ☐ Repack
Estimated 30-cm Dose Rate (mrem/hr): ☐ <100 ☑ >100 and <1,000 ☐ >1,000 and <10,000 ☐ >10,000
TRUCON Code: None Production Control Comments: Nitrate Salts apply mixture & EPA codes.

Performed By: Julie Gallegos (Production Control (Print)) Julie Gallegos (Signature) 176905 (Z Number) 10/18/12 (Date)

WDP Engineering

Chemicals Present (e.g., pyrophorics, acids, bases, shock sensitive, organic liquids, peroxides, crown ethers): ☐ Yes ☑ No ☐ Unknown
Processing Determination: ✓ Accept ☐ Reject
WDP Engineering Comments: Nitrate Salts
Net Wt. 352# Generator info shows 5 items of nitrate salts; weights range from 35-95#. RTR BDR shows plastic bags + homogeneous solids as well as prohibited liquids. Nitrate salts require repack w/ admixture. They carry waste codes for chromium, lead, and mercury. No chemicals identified. Drum is lead-lined.

Performed By: Valerie Rhodes (WDP Engineering (Print)) Valerie Rhodes (Signature) 112609 (Z Number) 12/11/12 (Date)

TRU Remediation Operations

✓ Waste Container Information Evaluated ☐ Less Than 170 lbs ☐ RTR Video Available
Other Specific Safety Concerns: Do not push or press on waste with hands. Use heavy duty gloves during processing of waste.
Processing Determination: ✓ Accept ☐ Reject
TRU Remediation Operations Comments: USE Proper PPE. Use proper ratio of kitty litter to waste, in accordance with procedures.
Performed By: G Mtz (TRU Remediation Operations (Print)) G Mtz (Signature) 149235 (Z Number) 5/18/13 (Date)
Jose Perez (Signature) 221452 5/18/13

IHS Review: RB 266302 12.17.12

Discardable Waste Log Sheet

DrumID: 000476

Item#	ItemID	Net (kg)	Matrix	M Code	NM	MT	Auth	Remarks
1	DOFS-364-FI	43.17	NITRATE SALTS		9	52	5/11	
2	DOFS-367-FI	18.1	NITRATE SALTS		0	52	5/11	
3	DOFS-368-FI	15.9	NITRATE SALTS		0	52	5/11	
4	DOFS-369-FI	20	NITRATE SALTS		0	52	5/11	
5	DOFS-370-FI	39.09	NITRATE SALTS		0	52	5/11	
		136.26 kg						

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination	[ ] RTR Replicate Scan [ ] RTR Independent Observation
Site ID:	LANL
Batch Number:	LA-HERTR-12-0094
Examination Date:	8/29/2012
Waste Container ID:	S813601
Video/Audio Recorded Media Number:	LA-HERTR-12-0094 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 12
NCR(s) associated with the container? (e.g., Prohibited Items)	[ ] No [X] Yes NCR No.: NCR-LANL-1631-12 NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3150
Waste Stream I.D.:	LA-CIN01.001
Waste Container Weights:	Gross Wt.: 188.5 kg Tare Wt.: 60.1 kg Net Wt.: 128.4 kg
Rigid Liner and Liner Vent Description:	Liner: [ ] No [X] Yes Lid: [ ] No [X] Yes Type: [ ] 30-mil [X] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [X] Yes [ ] N/A Punctured: [ ] No [X] Yes Mechanical Vent: [ ] No [X] Yes Fiberboard Liner: [X] No [ ] Yes Lead Lined: [ ] No [X] Yes
Number of Layers of Confinement:	Appears to be 2 layers
Volume Utilization Percentage:	50 %

CCP Radiography Data Sheet

Waste Container ID: S813601

Section 3: Container Inventory and Comments (Detailed descriptions)

IM:

AM:

OM:

OI:

C:

R:

XPM: Plastic bags

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP):Plastic Liner Bag, 90 MIL Liner with Liner Lid	9.4
Other: Lead Lined (LP)	23.0
Total Packaging Weight	60.1
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	4.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	124.4
Soils (S):	
Total WMP Weight:	128.4

CCP Radiography Data Sheet

Waste Container ID: S813601

Section 5: RTR Summary (Questions answered "Yes" will be explained in the Comment block except for Question 1)	
Is there observable liquid?	[X] Yes [ ] No
Is there any observable liquid in internal containers, more than 60 milliliters or 3 percent by volume, whichever is greater?	[ ] Yes [X] No
Is the total volume of observable liquid in the outermost container GREATER than 1% of the container?	[X] Yes [ ] No
Is there observable liquid in payload containers with an EPA Hazardous Waste Number of U134?	[ ] Yes [X] No
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	[ ] Yes [X] No
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	[ ] Yes [X] No
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does NOT match TRUCON Code[s])?	[ ] Yes [X] No
Is there an indication of wastes containing explosives or compressed gases?	[ ] Yes [X] No
Is there an indication of PCBs liquids?	[ ] Yes [X] No
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	[ ] Yes [X] No
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	[ ] Yes [X] No
CH or RH TRAMPAC	
Are there heat-sealed bags (unvented) GREATER than 4 liters and LESS than 390 square inches in the waste, or heat sealed bags not authorized in the RH TRUCON Code?	[ ] Yes [X] No
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	[ ] Yes [X] No
Are there sealed containers GREATER than 4 liters?	[ ] Yes [X] No
Are there indications of inadequate protection for heavy and/or sharp objects?	[ ] Yes [X] No

Comments: Per CCP-SO-LANL-55 Inconsistencies associated with these packaging configurations (90 MIL. Liner with Liner Lid) will not disqualify the container from meeting the waste stream description. NCR-LANL-1631-12

RTR Operator:

Eric Lyles		8/29/2012
Print Name	Signature	Date

ATTACHMENT 1
Page 1 of 1

TA-54 AREA G WASTE CONTAINER HYDROGEN/VOC SAMPLE ANALYSIS DATA SHEET

5.[1] Sample Date: Jan 29 2013

Container No. (5.[1])	S813601					
Container type sampled (e.g., 55-gal, 85-gal, 110-gal, or SWB) (5.[1])	55 gal					
Filtered Vent Type (5.[1])	72					
Filtered Vent Unobstructed (5.[1])	☑ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT
WIPP-Approved Filtered Vent (5.[2])	☑ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT
Total CCP VOC value (< 7,000 ppm) (5.[4])	0 ppm	ppm	ppm	ppm	ppm	ppm
Hydrogen Reading (< 64,000 ppm) (5.[5])	570.34 ppm	ppm	ppm	ppm	ppm	ppm
Methane Reading (< 16,000 ppm) (5.[5])	0 ppm	ppm	ppm	ppm	ppm	ppm

N/A 1/30/13

5.[7] Certified CCP Technician:

Performed By: Sara Aragon (CCP (Print)) 1237975 (Z#)

Reviewed By: Nathan Wales (CCP (Print)) 1233566 (Z#)

Comments: n/a

6.1[2][A] WCRRF waste container satisfies the following criteria: ☑ SAT ☐ UNSAT ☐ N/A

- Hydrogen – less than or equal to 3.2% (32,000 ppm)
- VOC – less than or equal to 7,000 ppm

6.1[3] Performed By: Julie Gallegos (Waste Handling Operator (print)) Julie Gallegos (Signature) 176905 (Z#) 1 30 13 (Date)

Quantitation Report (QT Reviewed)

InstName : FGA Unit 12

Data Path : C:\msdchem\1\DATA\130129c\
Data File : S813601.D
Acq On : 29 Jan 2013 3:16 pm (#1); 29 Jan 2013 3:15 pm (#2)
Operator : SA
Sample :
Misc : 55 GAL LFL THROUGH UNOBSTRUCTED FILTER 072 (Sig #1); (Sig #2
ALS Vial : 1 Sample Multiplier: 1

Quant Time Feb 04 16:40:37 2013
Quant Method : C:\msdchem\1\METHODS\H2-CH4.M
Quant Title : Flammable Gas Analysis for Transportation Only
QLast Update : Thu Oct 04 08:07:46 2012
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Target Compounds						Qvalue
1) Hydrogen	1.937	GC1	161084	570.34	ppmv	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

H2-CH4.M Mon Feb 04 16:40:43 2013 UNIT12

08-7-13
0555 Assuming WCRRF operations center OCC position - Clelada
0602 Assuming WCRRF operations center in training Randy Roybal.
0615 SOS Starting Prejob.
0640 Prejob complete.
0745 Atending all hands safety meeting.
1030 Returned Back from all hands meeting
1035 Atending Briefing For cut Bags. Talked about different scenarios of how Bags could have been Compromised.
1100 Sending in Crew to TA 50-69 to look for Burs or any abnormal conditions that may be causing cut or scraps on Bags.
1132 Starting movement out of 50-69.
1152 movement ~~into~~ OUT RR 08/07/13 50-69 complete.
1347 mode change performed TA 50-69 and WCRRF Yard now in operations.
1426 Starting inside Rounds.
1435 Bagging on S816667.
1447 Bag on complete.
1449 Item #63 is OOS, POD in place ok to proceed.
1456 Starting outside Rounds
1457 Item #3 is ~~OOS~~ RR 08/07/13 unSAT, FSR in place ok to proceed.
1458 Inside Round's complete.
1515 outside Round's complete.
1527 Bagging off 1 daughter Bagging on 1 daughter and continuing to process.
1545 Rounds signed off
1548 Bag off for 1st daughter complete.
1610 Starting movement into 50-69 from transportainers.
1635 Movement into 50-69 is complete.
1703 Bagging off 1 Daughter Bagging on S813601
1737 Notified By tech 15 that Operators were not able to perform Bag on Because Drum lift is cutting Bags.
1801 Notified by Som that operators will be useing an 85 castor with a 55 drum. to Resolve Problem with Bag's Being torn by Drum Lift.
1815 Performed shift turnover with OCC Gerald Espinoza Clelada
No further entries this page.

8-7-13 DAYSHIFT

0600 Reviewed the shift Turnover Checklist, and assumed the WCRR SOM position John Quadagnoli Reviewed and approved the dayshift watchbill

0635 Completed the pre-job brief with the SOS (Gilbert). Inspecting bags was the safety topic and to be looking for areas/sharps that could create a bag cut. Notification was made to QA to support in investigation of cut bags. There are no transfers scheduled for today, P&T are scheduled for class. Operations will be attending an all hands brief from 0800 to 1000 hrs.

0705 Completed the daily call in with AREA G - SOM - daily POD call in.

1025 All personnel return from the All Hands Safety Presentation

1040 OM and SOM met with personnel in the break trailer to discuss potential changes during inspection and prepping of bag on bags. Operations were requested to review all steps of the process and look for sharp edges.

1100 Operations entered 50/69 to reprep parent and save cut bag for QA

1230 Completed the noon call-in with PM/OM/AREA G SOM. Additional information was provided by operators inspecting the staging and prepping of drums inside 50/69. A shift order will be implemented to include: Prep drums as needed, Only 2 liquid drums on secondary containment, and utilize cheesecloth to check for Burrs on the Parent drums if Burrs are located, tape over them. It was noted that complacency and housekeeping were contributors to the bag holes

1310 The SOM initiated a SHIFT ORDER, WCRR-SH-13-005 R0 - Precautions provided to Prevent BAGTERRS and provided to the SOS for briefing operators.
In addition WCRR Facility Standing Order EP-WCRR-SO-117, R0 was entered into the Ops Center Standing Order / Timely Orders Logbook, effective today.

1347 Mode Change: 50/69 and YARD Transition from WARM/WARM to Operations/Operations

1435 Operators initiate bag on of Parent drum 5816667 -

1447 Operators report bag on completed.

1527 Bagging off 1 daughter and Bagging on an additional and continue processing

1548 Bagging off reported complete by inside Operations.

1610 Operations are moving 4 drums into 50/69 Facility - Parents

1701 Operations initiate Bag off of daughter and Bag On of Parent 5813601

1737 Inside Operators report trouble with belly band straps NOT fitting around the drum.

1749 Notification is made to the OM and CSE

1755 SOM and SOS investigate and ensure taking measurements (suggested by SOM)

(continued next page)

no further entries this page

8/7/13 WCRR SOS LOG BOOK

0600 Assuming SOS Position [illegible]

0615 Conducted shift brief went over Bay Issues And contamination Issues from night Prior Also went over Slip's trip's And Falls stay focused All hand's Meeting This morning 8-10 AM.

0640 Concluded shift brief. QA was contacted to check bags operators have been having many Tears on bags need to evaluate Further.

0745 leaving to Attend All hand's meeting At NSSB Building.

1016 Returned From All hand Meeting.

1035 Attended meeting with OM, SOM and operators to see the reasoning behind Ripped bags operators gave several potential area's.

1110 Meeting Concluded going to split up crews to see If we can find the Area of concern For rips. sent half of the operators to check all bags that were prepped prior to check IF our cabinet or staging area Is a concern also sending In operators to check Inside 50-69 For potential burrs on drums or on pert on WCG also checking doughnut for burrs or sharps.

1118 Operators entering 50-69 to check For potential sharps. That could Rip. Snag. puncture etc a bag.

1310 shift crewker put In place For prepping drums as needed. As well as only 2 liquid drums on containment pallet at any one Time. WCRR-SH-13-005 Rev 0 Also Reviewed ~~Timely or~~ GM 8-7-13 GM standard order EP-WCRR-50-1177 R0 TA 50-69 MAR De-Inventory Determination

1347 Mode change Complete WCRRF In operations.

1435 bagging on 5816667

1447 Bag on Complete

1527 bagging off 1 daughter Bagging on another

1545 Reviewed Inside And outside Rounds.

1549 Bag on/off Complete.

1800 Shift turnover with Clayton mullins [illegible]

No Further entries on this

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0100
Examination Date:	8/14/2013
Waste Container ID:	94144
Video/Audio Recorded Media Number:	LA-RTR2-13-0100 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 13
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3150
Waste Stream I.D.:	LA-CIN01.001
Waste Container Weights:	Gross Wt.: 64.5 kg Tare Wt.: 33.4 kg Net Wt.: 31.1 kg
Rigid Liner and Liner Vent Description:	Liner: [X] No [ ] Yes Lid: [X] No [ ] Yes Type: [ ] 30-mil [ ] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [ ] Yes [X] N/A Punctured: [X] No [ ] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [ ] No [X] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 1 layer
Volume Utilization Percentage:	35 %

CCP Radiography Data Sheet

Waste Container ID: 94144

Section 3: Container Inventory and Comments (Detailed descriptions)

IM: Scrap metal

AM:

OM:

OI:

C:

R:

XPM: Plastic bags, liner lid

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP): Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	0.1
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	3.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	28.0
Soils (S):	
Total WMP Weight:	31.1

CCP Radiography Data Sheet

Waste Container ID: 94144

Section 5: RTR Summary (Questions answered "Yes" will be explained in the Comment block, except for Question 1)	
Is there observable liquid?	☐ Yes ☒ No
Is there any observable liquid in internal containers, more than 60 milliliters or 3 percent by volume, whichever is greater?	☐ Yes ☒ No
Is the total volume of observable liquid in the outermost container GREATER than 1% of the container?	☐ Yes ☒ No
Is there observable liquid in payload containers with an EPA Hazardous Waste Number of U134?	☐ Yes ☒ No
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐ Yes ☒ No
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐ Yes ☒ No
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does NOT match TRUCON Code[s])?	☐ Yes ☒ No
Is there an indication of wastes containing explosives or compressed gases?	☐ Yes ☒ No
Is there an indication of PCBs liquids?	☐ Yes ☒ No
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐ Yes ☒ No
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐ Yes ☒ No
CH or RH TRAMPAC	
Are there heat-sealed bags (unvented) GREATER than 4 liters and LESS than 390 square inches in the waste, or heat sealed bags not authorized in the RH TRUCON Code?	☐ Yes ☒ No
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐ Yes ☒ No
Are there sealed containers GREATER than 4 liters?	☐ Yes ☒ No
Are there indications of inadequate protection for heavy and/or sharp objects?	☐ Yes ☒ No
Comments: N/A	

RTR Operator:

Eric Lyles		8/14/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	94144	Count Sequence Number:	23447
Operator:	D3PW2DK1\operator		
Assay Start:	8/14/2013 3:10:05 PM		
Description 1:	1LANDA1828		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6, Not Precision		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 31.1 kg	Net:	31.1 kg
Container:	Volume: 208.0 l	Full:	35.0 %
Density:	0.430 kg /l		

System Configuration

Counter:	MCS HENC #1
Count Type:	Item Count
Collimator/Geometry Setting:	All Banks On (GE - 0

Errors quoted at 1.000 sigma

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number: 23447
Assay Instrument: MCS HENC #1
Analysis Method: CCP-TP-063 v 14
Item ID: 94144

Batch Number: 1LANDA1828
Location: LANL TA-54
Software Version: NDA 2000 V.4.0
Analysis Date: 8/14/2013

Net Weight	31100.0 g		
Pu mass	3.33E-001	+-	2.95E-001 g
TRU Alpha Activity	1.09E+000	+-	5.65E-001 Ci
TRU Activity Concentration	3.50E+004	+-	1.82E+004 nCi/g
Pu-239 Equivalent Activity	1.09E+000	+-	5.65E-001 Ci
Pu-239 FGE	3.20E-001	+-	2.77E-001 g
Decay heat	3.61E-002	+-	1.88E-002 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	1.51E-002	1.06E-005	1.52E-006	9.95E-007
PU238	3.05E-005	5.21E-004	4.62E-004	3.38E-005
PU239	3.12E-001	1.94E-002	1.72E-002	1.26E-003
PU240	2.00E-002	4.53E-003	4.02E-003	2.94E-004
AM241	3.10E-001	1.06E+000	5.64E-001	2.09E-002
PU241	3.86E-004	3.98E-002	3.53E-002	2.58E-003
PU242	6.66E-005	2.63E-007	2.33E-007	0.00E+000
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	2.96E-007
U233	<LLD	<LLD	0.00E+000	1.85E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	5.38E-007
U238	<LLD	<LLD	0.00E+000	5.45E-006

Errors quoted at 1.000 sigma

Operator: Marla Gr Date: 8·15·13

ITR: Ami Gaston Date: 8/19/13

Automated Independent Technical Review

Count Sequence Number: 23447 Batch Number: 1LANDA1828
Counter ID: MCS HENC #1
Container ID: 94144
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 8/14/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis No Add-a-Source warnings.	Ok
Section 2 - Passive Neutron Analysis Analysis Status: No errors.	Ok
Cosmic Ray Rejection Analysis complete with warnings. - The CRR High-Z mass Mass Variance is negative, High-Z mass Uncertainty set to zero so analysis could continue.	Ok
Section 3 - Data Combiner Analysis Override enabled; Passive Neutron Pu and Gamma U data specified as input. Pu results taken from Passive Neutron data, U from Quantitative Gamma data. Results comparison test passed.	Passive Neutron Pu and Gamma U data specified as input.
Section 4 - MGA Analysis Results are marked as invalid.	MGA analysis failed. AK isotopics applied. The AK information utilized was provided by Steve Schafer, AKE, and consists of data from CCP-AK-LANL-006, AK Source Document M237. MT-52.
Section 5 - Gamma Analysis Analysis Status: No errors.	Ok
Miscellaneous	No additional nuclides contributing to 95% of the radiological hazard identified.

Expert Review by: Sherri Chambers Date: 8-15-13

Waste Container ID: **94144**

BDR Number: **LA13FG12075**

Sampling Date: **8/15/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	73.65	
74-82-8	Methane	9.63	U
67-56-1	Methanol	N/A	U
60-29-7	Ethyl Ether	N/A	U
75-35-4	1,1-Dichloroethylene	N/A	U
67-64-1	Acetone	N/A	U
75-34-3	1,1-Dichloroethane	N/A	U
156-59-2	cis-1,2-Dichloroethene	N/A	U
78-93-3	Methyl ethyl ketone	N/A	U
110-82-7	Cyclohexane	N/A	U
71-43-2	Benzene	N/A	U
107-06-2	1,2-Dichloroethane	N/A	U
71-36-3	1-Butanol	N/A	U
108-10-1	Methyl isobutyl ketone	N/A	U
108-88-3	Toluene	N/A	U
108-90-7	Chlorobenzene	N/A	U
100-41-4	Ethylbenzene	N/A	U
108-38-3/106-42-3	m- and p-Xylene	N/A	U
95-47-6	o-Xylene	N/A	U
108-67-8	1,3,5-Trimethylbenzene	N/A	U
95-63-6	1,2,4-Trimethylbenzene	N/A	U

CAS Number	IDENTIFIED TIC COMPOUND	Est. Amount ppmv
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

Quantitation Report (QT Reviewed)

InstName : FGA Unit 12

Data Path : C:\msdchem\1\DATA\130815c\
Data File : 94144.D
Acq On : 15 Aug 2013 3:18 pm (#1); 15 Aug 2013 3:17 pm (#2)
Operator : SA
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER-NucFil-019DS (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Aug 15 15:23:18 2013
Quant Method : C:\msdchem\1\METHODS\H2-CH4.M
Quant Title : Flammable Gas Analysis for Transportation Only
QLast Update : Thu May 23 08:37:45 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Target Compounds						Qvalue
1) Hydrogen	1.907	GC1	21009m	73.65	ppmv	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0102
Examination Date:	8/16/2013
Waste Container ID:	94145
Video/Audio Recorded Media Number:	LA-RTR2-13-0102 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 13
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3150
Waste Stream I.D.:	LA-CIN01.001
Waste Container Weights:	Gross Wt.: 104.5 kg Tare Wt.: 33.4 kg Net Wt.: 71.1 kg
Rigid Liner and Liner Vent Description:	Liner: [X] No [ ] Yes Lid: [X] No [ ] Yes Type: [ ] 30-mil [ ] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [ ] Yes [X] N/A Punctured: [X] No [ ] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [ ] No [X] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 1 layer
Volume Utilization Percentage:	50 %

CCP Radiography Data Sheet

Waste Container ID: 94145

Section 3: Container Inventory and Comments (Detailed descriptions)

IM: Scrap metal

AM:

OM: Scrap lead

OI:

C:

R:

XPM: Plastic bag

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP):Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	0.1
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	2.0
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	2.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	67.0
Soils (S):	
Total WMP Weight:	71.1

CCP Radiography Data Sheet

Waste Container ID: 94145

Section 5: RTR Summary (Questions answered "Yes" will be explained in the Comment block, except for Question 1)	
Is there observable liquid?	☐ Yes ☒ No
Is there any observable liquid in internal containers, more than 60 milliliters or 3 percent by volume, whichever is greater?	☐ Yes ☒ No
Is the total volume of observable liquid in the outermost container GREATER than 1% of the container?	☐ Yes ☒ No
Is there observable liquid in payload containers with an EPA Hazardous Waste Number of U134?	☐ Yes ☒ No
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐ Yes ☒ No
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐ Yes ☒ No
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does NOT match TRUCON Code[s])?	☐ Yes ☒ No
Is there an indication of wastes containing explosives or compressed gases?	☐ Yes ☒ No
Is there an indication of PCBs liquids?	☐ Yes ☒ No
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐ Yes ☒ No
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐ Yes ☒ No
CH or RH TRAMPAC	
Are there heat-sealed bags (unvented) GREATER than 4 liters and LESS than 390 square inches in the waste, or heat sealed bags not authorized in the RH TRUCON Code?	☐ Yes ☒ No
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐ Yes ☒ No
Are there sealed containers GREATER than 4 liters?	☐ Yes ☒ No
Are there indications of inadequate protection for heavy and/or sharp objects?	☐ Yes ☒ No

Comments: N/A

RTR Operator:

Aaron Elliott		8/16/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	94145	Count Sequence Number:	16417
Operator:	DCLTD231\Operator		
Assay Start:	8/19/2013 11:43:11 AM		
Description 1:	2LANDA1214		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gal Drum		
Weight:	Net: 71.1 kg	Net:	71.1 kg
Container:	Volume: 208.0 l	Full:	50.0 %
Density:	0.680 kg /l		

System Configuration

Counter:	HENC #2
Count Type:	Item Count
Collimator/Geometry Setting:	All Banks on GEO - 0

Errors quoted at 1.000 sigma

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number:	16417	Batch Number:	2LANDA1214
Assay Instrument:	HENC #2	Location:	LANL TA-54
Analysis Method:	CCP-TP-063 v 14	Software Version:	NDA 2000 V.4.0
Item ID:	94145	Analysis Date:	8/19/2013

Net Weight	71100.0 g		
Pu mass	4.89E+000	+-	1.19E+000 g
TRU Alpha Activity	3.99E+000	+-	6.63E-001 Ci
TRU Activity Concentration	5.61E+004	+-	9.33E+003 nCi/g
Pu-239 Equivalent Activity	4.00E+000	+-	6.63E-001 Ci
Pu-239 FGE	4.63E+000	+-	1.11E+000 g
Decay heat	1.32E-001	+-	2.21E-002 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	6.47E-002	4.62E-005	8.42E-006	2.36E-006
PU238	4.48E-004	7.74E-003	1.88E-003	3.54E-005
PU239	4.59E+000	2.89E-001	7.00E-002	1.32E-003
PU240	2.93E-001	6.74E-002	1.64E-002	3.08E-004
AM241	1.04E+000	3.62E+000	6.59E-001	3.82E-002
PU241	5.67E-003	5.89E-001	1.43E-001	2.69E-003
PU242	9.79E-004	3.89E-006	9.42E-007	0.00E+000
SR90	5.73E-009	7.91E-007	4.89E-007	0.00E+000
CS137	9.02E-009	7.91E-007	4.89E-007	4.40E-007
U233	<LLD	<LLD	0.00E+000	4.41E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	1.47E-006
U238	<LLD	<LLD	0.00E+000	1.00E-005
AM243	1.26E-003	2.54E-004	4.64E-005	3.31E-006

Errors quoted at 1.000 sigma

Operator: _____ Date: 8-21-13

ITR: _____ Date: 8-22-13

Automated Independent Technical Review

Count Sequence Number: 16417 Batch Number: 2LANDA1214
Counter ID: HENC #2
Container ID: 94145
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 8/19/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis Add-a-Source WARNINGS: Add-a-Source correction factor is less than one.	OK
Section 2 - Passive Neutron Analysis Analysis Status: No errors. No Warnings Reported.	OK
Section 3 - Data Combiner Analysis Override enabled; Passive Neutron Pu and Gamma U data specified as input. Pu results taken from Passive Neutron data, U from Quantitative Gamma data. Results comparison test passed.	Results taken from Passive Neutron for Pu and Gamma for U.
Section 4 - MGA Analysis Results are marked as invalid.	MGA analysis failed. AK isotopics applied. The AK information utilized was provided by Steve Schafer, AKE, and consists of data from CCP-AK-LANL-006, AK Source Document M237. MT-52.
Section 5 - Gamma Analysis Analysis Status: No errors.	OK
Miscellaneous	No additional nuclides contributing 95% of the radiological hazard identified.

Expert Review by: Bart B. Marah Date: 8/20/13

Waste Container ID: **94145**

BDR Number: **LA13FG12081**

Sampling Date: **8/21/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	125.27	
74-82-8	Methane	9.63	U
67-56-1	Methanol	N/A	U
60-29-7	Ethyl Ether	N/A	U
75-35-4	1,1-Dichloroethylene	N/A	U
67-64-1	Acetone	N/A	U
75-34-3	1,1-Dichloroethane	N/A	U
156-59-2	cis-1,2-Dichloroethene	N/A	U
78-93-3	Methyl ethyl ketone	N/A	U
110-82-7	Cyclohexane	N/A	U
71-43-2	Benzene	N/A	U
107-06-2	1,2-Dichloroethane	N/A	U
71-36-3	1-Butanol	N/A	U
108-10-1	Methyl isobutyl ketone	N/A	U
108-88-3	Toluene	N/A	U
108-90-7	Chlorobenzene	N/A	U
100-41-4	Ethylbenzene	N/A	U
108-38-3/106-42-3	m- and p-Xylene	N/A	U
95-47-6	o-Xylene	N/A	U
108-67-8	1,3,5-Trimethylbenzene	N/A	U
95-63-6	1,2,4-Trimethylbenzene	N/A	U

CAS Number	IDENTIFIED TIC COMPOUND	Est. Amount ppmv
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

Quantitation Report (QT Reviewed)

InstName : FGA Unit 12

Data Path : C:\msdchem\1\DATA\130821c\
Data File : 94145.D
Acq On : 21 Aug 2013 10:21 am (#1); 21 Aug 2013 10:19 am (#2)
Operator : NW
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER, NUCFIL-019DS (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Aug 21 10:25:00 2013
Quant Method : C:\msdchem\1\METHODS\H2-CH4.M
Quant Title : Flammable Gas Analysis for Transportation Only
QLast Update : Thu May 23 08:37:45 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Target Compounds						Qvalue
1) Hydrogen	1.907	GC1	35733m	125.27	ppmv	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0100
Examination Date:	8/14/2013
Waste Container ID:	94146
Video/Audio Recorded Media Number:	LA-RTR2-13-0100 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 13
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3150
Waste Stream I.D.:	LA-CIN01.001
Waste Container Weights:	Gross Wt.: 193.5 kg Tare Wt.: 33.4 kg Net Wt.: 160.1 kg
Rigid Liner and Liner Vent Description:	Liner: [X] No [ ] Yes Lid: [X] No [ ] Yes Type: [ ] 30-mil [ ] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [ ] Yes [X] N/A Punctured: [X] No [ ] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [ ] No [X] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 1 layer
Volume Utilization Percentage:	90 %

CCP Radiography Data Sheet

Waste Container ID: 94146

Section 3: Container Inventory and Comments	(Detailed descriptions)
IM:	
AM:	
OM:	Scrap lead
OI:	
C:	
R:	
XPM:	Plastic bags
OR:	
IN:	Homogeneous solids
S:	

Section 4: Packaging Material and Waste Material Parameters	
Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP): Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	15.0
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	2.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	143.1
Soils (S):	
Total WMP Weight:	160.1

CCP Radiography Data Sheet

Waste Container ID: 94146

Section 5: RTR Summary (Questions answered "Yes" will be explained in the Comment block, except for Question 1)	
Is there observable liquid?	☐ Yes ☒ No
Is there any observable liquid in internal containers, more than 60 milliliters or 3 percent by volume, whichever is greater?	☐ Yes ☒ No
Is the total volume of observable liquid in the outermost container GREATER than 1% of the container?	☐ Yes ☒ No
Is there observable liquid in payload containers with an EPA Hazardous Waste Number of U134?	☐ Yes ☒ No
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐ Yes ☒ No
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐ Yes ☒ No
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does NOT match TRUCON Code[s])?	☐ Yes ☒ No
Is there an indication of wastes containing explosives or compressed gases?	☐ Yes ☒ No
Is there an indication of PCBs liquids?	☐ Yes ☒ No
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐ Yes ☒ No
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐ Yes ☒ No
CH or RH TRAMPAC	
Are there heat-sealed bags (unvented) GREATER than 4 liters and LESS than 390 square inches in the waste, or heat sealed bags not authorized in the RH TRUCON Code?	☐ Yes ☒ No
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐ Yes ☒ No
Are there sealed containers GREATER than 4 liters?	☐ Yes ☒ No
Are there indications of inadequate protection for heavy and/or sharp objects?	☐ Yes ☒ No

Comments: N/A

RTR Operator:

Eric Lyles		8/14/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	94146	Count Sequence Number:	23446
Operator:	D3PW2DK1\operator		
Assay Start:	8/14/2013 2:28:02 PM		
Description 1:	1LANDA1828		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6, Not Precision		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 160.0 kg	Net:	160.0 kg
Container:	Volume: 208.0 l	Full:	90.0 %
Density:	0.860 kg /l		

System Configuration

Counter:	MCS HENC #1
Count Type:	Item Count
Collimator/Geometry Setting:	All Banks On (GE - 0

Errors quoted at 1.000 sigma

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number:	23446	Batch Number:	1LANDA1828
Assay Instrument:	MCS HENC #1	Location:	LANL TA-54
Analysis Method:	CCP-TP-063 v 14	Software Version:	NDA 2000 V.4.0
Item ID:	94146	Analysis Date:	8/14/2013

Net Weight	160000.0 g		
Pu mass	8.27E+000	+-	3.29E+000 g
TRU Alpha Activity	6.77E+000	+-	3.41E+000 Ci
TRU Activity Concentration	4.23E+004	+-	2.13E+004 nCi/g
Pu-239 Equivalent Activity	6.79E+000	+-	3.41E+000 Ci
Pu-239 FGE	7.83E+000	+-	3.09E+000 g
Decay heat	2.24E-001	+-	1.13E-001 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	9.65E-002	6.80E-005	1.42E-005	3.05E-006
PU238	7.57E-004	1.29E-002	5.15E-003	3.36E-005
PU239	7.76E+000	4.81E-001	1.91E-001	1.25E-003
PU240	4.96E-001	1.13E-001	4.48E-002	2.92E-004
AM241	1.80E+000	6.17E+000	3.40E+000	6.09E-002
PU241	9.60E-003	9.88E-001	3.93E-001	2.56E-003
PU242	1.66E-003	6.54E-006	2.60E-006	0.00E+000
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	8.02E-007
U233	<LLD	<LLD	0.00E+000	5.87E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	1.68E-006
U238	<LLD	<LLD	0.00E+000	1.59E-005

Errors quoted at 1.000 sigma

Operator: Maria Gu Date: 8·15·13

ITR: Ami Barton Date: 8/19/13

Automated Independent Technical Review

Count Sequence Number: 23446 Batch Number: 1LANDA1828
Counter ID: MCS HENC #1
Container ID: 94146
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 8/14/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis No Add-a-Source warnings.	Ok
Section 2 - Passive Neutron Analysis Analysis Status: No errors.	Ok
Ones Rate Analysis complete with warnings. - Error calculating the Ones Rate Pu-240 Effective MDA.	Not data affecting.
Section 3 - Data Combiner Analysis Override enabled; Passive Neutron Pu and Gamma U data specified as input. Pu results taken from Passive Neutron data, U from Quantitative Gamma data. Results comparison test passed.	Passive Neutron Pu and Gamma U data specified as input.
Section 4 - MGA Analysis Results are marked as invalid.	MGA analysis failed. AK isotopics applied. The AK information utilized was provided by Steve Schafer, AKE, and consists of data from CCP-AK-LANL-006, AK Source Document M237. MT-52.
Section 5 - Gamma Analysis Analysis Status: No errors.	Ok
Miscellaneous	No additional nuclides contributing to 95% of the radiological hazard identified.

Expert Review by: Sheri Chamberlin Date: 8-15-13

Waste Container ID: **94146**

BDR Number: **LA13FG12077**

Sampling Date: **8/16/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	230.14	
74-82-8	Methane	11.58	
67-56-1	Methanol	N/A	U
60-29-7	Ethyl Ether	N/A	U
75-35-4	1,1-Dichloroethylene	N/A	U
67-64-1	Acetone	N/A	U
75-34-3	1,1-Dichloroethane	N/A	U
156-59-2	cis-1,2-Dichloroethene	N/A	U
78-93-3	Methyl ethyl ketone	N/A	U
110-82-7	Cyclohexane	N/A	U
71-43-2	Benzene	N/A	U
107-06-2	1,2-Dichloroethane	N/A	U
71-36-3	1-Butanol	N/A	U
108-10-1	Methyl isobutyl ketone	N/A	U
108-88-3	Toluene	N/A	U
108-90-7	Chlorobenzene	N/A	U
100-41-4	Ethylbenzene	N/A	U
108-38-3/106-42-3	m- and p-Xylene	N/A	U
95-47-6	o-Xylene	N/A	U
108-67-8	1,3,5-Trimethylbenzene	N/A	U
95-63-6	1,2,4-Trimethylbenzene	N/A	U

CAS Number	IDENTIFIED TIC COMPOUND	Est. Amount ppmv
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

Quantitation Report (QT Reviewed)

InstName : FGA Unit 12

Data Path : C:\msdchem\1\DATA\130816c\
Data File : 94146.D
Acq On : 16 Aug 2013 1:24 pm (#1); 16 Aug 2013 1:22 pm (#2)
Operator : NW
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER, NUCFIL-019DS (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Aug 16 13:28:21 2013
Quant Method : C:\msdchem\1\METHODS\H2-CH4.M
Quant Title : Flammable Gas Analysis for Transportation Only
QLast Update : Thu May 23 08:37:45 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Target Compounds						Qvalue
1) Hydrogen	1.907	GC1	65647m	230.14	ppmv	
2) Methane	3.740	GC1	1544m	11.58	ppmv	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

13

S813676

S813676

Container Profile 747268

File Options Reports Help

S813676

747268	TBD-TRU	T-TTRU-TEMP	Active	Decommissioned

- General Information
- Weights/Volumes
- Location
- Account Information
- Waste Material Parameters
- Layers of Confinement
- Prohibited Items
- EPA Codes
- UHC
- Radioassay
- Radiological Survey
- Payload Preparation
- Container Closure
- Materials Added
- TRU Information
- TRU Information (TSDF)
- Radiological Calculations
- Shipping Description
- Site Treatment Plan
- Pending Tasks
- Genealogy
- Container Tags
- Task History
- Documentation
- Comment Log
- Edit Log

Genealogy

S813676

- S813676
  - LA00000068559
  - LA00000068541
  - LA00000068592 – EMPTY

Task History

Transfer Details

Transfer Amount	Transfer Unit	Item	Measured Weight	Measured Weig...
0.01	%			

ATTACHMENT 1
Page 1 of 4

Working Copy
Date: 11/4/13 HS

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: S8136716

6.2[4] Date Processed: 11-04-13

4.1[6][B] Processing Activity (EP-DIV-AP-0107):
☐ > 190 mrem/hr ☑ PID ☐ Split ☑ Repack

4.1[6][B] Prohibited Items:
☐ Sealed Containers > 4L ☑ Liquids ☐ Pressurized Containers ☐ N/A

4.1[6][B] Parent Waste Container RCRA Designations: D007, D008, D009

4.1[7] Activity Hazard Classification based on Anticipated Extremity Radiation Dose Rate:
☑ Moderate (≤ 10 rem/hr) ☐ High/Complex (> 10 rem/hr)

4.3[1]/4.3[2] ($) TA-50-69 is in the OPERATION or WARM STANDBY MODE (TSR 1.2) ☑ OPERATIONS ☐ WARM STANDBY ☐ N/A

4.3[4][B] Platform Scale: Equipment No.: 019065
Cal. Due Date: 10-14-14

4.3[5][B] ($) Three 1-Liter containers carbon spheroids or MET-L-X in WCG: (SAC 5.10.1.7.1) ☑ YES ☐ NO ☐ N/A

4.3[6] ($) Stationary Fire Watch has been established: ☑ N/A
(> 300 PE-Ci Equivalent Combustible)
(SAC 5.10.1.7.2) _____ (Initial and Date)

4.3[7 [A] Parent Waste Container degraded, loss of integrity, or weighs greater than 468 lb but less than or equal to 624 lb:
☐ YES ☑ NO ☐ N/A

4.3[8][D] WCG glove and bag-in/bag-out bag inspection: ☑ SAT ☐ UNSAT ☐ N/A

Performed By: BRIAN GALLEGOS Brian Gallegos 267129 11-04-13
Waste Handling Tech (print) Signature Z # Date

ATTACHMENT 1
Page 2 of 4

4.1[6][B] Parent Waste Container No.: 8813676

5.[18] Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable: 416.8 lb

6.2[5][A] Parent Drum Lead Blanket Weight (lb): .0 lb

6.2[5][B]/ 6.2[6] Total Parent Drum Weight (lb) 416.8 lb

6.2[7] ($) Total Parent Drum Weight < 624 lb (SR 4.5.1): ☑ SAT ☐ UNSAT

6.2[17][D] Drum lift hinge pin retaining clip replaced. N/A
Initials Z# Date

6.2[28] Approval to leave a parent drum attached to the WCG overnight:

N/A
EWMO-FOD (print) Signature Z # Date

ATTACHMENT 1
Page 3 of 4

4.1[6][B] Parent Waste Container No.: 5813676

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	68559	68541		
10.1[4]	Daughter Drum Filter No.	KH-760	LH-301	N	
10.1[4]	Daughter Drum Bag Filter No.	L-10324,	L-6723	A	
10.1[4]	Daughter Drum Purchase Order No.	501578	501578		
10.1[13][C]	WCG Fire Watch Stationed		☐ YES	☐ NO	☑ N/A
10.1[14][C][d]3/11.1[3]	WCG Fire Watch Secured		☐ YES	☐ NO	☑ N/A
10.2[4]	POC bag-on bag: Manufacturer				
	Model No.				
	Serial No.				
	Date of Manufacture				
10.2[5]	POC ID No				
10.2[7][B]/10.2[6]	POC Item Description	N	A		
10.2[13]	POC Assembly closed per Manufacturer's instructions. (Initial and Z#)				
10.2[14]	POC Assembly Gross Weight (lb)			N	
10.2[15]	POC Rad. Survey Results (mrem/hr)				
10.3[3][A]	Approx. Containerized Liquid Vol./Units	N A	N A		
10.3[5][A]	Free Liquid Volume/Units	2 GALLONS	2 LITERS		
10.3[7][A]	Opaque/Non-penetrable Item Description:	LEAD SHIELDING	LEAD SHIELDING		A
10.3[9][A]	PCB-contaminated Waste Description	N A	N A		
10.3[9][B]	PCB Item ID No.				
10.3[10]	Remaining Waste Description	SEE COMMENTS	SEE COMMENTS		
10.3[13]/10.4[10]/ 10.5[4]/10.6[10]	Daughter Drum % Full (%)	100%	90%		
10.5[3]/10.6[2]	Description Waste Added During Processing	KITTY LITTER	KITTY LITTER		

ATTACHMENT 1
Page 4 of 4

4.1[6][B] Parent Waste Container No.: 5813676

Comments: ROOM TRASH, PLASTICS, NITRATE SALTS, GLOVE BOX GLOVES, KITTY LITTER, LEAD SHIELDING

11.1[1] Performed By: BRIAN GALLEGOS/ [signature] /267129 11-04-13
Waste Handling Tech (print) Signature Z # Date

11.1[8] Reviewed By: Gilbert Martinez [signature] [signature] 1/4/2251 11/5/13 0815
SOS or designee (print) Signature Z # Date/Time

Working Copy
Date: 10-31-13

ATTACHMENT 2
Page 1 of 1

WCRRF OVERPACK DRUM ASSEMBLY PREPARATION DATA SHEET

5.[3] Overpack drum information:

Purchase Order No.: 501563
Lot No.: 0238360-1
Manufacture Date: 2013

5.[8] Overpack filtered vent and 2-in. bung torque wrench information:

	Filtered Vent	2-in. Bung
M&TE No.:	100216	036245
Cal. Expiration Date:	12-18-2013	08-05-2014
Tolerance:	±4% cw/±6% ccw	±3% cw/±6% ccw

Overpack filtered vent information:

Manufacturer: Nucfil
Model No.: 013
Serial No.: JL-1895
Manufacture Date: 10/11

5.[9] Torque wrench listed above is within the acceptable ranges as displayed on the calibration certificate. ☑ Yes ☐ No

5. [11] Performed By: GERALD ESPINOSA [signature] 1237764 10/31/13
Waste Handling Technician (print) Signature Z # Date

5.[15] Filtered Vent torque value [120 in-lb (96 to 144 in-lb)]: 120 in-lb

5. [18] 2-in. bung plug torque value: 30 ft-lb

Comments: N/C

8.1[1] Performed By: GERALD ESPINOSA [signature] 1237764 10/31/13
Waste Handling Technician (print) Signature Z # Date

8.1[6] Reviewed By: Gilbert Martinez [signature] 1457351 11/6/13
Supervisor or designee (print) Signature Z # Date

Working Copy
Date: 11/4/13 HS

ATTACHMENT 5
Page 1 of 1

WCRRF OVERPACK DRUM CLOSURE DATA SHEET

7.[17] Overpack Drum Unique Identifier No.: 68592

7.[23] Overpack drum closure ring torque wrench information:
M&TE No.: 036245
Cal. Expiration Date: 8-05-14
Range in ft-lb: 16-80
Tolerance: ±3% cw ±6% ccw

7.[24] Torque wrench listed above is within the acceptable ranges as displayed on the calibration certificate. ☑ Yes ☐ No

Performed By: BRIAN GALLEGOS / Brian Gallegos / 267129 11-04-13
Waste Handling Technician (print) Signature Z# Date

7.[26] Overpack drum closure ring torque value: 60 ft-lb

7.[29] Threaded lug of the drum closure ring is not touching the jam nut and the locking ring lugs are not touching. ☑ SAT ☐ UNSAT

7.[34][B] Platform scale serial number: 019065
Platform scale calibration expiration date: 10-14-14

7.[34][D] 85-gal overpack drum gross weight (lb): 170.6 lb

Comments: N/C

8.1[1] Performed By: BRIAN GALLEGOS / Brian Gallegos / 267129 11-04-13
Waste Handling Technician (print) Signature Z# Date

8.1[7] Reviewed By: Gilbert Martinez / [signature] / 149235 11/6/13
Supervisor or designee (print) Signature Z# Date

Working Copy
Date: 10-21-13

ATTACHMENT 1
Page 1 of 2

WCRRF DRUM PREPARATION DATA SHEET

5.[34][E] Drum ID No.: 68541

5.[3] Drum information:
Purchase Order No.: 501578
Lot No.: 240999
Manufacture Date: 2013

5.[17] Drum Liner Bag/Filter Assembly:
Manufacturer: Bop
Model No.: 6cpvc1.5 23pvc
Serial No.: L-6723
Manufacture Date: 1-13

5.[19] Filtered vent and 2 in. bung torque wrench information:

	Filtered Vent	2 in. Bung
M&TE No.:	100216	085369
Cal. Expiration Date:	12-18-13	12-18-13
Range in ft-lb:	40-200	10-80
Tolerance:	±4%cw ±6%ccw	±3%cw ±6%ccw

5.[20] Torque wrench listed above is within the acceptable ranges as displayed on the calibration certificate. ☑ YES ☐ NO

Performed By: Brandon Chavez / [signature] 204742 / 10-21-13
Operator (print) Signature Z # Date

5.[23] Filtered vent information:
Manufacturer: NUCFIL
Model No.: 019DS
Serial No.: LM-301
Manufacture Date: 12-12

5.[26] Filtered vent torque value [120 in-lb (96 to 144 in-lb)]: 120 in-lb

5.[29][B] 2 in. bung plug torque value: 30 ft-lb

5.[30] Scale File ID number: 019065

ATTACHMENT 1
Page 2 of 2

5.[31] Scale is within the calibration frequency. ☑ SAT ☐ UNSAT

5.[32] Drum tare weight (lbs): 76 lbs

5.[34][E] Drum ID No.: 68541

Comments: N/C

5.[35] Performed By: Brandon Chavez / [signature] 1047121 / 10-21-13
Operator (print) Signature Z # Date

7.1[4] Reviewed By: Gilbert Martinez / [signature] 142335 / 11/6/13
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 2
Page 1 of 2

WCRRF DRUM CLOSURE DATA SHEET

6.[3] Drum ID No.: 68541

6.[9] Drum closure ring torque wrench information:

M&TE No.: 636245
Cal. Expiration Date: 8-05-14
Range in ft-lb: 16-80
Tolerance: ±3% cw ±4% ccw

6.[10] Torque wrench listed above is within the acceptable ranges as displayed on the calibration certificate. ☑ YES ☐ NO

Performed By: BRIAN GALLEGOS / [signature] / 261129 11-14-13
Operator (print) Signature Z # Date

6.[12] Drum closure ring torque value: 66 ft-lb

6.[15] Threaded lug of the drum closure ring is not touching the jam nut and the locking ring lugs are not touching. ☑ SAT ☐ UNSAT

6.[17][A] Filtered vent and 2 in. bung torque wrench information: ☑ N/A

	Filtered Vent	2 in. Bung
M&TE No.:		
Cal. Expiration Date:		
Range in ft-lb:		
Tolerance:		

6.[17][B] Torque wrench listed above is within the acceptable ranges as displayed on the calibration certificate. ☐ YES ☐ NO ☑ N/A

Performed By: / / /
Operator (print) Signature Z # Date

6.[17][C] 2 in. bung plug torque value: _____ in-lb ☑ N/A

6.[17][D] Filtered vent torque value [120 in-lb (96 to 144 in-lb)]: _____ in-lb ☑ N/A

ATTACHMENT 2
Page 2 of 2

6.[3] Drum ID No.: 68541

6.[26] Scale File ID number: 019065

6.[27] Scale is within the calibration frequency. ☑ SAT ☐ UNSAT

6.[28] Drum gross weight: 314.2 lbs

6.[29] Drum gross weight recorded on drum lid in approximately 1/2 in. lettering: ☑ SAT ☐ UNSAT

Comments: N/C

6.[32] Performed By: BRIAN GALLEGOS / [signature] / 1267129 11-04-13
Operator (print) Signature Z # Date

7.1[4] Reviewed By: Gilbert Martinez / [signature] / 1497351 11/6/13
Supervisor or designee (print) Signature Z # Date

Working Copy
Date: 10-24-13cw

ATTACHMENT 1
Page 1 of 2

WCRRF DRUM PREPARATION DATA SHEET

5.[34][E] Drum ID No.: 68559

5.[3] Drum information:
Purchase Order No.: 501578
Lot No.: 0240119
Manufacture Date: 13

5.[17] Drum Liner Bag/Filter Assembly:
Manufacturer: BOP
Model No.: 6cpvc1.5-2spvc
Serial No.: L-10324
Manufacture Date: 5-13

5.[19] Filtered vent and 2 in. bung torque wrench information:

	Filtered Vent	2 in. Bung
M&TE No.:	100216	038369
Cal. Expiration Date:	12-18-13	12-18-13
Range in ft-lb:	40-200 in-lbs	10-80
Tolerance:	±4% cw ±6% ccw	±3% cw ±6% ccw

5.[20] Torque wrench listed above is within the acceptable ranges as displayed on the calibration certificate. ☑ YES ☐ NO

Performed By: GERALD ESPINOZA [signature] 1237120 10-24-13
Operator (print) Signature Z # Date

5.[23] Filtered vent information:
Manufacturer: NUCFIL
Model No.: 019DS
Serial No.: KM760
Manufacture Date: 11-12

5.[26] Filtered vent torque value [120 in-lb (96 to 144 in-lb)]: 120 in-lb

5.[29][B] 2 in. bung plug torque value: 30 ft-lb

5.[30] Scale File ID number: 019065

ATTACHMENT 1
Page 2 of 2

5.[31] Scale is within the calibration frequency. ☑ SAT ☐ UNSAT

5.[32] Drum tare weight (lbs): 76 lbs

5.[34][E] Drum ID No.: 68559

Comments: N/C

5.[35] Performed By: Brian Gallegos / Brian Gallegos / 689570 ~~11-03-13~~ 11-04-13 BG 11-4-13
Operator (print) Signature Z # Date

7.1[4] Reviewed By: Gilbert Martinez / [signature] / 149351 11/6/13
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 2
Page 1 of 2

WCRRF DRUM CLOSURE DATA SHEET

6.[3] Drum ID No.: 68559

6.[9] Drum closure ring torque wrench information:

M&TE No.: 036245
Cal. Expiration Date: 8-05 14
Range in ft-lb: 16 82
Tolerance: ±3% cw & 6% ccw

6.[10] Torque wrench listed above is within the acceptable ranges as displayed on the calibration certificate. ☑ YES ☐ NO

Performed By: Brian Gallegos / [signature] / 68530 ~~11-03-13~~ 11-04-13 / 11-4-13 BG
Operator (print) Signature Z # Date

6.[12] Drum closure ring torque value: 60 ft-lb

6.[15] Threaded lug of the drum closure ring is not touching the jam nut and the locking ring lugs are not touching. ☑ SAT ☐ UNSAT

6.[17][A] Filtered vent and 2 in. bung torque wrench information: ☑ N/A

	Filtered Vent	2 in. Bung
M&TE No.:		
Cal. Expiration Date:		
Range in ft-lb:		
Tolerance:		

6.[17][B] Torque wrench listed above is within the acceptable ranges as displayed on the calibration certificate. ☐ YES ☐ NO ☑ N/A

Performed By: / / /
Operator (print) Signature Z # Date

6.[17][C] 2 in. bung plug torque value: _____ in-lb ☑ N/A

6.[17][D] Filtered vent torque value [120 in-lb (96 to 144 in-lb)]: _____ in-lb ☑ N/A

ATTACHMENT 2
Page 2 of 2

6.[3] Drum ID No.: 68559

6.[26] Scale File ID number: 019065

6.[27] Scale is within the calibration frequency. ☑ SAT ☐ UNSAT

6.[28] Drum gross weight: 314.4 lbs

6.[29] Drum gross weight recorded on drum lid in approximately 1/2 in. lettering: ☑ SAT ☐ UNSAT

Comments: N/C

6.[32] Performed By: BRIAN GALLEGOS / [signature] / 1267129 / 11-04-13
Operator (print) / Signature / Z # / Date

7.1[4] Reviewed By: Gilbert Martinez / [signature] / [illegible] / 11/6/13
Supervisor or designee (print) / Signature / Z # / Date

Impetus 8P78

LTP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Planning and Technical Solutions

Container ID: S813676 Container Type: STEEL DRUM (55 GAL) Gross Weight (lbs): 386.757
Total PE-Ci Activity: 1.72E+00 Equivalent Combustible PE-Ci: 6.44E-01
Total Fissile Gram Equivalents: 1.77E+01 Total Surface Dose Rate (mrem/hr): 2
EPA Code(s): D007; D008; D009
Waste Description: Nitrate salts

Remediation/Characterization Activities: Ensure EPA Codes D007, D008, and D009 are indicated on the Haz Waste Label. A minimum of 1.2 volumes of kitty litter/zeolite must be mixed with 1.0 volume of nitrate salts.

RTR pre-screen indicates ~6 gallons of free liquid throughout the drum and at the bottom.

Potential Safety Risks: Nitrate salt drums often contain free liquids and are packaged in individual plastic bags. Net weight is ~282 lbs. and generator data shows 5 items of nitrate salts with weights ranging from ~21 – 126 lbs.

Performed By: Susan Ramsey (LTP-PTS (Print)) | Susan S. Ramsey (Signature) | 100681 (Z#) | 7/30/13 (Date)

IHS Representative

Potential IHS Safety Risks: May contain lead, mercury, chromium, contain free liquid.

Performed By: Johnny Smallwood (IHS Representative (Print)) | Johnny Smallwood (Signature) | Z# | 7-31-13 (Date)

LTP Engineering

Waste container remediation compliant with applicable facility safety basis requirements: ☒ Yes ☐ No

Engineering Comments: NA

Performed By: Valerie Rhodes (LTP Engineering (Print)) | Valerie Rhodes (Signature) | 112607 (Z#) | 8/5/13 (Date)

TRU Remediation Operations

Potential Safety Risks: USE Proper PPE. And kitty litter kats.

Performed By: G Mk (TRU Operations (Print)) | G Mk (Signature) | 149255 (Z#) | 8/12/13 (Date)

Operations Manager or designee

Processing Determination: ☒ Accept ☐ Reject

OM or designee Comments: Do not push or press on waste with hands. Use hexarmour gloves during processing. Use tools when possible to handle waste.

Approved By: Jose Jerez (OM or designee (Print)) | Jose Jerez (Signature) | 221452 (Z#) | 8-12-13 (Date)

Discardable Waste Log Sheet

DrumID: 000370

Item#	ItemID	Net (kg)	Matrix	M Code	NM	MT	Auth	Remarks
1	IXFS-372-F1	36.59	NITRATE SALTS		0	52	5/11	
2	IXFS-374-F1	13.41	NITRATE SALTS		0.42	42	5/11	
3	IXFS-375-F1	11.82	NITRATE SALTS		3	52	5/11	
4	IXFS-376-F1	57.05	NITRATE SALTS		8.05	52	5/11	
5	IXFS-377-F1	9.55	NITRATE SALTS		4.77	52	5/11	
		128.42 kg						

ATTACHMENT 1
Page 1 of 1

TA-54 AREA G WASTE CONTAINER HYDROGEN/VOC SAMPLE ANALYSIS DATA SHEET

5.[1] Sample Date: 4/11/13

Container No. (5.[1])	S8/3676					
Container type sampled (e.g., 55-gal, 85-gal, 110-gal, or SWB) (5.[1])	55-Gal					
Filtered Vent Type (5.[1])	073					
Filtered Vent Unobstructed (5.[1])	☑ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT
WIPP-Approved Filtered Vent (5.[2])	☑ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT
Total CCP VOC value (< 7,000 ppm) (5.[4])	0 ppm	ppm	ppm	ppm	ppm	ppm
Hydrogen Reading (< 64,000 ppm) (5.[5])	793.74 ppm	ppm	ppm	ppm	ppm	ppm
Methane Reading (< 16,000 ppm) (5.[5])	0 ppm	ppm	ppm	ppm	ppm	ppm

N/A

5.[7] Certified CCP Technician:

Performed By: Sara Aragon (CCP (Print)), 237975 (Z#)

Reviewed By: Nathan Wales (CCP (Print)), 238866 (Z#)

Comments:

6.1[2][A] WCRRF waste container satisfies the following criteria: ☑ SAT ☐ UNSAT ☐ N/A

- Hydrogen – less than or equal to 3.2% (32,000 ppm)
- VOC – less than or equal to 7,000 ppm

6.1[3] Performed By: Susan Ramsey (Waste Handling Operator (print)), [signature] (Signature), 100681 (Z#), 5/20/13 (Date)

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\130411c\
Data File : S813676.D
Acq On : 11 Apr 2013 12:54 pm (#1); 11 Apr 2013 12:53 pm (#2)
Operator : SA
Sample :
InstName : Unit 8
Misc : 55 GALLON LFL THROUGH UNOBSTRUCTED 073 (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 11 13:03:09 2013
Quant Method : C:\msdchem\1\METHODS\Vocgas.m
Quant Title : Flammable Gas Analysis for Transportation
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
3) Fluorobenzene	3.253	96	1995253	206.00 ppm	0.00
15) Chlorobenzene-d5	5.940	117	1797716	179.50 ppm	0.00
Target Compounds					Qvalue
1) Hydrogen	5.216	GC1	196132m	793.79 ppm	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Vocgas.m Thu Apr 11 13:03:17 2013

3 PROJECT NAME WCRR SOS LOG BOOK NOTEBOOK NO.

11-4-13

0600 Assuming SOS Position [illegible] M.P.
0615 Performed shift Brief went over RWP's talked about lead windows
0710 Shift Brief Concluded. operators will have to Change out Glover
0747 started Rounds
0850 starting shipment out to Area G
0907 starting Glove Changes station 1, 2, 7 and 8
1012 shipment out Complete
1050 Glove Change complete
1057 Inside and outside Round Reviewed
1155 RP-1 notified Tech 41 obtained some broken skin of finger OC med notified operator will be transported entered Procedure EP-WCRR-RM-EOP-0309
1156 Late entrie starting shipment Into SO-69 @ 1130 Also made Change complete WCRRF In operation's @ 1127 [illegible] 11/4/13
1200 Movement In Complete Late entry started move In @ 1130 [illegible] 11/4/13
1240 DOE notified By SOM of Injury
1301 Operator returned From OC med with Restrictions. Exiting EP-WCRR-RM-EOP-0309.
1375 Starting Shipment In to WCRRF from Area G.
1340 Bagging on 5813676
1359 Bag on complete
1440 starting Rounds
11-4-13 1454 Bagging off Daughter Bagging on Another.
1615 Bagging off 1 Daughter Bagging on 5842181
1627 Shipment complete from G to WCRR
1645 Bag on/off complete.
1700 Reviewed Inside And outside Rounds
1727 Bagging off one Daughter And 2 POCs And Continuing
1810 Bag off complete
11-30-13 1815 Relieved by JOSE Tercz [illegible]
MM

No Further entries on this Page

SIGNATURE _____ DATE _____ 20
READ AND UNDERSTOOD _____ DATE _____ 20

4

PROJECT NAME WCRR SOS Log Book NOTEBOOK NO.

11/4/13

1800 Assuming SOS position for the evening, conducted turnover with off going SOS Gilbert Martinez.

1815 Starting Pre-Job brief. Off going SOS briefing status of glove Box, Parent currently bagged on has approximately 20% remaining to process. Safety topic discussed wearing the proper leather gloves for the task being performed. Discussed operator incident when putting banding on Parent when prepping. also discussed Ergo evaluation performed by IH and 40 lb. kitty litter bags, bags need to weigh around 20 pounds. Also discussed that we will be short ~~that~~ handed operators due to training that operators need to take during the day.

1820 Entering 30/30 due to lightning and thunder

1845 Concluded Pre-Job brief

1905 Continuing 30/30 for lightning

1940 30/30 no longer in effect, operators headed to the back to finish processing parent that is bagged on.

2130 Bagging off one daughter bagging on another daughter to continue processing. Operators needing to replace Hexarmour gloves, Gloves are reading above 80 mr/hr and are also curled up and cannot be moved.

2137 Starting 30/30, suspending all outside operations, inside operation continuing.

2146 Bag on/off complete.

2200 Inventory control operator explaining that he is having problems with the empty daughters that are being generated. It appears that they were moved in but not completely prepped in the WCATS system and he is having to contact waste help so that he can create them in the system to create daughters. Appears that it is a problem with the units not syncing completely when the daughter drums are prepped.

2205 30/30 lifted outside operations can resume.

0015 Operators breaking for lunch

0050 Starting 30/30 for lightning suspending outside operations.

0130 Operators returning from lunch to continue processing. 30/30 lifted outside operations can resume

0255 Outside rounds have been reviewed and signed.

0305 Bagging off one daughter and parent, Bagging on 5853771

0320 Bag on Bag off complete.

0541 Inside rounds reviewed and signed.

0615 Securing SOS position for the evening turning over to oncoming SSO Laurel Blain.

No further entries on this Page.

SIGNATURE _____ DATE _____ 20__

READ AND UNDERSTOOD _____ DATE _____ 20__

11-4-13

0600 ASSUMING WCRR OPERATION CENTER - HSMITH

0610 STARTING PRE JOB BRIEFING, DISCUSSING NEW RWP's SAFETY CONCERNS WITH GLOVEBOX WINDOWS AND STAFFING.

0705 PRE-JOB COMPLETED

0747 STARTING INSIDE ROUNDS

0801 ITEM #63 OOS PERMISSION TO PROCEED, PER CSE DOCUMENTATION

0820 INSIDE ROUNDS COMPLETED

0850 STARTING SHIPMENT OUT TO AREA G

0852 GENERATOR - OOS DUE TO PARTS & FSR IN EFFECT

0907 STARTING ~~[illegible]~~ 11/4/13 HS GLOVE CHANGES STATIONS #1,2,7,8

0914 ~~ROUND~~ 11-4-13 HS OUTSIDE ROUNDS REVIEWED BY SOS

1012 SHIPMENT COMPLETE, TRANSPORTAINER DOOR CLOSED & LATCHED

1015 VEHICLE BARRIER RESTORE

1050 GLOVE BOX GLOVE CHANGES COMPLETED

1057 OUTSIDE ROUNDS REVIEWED BY SOS

1155 RP-1 NOTIFIED OPERATION CENTER TECH 41 OBTAINED BROKEN SKIN ON FINGER, OCC MED NOTIFIED OPERATOR BEING TRANSFER FOR OBSERVATION, ENTERED PROCEDURE EP-WCRR-RM-EOP-0309 PER SOM.

1200 ~~SHIPMENT~~ 11-4-13 HS MOVEMENT INTO TA50-69 FROM TA50-197/75 IS COMPLETE

1240 DOE NOTIFIED OF INJURY TO TECH 41 BY SOM

1301 EXITING EP-WCRR-RM-EOP-0309, OPERATOR RETURNS FROM OCC. MED, COUNT NDA WITH RESTRICTIONS FROM GLOVEBOX WORK AND FOLLOW UP VISIT.

1325 STARTING SHIPMENT INTO TA50-194/75 FROM TA54, PERMISSION GRANTED TO LOWER VEHICLE ACCESS GATE.

1340 BAGGING ON S813676

1359 BAGGING ON COMPLETED

1440 STARTING INSIDE ROUNDS

1446 ITEM #63 INSIDE ROUNDS OOS, OR TO PROCEED PER CSE DOCUMENTATION. - HS ~~XXX~~ 11/4/13 CONTINUED ON NEXT PAGE HSMITH

11/4/13 CONTINUED FROM PREVIOUS PAGE.
1452 INSIDE ROUNDS COMPLETED
1454 BAGGING OFF DAUGHTER. BAGGING ON DAUGHT AND CONTINUE TO PROCESS
1515 1130 LATE ENTRY ~~[illegible]~~ HS 11/4/13 STARTING
AK 11-4-13 MOVEMENT INTO TA 50-69 HS
1613 INSIDE ROUNDS REVIEWED BY SOS
1615 BAGGING OFF DAUGHTER, BAGGING ON S842181
1627 SHIPMENT COMPLETED FROM TA-54, VEHICLE ACCESS GATES RESTORED.
1640 STARTING OUTSIDE ROUNDS
1645 BAG ON - BAG OFF COMPLETE
1657 COMPLETED OUTSIDE ROUNDS
1653 POC ON THE BOX
1700 OUTSIDE ROUNDS REVIEWED BY SOS
1727 BAGGING OFF ONE DAUGHTER AND 2 POC'S AND CONTINUING TO PROCESS
1815 BAG OFF COMPLETE
11-4-13 BEING RELIEVED BY DCO CLAYTON MULLINS - H SMITH
HS

NO FURTHER ENTRIES ON THIS PAGE H SMITH

11/4/13

1810 Assuming WCRRF Operations Center. CA

1820 Suspending outside operations, due to lightning. EP-WCRR-RM-AOP-0207.

1821 Pre-Job being conducted by the SOS. Starting with turnover from day shift. Also making sure the bag of kitty liter weighs less than the 34lb. limit.

1844 Pre-Job complete.

1940 Exited EP-WCRR-RM-AOP-0207

2130 Bagging off a daughter, bagging on another daughter.

2137 Suspending outside operations due to lightning. EP-WCRR-RM-AOP-0207.

2146 Bag off/on complete.

2207 Exited EP-WCRR-RM-AOP-0207

0001 Turning over Operations Center to Jose Jerez. CA

0001 Assuming OCO position. Jer Jey

0130 Operators returning from lunch and continuing to process parent.

0220 Starting outside rounds.

0250 Rounds Outside completed

0255 Signed off on outside rounds.

0305 Bagging off one daughter and Parent, Bagging on 5853771

0320 Bag on Bag off Complete.

0451 Operator 38 reporting that the thread bolt count being performed is different than the inspection performed on days. Thread count is 1, 1, 1.

0503 Starting inside rounds

0524 Inside rounds completed

11/5/13 0545 Securing OCO position for the evening and turning over to on comming OCO H. Smith. Jer Jey

No further entries on this page.

11-4-13 Dayshift

0600 Reviewed the SOM LOGBOOK and assumed the SOM turnover checklist and assumed the WCRR SOM position [signature]

0633 Completed attending the pre-job brief conducted by Gilbert (the ES). The safety message discussed was workplace ACTIVE SHOOTER. There is a scheduled transfer in and out of WCRRF. The shift orders Manual drum movements WCRR-SH-003-R2 and Precautions to prevent bag tears WCRR-SH-005 R0 are in effect. The ES/PM discussed the current status of the WCRRF Generator and in the event of a power loss, Operations would follow ACP-0205-Loss of Power. Personnel will perform glove box inspections and per shift turnover, stations 2, 7, 8, and possibly station 1 both pair require changing. Operators were briefed to the RWP-2012-0015

0705 Completed the daily phone call. status using the FOD activities for WCRRF

0745 Discussed with OM and procurement specialist - ordering of lead windows. Jack indicated that the specialist will obtain word today if the vendor can supply the lead windows with the tolerances indicated. Also discussed ordering thinner lead windows and doubling them up. Jack with get back to us on the method of ordering which benefits WCRRF

0850 P&T arrives for inspection and transfer out from WCRRF to AREA 6

0905 P&T completes inspection of drums and staging and loading is initiated

0907 Inside operators initiate glove changes on stations 1, 2, 7, and 8

1020 P&T exits / completes the transfer out of WCRR and backs up for the transfer to WCRR, 18 drums to be received, 22 drums were transfered out.

1050 Operations completed glove box glove changes on both pair of stations 1, 2, 7, + 8.

1100 Operators outside initiate movement in, of 3 Parent Drums.

1127 Mode Change: WCRR YARD and 50/69 Facility transition from WARM/COLD to Operations/Operations - Procedural driven work is released.

1155 Notification was made to the Operations Center and SOM that an operator in the Hi Bay AREA while prepping drums and wearing mechanical gloves had received a scrape on his right hand index finger between the 1st and second knuckle. The area is an RBA, the surface skin was removed ~ 1/4" diameter and there was no blood. EOP 0309 - injured person minor was entered, notification was made to the OM, PM, and ES/PM. The operator was transported to occ Med for a wound count. The OM will notify DOE

1204 Participated in the daily noon phone call, providing facility update to OM/SOM other

1240 OM reports DOE was notified

1301 Operator returns from occ Med, wound count is NOA - noted as First Aid and

11-4-13 Dayshift (Cont.)

1301 cont. operator is restricted from performing glove box work, he will need to keep it occluded until healed and report back to OCC MED as soon as it is healed or at 7 days. Other work can continue in WCRR YARD by operator. The OCO exited EDP-0309 Injured Person

1340 Operators inside initiated bag on of parent drum 5813676.

1359. Operators inside indicate bag on completed.

1415 Follow up was conducted with the scraped knuckle injury, ES/IH evaluated PPE and determined appropriate PPE was worn. The operator overtightened the band, which caused a release and the bands came together and the 1st finger on right hand came in contact with the L piece of metal which is utilized to cut the excess band material. Lessons Learned - do not overtighten and ES will brief their personnel at WCRRF during pre job brief.

1454 Inside Operators initiated bag off of daughter and bag on and will continue to process.

1550 Notified by DOE and RP-1 - that Fac Rep Roberto and representative Rad Fac Rep from TA-55 will perform a radiological assessment at WCRRF on 11-5-13. - during day shift - no other details available.

1615 Inside Operations report bagging off a daughter and bagging on Parent 5842181

1627 The transfer of drums from the transfer truck to the transport vehicle was completed - all TRU Drums secured. Production Inventory is initiating acceptance in WCATS.

1653 Inside operator reports POC identified on the box.

1727 Inside operators report bagging off 1 daughter and 2 POCs which will leave the parent drum 30% full.

1745 initiated shift turnover checklist for oncoming SOM. R. Axtel

1755 Completed shift turnover with Oncoming SOM R. Axtel and relieved of SOM duties by R Axtell [signature]

11-5-13

No further entries this page
[signature]

11/4/13 Nightshift

1755 Reviewed shift turnover checklist and assumed WCRR SOM. R

1806 Approved and posted Nightshift operations watchbill.

1820 Due to Lightning entered the 30/30 rule - suspended outdoor operations per EP-WCRR-RM-AOP-0207 Severe Weather.

1845 Prejob brief conducted by SOS completed. Discussed today's injured personnel and importance of wearing proper PPE - injury could have been much worse. Operators instructed not to tighten banding causing slipping of the tool. Covered active shift orders and briefed operators to status of the emergency diesel generator and how it will affect facility status should we lose AC power.

1940 Exited severe weather AOP.

2137 Entered severe weather restrictions - 30/30 rule for lightning per EP-WCRR-RM-AOP-0207. Outside ops suspended.

2146 Completed bag off of another daughter - continuing to process.

2207 Exited severe weather AOP.

11/5/13 0015 Operators breaking for lunch

0050 Due to lightning entering EP-WCRR-RM-AOP-0207 Severe Weather and 30/30 rule Outside ops suspended.

0130 Resuming operations. Exiting severe weather AOP.

0320 Completed bag off of all drums for parent # 5842181 (3 daughters & 2 POC's). Bagged on drum # 5853771.

0600 Reviewed the AM roundsheets

0623 Approved and posted the Day shift operations watchbill.

11/5/13 0630 Relieved by L. Julbert as SOM. R

US 11-5-13

No further entries this page
RM

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0125
Examination Date:	11/7/2013
Waste Container ID:	68541
Video/Audio Recorded Media Number:	LA-RTR2-13-0125 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 14
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3110
Waste Stream I.D.:	LA-MIN02-V.001
Waste Container Weights:	Gross Wt.: 156.5 kg Tare Wt.: 33.4 kg Net Wt.: 123.1 kg
Rigid Liner and Liner Vent Description:	Liner: [X] No [ ] Yes Lid: [X] No [ ] Yes Type: [ ] 30-mil [ ] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [ ] Yes [X] N/A Punctured: [X] No [ ] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [ ] No [X] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 2 layers
Volume Utilization Percentage:	70 %

CCP Radiography Data Sheet

Waste Container ID: 68541

Section 3: Container Inventory and Comments	(Detailed descriptions)
IM:	
AM:	
OM:	Scrap lead
OI:	
C:	Tape roll
R:	
XPM:	Plastic bags
OR:	
IN:	Homogeneous solids
S:	

Section 4: Packaging Material and Waste Material Parameters	
Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP): Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	15.0
Other Inorganic Materials (OI)	
Cellulosics (C):	0.1
Rubber (R):	
Plastics (waste materials) (XPM):	6.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	102.0
Soils (S):	
Total WMP Weight:	123.1

CCP Radiography Data Sheet

Waste Container ID: 68541

Section 5: RTR Summary (Questions answered "Yes" will be explained in the Comment block, except for Question 1)	
Is there observable liquid?	☐ Yes ☒ No
Is there any observable liquid in internal containers, more than 60 milliliters or 3 percent by volume, whichever is greater?	☐ Yes ☒ No
Is the total volume of observable liquid in the outermost container GREATER than 1% of the container?	☐ Yes ☒ No
Is there observable liquid in payload containers with an EPA Hazardous Waste Number of U134?	☐ Yes ☒ No
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐ Yes ☒ No
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐ Yes ☒ No
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does NOT match TRUCON Code[s])?	☐ Yes ☒ No
Is there an indication of wastes containing explosives or compressed gases?	☐ Yes ☒ No
Is there an indication of PCBs liquids?	☐ Yes ☒ No
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐ Yes ☒ No
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐ Yes ☒ No
CH or RH TRAMPAC	
Are there heat-sealed bags (unvented) GREATER than 4 liters and LESS than 390 square inches in the waste, or heat sealed bags not authorized in the RH TRUCON Code?	☐ Yes ☒ No
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐ Yes ☒ No
Are there sealed containers GREATER than 4 liters?	☐ Yes ☒ No
Are there indications of inadequate protection for heavy and/or sharp objects?	☐ Yes ☒ No

Comments: N/A

RTR Operator:

Thad Hasselstrom	Thad Hasselstrom	11/7/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	68541	Count Sequence Number:	16701
Operator:	DCLTD231\Operator		
Assay Start:	11/13/2013 2:50:34 PM		
Description 1:	2LANDA1239		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6, MT-42 Mix		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gal Drum		
Weight:	Net: 123.0 kg	Net:	123.0 kg
Container:	Volume: 208.0 l	Full:	70.0 %
Density:	0.850 kg /l		

System Configuration

Counter:	HENC #2
Count Type:	Item Count
Collimator/Geometry Setting:	All Banks on GEO - 0

Errors quoted at 1.000 sigma

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number:	16701	Batch Number:	2LANDA1239
Assay Instrument:	HENC #2	Location:	LANL TA-54
Analysis Method:	CCP-TP-063 v 15	Software Version:	NDA 2000 V.4.0
Item ID:	68541	Analysis Date:	11/13/2013

Net Weight	123000.0 g		
Pu mass	1.37E+001	+-	2.96E+000 g
TRU Alpha Activity	1.34E+001	+-	6.84E+000 Ci
TRU Activity Concentration	1.09E+005	+-	5.56E+004 nCi/g
Pu-239 Equivalent Activity	1.35E+001	+-	6.84E+000 Ci
Pu-239 FGE	1.30E+001	+-	2.95E+000 g
Decay heat	4.44E-001	+-	2.27E-001 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	9.56E-007
U233	<LLD	<LLD	0.00E+000	9.66E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	3.18E-006
NP237	2.52E-001	1.77E-004	3.68E-005	5.33E-006
PU238	1.25E-003	2.14E-002	5.77E-003	1.07E-003
U238	<LLD	<LLD	0.00E+000	2.76E-005
PU239	1.29E+001	7.97E-001	1.83E-001	4.00E-002
PU240	8.22E-001	1.87E-001	5.03E-002	9.36E-003
AM241	3.62E+000	1.24E+001	6.84E+000	8.00E-002
PU241	1.57E-002	1.62E+000	4.36E-001	8.12E-002
PU242	2.74E-003	1.08E-005	2.92E-006	0.00E+000
AM243	5.27E-003	1.05E-003	2.19E-004	7.34E-006

Errors quoted at 1.000 sigma

Operator: [signature] Date: 11-15-13

ITR: [signature] Date: 11/18/13

Automated Independent Technical Review

Count Sequence Number: 16701 Batch Number: 2LANDA1239
Counter ID: HENC #2
Container ID: 68541
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 11/13/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis Add-a-Source WARNINGS: Add-a-Source correction factor is less than n-sigma * the correction factor error.	OK
Section 2 - Passive Neutron Analysis Analysis Status: No errors. Ones Rate Analysis complete with warnings. - Error calculating the Ones Rate Pu-240 Effective MDA.	OK Not data affecting.
Section 3 - Data Combiner Analysis Override enabled; Gamma data specified as input. Results taken from Quantitative Gamma data. Results comparison test passed.	Results taken from quantitative gamma data.
Section 4 - MGA Analysis Results are marked as invalid.	Isotopic analysis failed. AK isotopics applied. The AK information utilized was provided by Steve Schafer, AKE, and consists of data from CCP-AK-LANL-006, AK Source Document M237. MT-52.
Section 5 - Gamma Analysis Analysis Status: No errors.	OK
Miscellaneous	No additional nuclides contributing to 95% of the radiological hazard identified.

Expert Review by: [signature] Date: 11/15/13

Attachment 4 – Flammable Gas Analysis Form

SCO 1049 Add 4 - Win XP SP3/Win 7 SP1
Excel 2003/2007/2010

Waste Container ID: **68541**

BDR Number: **LA13FG2118**

Sampling Date: **11/21/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	320.11	
74-82-8	Methane	142.14	U
67-56-1	Methanol	35.23	U
60-29-7	Ethyl Ether	0.96	U
75-35-4	1,1-Dichloroethylene	6.38	U
67-64-1	Acetone	18.08	U
75-34-3	1,1-Dichloroethane	4.08	U
156-59-2	cis-1,2-Dichloroethene	0.76	U
78-93-3	Methyl ethyl ketone	11.73	U
110-82-7	Cyclohexane	5.10	U
71-43-2	Benzene	2.69	
107-06-2	1,2-Dichloroethane	3.66	U
71-36-3	1-Butanol	1.84	U
108-10-1	Methyl isobutyl ketone	9.82	U
108-88-3	Toluene	8.02	U
108-90-7	Chlorobenzene	4.10	U
100-41-4	Ethylbenzene	3.57	U
108-38-3/106-42-3	m- and p-Xylene	1.92	U
95-47-6	o-Xylene	2.10	U
108-67-8	1,3,5-Trimethylbenzene	1.96	U
95-63-6	1,2,4-Trimethylbenzene	2.13	U

CAS Number	IDENTIFIED TIC COMPOUND	Est. Amount ppmv
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0125
Examination Date:	11/7/2013
Waste Container ID:	68559
Video/Audio Recorded Media Number:	LA-RTR2-13-0125 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 14
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3110
Waste Stream I.D.:	LA-MIN02-V.001
Waste Container Weights:	Gross Wt.: 144.0 kg Tare Wt.: 33.4 kg Net Wt.: 110.6 kg
Rigid Liner and Liner Vent Description:	Liner: [X] No [ ] Yes Lid: [X] No [ ] Yes Type: [ ] 30-mil [ ] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [ ] Yes [X] N/A Punctured: [X] No [ ] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [ ] No [X] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 2 layers
Volume Utilization Percentage:	80 %

CCP Radiography Data Sheet

Waste Container ID: 68559

Section 3: Container Inventory and Comments	(Detailed descriptions)
IM:	
AM:	
OM:	
OI:	
C:	
R:	Leaded rubber gloves
XPM:	Plastic bags, liner lid
OR:	
IN:	Homogeneous solids
S:	

Section 4: Packaging Material and Waste Material Parameters	
Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP): Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	5.0
Plastics (waste materials) (XPM):	7.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	98.6
Soils (S):	
Total WMP Weight:	110.6

CCP Radiography Data Sheet

Waste Container ID: 68559

Section 5: RTR Summary (Questions answered "Yes" will be explained in the Comment block except for Question 1)	
Is there observable liquid?	☐ Yes ☒ No
Is there any observable liquid in internal containers, more than 60 milliliters or 3 percent by volume, whichever is greater?	☐ Yes ☒ No
Is the total volume of observable liquid in the outermost container GREATER than 1% of the container?	☐ Yes ☒ No
Is there observable liquid in payload containers with an EPA Hazardous Waste Number of U134?	☐ Yes ☒ No
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐ Yes ☒ No
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐ Yes ☒ No
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does NOT match TRUCON Code[s])?	☐ Yes ☒ No
Is there an indication of wastes containing explosives or compressed gases?	☐ Yes ☒ No
Is there an indication of PCBs liquids?	☐ Yes ☒ No
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐ Yes ☒ No
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐ Yes ☒ No
CH or RH TRAMPAC	
Are there heat-sealed bags (unvented) GREATER than 4 liters and LESS than 390 square inches in the waste, or heat sealed bags not authorized in the RH TRUCON Code?	☐ Yes ☒ No
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐ Yes ☒ No
Are there sealed containers GREATER than 4 liters?	☐ Yes ☒ No
Are there indications of inadequate protection for heavy and/or sharp objects?	☐ Yes ☒ No

Comments: N/A

RTR Operator:

Thad Hasselstrom	Thad Hasselstrom	11/7/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	68559	Count Sequence Number:	23808
Operator:	D3PW2DK1\operator		
Assay Start:	11/8/2013 10:20:02 AM		
Description 1:	1LANDA1862		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6, MT-42		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 111.0 kg	Net:	111.0 kg
Container:	Volume: 208.0 l	Full:	80.0 %
Density:	0.670 kg /l		

System Configuration

Counter:	MCS HENC #1
Count Type:	Item Count
Collimator/Geometry Setting:	All Banks On (GE - 0

Errors quoted at 1.000 sigma

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number:	23808	Batch Number:	1LANDA1862
Assay Instrument:	MCS HENC #1	Location:	LANL TA-54
Analysis Method:	CCP-TP-063 v 15	Software Version:	NDA 2000 V.4.0
Item ID:	68559	Analysis Date:	11/8/2013

Net Weight	111000.0 g		
Pu mass	4.83E+000	+-	9.59E-001 g
TRU Alpha Activity	5.78E+000	+-	2.94E+000 Ci
TRU Activity Concentration	5.21E+004	+-	2.64E+004 nCi/g
Pu-239 Equivalent Activity	5.79E+000	+-	2.94E+000 Ci
Pu-239 FGE	4.49E+000	+-	9.56E-001 g
Decay heat	1.91E-001	+-	9.76E-002 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	8.24E-007
U233	<LLD	<LLD	0.00E+000	5.99E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	1.80E-006
NP237	8.24E-002	5.81E-005	1.07E-005	6.18E-006
PU238	1.15E-003	1.96E-002	5.06E-003	1.84E-003
U238	<LLD	<LLD	0.00E+000	2.03E-005
PU239	4.44E+000	2.75E-001	5.93E-002	2.57E-002
PU240	2.90E-001	6.58E-002	1.70E-002	6.16E-003
AM241	1.58E+000	5.42E+000	2.94E+000	7.15E-002
PU241	6.65E-003	6.85E-001	1.77E-001	6.41E-002
PU242	9.58E-002	3.78E-004	9.69E-005	0.00E+000

Errors quoted at 1.000 sigma

Operator: Jan Barton Date: 11/11/13

ITR: Martha Gr Date: 11-12-13

Automated Independent Technical Review

Count Sequence Number: 23808
Batch Number: 1LANDA1862
Counter ID: MCS HENC #1
Container ID: 68559
Waste Matrix Code: Homo Sol. S3000
Count Type:
Sequence Type:
Assay Date: 11/8/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis No Add-a-Source warnings.	Ok
Section 2 - Passive Neutron Analysis Analysis Status: No errors. Ones Rate Analysis complete with warnings. - Error calculating the Ones Rate Pu-240 Effective MDA.	Ok Not data affecting.
Section 3 - Data Combiner Analysis Override enabled; Gamma data specified as input. Results taken from Quantitative Gamma data. Results comparison test passed.	Results taken from quantitative gamma data.
Section 4 - MGA Analysis Results are marked as invalid.	MGA analysis failed. AK isotopics applied. The AK information utilized was provided by Steve Schafer, AKE, and consists of data from CCP-AK-LANL-006, AK Source Document M237. MT-52,42.
Section 5 - Gamma Analysis Analysis Status: No errors. Spectrum Validity Check engine has suggested data review.	Ok After EA review, spectrum valid.
Miscellaneous	No additional nuclides contributing to 95% of the radiological hazard identified.

Expert Review by: Sheri Chamberlin Date: 11-11-13

Waste Container ID: **68559**

BDR Number: **LA13FG2119**

Sampling Date: **11/22/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	158.26	
74-82-8	Methane	142.14	U
67-56-1	Methanol	35.23	U
60-29-7	Ethyl Ether	0.96	U
75-35-4	1,1-Dichloroethylene	6.38	U
67-64-1	Acetone	18.08	U
75-34-3	1,1-Dichloroethane	4.08	U
156-59-2	cis-1,2-Dichloroethene	0.76	U
78-93-3	Methyl ethyl ketone	11.73	U
110-82-7	Cyclohexane	5.10	U
71-43-2	Benzene	1.77	U
107-06-2	1,2-Dichloroethane	3.66	U
71-36-3	1-Butanol	1.84	U
108-10-1	Methyl isobutyl ketone	9.82	U
108-88-3	Toluene	8.02	U
108-90-7	Chlorobenzene	4.10	U
100-41-4	Ethylbenzene	3.57	U
108-38-3/106-42-3	m- and p-Xylene	1.92	U
95-47-6	o-Xylene	2.10	U
108-67-8	1,3,5-Trimethylbenzene	1.96	U
95-63-6	1,2,4-Trimethylbenzene	2.13	U

CAS Number	IDENTIFIED TIC COMPOUND	Est. Amount ppmv
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

InstName : Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\131122c\
Data File : 68559.D
Acq On : 22 Nov 2013 12:51 pm (#1); 22-Nov-13, 12:50:40 (#2)
Operator : SA
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Nov 22 12:59:24 2013
Quant Method : C:\msdchem\1\METHODS\VOCGAS.M
Quant Title : Flammable Gas Analysis
QLast Update : Mon Aug 26 13:12:56 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
3) Fluorobenzene	3.578	96	4368339	205.75 ppmv	0.06
15) Chlorobenzene-d5	5.878	117	3458402	177.50 ppmv	0.02
Target Compounds					Qvalue
1) Hydrogen	1.619	GC1	1190m	158.26 ppmv	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

S814859

S814859

Container Profile 750032

File Options Reports Help

S814859

750032	TBD-TRU	T-TTRU-TEMP	Active	Decommissioned

- General Information
- Weights/Volumes
- Location
- Account Information
- Waste Material Parameters
- Layers of Confinement
- Prohibited Items
- EPA Codes
- UHC
- Radioassay
- Radiological Survey
- Payload Preparation
- Container Closure
- Materials Added
- TRU Information
- TRU Information (TSDF)
- Radiological Calculations
- Shipping Description
- Site Treatment Plan
- Pending Tasks
- Genealogy
- Container Tags
- Task History
- Documentation
- Comment Log
- Edit Log

Genealogy

S814859

S814859
- 93966 – EMPTY
- 93965
- 93962

Task History

Transfer Details

Transfer Amount	Transfer Unit	Item	Measured Weight	Measured Weig...
49.99947775	%			

Working Copy
Date: 7-3-13

ATTACHMENT 1
Page 1 of 4

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: 5814859

6.2[4] Date Processed: 7-3-13

4.1[6][B] Processing Activity (EP-DIV-AP-0107):
☐ > 190 mrem/hr ☑ PID ☐ Split ☐ Repack

4.1[6][B] Prohibited Items:
☑ Sealed Containers > 4L ☑ Liquids ☐ Pressurized Containers ☐ N/A

4.1[6][B] Parent Waste Container RCRA Designations: D007, D008, D009

4.1[7] Activity Hazard Classification based on Anticipated Extremity Radiation Dose Rate:
☑ Moderate (≤ 10 rem/hr) ☐ High/Complex (> 10 rem/hr)

4.3[1]/4.3[2] ($) TA-50-69 is in the OPERATION or WARM STANDBY MODE (TSR 1.2) ☑ OPERATIONS ☐ WARM STANDBY ☐ N/A

4.3[4][B] Platform Scale: Equipment No.: 019065
Cal. Due Date: 7-31-13

4.3[5][B] ($) Three 1-Liter containers carbon spheroids or MET-L-X in WCG: (SAC 5.10.1.7.1) ☑ YES ☐ NO ☐ N/A

4.3[6] ($) Stationary Fire Watch has been established:
(> 300 PE-Ci Equivalent Combustible)
(SAC 5.10.1.7.2) N/A
(Initial and Date)

4.3[7 [A] Parent Waste Container degraded, loss of integrity, or weighs greater than 468 lb but less than or equal to 624 lb:
☐ YES ☑ NO ☐ N/A

4.3[8][D] WCG glove and bag-in/bag-out bag inspection: ☑ SAT ☐ UNSAT ☐ N/A

Performed By: Gerald Espinoza / [signature] / 1237720 / 7-3-13
Waste Handling Tech (print) Signature Z # Date

ATTACHMENT 1
Page 2 of 4

4.1[6][B]	Parent Waste Container No.: S814859	
5.[18]	Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable:	414.4 lb
6.2[5][A]	Parent Drum Lead Blanket Weight (lb):	Ø lb
6.2[5][B]/ 6.2[6]	Total Parent Drum Weight (lb)	414.4 lb
6.2[7]	(S) Total Parent Drum Weight < 624 lb (SR 4.5.1):	☑ SAT ☐ UNSAT
6.2[28]	Approval to leave a parent drum attached to the WCG overnight:	

N/A / / /
EWMO-FOD (print) Signature Z # Date

ATTACHMENT 1
Page 3 of 4

4.1[6][B] Parent Waste Container No.: S814859

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	93962	93965		
10.1[4]	Daughter Drum Filter No.	KM-512	KM-522	N	A
10.1[4]	Daughter Drum Bag Filter No.	L-6823	L-6889		
10.1[4]	Daughter Drum Purchase Order No.	501103	501103		
10.1[13][C]	WCG Fire Watch Stationed		☐ YES	☐ NO	☑ N/A
10.1[14][C][d]3/11.1[3]	WCG Fire Watch Secured		☐ YES	☐ NO	☑ N/A
10.2[4]	POC bag-on bag: Manufacturer				
	Model No.				
	Serial No.				
	Date of Manufacture				
10.2[5]	POC ID No				
10.2[7][B]/10.2[6]	POC Item Description		N	A	
10.2[13]	POC Assembly closed per Manufacturer's instructions. (Initial and Z#)				
10.2[14]	POC Assembly Gross Weight (lb)				
10.2[15]	POC Rad. Survey Results (mrem/hr)				
10.3[3][A]	Approx. Containerized Liquid Vol./Units				
10.3[5][A]	Free Liquid Volume/Units				
10.3[7][A]	Opaque/Non-penetrable Item Description:	lead shielding	Lead shielding		
10.3[9][A]	PCB-contaminated Waste Description	N	A		
10.3[9][B]	PCB Item ID No.			N	A
10.3[10]	Remaining Waste Description	SEE COMMENTS	SEE COMMENTS		
10.3[13]/10.4[10]/ 10.5[4]/10.6[10]	Daughter Drum % Full (%)	70%	80%		
10.5[3]/10.6[2]	Description Waste Added During Processing	PLASTIC	plastic		

ATTACHMENT 1
Page 4 of 4

4.1[6][B] Parent Waste Container No.: 5814859

Comments: Nitrate Salts, plastic, lead shielding

11.1[1] Performed By Gerald Espinoza / [signature] / 1237720 / 7.3.13
Waste Handling Tech (print) Signature Z. # Date

11.1[7] Reviewed By: Clayton Mullins / [signature] / 1340092 / 7/4/13 0149
SOS or designee (print) Signature Z. # Date Time

Working Copy
Date: 6-28-13

ATTACHMENT 2
Page 1 of 1

WCRRF OVERPACK DRUM ASSEMBLY PREPARATION DATA SHEET

5.[3] Overpack drum information:

Purchase Order No.: 501323
Lot No.: 0238025
Manufacture Date: 13

5.[8] Overpack filtered vent and 2-in. bung torque wrench information:

	Filtered Vent	2-in. Bung
M&TE No.:	1002160	0383169
Cal. Expiration Date:	12.18.13	12.18.13
Tolerance:	40-200	10-80

Overpack filtered vent information:

Manufacturer: NUCFIL
Model No.: 013
Serial No.: JL-1978
Manufacture Date: 10-11

5.[9] Torque wrench listed above is within the acceptable ranges as displayed on the calibration certificate. ☑ Yes ☐ No

5. [11] Performed By: Gerald Espinosa / [signature] / 287720 / 6.28.13
Waste Handling Technician (print) Signature Z # Date

5.[15] Filtered Vent torque value [120 in-lb (96 to 144 in-lb)]: 120 in-lb

5. [18] 2-in. bung plug torque value: 30 ft-lb

Comments: N/C

8.1[1] Performed By: Gerald Espinosa / [signature] / 287720 / 6.28.13
Waste Handling Technician (print) Signature Z # Date

8.1[6] Reviewed By: Clayton Mullins / [signature] / 240092 / 7/4/13
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 5
Page 1 of 1

7-3-13 JL

WCRRF OVERPACK DRUM CLOSURE DATA SHEET

7.[18] Overpack Drum Unique Identifier No.: 939666

7.[24] Overpack drum closure ring torque wrench information:

M&TE No.: 038373
Cal. Expiration Date: 9-11-13
Range in ft-lb: 10-80
Tolerance: ±3% cw ±6% ccw

7.[25] Torque wrench listed above is within the acceptable ranges as displayed on the calibration certificate. ☑ Yes ☐ No

Performed By: Gerald Espinoza / [signature] / 1237120 / 7-3-13
Waste Handling Technician (print) Signature Z # Date

7.[27] Overpack drum closure ring torque value: 60 ft-lb

7.[30] Threaded lug of the drum closure ring is not touching the jam nut and the locking ring lugs are not touching. ☑ SAT ☐ UNSAT

7.[35][B] Platform scale serial number: 019065
Platform scale calibration expiration date: 7-31-13

7.[35][D] 85-gal overpack drum gross weight (lb): 160.8 lb

Comments: N/A

8.1[1] Performed By: Gerald Espinoza / [signature] / 1237120 / 7-3-13
Waste Handling Technician (print) Signature Z # Date

8.1[7] Reviewed By: Clayton Mullins / [signature] / 1240091 / 7/4/13
Supervisor or designee (print) Signature Z # Date

Attachment 1. Checklist for the preparation of a new 55-Gallon Drum Assembly

Drum ID#: 93962

1. Drum/Lid Assembly

- [x] Remove and discard ¾" bung from lid
- [x] Remove Lid
- [x] Inspect drum, lid, and gasket, ring bolt and nut, chines, and paint
  NOTE: Reject damaged drum/lid assembly
- [x] Place 2" duct tape on vertical seam on interior of drum

RECORD drum information:

Purchase Request #: 501103
Lot #: 02347605
Date of Manufacture: 13

2. Drum Liner Bag/Filter Assembly:

- [x] Place yellow vinyl tape, with smear centered on tape, over filter
- [x] Fill bag with air from compressed air source
- [x] Inspect bag for damage, cuts, or leaks by looking, listening, and feeling
  NOTE: Reject or repair damaged, cut, or leaking bags
- [x] Stretch bag's bungee cord
- [x] Inspect bungee cord
  NOTE: Reject bag if bungee cord is broken or damaged

RECORD bag filter information:

Manufacturer: B&P
Model #: 3CBV1.5-25PVC
Serial #: L682J
Date of Manufacture: 1/13

3. Cardboard Liner/Plastic Liner Drum Liner Bag/Filter Assembly:

- [x] Inspect cardboard liner/plastic liner (circle type of liner used)
  NOTE: Reject any damaged liners
- [x] Place cardboard/plastic liner into drum liner bag/filter assembly
- [x] Line up filter with drum seam
- [x] Place liner/bag/filter assembly into drum
- [x] Roll excess liner bag into cardboard liner/plastic liner

4. Install Lid/Drum Filter

- [x] Place lid and ring onto drum
- [x] Tighten ring sufficiently to simply hold lid in place
- [x] Torque 2" bung plug
- [x] Apply sealant to filter threads, screw in ¾" bung hole, and torque
- [x] Place this Attachment and blank Attachment 2 into a protective sleeve and tape to top of drum

RECORD drum filter information:

Manufacturer: NULFIL
Model #: 619DS
Serial #: KM512
Date of Manufacture: 11/12

RECORD torque wrench information:

Filter torque wrench:	100216 GE	Jam Nut / Bung torque wrench:	0383165
M&TE ID #:	~~100216~~	M&TE ID #:	
Cal Expiration Date:	12·18·13	Cal Expiration Date:	12·18·13
Range (ft-lbs or in-lbs):	40-200	Range (ft-lbs or in-lbs):	10-80
Tolerance:	±4% out of cal	Tolerance:	±3% out of cal

Torque wrenches listed above are within the acceptable ranges as displayed on the calibration certificate.
[x] Yes [ ] No
Print Name: Gerald Espinoza Signature: [signature] #: 237720

5. Weigh Drum Assembly

RECORD weight information
Tare witght (lbs) 764
File ID #: 019065

- [x] Write the tare weight on drum using permanent marker

6. Label Drum Assembly

- [x] Place 1 barcode drum ID label to the left of the drum seam, ~6" from drum bottom
- [x] Place 1 barcode drum ID label in the center of the drum lid

RECORD drum ID# at the top of Attachments 1 and 2

Operator Print: MICHAEL MONTOYA Operator Sign: [signature] Z#: 191752 Date: 6/28/13
Verifier Print: Gerald Espinoza Verifier Sign: [signature] Z#: 237720 Date: 7·3·13

Attachment 2. Checklist for the Closing of a 55-Gallon Drum Assembly

DRUM ID#: 939602

1. LID INSTALLATION

NOTE: Install lid per manufacturer's instructions

✓ Mount lid with filter directly over drum seam.

✓ Install ring with bolt positioned downward and directly over drum seam.

✓ Engage bolt and nut and torque per manufactures instructions

NOTE Seal the ring while tightening using a rubber hammer or dead-blow mallet or a drum lid press.

✓ Tighten jam nut.

Record torque wrench information:

MT&E #: 038373

Cal expiration date: 9.11.13

Range/ Value (ft-lbs): 10-80

--- Tolerance ± 3% cw ± 6% ccw

2. DRUM LABELING

NOTE: Do not cover the drum seam with any labels.

✓ Place two barcode drum ID labels ~6" from the bottom of the drum ~120° from previously placed ID label.

✓ Place one barcode drum ID label to the right of drum seam between the top two rolling hoops.

✓ Place one yellow radioactive waste label between the top two rolling hoops

✓ Place one yellow radioactive waste label in the center of the drum lid.

RCRA Label:

✓ Place one blue NON-RCRA Regulated Waste label between the top two rolling hoops.

OR

✓ Place one yellow HAZARDOUS Waste label between the top two rolling hoops left of the drum seam. (Ensure EPA waste number and accumulation start date are documented.)

NOTE: Check only one of the above two boxes.

3. WEIGH DRUM ASSEMBLY

Record weight information:

Gross Weight(lbs) 245.6

Scale ID#: 019065

✓ Using a permanent marker, write the gross weight on the drum lid.

4. FINALIZE DOCUMENTATION

✓ Have RCT monitor drum prior to moving to storage area.

✓ Place attachment 1 and 2 and HMPT Tag into a protective sleeve.

✓ Complete TWSR.

Operator Print/Sign: Gerardel Espinosa Date 7-3-13

Verifier Print/Sign: [illegible] Date: 7-3-13

Attachment 1. Checklist for the preparation of a new 55-Gallon Drum Assembly

Drum ID#: 939605

1. Drum/Lid Assembly

- ☑ Remove and discard ¾" bung from lid
- ☑ Remove Lid
- ☑ Inspect drum, lid, and gasket, ring bolt and nut, chines, and paint
  NOTE: Reject damaged drum/lid assembly
- ☑ Place 2" duct tape on vertical seam on interior of drum

RECORD drum information:
Purchase Request #: 501103
Lot #: 0274765
Date of Manufacture: 12

2. Drum Liner Bag/Filter Assembly:

- ☑ Place yellow vinyl tape, with smear centered on tape, over filter
- ☑ Fill bag with air from compressed air source
- ☑ Inspect bag for damage, cuts, or leaks by looking, listening, and feeling
  NOTE: Reject or repair damaged, cut, or leaking bags
- ☑ Stretch bag's bungee cord
- ☑ Inspect bungee cord
  NOTE: Reject bag if bungee cord is broken or damaged

RECORD bag filter information:
Manufacturer: Bo 10
Model #: 30PK 1.5 25 BC
Serial #: L-6885
Date of Manufacture: 1-13

3. Cardboard Liner/Plastic Liner Drum Liner Bag/Filter Assembly:

- ☑ Inspect cardboard liner/plastic liner (circle type of liner used)
  NOTE: Reject any damaged liners
- ☑ Place cardboard/plastic liner into drum liner bag/filter assembly
- ☑ Line up filter with drum seam
- ☑ Place liner/bag/filter assembly into drum
- ☑ Roll excess liner bag into cardboard liner/plastic liner

4. Install Lid/Drum Filter

- ☑ Place lid and ring onto drum
- ☑ Tighten ring sufficiently to simply hold lid in place
- ☑ Torque 2" bung plug
- ☑ Apply sealant to filter threads, screw in ¾" bung hole, and torque
- ☑ Place this Attachment and blank Attachment 2 into a protective sleeve and tape to top of drum

RECORD drum filter information:
Manufacturer: MULFIL
Model #: 019 DS
Serial #: Km 823
Date of Manufacture: 11/12

RECORD torque wrench information:

Filter torque wrench:		Jam Nut / Bung torque wrench:	
M&TE ID #:	100216	M&TE ID #:	038364
Cal Expiration Date:	12-18-13	Cal Expiration Date:	12-18-13
Range (ft-lbs or in-lbs):	40 - 200	Range (ft-lbs or in-lbs):	10 - 80
Tolerance:	+/- 4% or 7.6 cw	Tolerance:	+/- 3% or 4.8 cw

Torque wrenches listed above are within the acceptable ranges as displayed on the calibration certificate.
☑ Yes ☐ No
Print Name: Ian Marquez Signature: [signature] ZI#: 276708

5. Weigh Drum Assembly

RECORD weight information
Tare wtght (lbs) 76.4
File ID #: 019065

- ☑ Write the tare weight on drum using permanent marker

6. Label Drum Assembly

- ☑ Place 1 barcode drum ID label to the left of the drum seam, ~6" from drum bottom
- ☑ Place 1 barcode drum ID label in the center of the drum lid

RECORD drum ID# at the top of Attachments 1 and 2

Operator Print: IAN MARQUEZ Operator Sign: [signature] ZI#: 276708 Date: 7-1-13
Verifier Print: Gerald Espinoza Verifier Sign: [signature] ZI#: 237720 Date: 7-3-13

Attachment 2. Checklist for the Closing of a 55-Gallon Drum Assembly

DRUM ID#: 93965

1. LID INSTALLATION

NOTE: Install lid per manufacturer's instructions

✓Mount lid with filter directly over drum seam.

✓Install ring with bolt positioned downward and directly over drum seam.

✓Engage bolt and nut and torque per manufactures instructions.

NOTE Seal the ring while tightening using a rubber hammer or dead-blow mallet or a drum lid press.

✓Tighten jam nut.

Record torque wrench information:

MT&E # : D38373

Cal expiration date: 9-11-13

Range/ Value (ft-lbs): 10-80

Tolerance ±3% cw ±6% ccw

2. DRUM LABELING

NOTE: Do not cover the drum seam with any labels.

✓Place two barcode drum ID labels ~6" from the bottom of the drum ~120° from previously placed ID label.

✓Place one barcode drum ID label to the right of drum seam between the top two rolling hoops.

✓Place one yellow radioactive waste label between the top two rolling hoops

✓Place one yellow radioactive waste label in the center of the drum lid.

RCRA Label:

N/A Place one blue NON-RCRA Regulated Waste label between the top two rolling hoops.

OR

✓Place one yellow HAZARDOUS Waste label between the top two rolling hoops left of the drum seam. (Ensure EPA waste number and accumulation start date are documented.)

NOTE: Check only one of the above two boxes.

3. WEIGH DRUM ASSEMBLY

Record weight information:

Gross Weight(lbs): 344.2

Scale ID#: 019065

✓Using a permanent marker, write the gross weight on the drum lid.

4. FINALIZE DOCUMENTATION

✓Have RCT monitor drum prior to moving to storage area.

✓Place attachment 1 and 2 and HMPT Tag into a protective sleeve.

✓Complete TWSR.

Operator Print/Sign: Gerardo Espinoza Date: 7-3-13

Verifier Print/Sign: [illegible] Date: 7-3-13

1971 97

WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Production Control

Container ID: S814859 Container Type: 55-GAL Gross Weight (lbs): 415
Inner Seal #: 008933 Filter Prefix: None Filter Serial #: None
AK Waste Stream: LA-CIN01.001 Certified RTR BDR: LA-HERTR-12-0050
TWSR Comments: None
Total PE-Ci Activity: 1.37E+00 Equivalent Combustible PE-Ci: 5.15E-01 AM-241 PE-Ci: 1.64E-01
Total Fissile Gram Equivalents: 13.1 Total Surface Dose Rate (mrem/hr): 1
EPA Code(s): D008, D007, D009 JL 10/17/12
NCR RTR/NDA Comment: LANL: remediate-Prohibited Item
RTR Pre-Screen Date: 12/7/2006 Comment: Impenetrable Obj, Liner Not Punctured
Certified RTR Comment: >1% liquid, Sealed Container 4L Unvented 90mil Liner
Prohibited Items: ✓ Sealed > 4 Liters ✓ Liquid ☐ Pressurized Container ✓ Impenetrable Item ✓ Other
Security Determination: ✓ Green ☐ Yellow
Remediation Determination: ☐ VE ☑ PID ☐ Split ☐ Repack
Estimated 30-cm Dose Rate (mrem/hr): ☐ <100 ☑ >100 and <1,000 ☐ >1,000 and <10,000 ☐ >10,000
TRUCON Code: LA125M Production Control Comments: Nitrate Salts apply mixture & EPA codes

Performed By: Julie Gallegos (Production Control (Print)) / Julie Gallegos (Signature) / 176905 (Z Number) / 10/15/12 (Date)

WDP Engineering

Chemicals Present (e.g., pyrophorics, acids, bases, shock sensitive, organic liquids, peroxides, crown ethers): ☐ Yes ☒ No ☐ Unknown
Processing Determination: ☒ Accept ☐ Reject
WDP Engineering Comments: Nitrate Salts
Net Wt: 355#. Generator info shows 10 items of nitrate salts, weighing from ~7# to ~49lb. RTR BDR shows lead shielding, plastic bags + homogenous solids. It also identifies liquids + >4L sealed container. RTR PS also reported impenetrable item(s) and unpuncture liner. Nitrate salts commonly contain undocumented liquids and carry waste codes for chromium lead + mercury. No chemicals identified.

May require RWP for >100 + <1000 mrem/hr

Performed By: Valerie Rhodes (WDP Engineering (Print)) / Valerie Rhodes (Signature) / 112609 (Z Number) / 10/17/12 (Date)

TRU Remediation Operations

✓ Waste Container Information Evaluated ☐ Less Than 170 lbs ☐ RTR Video Available
Other Specific Safety Concerns: Do not push or press on waste with hands. Use Kevlar glove during processing.
Processing Determination: ☑ Accept ☐ Reject
TRU Remediation Operations Comments: USE Proper PPE, Ensure proper ratio of kitty litter is used in accordance with the procedure.
Performed By: G Martinez (TRU Remediation Operations (Print)) / G Martinez (Signature) / 1149235 (Z Number) / 5/18/13 (Date)
Joe Jerez (Signature) / 221452 / 5/18/13
IHS Review Jay Andrews CSP, contains mercury, chromium, lead
10/25/12

Discardable Waste Log Sheet

DrumID: 008933

Item#	ItemID	Net (kg)	Matrix	M Code	NM	MT	Auth	Remarks
1	IXFS-233-F1	11.4	NITRATE SALTS		1.67	54	5/11	
2	IXFS-234-F1	15	NITRATE SALTS		2.6	52	5/11	
3	IXFS-235-F1	22.3	NITRATE SALTS		1.67	52	5/11	
4	IXFS-236-F1	2.26	NITRATE SALTS		1.05	52	5/11	
5	IXFS-238	7.3	NITRATE SALTS		2.2	54	5/11	
6	IXFS-239-F1	3.86	NITRATE SALTS		0.41	52	5/11	
7	IXFS-240-F1	13.18	NITRATE SALTS		2	52	5/11	
8	IXFS-241-F1	17.27	NITRATE SALTS		0.95	52	5/11	
9	IXFS-242-F1	14.77	NITRATE SALTS		1.4	52	5/11	
10	IXFS-243-F1	3.41	NITRATE SALTS		0.2	52	5/11	
		110.75 kg						

Attachment 2 – CCP Radiography Data Sheet

Section 1: General Information	
☑ RTR Examination ☐ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-HERTR-12-0050
Examination Date:	06/22/12
Waste Container ID:	S814859
Video/Audio Recorded Media Number:	LA-HERTR-12-0050 G
Procedure and Revision No.:	CCP-TP-053 Rev. 11
NCR(s) associated with the container? (e.g., Prohibited Items)	☐ NO ☑ YES NCR No.: NCR-LANL-1059-12 NCR No.: NCR-LANL-1152-12

Section 2: Waste Container Data	
Container Type:	55 GALLON DRUM
TRUCON Code:	LA226
Waste Matrix Code:	S3150
Waste Stream I.D.:	LA-CIN01.001
Waste Container Weights:	Gross Wt: 185.5 kg. Tare Wt: 35.1 kg. Net Wt: 150.4 kg.
Rigid Liner and Liner Vent Description: (e.g., "90 mil liner – NO Lid" or "NO Liner")	90mil Liner - Unvented
Number of Layers of Confinement:	Appears to be 1 layer
Volume Utilization Percentage:	45 %

Attachment 2 – CCP Radiography Data Sheet (Continued)

Waste Container ID: 8814859

Section 3: Container Inventory and Comments (Detailed description)
Lead shielding
Plastic bags
Homogeneous solid material

Section 4: Packaging Material and Waste Material Parameters	
Packaging Material:	Estimated Weight (kg)
Steel (ST):	27.7
Plastics (PP): 90mil Liner and Lid	7.4
Others:	0.0 as 6/26/12
Total Packaging Weight:	35.1
Waste Material Parameter:	Estimated Weight (kg)
Iron-based Metal / Alloys (IM):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	18.0
Other Inorganic Materials (OI):	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	4.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	128.4
Soils (S):	
Total WMP Weight:	150.4

Attachment 2 – CCP Radiography Data Sheet (Continued)

Page 3 of 3

Waste Container ID: 8814659

Section 5: RTR Summary (Questions answered YES will be evaluated by the Contractor and Project Office)	Yes	No
Is there observable liquid?	☑	☐
Is there any observable liquid in internal containers, more than 60 milliliters or 3 percent by volume, whichever is greater?	☐	☑
Is the total volume of observable liquid in the outermost container **GREATER** than 1% of the container?	☑	☐
Is there observable liquid in payload containers with an EPA Hazardous Waste Number of U134?	☐	☑
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☑
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☑
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does NOT match TRUCON Code[s])?	☐	☑
Is there an indication of wastes containing explosives or compressed gases?	☐	☑
Is there an indication of PCBs liquids?	☐	☑
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA hazardous waste numbers of D001, D002, or D003)?	☐	☑
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☑
CCP or RH TRAMPAC		
Are there heat-sealed bags (unvented) GREATER than 4 liters and LESS than 390 square inches in the waste, or heat sealed bags not authorized in the RH TRUCON Code?	☐	☑
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☑
Are there sealed containers GREATER than 4 liters?	☑	☐
Are there indications of inadequate protection for heavy and/or sharp objects?	☐	☑

Comments: This drum contains metal cans with material, which may require additional Project Office review.
NCR-LANL-1059-12; NCR-LANL-1152-12

RTR Operator:

Print Name	Signature	Date
Michael Simmons	[signature]	06/22/12

ATTACHMENT 1
Page 1 of 1

TA-54 AREA G WASTE CONTAINER HYDROGEN/VOC SAMPLE ANALYSIS DATA SHEET

5.[1] Sample Date: Feb 13 2013

Container No. (5.[1])	S814859					
Container type sampled (e.g., 55-gal, 85-gal, 110-gal, or SWB) (5.[1])	55 gal					
Filtered Vent Type (5.[1])	12					
Filtered Vent Unobstructed (5.[1])	☑ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT
WIPP-Approved Filtered Vent (5.[2])	☑ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT
Total CCP VOC value (< 7,000 ppm) (5.[4])	0 ppm	ppm	2 ppm	ppm	ppm	ppm
Hydrogen Reading (< 64,000 ppm) (5.[5])	0 ppm	ppm	ppm	ppm	ppm	ppm
Methane Reading (< 16,000 ppm) (5.[5])	0 ppm	ppm	ppm	ppm	ppm	ppm

5.[7] Certified CCP Technician:

Performed By: Gabe Romero (CCP (Print)) 236973 (Z#)

Reviewed By: Rick Jagielski (CCP (Print)) 266088 (Z#)

Comments: n/a

6.1[2][A] WCRRF waste container satisfies the following criteria: ☑ SAT ☐ UNSAT ☐ N/A

- Hydrogen – less than or equal to 3.2% (32,000 ppm)
- VOC – less than or equal to 7,000 ppm

6.1[3] Performed By: Julie Gallegos (Waste Handling Operator (print)) Julie Gallegos (Signature) 176905 (Z#) 2-13-13 (Date)

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\130213C\
Data File : S814859.D
Acq On : 13 Feb 2013 3:08 pm (#1); 13 Feb 2013 3:03 pm (#2)
Operator : RJ
Sample :
InstName : Unit 8
Misc : 55 Gal drum, through unobstructed Nucfil-072 (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Feb 13 15:12:16 2013
Quant Method : C:\msdchem\1\METHODS\H2-CH4.M
Quant Title : Flammable Gas Analysis for Transportation
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

H2-CH4.M Wed Feb 13 15:12:27 2013

7-3-13
1800 Assuming WCRR operations center. - Coleman
1815 Pre-job being conducted by SOS.
1834 Beginning 30 minute wait for lightning. Entering EP-WCRR-RM-AOP-0207.
1855 Pre-job concluded.
1904 Exiting EP-WCRR-RM-AOP-0207.
1924 Mode changed to operations in WCRRF yard and 50-69.
2010 Operators entering 50-69 to begin operations.
2039 Bagging on drum #S814839.
2049 Bag on complete. PPE check Sat.
7-3-13 2140 Bagging off / daughter, bagging on another.
2154 Bag off/on complete. PPE Check Sat.
2245 Operators in a pause due to RCT instrument not working properly.
2311 Operators resuming operations.
2342 Operator inside 50-69 reported to SOS and OM that he is not feeling well. OM notified as well.
2355 Bag off and placing port covers on.
0019 Bag off complete.
0100 Operator still not feeling well, going home, unable at this time to stand up the watchbill as far as "Q" person inside 50-69.
0105 Operators entering 50-69 to wipe down the WGC and check the gloves to see if any need changed out.
0118 Beginning outside rounds
0126 Item #3 is unsat, okay to proceed, FSR in place. Beginning inside rounds.
0139 Outside rounds complete.
0145 Item #63 is OOS. Okay to proceed, Pod in place.
0146 Inside rounds complete.
0159 Both rounds reviewed by SOS.
0200 Initiating a drum movement from 50-69 to a transportainer.
0233 Drum movement out of 50-69 complete. All inventory has been
0235 JC 7-4-13
0236 removed from 50-69.
7-4-13 0300 Mode change complete. WCRRF yard - Warm, 50-69 - COLD.
End of day. CCO position secured. - Coleman
No further entries this page

7-8-13

0400 Assuming WCRRF operations center checklists
0415 Starting outside rounds.
0419 Pre JCB being conducted by SOS
0424 Item #3 is unsat, FSR in place OK to proceed.
0433 Starting inside rounds.
0748 Rounds have been signed off by SOS.
0904 Starting vehicle barrier inspection
0922 Shutting down ventilation.
0923 Mizer alarm acknowledged.
0924 Ventilation has been shutdown.
0927 Starting channel function test.
0930 Starting WCG structural inspection.
1033 Unable to perform channel function test.
1035 Starting up ventilation.
1039 Ventilation startup is complete
1350 Mode change performed TA50-69 and WCRRF yard now in operations
1354 EP-WCRRF-RM-AOP-0207 entered due to lightning and thunder in the area
1424 Exiting EP-WCRR-RM-AOP-0207, OK to resume outside operations.
1443 Starting movement into 50-69
1450 Entering EP-WCRR-RM-AOP-0207 due to lightning and thunder. Outside operations have been suspended.
1451 Starting inside rounds.
1503 Item 63 is OOS, POD in place OK to proceed
1510 Inside rounds complete.
1520 Exiting EP-WCRR-RM-AOP-0207 OK to resume outdoor operations
1523 Resuming movement into 50-69
1534 movement into 50-69 complete
1540 Starting outside rounds
1554 Completed outside rounds.
1559 Bagging on 38222483
— Continued on next page checklists

PROJECT NAME 7-3-13 DAY SHIFT NOTEBOOK NO.

0604 Assumed the WCRR SOM position [illegible]
0621 Mode Change - Yard and SO/CS Operations / Operations transition to WARM / WARM
0659 Completed attending the pre-job brief conducted by the SOS - Clayton Mullens. Operations discussed the shift order which was cancelled WCRR-SH-13-004-RO Night Operations. Also Drum Movement WCRR-SH-13-003 R2 was reviewed and is still in effect. There is one transfer of drums - WCRR to Area 4 scheduled - 20 drums out. Due to the SOS being on call and facility in WARM, minimal manpower will be on board. Current priorities include the transfer OUT, HHW staging, maintenance may work on the outer roll up door and vegetation cut back. Other items noted, there were only 4 pair of HEX-ARMORS left which were bagged into the WCG.
0731 Notification made to the WMC, support was needed for ensuring the HHW storage / staging area is up to date with labels, etc. Response - he will support -
0915 Operations completed the transfer of ~~23~~ 22 drums out
0945 The HHW staging area was attended by the WMC and labels applied appropriately.
1030 Work Package #00466679-01 / SO-CS Equipment Servicing of Forktruck was released to perform work. Craft will service the Forktruck in the parking lot.
1040 Work Package #00466715-01 - TSR and repair DRE's, the outer roll up door will be repaired, package was released - after USQ has been updated.
1059 Completed attending the pre-job brief for the Outer Roll up door conducted by the craft supervisor. All hazards and controls were discussed - No lockout tagout is required. A rivit is to be installed on the side of the door. An RCT was assigned to support.
1124 Refueling of light stations initiated (outside yard)
1133 Work package 466287-01 - SO-84 Refueling and inter of light stations was released, and refueling was initiated for all 3 stations (outside yard)
1140 Crafts Completed work on the Outer Roll UP door - The door was tested and it works. The package was signed off completed.
1215 Completed the daily update phone call with AREA 4 SOM and Maintenance Coordinator
1330 Conducted follow up on HEX ARMORS with leather palms - ES - office provided several pair, however they do not have leather palms and can not be used in the glovebox due to being cut resistant, but not puncture resistant.
1503 Hex ARMORS were located in ML-2 storage with leather palms - ~~operations~~ [illegible] 7-3-13 ~~can bag these into the glovebox for usage~~ gloves were found but no sleeves.
1512 Inside and outside rounds have been completed for afternoon and signed off.
1529 ES/office obtained 10 pair of HEX ARMORS gloves and sleeves for use.
1535 Secured the day shift SOM position. [illegible]

[illegible] 7-12-13

No further Entries this Page
[illegible]

SIGNATURE DATE 20
READ AND UNDERSTOOD DATE 20

PROJECT NAME 7/3/13 Night Shift NOTEBOOK NO.

1800 Reviewed Shift Turnover Checklist and assumed the WCRR SOM position.

1815 Attended pre job brief conducted by SOS. ES Upper Management attended and had meeting w/ crew. ES IH went over results from his lighting evaluation conducted last evenings shift and is requiring headlamps for forklift spotters when operating between bldgs 50-84 and 54, as well as west of the transportainers. Briefed Shift Order WCRR-SH-13-003 R.2 Drum Movements

1834 Entered EP-WCRR-RM-AOP-0207 for severe weather. 30/30 rule in effect

1904 Exited EP-WCRR-RM-AOP-0207

1924 Completed Mode Change: WCRR Yard / Bldg 50-69 from Warm/Warm to Operations/Operations

2049 Bag on of 1st drum #S814859 complete

2245 RP-1 reported that instrument probe used for dosing the WCG was not working properly. Work being paused to install new probe.

2311 Operations resumed.

2342 SOS reported that Operator #1 (Q cleared designated) is not feeling well. Finishing bag offs and will break for lunch will evaluate fitness for duty after break. Notified OM

7/4/13 0019 All bag offs complete. Operators breaking for lunch

0100 Operator is being sent home due to illness. Leaves no Q cleared Waste Handling Tech who can support an operations watch bill. OM notified.

0236 Completed Mode Change: WCRR Yard / Bldg 50-69 from Operations/Operations to Warm/Cold.

0257 Late Entry 0230 Verified RCRA inspections are completed for day.

0315 Secured SOM position.

No further entries this page

SIGNATURE
READ AND UNDERSTOOD

DATE 7/4 20 13
DATE 20

7/3/13 Continued from Previous Page. C Mullins
0635 Starting Pre-Job, discussing not being in Operations, but shipment out, glovebox maintenance, and artic ops will be performed.
0705 Completed pre-job.
0710 Securing SOS position. CM

7-3-13

No Further Entries on this Page

7/3/13 WCRR SOS Log Book
1800 Assuming SOS position. CA
1815 Starting Pre-Job, discussed keeping focused with holiday weekend. ~~EP-WCRR-RM-AOP-0207~~ CM 7-3-13
1834 Beginning 30min wait for lightning. EP-WCRR-RM-AOP-0207
1855 Completed Pre-Job.
1904 Exiting AOP-0207.
1924 Mode change complete, WCRRF yard and 50-69 are now in Operations.
2039 Bagging on drum 5814859.
2049 Bag on complete.
2140 Bagging off 1 daughter, bagging on a second daughter.
2154 Bag off/on complete
2355 Bagging off second daughter to complete processing.
0017 Bag of complete.
0159 Signed off on the rounds.
0200 Tech 38 feeling ill, will be going home, unable to support Tech 1 for the watchbill.
0200 Starting movement out of 50-69
0233 Movement out of 50-69 complete.
0236 Mode change complete, WCRRF yard in Warm Standby and 50-69 in Cold Standby.
0311 Securing SOS position. CA

No Further Entries on this Page

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0091
Examination Date:	7/11/2013
Waste Container ID:	93962
Video/Audio Recorded Media Number:	LA-RTR2-13-0091 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 13
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3150
Waste Stream I.D.:	LA-CIN01.001
Waste Container Weights:	Gross Wt.: 111.5 kg Tare Wt.: 33.4 kg Net Wt.: 78.1 kg
Rigid Liner and Liner Vent Description:	Liner: [X] No [ ] Yes Lid: [X] No [ ] Yes Type: [ ] 30-mil [ ] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [ ] Yes [X] N/A Punctured: [X] No [ ] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [ ] No [X] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 2 layers
Volume Utilization Percentage:	60 %

CCP Radiography Data Sheet

Waste Container ID: 93962

Section 3: Container Inventory and Comments (Detailed descriptions)

IM:

AM:

OM:

OI:

C:

R:

XPM: Plastic bags, 90 mil liner lid

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP): Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	6.1
Organic Matrix (OR):	
Inorganic Matrix (IN):	72.0
Soils (S):	
Total WMP Weight:	78.1

CCP Radiography Data Sheet

Waste Container ID: 93962

Section 5: RTR Summary (Questions answered "Yes" will be explained in the Comment block, except for Question 1)	
Is there observable liquid?	☐ Yes ☒ No
Is there any observable liquid in internal containers, more than 60 milliliters or 3 percent by volume, whichever is greater?	☐ Yes ☒ No
Is the total volume of observable liquid in the outermost container GREATER than 1% of the container?	☐ Yes ☒ No
Is there observable liquid in payload containers with an EPA Hazardous Waste Number of U134?	☐ Yes ☒ No
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐ Yes ☒ No
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐ Yes ☒ No
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does NOT match TRUCON Code[s])?	☐ Yes ☒ No
Is there an indication of wastes containing explosives or compressed gases?	☐ Yes ☒ No
Is there an indication of PCBs liquids?	☐ Yes ☒ No
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐ Yes ☒ No
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐ Yes ☒ No
CH or RH TRAMPAC	
Are there heat-sealed bags (unvented) GREATER than 4 liters and LESS than 390 square inches in the waste, or heat sealed bags not authorized in the RH TRUCON Code?	☐ Yes ☒ No
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐ Yes ☒ No
Are there sealed containers GREATER than 4 liters?	☐ Yes ☒ No
Are there indications of inadequate protection for heavy and/or sharp objects?	☐ Yes ☒ No

Comments: N/A

RTR Operator:

Michael Simmons		7/11/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	93962	Count Sequence Number:	16171
Operator:	DCLTD231\Operator		
Assay Start:	7/15/2013 10:51:07 AM		
Description 1:	2LANDA1194		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gal Drum		
Weight:	Net: 78.1 kg	Net:	78.1 kg
Container:	Volume: 208.0 l	Full:	60.0 %
Density:	0.630 kg /l		

System Configuration

Counter:	HENC #2
Count Type:	Item Count
Collimator/Geometry Setting:	All Banks on GEO - 0

Errors quoted at 1.000 sigma

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number:	16171	Batch Number:	2LANDA1194
Assay Instrument:	HENC #2	Location:	LANL TA-54
Analysis Method:	CCP-TP-063 v 14	Software Version:	NDA 2000 V.4.0
Item ID:	93962	Analysis Date:	7/15/2013

Net Weight	78100.0 g		
Pu mass	5.54E+000	+-	1.00E+000 g
TRU Alpha Activity	1.35E+000	+-	4.84E-001 Ci
TRU Activity Concentration	1.73E+004	+-	6.20E+003 nCi/g
Pu-239 Equivalent Activity	1.36E+000	+-	4.84E-001 Ci
Pu-239 FGE	5.01E+000	+-	9.98E-001 g
Decay heat	4.41E-002	+-	1.62E-002 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	1.86E-007
U233	<LLD	<LLD	0.00E+000	2.37E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	7.76E-007
NP237	2.08E-002	1.49E-005	2.59E-006	6.34E-007
PU238	1.47E-003	2.54E-002	9.53E-003	1.10E-003
U238	<LLD	<LLD	0.00E+000	6.03E-006
PU239	4.98E+000	3.13E-001	6.28E-002	1.36E-002
PU240	5.40E-001	1.24E-001	2.64E-002	5.37E-003
AM241	2.56E-001	8.88E-001	4.79E-001	2.02E-002
PU241	4.94E-003	5.13E-001	1.13E-001	2.22E-002
PU242	9.32E-003	3.70E-005	8.46E-006	0.00E+000
AM243	2.56E-004	5.17E-005	9.09E-006	1.73E-006

Errors quoted at 1.000 sigma

Operator: _____ Date: 7-18-13

ITR: _____ Date: 7-19-13

Automated Independent Technical Review

Count Sequence Number: 16171 Batch Number: 2LANDA1194
Counter ID: HENC #2
Container ID: 93962
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 7/15/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis Add-a-Source WARNINGS: Add-a-Source correction factor is less than one.	Ok
Section 2 - Passive Neutron Analysis Analysis Status: No errors. No Warnings Reported.	Ok
Section 3 - Data Combiner Analysis Override enabled; Gamma data specified as input. Results taken from Quantitative Gamma data. Results comparison test passed.	Results taken from quantitative gamma data.
Section 4 - MGA Analysis Expert review is recommended; the following validity tests failed: Pu239 weight percent is outside limits [92.5, 95.0].	MGA valid. Pu239 percent consistent with AK. Mix of MT-54,52.
Section 5 - Gamma Analysis Analysis Status: No errors.	Ok
Miscellaneous	No additional nuclides contributing to 95% of the radiological hazard identified.

Expert Review by: Sheri Chambers Date: 7-16-13

Attachment 4 – Flammable Gas Analysis Form

SCO 1049 Add 4 - Win XP SP3/Win 7 SP1
Excel 2003/2007/2010

Waste Container ID: **93962**

BDR Number: **LA13FG12064**

Sampling Date: **7/18/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	32.73	
74-82-8	Methane	9.63	U
67-56-1	Methanol	N/A	U
60-29-7	Ethyl Ether	N/A	U
75-35-4	1,1-Dichloroethylene	N/A	U
67-64-1	Acetone	N/A	U
75-34-3	1,1-Dichloroethane	N/A	U
156-59-2	cis-1,2-Dichloroethene	N/A	U
78-93-3	Methyl ethyl ketone	N/A	U
110-82-7	Cyclohexane	N/A	U
71-43-2	Benzene	N/A	U
107-06-2	1,2-Dichloroethane	N/A	U
71-36-3	1-Butanol	N/A	U
108-10-1	Methyl isobutyl ketone	N/A	U
108-88-3	Toluene	N/A	U
108-90-7	Chlorobenzene	N/A	U
100-41-4	Ethylbenzene	N/A	U
108-38-3/106-42-3	m- and p-Xylene	N/A	U
95-47-6	o-Xylene	N/A	U
108-67-8	1,3,5-Trimethylbenzene	N/A	U
95-63-6	1,2,4-Trimethylbenzene	N/A	U

CAS Number	IDENTIFIED TIC COMPOUND	Est. Amount ppmv
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

Quantitation Report (QT Reviewed)

InstName : FGA Unit 12

Data Path : C:\msdchem\1\DATA\130718c\
Data File : 93962.D
Acq On : 18 Jul 2013 12:48 pm (#1); 18 Jul 2013 12:47 pm (#2)
Operator : SA
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER, NucFil-019DS (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 18 13:07:42 2013
Quant Method : C:\msdchem\1\METHODS\H2-CH4.M
Quant Title : Flammable Gas Analysis for Transportation Only
QLast Update : Thu May 23 08:37:45 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Target Compounds						Qvalue
1) Hydrogen	1.903	GC1	9337m	32.73	ppmv	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-HERTR-13-0083
Examination Date:	7/12/2013
Waste Container ID:	93965
Video/Audio Recorded Media Number:	LA-HERTR-13-0083 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 13
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3150
Waste Stream I.D.:	LA-CIN01.001
Waste Container Weights:	Gross Wt.: 156.0 kg Tare Wt.: 33.4 kg Net Wt.: 122.6 kg
Rigid Liner and Liner Vent Description:	Liner: [X] No [ ] Yes Lid: [X] No [ ] Yes Type: [ ] 30-mil [ ] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [ ] Yes [X] N/A Punctured: [X] No [ ] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [ ] No [X] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 2 layers
Volume Utilization Percentage:	65 %

CCP Radiography Data Sheet

Waste Container ID: 93965

Section 3: Container Inventory and Comments (Detailed descriptions)

IM:

AM:

OM: Scrap lead

OI:

C: Leather gloves, tape roll

R:

XPM: Plastic bags

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP): Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	14.0
Other Inorganic Materials (OI)	
Cellulosics (C):	3.4
Rubber (R):	
Plastics (waste materials) (XPM):	6.5
Organic Matrix (OR):	
Inorganic Matrix (IN):	98.7
Soils (S):	
Total WMP Weight:	122.6

CCP Radiography Data Sheet

Waste Container ID: 93965

Section 5: RTR Summary (Questions answered "Yes" will be explained in the Comment block, except for Question 1)	
Is there observable liquid?	☐ Yes ☒ No
Is there any observable liquid in internal containers, more than 60 milliliters or 3 percent by volume, whichever is greater?	☐ Yes ☒ No
Is the total volume of observable liquid in the outermost container GREATER than 1% of the container?	☐ Yes ☒ No
Is there observable liquid in payload containers with an EPA Hazardous Waste Number of U134?	☐ Yes ☒ No
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐ Yes ☒ No
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐ Yes ☒ No
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does NOT match TRUCON Code[s])?	☐ Yes ☒ No
Is there an indication of wastes containing explosives or compressed gases?	☐ Yes ☒ No
Is there an indication of PCBs liquids?	☐ Yes ☒ No
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐ Yes ☒ No
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐ Yes ☒ No
CH or RH TRAMPAC	
Are there heat-sealed bags (unvented) GREATER than 4 liters and LESS than 390 square inches in the waste, or heat sealed bags not authorized in the RH TRUCON Code?	☐ Yes ☒ No
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐ Yes ☒ No
Are there sealed containers GREATER than 4 liters?	☐ Yes ☒ No
Are there indications of inadequate protection for heavy and/or sharp objects?	☐ Yes ☒ No
Comments: N/A	

RTR Operator:

Michael Simmons		7/12/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	93965	Count Sequence Number:	23215
Operator:	D3PW2DK1\operator		
Assay Start:	7/12/2013 3:00:25 PM		
Description 1:	1LANDA1808		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 123.0 kg	Net:	123.0 kg
Container:	Volume: 208.0 l	Full:	65.0 %
Density:	0.910 kg /l		

System Configuration

Counter:	MCS HENC #1
Count Type:	Item Count
Collimator/Geometry Setting:	All Banks On (GE - 0

Errors quoted at 1.000 sigma

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number:	23215	Batch Number:	1LANDA1808
Assay Instrument:	MCS HENC #1	Location:	LANL TA-54
Analysis Method:	CCP-TP-063 v 14	Software Version:	NDA 2000 V.4.0
Item ID:	93965	Analysis Date:	7/12/2013

Net Weight	123000.0 g		
Pu mass	4.03E+000	+-	1.03E+000 g
TRU Alpha Activity	3.24E+000	+-	1.62E+000 Ci
TRU Activity Concentration	2.63E+004	+-	1.32E+004 nCi/g
Pu-239 Equivalent Activity	3.26E+000	+-	1.62E+000 Ci
Pu-239 FGE	3.75E+000	+-	9.49E-001 g
Decay heat	1.08E-001	+-	5.42E-002 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	4.53E-002	3.23E-005	7.02E-006	1.99E-006
PU238	7.01E-004	1.21E-002	3.10E-003	5.04E-005
PU239	3.71E+000	2.33E-001	5.97E-002	9.70E-004
PU240	3.02E-001	6.95E-002	1.78E-002	2.89E-004
AM241	8.42E-001	2.92E+000	1.62E+000	3.57E-002
PU241	8.69E-003	9.03E-001	2.31E-001	3.75E-003
PU242	2.82E-003	1.12E-005	2.86E-006	0.00E+000
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	6.16E-007
U233	<LLD	<LLD	0.00E+000	3.79E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	1.03E-006
U238	<LLD	<LLD	0.00E+000	1.13E-005

Errors quoted at 1.000 sigma

Operator: B Hanna Date: 7-20-13

ITR: Brit Upchurch Date: 7-22-13

Automated Independent Technical Review

Count Sequence Number: 23215 Batch Number: 1LANDA1808
Counter ID: MCS HENC #1
Container ID: 93965
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 7/12/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis No Add-a-Source warnings.	Ok
Section 2 - Passive Neutron Analysis Analysis Status: No errors. No Warnings Reported.	Ok
Section 3 - Data Combiner Analysis Override enabled; Passive Neutron Pu and Gamma U data specified as input. Pu results taken from Passive Neutron data, U from Quantitative Gamma data. Results comparison test passed.	Passive Neutron Pu and Gamma U data specified as input.
Section 4 - MGA Analysis Results are marked as invalid.	MGA analysis failed. AK isotopics applied. The AK information utilized was provided by Steve Schafer, AKE, and consists of data from CCP-AK-LANL-006, AK Source Document M237. MT-52,54.
Section 5 - Gamma Analysis Analysis Status: No errors.	Ok
Miscellaneous	No additional nuclides contributing to 95% of the radiological hazard identified.

Expert Review by: Sheri Chamberlin Date: 7-16-13

Attachment 4 – Flammable Gas Analysis Form

SCO 1049 Add 4 - Win XP SP3/Win 7 SP1
Excel 2003/2007/2010

Waste Container ID: **93965**

BDR Number: **LA13FG12063**

Sampling Date: **7/16/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	105.14	
74-82-8	Methane	9.63	U
67-56-1	Methanol	N/A	U
60-29-7	Ethyl Ether	N/A	U
75-35-4	1,1-Dichloroethylene	N/A	U
67-64-1	Acetone	N/A	U
75-34-3	1,1-Dichloroethane	N/A	U
156-59-2	cis-1,2-Dichloroethene	N/A	U
78-93-3	Methyl ethyl ketone	N/A	U
110-82-7	Cyclohexane	N/A	U
71-43-2	Benzene	N/A	U
107-06-2	1,2-Dichloroethane	N/A	U
71-36-3	1-Butanol	N/A	U
108-10-1	Methyl isobutyl ketone	N/A	U
108-88-3	Toluene	N/A	U
108-90-7	Chlorobenzene	N/A	U
100-41-4	Ethylbenzene	N/A	U
108-38-3/106-42-3	m- and p-Xylene	N/A	U
95-47-6	o-Xylene	N/A	U
108-67-8	1,3,5-Trimethylbenzene	N/A	U
95-63-6	1,2,4-Trimethylbenzene	N/A	U

CAS Number	IDENTIFIED TIC COMPOUND	Est. Amount ppmv
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

Quantitation Report (QT Reviewed)

InstName : FGA Unit 12

Data Path : C:\msdchem\1\DATA\130716C\
Data File : 93965.D
Acq On : 16 Jul 2013 1:00 pm (#1); 16 Jul 2013 12:58 pm (#2)
Operator : SA
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER, NucFil-019DS (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 16 13:12:52 2013
Quant Method : C:\msdchem\1\METHODS\H2-CH4.M
Quant Title : Flammable Gas Analysis for Transportation Only
QLast Update : Thu May 23 08:37:45 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Target Compounds						Qvalue
1) Hydrogen	1.907	GC1	29990m	105.14	ppmv	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

S815176

S815176

Container Profile 748418

File Options Reports Help

S815176

748418	TBD-TRU	T-TTRU-TEMP	Active	Decommissioned

- General Information
- Weights/Volumes
- Location
- Account Information
- Waste Material Parameters
- Layers of Confinement
- Prohibited Items
- EPA Codes
- UHC
- Radioassay
- Radiological Survey
- Payload Preparation
- Container Closure
- Materials Added
- TRU Information
- TRU Information (TSDF)
- Radiological Calculations
- Shipping Description
- Site Treatment Plan
- Pending Tasks
- Genealogy
- Container Tags
- Task History
- Documentation
- Comment Log
- Edit Log

Genealogy

S815176

S815176

94226 – EMPTY

94225

Task History

Transfer Details

Transfer Amount	Transfer Unit	Item	Measured Weight	Measured Weig...
99.9989555	%			

Working Copy
Date: 8/20/13 HKG

ATTACHMENT 1
Page 1 of 4

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: S815176

6.2[4] Date Processed: 08-20-13

4.1[6][B] Processing Activity (EP-DIV-AP-0107):
☐ > 190 mrem/hr ☑ PID ☐ Split ☐ Repack

4.1[6][B] Prohibited Items:
☐ Sealed Containers > 4L ☑ Liquids ☐ Pressurized Containers ☐ N/A

4.1[6][B] Parent Waste Container RCRA Designations: D008 + D007

4.1[7] Activity Hazard Classification based on Anticipated Extremity Radiation Dose Rate:
☐ Moderate (≤ 10 rem/hr) ☑ High/Complex (> 10 rem/hr)

4.3[1]/4.3[2] ($) TA-50-69 is in the OPERATION or WARM STANDBY MODE (TSR 1.2) ☑ OPERATIONS ☐ WARM STANDBY ☐ N/A

4.3[4][B] Platform Scale: Equipment No.: 019065
Cal. Due Date: 10-14-14

4.3[5][B] ($) Three 1-Liter containers carbon spheroids or MET-L-X in WCG: (SAC 5.10.1.7.1) ☑ YES ☐ NO ☐ N/A

4.3[6] ($) Stationary Fire Watch has been established:
(> 300 PE-Ci Equivalent Combustible)
(SAC 5.10.1.7.2) N/A
(Initial and Date)

4.3[7 [A] Parent Waste Container degraded, loss of integrity, or weighs greater than 468 lb but less than or equal to 624 lb:
☑ YES ☐ NO ☑ N/A JB 08-20-13

4.3[8][D] WCG glove and bag-in/bag-out bag inspection: ☑ SAT ☐ UNSAT ☐ N/A

Performed By: James Sutel / /
Waste Handling Tech (print) Signature Z # Date

ATTACHMENT 1
Page 2 of 4

4.1[6][B] Parent Waste Container No.: 5815176

5.[18] Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable: 378.8 lb

6.2[5][A] Parent Drum Lead Blanket Weight (lb): 0 lb

6.2[5][B] Total Parent Drum Weight (lb) 278.8 lb
6.2[6]

6.2[7] **($)** Total Parent Drum Weight < 624 lb (SR 4.5.1): ☑ SAT ☐ UNSAT

6.2[28] Approval to leave a parent drum attached to the WCG overnight:

N/A / /

EWMO-FOD (print) Signature Z # Date

ATTACHMENT 1
Page 3 of 4

4.1[6][B] Parent Waste Container No.: S815176

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	94225		N	
10.1[4]	Daughter Drum Filter No.	KL-432			
10.1[4]	Daughter Drum Bag Filter No.	L-8173		A	
10.1[4]	Daughter Drum Purchase Order No.	501321			
10.1[13][C]	WCG Fire Watch Stationed		☐ YES	☐ NO	☑ N/A
10.1[14][C][d]3/11.1[3]	WCG Fire Watch Secured		☐ YES	☐ NO	☑ N/A
10.2[4]	POC bag-on bag: Manufacturer				
	Model No.				
	Serial No.				
	Date of Manufacture				
10.2[5]	POC ID No				
10.2[7][B]/10.2[6]	POC Item Description		N		
10.2[13]	POC Assembly closed per Manufacturer's instructions. (Initial and Z#)			A	
10.2[14]	POC Assembly Gross Weight (lb)				
10.2[15]	POC Rad. Survey Results (mrem/hr)				
10.3[3][A]	Approx. Containerized Liquid Vol./Units	1 Qt			
10.3[5][A]	Free Liquid Volume/Units	2 Gallons			
10.3[7][A]	Opaque/Non-penetrable Item Description:	lead		N	
10.3[9][A]	PCB-contaminated Waste Description			A	
10.3[9][B]	PCB Item ID No.				
10.3[10]	Remaining Waste Description	See Comments			
10.3[13]/10.4[10]/ 10.5[4]/10.6[10]	Daughter Drum % Full (%)	100%		N	
10.5[3]/10.6[2]	Description Waste Added During Processing	Plastic Room Trash		A	

ATTACHMENT 1
Page 4 of 4

4.1[6][B] Parent Waste Container No.: S815176

Comments: Nitrate Salts, Plastic, Room Trash, lead and Kitty litter

11.1[1] Performed By: James Sw [signature] 1116662 / 08-20-13
Waste Handling Tech (print) Signature Z # Date

11.1[7] Reviewed By: G Mk [signature] 1/493351 8/21/13 0218
SOS or designee (print) Signature Z # Date/Time

Working Copy
Date: 8.20.13

ATTACHMENT 2
Page 1 of 1

WCRRF OVERPACK DRUM ASSEMBLY PREPARATION DATA SHEET

5.[3] Overpack drum information:

Purchase Order No.: 501012
Lot No.: 0233945
Manufacture Date: N/A

5.[8] Overpack filtered vent and 2-in. bung torque wrench information:

	Filtered Vent	2-in. Bung
M&TE No.:	N	
Cal. Expiration Date:		
Tolerance:		A

Overpack filtered vent information:

Manufacturer: Nucfil
Model No.: 01905
Serial No.: EK-1117
Manufacture Date: 5-10

5.[9] Torque wrench listed above is within the acceptable ranges as displayed on the calibration certificate. ☐ Yes ☐ No N/A

5. [11] Performed By: _____ / _____ / _____
Waste Handling Technician (print) Signature Z # Date

5.[15] Filtered Vent torque value [120 in-lb (96 to 144 in-lb)]: N/A in-lb

5. [18] 2-in. bung plug torque value: N/A ft-lb

Comments: Not Prepped At WCRRF.

8.1[1] Performed By: James Smith / [signature] 111662 08-20-13
Waste Handling Technician (print) Signature Z # Date

8.1[6] Reviewed By: G Mp / [signature] 14935, 8/21/13
Supervisor or designee (print) Signature Z # Date

Working Copy
Date: 8/20/13 HSB

ATTACHMENT 5
Page 1 of 1

WCRRF OVERPACK DRUM CLOSURE DATA SHEET

7.[18] Overpack Drum Unique Identifier No.: 94226

7.[24] Overpack drum closure ring torque wrench information:
M&TE No.: 038373
Cal. Expiration Date: 09-11-13
Range in ft-lb: 10-80
Tolerance: ±3% CW & ±6% CCW

7.[25] Torque wrench listed above is within the acceptable ranges as displayed on the calibration certificate. ☑ Yes ☐ No

Performed By: James Sandoval / [signature] / 116662 / 08-20-13
Waste Handling Technician (print) Signature Z# Date

7.[27] Overpack drum closure ring torque value: 60 ft-lb

7.[30] Threaded lug of the drum closure ring is not touching the jam nut and the locking ring lugs are not touching. ☑ SAT ☐ UNSAT

7.[35][B] Platform scale serial number: 019065
Platform scale calibration expiration date: 10-14-14

7.[35][D] 85-gal overpack drum gross weight (lb): 243.0 lb

Comments: N/C

8.1[1] Performed By: James Sandoval / [signature] / 116662 / 08-20-13
Waste Handling Technician (print) Signature Z# Date

8.1[7] Reviewed By: G Mk / [signature] / 149235 / 8/21/13
Supervisor or designee (print) Signature Z# Date

#2A

Attachment 1. Checklist for the preparation of a new 55-Gallon Drum Assembly

Drum ID#: 94225

1. Drum/Lid Assembly

- [x] Remove and discard ¾" bung from lid
- [x] Remove Lid
- [x] Inspect drum, lid, and gasket, ring bolt and nut, chines, and paint
  - NOTE: Reject damaged drum/lid assembly
- [x] Place 2" duct tape on vertical seam on interior of drum

RECORD drum information:

Purchase Request #: 501321
Lot #: 02377720
Date of Manufacture: 2-15

2. Drum Liner Bag/Filter Assembly:

- [x] Place yellow vinyl tape, with smear centered on tape, over filter
- [x] Fill bag with air from compressed air source
- [x] Inspect bag for damage, cuts, or leaks by looking, listening, and feeling
  - NOTE: Reject or repair damaged, cut, or leaking bags
- [x] Stretch bag's bungee cord
- [x] Inspect bungee cord
  - NOTE: Reject bag if bungee cord is broken or damaged

RECORD bag filter information:

Manufacturer: BOP
Model #: CLAVCLIP 25 PFC
Serial #: L-8173
Date of Manufacture: 3/15

3. Cardboard Liner/Plastic Liner Drum Liner Bag/Filter Assembly:

- [x] Inspect cardboard liner/plastic liner (circle type of liner used)
  - NOTE: Reject any damaged liners
- [x] Place cardboard/plastic liner into drum liner bag/filter assembly
- [x] Line up filter with drum seam
- [x] Place liner/bag/filter assembly into drum
- [x] Roll excess liner bag into cardboard liner/plastic liner

4. Install Lid/Drum Filter

- [x] Place lid and ring onto drum
- [x] Tighten ring sufficiently to simply hold lid in place
- [x] Torque 2" bung plug
- [x] Apply sealant to filter threads, screw in ¾" bung hole, and torque
- [x] Place this Attachment and blank Attachment 2 into a protective sleeve and tape to top of drum

RECORD drum filter information:

Manufacturer: MUSTI
Model #: 019DS
Serial #: KL432
Date of Manufacture: 12/11

RECORD torque wrench information:

Filter torque wrench:		Jam Nut / Bung torque wrench:	
M&TE ID #:	100216	M&TE ID #:	038369
Cal Expiration Date:	12-18-13	Cal Expiration Date:	12-18-13
Range (ft-lbs or in-lbs):	40-200	Range (ft-lbs or in-lbs):	10-80
Tolerance:	+/- 4% CW +/- 6% CCW	Tolerance:	+/- 3% CW +/- 6% CCW

Torque wrenches listed above are within the acceptable ranges as displayed on the calibration certificate.

[x] Yes [ ] No

Print Name: Ian Manoue Signature: [signature] Z#: Z46708

5. Weigh Drum Assembly

RECORD weight information

Tare witght (lbs) 762
File ID #: 019065

- [x] Write the tare weight on drum using permanent marker

6. Label Drum Assembly

- [x] Place 1 barcode drum ID label to the left of the drum seam, ~6" from drum bottom
- [x] Place 1 barcode drum ID label in the center of the drum lid

RECORD drum ID# at the top of Attachments 1 and 2

Operator Print: Ian Manoue Operator Sign: [signature] Z#: Z46708 Date: 8-15-13

Verifier Print: Jason Smith Verifier Sign: [signature] Z#: 116667 Date: 08-20-13

Attachment 2. Checklist for the Closing of a 55-Gallon Drum Assembly

DRUM ID#: 94225

1. LID INSTALLATION

NOTE: Install lid per manufacturer's instructions

✓ Mount lid with filter directly over drum seam.

✓ Install ring with bolt positioned downward and directly over drum seam.

✓ Engage bolt and nut and torque per manufactures instructions

NOTE Seal the ring while tightening using a rubber hammer or dead-blow mallet or a drum lid press.

✓ Tighten jam nut.

Record torque wrench information:

MT&E #: 038373

Cal expiration date: 09-11-13

Range/ Value (ft-lbs): 10-80

--- Tolerance +/- 3% cw +/- 6% ccw

2. DRUM LABELING

NOTE: Do not cover the drum seam with any labels

✓ Place two barcode drum ID labels ~6" from the bottom of the drum ~120° from previously placed ID label.

✓ Place one barcode drum ID label to the right of drum seam between the top two rolling hoops.

✓ Place one yellow radioactive waste label between the top two rolling hoops

✓ Place one yellow radioactive waste label in the center of the drum lid.

RCRA Label:

✓ Place one blue NON-RCRA Regulated Waste label between the top two rolling hoops.

OR

✓ Place one yellow HAZARDOUS Waste label between the top two rolling hoops left of the drum seam. (Ensure EPA waste number and accumulation start date are documented.)

NOTE: Check only one of the above two boxes.

3. WEIGH DRUM ASSEMBLY

Record weight information:

Gross Weight(lbs): 365.6

Scale ID#: 019065

✓ Using a permanent marker, write the gross weight on the drum lid.

4. FINALIZE DOCUMENTATION

✓ Have RCT monitor drum prior to moving to storage area

✓ Place attachment 1 and 2 and HMPT Tag into a protective sleeve.

✓ Complete TWSR.

Operator Print/Sign: [illegible] Date: 08-20-13

Verifier Print/Sign: MICHAEL MONTOYA Date: 08-20-13

ATTACHMENT 3
Page 1 of 1

WCRRF PARENT 55-GAL DRUM PREPARATION DATA SHEET

6.3[21] Prepared Parent 55-Gal Drum Number: S815176

6.3[15] ($) 55-gal drum wrapped in protective covering: (ISI 6.3.6) ☑ SAT ☐ UNSAT

6.3[16] Platform scale serial number: 019065
Platform scale calibration expiration date: 10-14-14

6.3[18] Prepared parent 55-gal drum weight (lb): 378.8

6.3[19] ($) Prepared parent 55-gal drum weighs < 624 lb: (SR 4.5.1) ☑ SAT ☐ UNSAT

Comments: N/C

8.1[1] Performed By: James S. [illegible] [signature] 111662 08-20-13
Waste Handling Technician (print) Signature Z # Date

8.1[7] Reviewed By: G [illegible] [signature] 149235 8/24/13
Supervisor or designee (print) Signature Z # Date

8.1[8][B] Acceptance criteria satisfied: ☑ YES ☐ NO

8.1[8][D] Approved by: G [illegible] [signature] 149235 8/24/13 0715
SOS/SOM or designee (print) Signature Z # Date Time

NOFP
RA

WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Production Control

Container ID: S815176 Container Type: 55-GAL Gross Weight (lbs): 378
Inner Seal #: 007306 Filter Prefix: None Filter Serial #: None
AK Waste Stream: LA-CIN01.001 Certified RTR BDR: No BDR
TWSR Comments: None
Total PE-Ci Activity: 7.70E-01 Equivalent Combustible PE-Ci: 2.89E-01 AM-241 PE-Ci: 6.94E-01
Total Fissile Gram Equivalents: 0.5 Total Surface Dose Rate (mrem/hr): 1
EPA Code(s): D008
NCR RTR/NDA Comment: None
RTR Pre-Screen Date: 2/27/2012 Comment: Liquid; lead liner
Certified RTR Comment: None
Prohibited Items: ☐ Sealed > 4 Liters ☑ Liquid ☐ Pressurized Container ☑ Impenetrable Item ☑ Other
Security Determination: ☑ Green ☐ Yellow
Remediation Determination: ☐ VE ☑ PID ☐ Split ☐ Repack
Estimated 30-cm Dose Rate (mrem/hr): ☐ <100 ☐ >100 and <1,000 ☑ >1,000 and <10,000 ☐ >10,000
TRUCON Code: LA125M Production Control Comments: Nitrate Salts apply mixture & EPA codes

Performed By: Julie Gallegos (Production Control (Print)) Julie Gallegos (Signature) / 176905 (Z Number) / 10/11/12 (Date)

WDP Engineering

Chemicals Present (e.g., pyrophorics, acids, bases, shock sensitive, organic liquids, peroxides, crown ethers): ☐ Yes ☑ No ☐ Unknown
Processing Determination: ☑ Accept ☐ Reject
WDP Engineering Comments: Nitrate Salts
Net Wt: 318 lb. Although in SP57, generator info indicates the waste is comprised of 7 items of nitrate salts weights range from ~13 lb to ~48 lb. Nitrate salts have historically contained undocumented liquids, carry waste codes D006/D015/12 for chromium, lead, & mercury and are repackaged in plastic bags (if not cemented). No chemicals identified. RTR PS identifies liquids + lead lined drum (which is also typical for nitrate salts), ~~that~~ ~~to~~ ~~TRUCON~~ RW 10/15/12
May require RWP for >1000 + <10000 mrem/hr

Performed By: Valerie Rhodes (WDP Engineering (Print)) Valerie Rhodes (Signature) / 112609 (Z Number) / 10/15/12 (Date)

TRU Remediation Operations

☑ Waste Container Information Evaluated ☐ Less Than 170 lbs ☐ RTR Video Available
Other Specific Safety Concerns: Do not push or press on waste with hands. Use heavy duty gloves during processing.
Processing Determination: ☑ Accept ☐ Reject
TRU Remediation Operations Comments: USE Proper PPE. Use proper ratio of kitty litter and waste in accordance with the procedure.
Performed By: G Mtz (TRU Remediation Operations (Print)) G Mtz (Signature) / 149235 (Z Number) / 5/18/13 (Date)
Jose Jerez (Signature) / 221452 / 5/18/13

HS REVIEW RB 296362 12.17.12

Discardable Waste Log Sheet

DrumID: 007306

Item#	ItemID	Net (kg)	Matrix	M Code	NM	MT	Auth	Remarks
1	IXFS-277-F1	10	NITRATE SALTS		0	52	5/11	
2	IXFS-278-F1	5.9	NITRATE SALTS		1.23	52	5/11	
3	IXFS-279-F1	13.~~56~~ 62	NITRATE SALTS		1	52	5/11	
4	IXFS-280-F1	20.67	NITRATE SALTS		4.55	52	5/11	
5	IXFS-281-F1	10.45	NITRATE SALTS		0	52	5/11	
6	IXFS-282-F1	10.45	NITRATE SALTS		0	52	5/11	
7	IXFS-283-F1	21.81	NITRATE SALTS		0	52	5/11	
		92.64 kg						

ATTACHMENT 1
Page 1 of 1

TA-54 AREA G WASTE CONTAINER HYDROGEN/VOC SAMPLE ANALYSIS DATA SHEET

5.[1] Sample Date: Feb 13 2013

Container No. (5.[1])	S815176					
Container type sampled (e.g., 55-gal, 85-gal, 110-gal, or SWB) (5.[1])	55 gal					
Filtered Vent Type (5.[1])	72					
Filtered Vent Unobstructed (5.[1])	☑ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☑ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT
WIPP-Approved Filtered Vent (5.[2])	☑ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT
Total CCP VOC value (< 7,000 ppm) (5.[4])	0 ppm	ppm	ppm	ppm	ppm	ppm
Hydrogen Reading (< 64,000 ppm) (5.[5])	242.90 ppm	ppm	ppm	ppm	ppm	ppm
Methane Reading (< 16,000 ppm) (5.[5])	28.07 ppm	ppm	ppm	ppm	ppm	ppm

5.[7] Certified CCP Technician:

Performed By: Gabe Romero — 234973
CCP (Print) — Z#

Reviewed By: Rick Jagielski — 240688
CCP (Print) — Z#

Comments: n/a

6.1[2][A] WCRRF waste container satisfies the following criteria: ☑ SAT ☐ UNSAT ☐ N/A

- Hydrogen – less than or equal to 3.2% (32,000 ppm)
- VOC – less than or equal to 7,000 ppm

6.1[3] Performed By: Julie Gallegos, Julie Gallegos, 176905 2/13/
Waste Handling Operator (print) Signature Z# Date

Quantitation Report (QT Reviewed)

InstName : FGA Unit 12

Data Path : C:\msdchem\1\DATA\130213I\
Data File : S815176.D
Acq On : 13 Feb 2013 2:49 pm (#1); 13 Feb 2013 2:48 pm (#2)
Operator : GR
Sample :
Misc : 55 GAL DRUM THROUGH UNOBSTRUCTED NUCFIL-072 (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Feb 13 14:54:04 2013
Quant Method : C:\msdchem\1\METHODS\H2-CH4.M
Quant Title : Flammable Gas Analysis for Transportation Only
QLast Update : Wed Feb 13 14:42:56 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Target Compounds						Qvalue
1) Hydrogen	1.933	GC1	68604	242.90	ppmv	100
2) Methane	3.843	GC1	3717	28.07	ppmv	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

H2-CH4.M Wed Feb 13 14:54:17 2013 UNIT12

8-20-13

0634 Assuming WCRRF Operations Center. Cvelande

0636 Late entry at 0620 pre job being performed by SDS - Cvelande

0700 Operators setting 50-69 and will continue processing 9802959.

0850 Per proficiency instructors and IH determination was made that the drum handler is in a Sat condition caution tag has been removed.

0914 Bagging off S802959, Bagging on 9815176 after denesting.

1011 Bag on, Bag off is complete and also denesting.

1230 Operators exiting facility for lunch.

1339 Operators continuing to process

1442 ASSUMING OPERATIONS CENTER IN TRAINING HASMITH 8/20/13

1445 BAGGING OFF S 815176 BAGGING ON ~~S5813475~~ S 813475

1515 BAG ON BAG OFF COMPLETE.

1522 STARTING INSIDE ROUNDS

1537 ENTERING EP-WCRR RM-AOP-0207 DUE TO LIGHTNING ACTIVITY

1538 #63 ITEM, OOS INSIDE ROUNDS, POD IN PLACE OK TO PROCEED

1545 INSIDE ROUNDS COMPLETE

1605 RESET TIME FOR EP-WCRR-RM-AOP-0207 DUE TO LIGHTNING ACTIVITY

1608 OPERATORS NOTIFIED TO PAUSE OPERATION. AND PUT INVENTORY IN SAFE CONFIGURATION, WITH LPOS ON PARENT DRUM, INTERMITTEN POWER LOSS, STILL IN EP-WCRR-RM-AOP-0207, ALL GOOD IN TA 50-69

1624 OPERATORS ADVISED BY SDS TO RESUME PROCESSING

1632 30-30 RESTARTED STARTED DUE TO THUNDER

1707 EXITING EP-WCRR-RM-AOP-0207

1710 BEGIN OUT SIDE ROUNDS

1715 BAGGING OFF S 813475

1717 ITEM #3 UNSAT. FSR IN PLACE, OKAY TO CONTINUE

1728 ITEM #19 UNSAT. FSR IN PLACE, OKAY TO CONTINUE

CONTINUED ON NEXT PAGE HASMITH

8/20/13 CONTINUE FROM PREVIOUS PAGE HA SMITH
1732 OUTSIDE ROUNDS COMPLETE
1747 BAG OFF S 213475 COMPLETE
1747 MODE CHANGE TO WARM IN TA50-69 AND YARD
1800 INSIDE AND OUTSIDE ROUNDS SIGNED BY SOS
1810 End of day WCRF operations center is secure - CVelarde

No further entries this page

B-20-13 DAYSHIFT

0601 Reviewed the shift turnover checklist, and assumed the WCRR dayshift SOM responsibilities. John Guardado

0616 Reviewed and approved the dayshift watchbill.

0658 Completed attending the pre-job brief conducted by Gilbert the SOS. He provided an update to the facility, with lead windows - station 3, and the Roto Grip wheel was cracked and operators caution tagged it out. The PHTS brief was given by the SOM to all in attendance, shift orders are still effective.

0701 Completed the daily phone call with AREA G - SOM - per POD.

0704 Operations entering 50/69 and will continue processing S802959.

0850 Per proficiency instructions and IH determination was made that the drum handler is in a SAT condition. The caution tag was removed by the SOS.

0914 Inside Operations initiated bag off of Parent drum S802959 and Bag on of Parent drum S815176.

1011 Operations complete bag off, bag on and denesting

1210 Inside operations break for lunch.

1250 Completed weekly LFL teleconference and daily update with OM/PM, others.

1430 Completed debrief with ES QR, LANL QA, ES SOS, ES PM regarding ML-2 storage and requirements to Meet P330 Chapters 11, 12, 13. Energy Solutions will initiate corrective actions Actions include training on ES procedure, ensuring documentation for all items on shelves - otherwise they default to ML-4, Reorganizing ML-components together. Primary custodians need to take ownership / and LOQ1 should include list of qualified personnel. ES - will work on adding personnel (qualified ML custodian) to LOQ1

1441 Operations initiated bagging off parent S815176 and bag on of Parent S813475

1515 BAG on / Bag off noted completed

1537 Due to Severe weather lightening, OCD entered EP-WCRR-RM-AOP-0207

1608 Operations notified to pause operations due to lightening strikes in the immediate area and requesting inside Ops to put the glovebox in a safe configuration. Currently Ventilation is

1707 Operations Center exited EP-WCRR-RM-AOP-0207

1708 Late entry for 1624 - Operations advised by SOS and concurrence from OM to commence operations.

Continued on Next Page

8-20-13 DAYSHIFT (Cont)

1715 Inside Operations notify the Operations Center of initiating Bag offs which will include PARENT DRUM 5813475

1744 Inside Operations report Bag offs completed, and the glovebox is in a safe configuration.

1747 Mode Change: 50/69 and ~~Operc~~ 4pnd transition from Operations/Operations to WARM/WARM

1805 Completed Checklist turnover with Nightshift SOM

~1820 Secured the Day shift WCRR SOM position

No further Entries this page

6/20/13 WCRRF SOS Log Book

1816 Assuming SOS position. CA

1817 Will be attending WCATS training.

2358 Back from training.

0105 Starting Pre-Job, discussed hearing protection as well as hand placement, especially our un-qualified operator. Mode change performed, WCRRF yard and 50-69 are now in Operations.

0135 Pre-Job complete.

0241 Denesting and bagging on 5846084

0316 Denesting and bag on complete.

0514 Signed off on the rounds.

0517 Bagging off 2 daughters to complete processing.

0552 Bag off complete

0612 Mode change complete, WCRRF yard and 50-69 are now in Warm Standby.

0616 Turning over SOS position to Gilbert Martinez. CA

No Further Entries on this Page

8/20/13 Continued from Previous Page. C Mullins
0610 Signed off on the rounds.
0622 Turning over SOS position to Gilbert Martinez. CM
pg

No Further Entries on this Page

8/20/13 WCRR SOS LOG BOOK

0600 Assuming SOS Position [signature]

0615 Conducted shift brief with operators went over watch Bill responsibility's And when Personal on watch could leave facility

0640 shift brief Concluded.

0700 Operators entering Facility Continuing work on S802959

0850 Per Proficency Instructor And IH determination was made that drum handler In sat condition ok to use tires will be ordered And Replaced. Caution tag Removed.

0914 Bagging off S802959 Bagging on S815176 After Denesting

1011 Denesting And bag on/off complete

1130 Operator exiting For Lunch

1339 Operators Conting to Process

1342 had meeting with ML-2 Personal on Issuse Found by ML-2 rep need to be Fixed ASAP.

1445 bagging off S815176 Bagging on S813475.

1515 bag on/off complete

1522 Started Rounds.

1537 30-30 Rule Due to lightning

1545 Inside Rounds Complete

1605 30-30 Reentered

1608 Paused Inside operation due to Power bumps Inside 50-69

1624 Advised operator to continue.

1632 30-30 rule reentered.

1707 Exiting 30-30 rule

1715 Bagging off S813475

1747 Bag off complete Mode change Complete WCRRF In Warm.

1800 Reviewed Inside And outside Rounds

1815 Securing SOS Position [signature]

No Further entries on this Page

8/20/13 WCRRF SOS Log Book

1816 Assuming SOS position. CA

1817 Will be attending WCATS training.

2358 Back from training.

0105 Starting Pre-Job, discussed hearing protection as well as hand placement, especially our un-qualified operator. Mode change performed, WCRRF yard and 50-69 are now in Operations.

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0514 Signed off on the rounds.

0517 Bagging off 2 daughters to complete processing.

0552 Bag off complete.

0612 Mode change complete, WCRRF yard and 50-69 are now in Warm Standby.

8-21-13 0616 Turning over SOS position to Gilbert Martinez. CA

No Further Entries on this Page

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0104
Examination Date:	9/3/2013
Waste Container ID:	94225
Video/Audio Recorded Media Number:	LA-RTR2-13-0104 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 13
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3150
Waste Stream I.D.:	LA-CIN01.001
Waste Container Weights:	Gross Wt.: 165.5 kg Tare Wt.: 33.4 kg Net Wt.: 132.1 kg
Rigid Liner and Liner Vent Description:	Liner: [X] No [ ] Yes Lid: [X] No [ ] Yes Type: [ ] 30-mil [ ] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [ ] Yes [X] N/A Punctured: [X] No [ ] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [ ] No [X] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 2 layers
Volume Utilization Percentage:	95 %

CCP Radiography Data Sheet

Waste Container ID: 94225

Section 3: Container Inventory and Comments (Detailed descriptions)

IM: Scrap metal, utility knives

AM:

OM: Scrap lead

OI:

C:

R: Rubber gloves

XPM: Plastic bags, liner lid

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP): Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	2.0
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	20.0
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	2.0
Plastics (waste materials) (XPM):	6.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	102.1
Soils (S):	
Total WMP Weight:	132.1

CCP Radiography Data Sheet

Waste Container ID: 94225

Section 5: RTR Summary (Questions answered "Yes" will be explained in the Comment block, except for Question 1)	
Is there observable liquid?	☐ Yes ☒ No
Is there any observable liquid in internal containers, more than 60 milliliters or 3 percent by volume, whichever is greater?	☐ Yes ☒ No
Is the total volume of observable liquid in the outermost container GREATER than 1% of the container?	☐ Yes ☒ No
Is there observable liquid in payload containers with an EPA Hazardous Waste Number of U134?	☐ Yes ☒ No
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐ Yes ☒ No
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐ Yes ☒ No
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does NOT match TRUCON Code[s])?	☐ Yes ☒ No
Is there an indication of wastes containing explosives or compressed gases?	☐ Yes ☒ No
Is there an indication of PCBs liquids?	☐ Yes ☒ No
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐ Yes ☒ No
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐ Yes ☒ No
CH or RH TRAMPAC	
Are there heat-sealed bags (unvented) GREATER than 4 liters and LESS than 390 square inches in the waste, or heat sealed bags not authorized in the RH TRUCON Code?	☐ Yes ☒ No
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐ Yes ☒ No
Are there sealed containers GREATER than 4 liters?	☐ Yes ☒ No
Are there indications of inadequate protection for heavy and/or sharp objects?	☐ Yes ☒ No

Comments: N/A

RTR Operator:

Thad Hasselstrom	Thad Hasselstrom	9/3/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	94225	Count Sequence Number:	16459
Operator:	DCLTD231\Operator		
Assay Start:	9/3/2013 1:30:07 PM		
Description 1:	2LANDA1218		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gal Drum		
Weight:	Net: 132.0 kg	Net:	132.0 kg
Container:	Volume: 208.0 l	Full:	95.0 %
Density:	0.670 kg /l		

System Configuration

Counter:	HENC #2
Count Type:	Item Count
Collimator/Geometry Setting:	All Banks on GEO - 0

Errors quoted at 1.000 sigma

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number:	16459	Batch Number:	2LANDA1218
Assay Instrument:	HENC #2	Location:	LANL TA-54
Analysis Method:	CCP-TP-063 v 15	Software Version:	NDA 2000 V.4.0
Item ID:	94225	Analysis Date:	9/3/2013

Net Weight	132000.0 g		
Pu mass	3.35E+000	+-	8.77E-001 g
TRU Alpha Activity	1.63E+000	+-	2.56E-001 Ci
TRU Activity Concentration	1.23E+004	+-	1.94E+003 nCi/g
Pu-239 Equivalent Activity	1.63E+000	+-	2.56E-001 Ci
Pu-239 FGE	3.17E+000	+-	8.23E-001 g
Decay heat	5.38E-002	+-	8.54E-003 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	2.54E-002	1.81E-005	3.29E-006	1.44E-006
PU238	3.07E-004	5.31E-003	1.39E-003	3.51E-005
PU239	3.15E+000	1.98E-001	5.18E-002	1.31E-003
PU240	2.01E-001	4.62E-002	1.21E-002	3.06E-004
AM241	3.97E-001	1.38E+000	2.51E-001	2.02E-002
PU241	3.88E-003	4.03E-001	1.06E-001	2.67E-003
PU242	6.71E-004	2.66E-006	6.97E-007	0.00E+000
SR90	3.54E-009	4.89E-007	2.62E-007	0.00E+000
CS137	5.57E-009	4.89E-007	2.62E-007	2.86E-007
U233	<LLD	<LLD	0.00E+000	2.61E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	8.38E-007
U238	<LLD	<LLD	0.00E+000	8.02E-006
AM243	6.66E-004	1.35E-004	2.43E-005	1.97E-006

Errors quoted at 1.000 sigma

Operator: Amy Barton Date: 9/10/13

ITR: [signature] Date: 9-10-13

Automated Independent Technical Review

Count Sequence Number: 16459 Batch Number: 2LANDA1218
Counter ID: HENC #2
Container ID: 94225
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 9/3/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis Add-a-Source WARNINGS: Add-a-Source correction factor is less than n-sigma * the correction factor error.	OK
Section 2 - Passive Neutron Analysis Analysis Status: No errors. No Warnings Reported.	OK
Section 3 - Data Combiner Analysis Override enabled; Passive Neutron Pu and Gamma U data specified as input. Pu results taken from Passive Neutron data, U from Quantitative Gamma data. Results comparison test passed.	Pu results taken from Passive Neutron data, U from Quantitative Gamma data.
Section 4 - MGA Analysis Results are marked as invalid.	MGA analysis failed. AK isotopics applied. The AK information utilized was provided by Steve Schafer, AKE, and consists of data from CCP-AK-LANL-006, AK Source Document M237. MT-52.
Section 5 - Gamma Analysis Analysis Status: No errors.	OK
Miscellaneous	No additional nuclides contributing 95% of the radiological hazard identified.

Expert Review by: Bart B. Marala Date: 9/4/13

Waste Container ID: **94225**

BDR Number: **LA13FG12088**

Sampling Date: **9/9/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	56.96	
74-82-8	Methane	9.63	U
67-56-1	Methanol	N/A	U
60-29-7	Ethyl Ether	N/A	U
75-35-4	1,1-Dichloroethylene	N/A	U
67-64-1	Acetone	N/A	U
75-34-3	1,1-Dichloroethane	N/A	U
156-59-2	cis-1,2-Dichloroethene	N/A	U
78-93-3	Methyl ethyl ketone	N/A	U
110-82-7	Cyclohexane	N/A	U
71-43-2	Benzene	N/A	U
107-06-2	1,2-Dichloroethane	N/A	U
71-36-3	1-Butanol	N/A	U
108-10-1	Methyl isobutyl ketone	N/A	U
108-88-3	Toluene	N/A	U
108-90-7	Chlorobenzene	N/A	U
100-41-4	Ethylbenzene	N/A	U
108-38-3/106-42-3	m- and p-Xylene	N/A	U
95-47-6	o-Xylene	N/A	U
108-67-8	1,3,5-Trimethylbenzene	N/A	U
95-63-6	1,2,4-Trimethylbenzene	N/A	U

CAS Number	IDENTIFIED TIC COMPOUND	Est. Amount ppmv
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

Quantitation Report (QT Reviewed)

InstName : FGA Unit 12

Data Path : C:\msdchem\1\DATA\130909c\
Data File : 94225.D
Acq On : 9 Sep 2013 12:58 pm (#1); 9 Sep 2013 12:56 pm (#2)
Operator : EL
Sample :
Misc : 55 Gallon Drum Through Filter, NucFil-019DS (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 09 13:02:46 2013
Quant Method : C:\msdchem\1\METHODS\H2-CH4.M
Quant Title : Flammable Gas Analysis for Transportation Only
QLast Update : Thu May 23 08:37:45 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Target Compounds						Qvalue
1) Hydrogen	1.893	GC1	16247m	56.96	ppmv	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

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