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NMED
Hazardous Waste Bureau

Los Alamos
NATIONAL LABORATORY
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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 2 8 2014
Symbol: ENV-DO-14-0231
LAUR: 14-26498
Locates Action No.: Not Applicable

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 8

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* table which is 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. 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 eighth 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.

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Enclosure 1 includes the pertinent documentation for six (6) of the original 267 parent waste containers and all associated daughter and granddaughter waste containers. The enclosed 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/ms

Enclosures: (1) Remediation and Repacking Documentation for Nitrate Salt-Bearing Waste Containers – Package 8

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 M. 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):
Selena Z. Sauer, LC-ESH, (E-File)
Kenneth M. Hargis, LTP-PTS, (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)

Remediation and Repackaging Documentation for Nitrate Salt-Bearing Waste Containers – Package 8
ENV-DO-14-0231
LA-UR-14-26498

August 2014

Los Alamos
NATIONAL LABORATORY
EST. 1943

ENCLOSURE 1

Remediation and Repacking Documentation for Nitrate Salt-Bearing Waste Containers – Package 8

ENV-DO-14-0231

LA-UR-14-26498

Date: AUG 2 8 2014

ParentID	Intermediate Daughters	PKG_ID	Overpacked Into
S832146		94208	SB02091
S832146		94209	
S832146		94210	
S832146		94211	SB50108
S832146		94212	
S832147	90727	92210	
S832147	90727	92211	
S832147	90727	92212	SB02080
S832147	90727	92213	
S832147	90728	92486	SB01966
S832148		69555	SB50424
S832148		69559	
S832149		90845	
S832149	90848	92181	
S832149	90850	92290	SB02091
S832149	90853	92294	
S832149	90849	92572	
S832149	90851	92574	
S832149	90852	92578	
S832150		68668	
S832150		68670	
S832155	90895	92237	
S832155	90897	92362	SB02087
S832155	90896	92665	SB02093

S832146

S832146

Containe 752155

File Options Reports Help

S832146

752155	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

S832146

- S832146
  - 94213 -EMPTY
  - 94212 - WIPP
  - 94211 -LANL
    - LASB50108
  - 94210
  - 94209
  - 94208
    - LASB02091

} WIPP

815180

ATTACHMENT 1
Page 1 of 4

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: 5832146

6.2[4] Date Processed: 8/15/13

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: Clayton Mullins CM 1240096 8/15/13
Waste Handling Tech (print) Signature Z # Date

ATTACHMENT 1
Page 2 of 4

4.1[6][B] Parent Waste Container No.: 5832146

5.[18] Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable: 358.0 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) 478.0 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
	N/A	/	/

ATTACHMENT 1
Page 3 of 4

4.1[6][B] Parent Waste Container No.: 5832146

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	94208	94209	94212	
10.1[4]	Daughter Drum Filter No.	KL-439	KL-379	KL-443	N/A
10.1[4]	Daughter Drum Bag Filter No.	L-8221	L-6220	L-6676	
10.1[4]	Daughter Drum Purchase Order No.	501321	501011	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	BOP	BOP		
	Model No.	6CPV-1.5-2-SPE	6CPV-1.5-2-SPE		
	Serial No.	L-8234	L-8210		
	Date of Manufacture	3/13	3/13		
10.2[5]	POC ID No	D-2459/94210	D-2393/94211		
10.2[7][B]/10.2[6]	POC Item Description	plastic, kitty litter, nitrate salts	plastic, kitty litter, nitrate salts	N/A	N/A
10.2[13]	POC Assembly closed per Manufacturer's instructions. (Initial and Z#)	cm 240094	cm 240094		
10.2[14]	POC Assembly Gross Weight (lb)	377.4	405.4		
10.2[15]	POC Rad. Survey Results (mrem/hr)	880.5	1500.5		
10.3[3][A]	Approx. Containerized Liquid Vol./Units	cm ~~1 qt.~~ N/A	cm ~~1 qt.~~ N/A	cm ~~2 oz~~ N/A	
10.3[5][A]	Free Liquid Volume/Units	1 qt.	1 qt.	2 oz	
10.3[7][A]	Opaque/Non-penetrable Item Description:	lead shielding	N/A	lead shielding	
10.3[9][A]	PCB-contaminated Waste Description	N/A	N/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 (%)	75%	40%	25%	
10.5[3]/10.6[2]	Description Waste Added During Processing	plastic, kitty litter, hex-armors	plastic, kitty litter, hex-armors	plastic, kitty litter, hex-armors	

ATTACHMENT I
Page 4 of 4

4.1[6][B] Parent Waste Container No.: 5832146

Comments: plastic and nitrate salts.

11.1[1] Performed By: Clayton Mullins, CM, 240092, 8/16/13
Waste Handling Tech (print) Signature Z # Date

11.1[7] Reviewed By: Jose Jerez, [signature], 321452, 8/24/13 0905
SOS or designee (print) Signature Z # Date/Time

ATTACHMENT 2
Page 1 of 1

8/15/13

WCRRF OVERPACK DRUM ASSEMBLY PREPARATION DATA SHEET

5.[3] Overpack drum information:

Purchase Order No.: 501323
Lot No.: 0238 025
Manufacture Date: 2013

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

	Filtered Vent	2-in. Bung
M&TE No.:		
Cal. Expiration Date:	N/A	N/A
Tolerance:		

Overpack filtered vent information:

Manufacturer: Nucfil
Model No.: C19DS
Serial No.: EK-1111
Manufacture Date: 5/10

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: _____ / _____ / _____ / _____
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: _____ ft-lb

Comments: not prepped at TA-50

8.1[1] Performed By: Clayton Mullins / CA / 240092 / 8/15/13
Waste Handling Technician (print) Signature Z # Date

8.1[6] Reviewed By: Joe Jerez / [signature] / 221452 / 8/24/13
Supervisor or designee (print) Signature Z # Date

81513

ATTACHMENT 5
Page 1 of 1

WCRRF OVERPACK DRUM CLOSURE DATA SHEET

7.[18] Overpack Drum Unique Identifier No.: 94213

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: Clayton Mullins, CM 240091 8/16/13
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): 181.2 lb

Comments: N/C

8.1[1] Performed By: Clayton Mullins, CM 240091 8/16/13
Waste Handling Technician (print) Signature Z # Date

8.1[7] Reviewed By: Jose Jerez, [signature] 221452 8/24/13
Supervisor or designee (print) Signature Z # Date

Date: 8-13-13 av

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

Drum ID#: 94208

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 #: 501331
Lot #: 0237720
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: BOP
Model #: 6CAVC-1.5-2.5PVC
Serial #: 6-8231
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: Nuc Ci
Model #: 019 DS
Serial #: KL-434
Date of Manufacture: 11-11

RECORD torque wrench information:

Filter torque wrench:
M&TE ID #: 108216
Cal Expiration Date: 12-18-13
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: 12-18-13
Range (ft-lbs or in-lbs): 10-80
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: Fredrick Mobley Signature: [signature] Z#: 228626

5. Weigh Drum Assembly

RECORD weight information

Tare wight (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: Fredrick Mobley Operator Sign: [signature] Z#: 228626 Date: 8-13-13

Verifier Print: Clayton Mullins Verifier Sign: [signature] Z#: 240092 Date: 8/15/13

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

DRUM ID#: 94208

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 / 60

--- 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): 285.6

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: Clayton Mullins CM Date: 8/16/13

Verifier Print/Sign: Justin Cofer Date: 8-16-13

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

Drum ID#: 94209

1. Drum/Lid Assembly

- [x] Remove and discard ¾" bung from lid
- [ ] 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 #: 501011
Lot #: 0233413
Date of Manufacture: 2012

2. Drum Liner Bag/Filter Assembly:

- [x] Place yellow vinyl tape, with smear centered on tape, over filter
- [ ] 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
- [ ] Inspect bungee cord
  NOTE: Reject bag if bungee cord is broken or damaged

RECORD bag filter information:
Manufacturer: BOP
Model #: 6CPVC-1.5-2SPVC
Serial #: [illegible]
Date of Manufacture: 11-12

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
- [ ] 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: NucFil
Model #: D19DS
Serial #: K6-379
Date of Manufacture: 11-11

RECORD torque wrench information:

Filter torque wrench:
M&TE ID #: 040694
Cal Expiration Date: 9-26-13
Range (ft-lbs or in-lbs): 40-200
Tolerance: ±4% cw ±16% ccw

Jam Nut / Bung torque wrench:
M&TE ID #: 038369
Cal Expiration Date: 12-14-13
Range (ft-lbs or in-lbs): 10-80
Tolerance: ±3% cw ±16% ccw

Torque wrenches listed above are within the acceptable ranges as displayed on the calibration certificate
[x] Yes [ ] No
Print Name: Brandon Chase Signature: [signature] Z#: 204742

5. Weigh Drum Assembly

RECORD weight information
Tare wtight (lbs) 74.4
File ID # 019069

- [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: Brandon Chase Operator Sign: [signature] Z#: 204742 Date: 2-10-13
Verifier Print: Clayte Mullis Verifier Sign: [signature] Z#: 240092 Date: 8/16/13

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

DRUM ID#: 94209

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~~ 10 80 / 60

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) 120.0

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: Clayton Mullins Date 8/15/13

Verifier Print/Sign: Gerald Espinoza Date: 8-15-13

Date: 8-13-13 av

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

Drum ID#: 94212

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 #: 0227720
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: BWP
Model #: GCPVC-15-2SPVC
Serial #: L-6676
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 #: KL-143
Date of Manufacture: 11/11

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 1% full scale

Jam Nut / Bung torque wrench:
M&TE ID #: 03x369
Cal Expiration Date: 12-18-13
Range (ft-lbs or in-lbs): 10-50
Tolerance: +/-3% or 1% full scale

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

- [x] Yes
- [ ] No

Print Name: Frederick Archuleta Signature: [signature] Z#: 220526

5. Weigh Drum Assembly

RECORD weight information

Tare wight (lbs): 75.8
File ID #: 019069

- [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#: 151332 Date: 8/13/13

Verifier Print: Clayton Mullins Verifier Sign: [signature] Z#: 240097 Date: 8/14/13

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

DRUM ID#: 942/2

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 / 60

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.): 215.8

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: Clayton Mullins Date 8/16/13

Verifier Print/Sign: Gerald Espinosa Date: 8-16-13

8/21/13

ATTACHMENT 3
Page 1 of 1

WCRRF PARENT 55-GAL DRUM PREPARATION DATA SHEET

6.3[21] Prepared Parent 55-Gal Drum Number: 5832146

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): 358.0

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: Clayton Mullins, [signature] 240092 8/14/13
Waste Handling Technician (print) Signature Z # Date

8.1[7] Reviewed By: Jose Perez, [signature] 221452 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: Jose Perez, [signature] 221452 8-24-13 0900
SOS/SOM or designee (print) Signature Z # Date Time

WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Production Control

Container ID: S832146 Container Type: 55-GAL Gross Weight (lbs): 335

Inner Seal #: 009465 Filter Prefix: LAVC Filter Serial #: 02298

AK Waste Stream: LA-CIN01.001 Certified RTR BDR: LA-HERTR-12-0095

TWSR Comments: LEACHED SOLIDS MST 12 RM 434

Total PE-Ci Activity: 1.89E+01 Equivalent Combustible PE-Ci: 7.08E+00 AM-241 PE-Ci: 1.94E+00

Total Fissile Gram Equivalents: 177.7 Total Surface Dose Rate (mrem/hr): 1

EPA Code(s): D007 D008 D009 VR 10/18/12

NCR RTR/NDA Comment: LANL: remediate-3 Gallons of liquid between 26 and 32 Inches

RTR Pre-Screen Date: 6/12/2012 Comment: >4L.

Certified RTR Comment: 3 Gallons of liquid at 26 to 32"

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: Apply kitty litter/zeolite mixture

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: 275lb. Incomplete generator info available for review; limited info implies drum contains nitrate salts (generation date, Rm 434, weight, & material types). RTR BDR shows metal hardware, plastic bags & homogeneous solids. It also identifies liquids, which are common in nitrate salts. RTR PS also shows sealed > 4L container (although RTR BDR did not). No chemicals identified; drum carries waste code for chromium (D007). Nitrate salts carry additional waste codes for lead + mercury. Drum is lead lined. 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 cards with hands. Use hexarmour gloves during processing.

Processing Determination: ☑ Accept Reject

TRU Remediation Operations Comments: use proper PPE Read kitty litter bulletin

Performed By: [illegible] (TRU Remediation Operations (Print)) / [illegible] (Signature) / [illegible] (Z Number) / 6/28/13 (Date)

HS Review: Jolly Smallwood CSP, contains Mercury, Chromium + lead. 10/25/12.

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-HERTR-12-0095
Examination Date:	8/30/2012
Waste Container ID:	S832146
Video/Audio Recorded Media Number:	LA-HERTR-12-0095 C&D
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-1637-12 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.: 159.0 kg Tare Wt.: 58.1 kg Net Wt.: 100.9 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: [X] No [ ] Yes Mechanical Vent: [ ] No [X] Yes Fiberboard Liner: [X] No [ ] Yes Lead Lined: [ ] No [X] Yes
Number of Layers of Confinement:	Appears to be 1 layer
Volume Utilization Percentage:	30 %

CCP Radiography Data Sheet

Waste Container ID: S832146

Section 3: Container Inventory and Comments (Detailed descriptions)
IM: Metal Hardware
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): Rigid Liner/Liner Lid	7.4
Other: Lead Lined (LP)	23.0
Total Packaging Weight	58.1
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):	0.5
Organic Matrix (OR):	
Inorganic Matrix (IN):	100.3
Soils (S):	
Total WMP Weight:	100.9

CCP Radiography Data Sheet

Waste Container ID: S832146

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: NCR-LANL-1637-12	

RTR Operator:

Aaron Elliott		8/30/2012
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])	S832146					
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])	14967 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)) 237975 (Z #)

Reviewed By: Nathan [illegible] (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 #) 1-30-15 (Date)

Quantitation Report (QT Reviewed)

InstName : FGA Unit 12

Data Path : C:\msdchem\1\DATA\130129c\
Data File : S832146.D
Acq On : 29 Jan 2013 2:11 pm (#1); 29 Jan 2013 2:10 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 14:15:41 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	422730m	1496.74	ppmv	

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

H2-CH4.M Tue Jan 29 14:15:45 2013 UNIT12

8-25-13
1815 Assuming WCRR Operations Center. JColeman
1821 Pre-job being conducted by SCS.
1844 Pre-job concluded.
2055 Bagging off, bagging on S832146.
2130 Bag off/on complete.
2255 Bagging off 1 daughter, bagging on one POC.
2335 Bagging off the tool drum.
8-26-13 ~~1202~~ Bag off complete.
0150 Initiating a drum movement from 50-69 to a transportainer.
0242 Drum movement out of 50-69 complete.
0335 Bagging off 1 daughter and 1 POC, bagging on another POC.
0400 Bag off/on complete.
0430 Beginning outside rounds.
0436 Item #3 on the rounds is unsat, FSR in place, okay to proceed.
0450 Completed outside rounds.
0453 Bagging off 1 daughter and 1 POC which completed this drum.
0518 Bag off complete.
0520 Beginning inside rounds.
0534 Item #63 on the rounds is CCS, POD in place, okay to proceed.
0539 Inside rounds complete.
0542 Initiating a drum movement from 50-69 to a transportainer.
0555 Drum movement out of 50-69 complete. All inventory has been removed from the facility.
0601 Mode change complete. We are now in Warm Standby in WCRRF yard and Cold in 50-69.
0608 Both rounds reviewed by SCS.
8-13 1830 End of day. CCC position secured. JColeman

No further entries this page.

8/15/~~14~~ 8/15/13 Night Shift

1754 Reviewed Shift turnover checklist, assumed WCRR SOM position.

1815 Approved and posted Night Shift operations watch bill - attending pre job brief conducted by SOS. Discussed issue w/ drum bag on to WCG and resulting contamination. RP-1 lead provided good input and discussed bringing consumables into controlled area - what to do if accidentally happens. Safety topic was again use of sharps - identification inside WCG. Shift orders in effect for manual drum movements and preventing bag tears.

1930 Inspected leaking boiler overflow value w/ SOS. Leak is still happening @ a rate of ≈ 1 drop/sec - being contained in a catch pan. Estimate a half quart of liquid has leaked into catch pan. Informed ENV-RCRA Liz English of status. Will continue to monitor.

2015 Obtained certs for Fire Riser Pressure Gage calibration and put into file in Ops Center.

2130 All bag offs for parent S822541 are complete (2 POC's total) w/ Daughter bagged on S832146.

2255 Bagging off 1 daughter and bagging on 1 POC.

2335 Operators reported they are bagging off the tool drum to clean up the far end of the WCG ~~to~~ MG 8/15/13.

8/16/13 0009 Operators breaking for lunch

0110 Resuming operations.

0242 Drum movement of 4 containers from 50-69 to transportainers completed.

0400 Bagged off another daughter and POC, bagged on a POC.

0412 Late Entry @ 0340 - Inspected boiler leak - still leaking @ same rate as before - approx. 1 gal of liquid in catch pan.

0518 All bag offs are complete for parent # S832146 (3 daughters, 2 POC's total)

0555 Bldg 50-69 has been deinventoried.

0601 Completed mode change: WCRR Yard / Bldg 50-69 from Operations / Operations to Warm / Cold.

0610 Liz English on site for ENV-RCRA look @ Boiler leak. She will make contact w/ WMC for cleanup of area.

Continued next page →

8/15 - 8/16/13 Night Shift continued.

0620 Per OM placing boiler in "safe configuration" for over weekend. Pump run switches are placed in Off position and Air Bleed isolation valve BPV-031 is shut with caution tag.

0650 Secured SOM position.

LR

LR 8-30-13

No further entries this page

LRA

8/15/13 WCRR SOS Log Book

1800 Assuming SOS position for the evening turnover completed with off going SOS Gilbert Martinez. [illegible]

1820 Starting Pre Job. Safety Topic. Discussing handling of sharps inside of the glove box during processing ensuring that the blades are retracted and put away also discussed blood born pathogens and how they are transmitted. Discussed contamination event and cause of it on they day shift. Explained to operators to ensure that they take their time especially today being last day of schedule working 12 hour days. Parent bagged on from day shift, partially processed and one more parent remaining in 50-69 for processing. Will need to be in Cold by end of shift. Also need to keep an eye on the boiler that is leaking.

1850 Pre-Job Completed

1915 Operators entering facility to process

1920 SOM and I went to look at boiler that is leaking. observed that it was leaking at a rate of approximately a drop per second. Catch Pan from the day shift is still in place.

2055 Bagging off 5824521, Bagging on 5832146

2130 Bag off, Bag on Complete.

2255 Bagging off one daughter, Bagging on 1 POC, continuing to process parent

2335 Bagging off the tool drum

0002 Bag off Complete

0030 Operators breaking for lunch

0130 Operators returning from lunch.

0150 Initiating ~~Parent~~ drum movement from 50-69 to transportainers.

0242 Drum Movement complete.

0453 Bagging off 1 daughter and 1 POC to complete Processing of Parent.

0520 Bag off Complete.

0601 Blade Change 50-69 in CAD WCRR Yard in WARM

0608 Reviewed and signed rounds [illegible]

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0103
Examination Date:	8/21/2013
Waste Container ID:	94208
Video/Audio Recorded Media Number:	LA-RTR2-13-0103 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.: 129.0 kg Tare Wt.: 33.4 kg Net Wt.: 95.6 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: 94208

Section 3: Container Inventory and Comments (Detailed descriptions)

IM: Scrap metal

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):	5.0
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	30.0
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	5.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	55.6
Soils (S):	
Total WMP Weight:	95.6

CCP Radiography Data Sheet

Waste Container ID: 94208

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		8/21/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	94208	Count Sequence Number:	23513
Operator:	D3PW2DK1\operator		
Assay Start:	9/3/2013 12:10:40 PM		
Description 1:	1LANDA1834		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 95.6 kg	Net:	95.6 kg
Container:	Volume: 208.0 l	Full:	65.0 %
Density:	0.710 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:	23513	Batch Number:	1LANDA1834
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:	94208	Analysis Date:	9/3/2013

Net Weight	95600.0 g			
Pu mass	2.72E+001	+-	4.26E+000	g
TRU Alpha Activity	7.35E+000	+-	2.83E+000	Ci
TRU Activity Concentration	7.69E+004	+-	2.96E+004	nCi/g
Pu-239 Equivalent Activity	7.49E+000	+-	2.83E+000	Ci
Pu-239 FGE	2.51E+001	+-	3.89E+000	g
Decay heat	2.40E-001	+-	9.39E-002	W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	1.11E-001	7.85E-005	1.47E-005	3.33E-006
PU238	7.31E-003	1.25E-001	1.96E-002	6.88E-005
PU239	2.48E+001	1.54E+000	2.41E-001	8.47E-004
PU240	2.23E+000	5.07E-001	7.94E-002	2.79E-004
AM241	1.51E+000	5.18E+000	2.82E+000	7.68E-002
PU241	7.45E-002	7.67E+000	1.20E+000	4.22E-003
PU242	1.79E-002	7.09E-005	1.11E-005	0.00E+000
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	8.46E-007
U233	<LLD	<LLD	0.00E+000	6.54E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	1.93E-006
U238	<LLD	<LLD	0.00E+000	1.69E-005
AM243	3.52E-005	7.04E-006	1.62E-006	4.32E-006

Errors quoted at 1.000 sigma

Operator: D. R. [illegible] Date: 9-4-13

ITR: [illegible] Date: 9-4-13

Automated Independent Technical Review

Count Sequence Number: 23513 Batch Number: 1LANDA1834
Counter ID: MCS HENC #1
Container ID: 94208
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 9/3/2013

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; 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-53,52.
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 Chandler Date: 9-4-13

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **94208**

BDR Number: **LA13FG12088**

Sampling Date: **9/9/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	125.42	
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\130909c\
Data File : 94208.D
Acq On : 9 Sep 2013 1:05 pm (#1); 9 Sep 2013 1:03 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 13:08:51 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	1.897	GC1	35777m	125.42	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-RTR2-13-0103
Examination Date:	8/21/2013
Waste Container ID:	94209
Video/Audio Recorded Media Number:	LA-RTR2-13-0103 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.: 54.5 kg Tare Wt.: 33.4 kg Net Wt.: 21.1 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:	30 %

CCP Radiography Data Sheet

Waste Container ID: 94209

Section 3: Container Inventory and Comments (Detailed descriptions)

IM: Scrap metal

AM:

OM: Scrap lead

OI:

C: Leather gloves

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):	3.0
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	2.0
Other Inorganic Materials (OI)	
Cellulosics (C):	1.0
Rubber (R):	
Plastics (waste materials) (XPM):	4.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	11.1
Soils (S):	
Total WMP Weight:	21.1

CCP Radiography Data Sheet

Waste Container ID: 94209

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		8/21/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	94209	Count Sequence Number:	23490
Operator:	D3PW2DK1\operator		
Assay Start:	8/22/2013 11:06:58 AM		
Description 1:	1LANDA1832		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 21.1 kg	Net:	21.1 kg
Container:	Volume: 208.0 l	Full:	30.0 %
Density:	0.340 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:	23490	Batch Number:	1LANDA1832
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:	94209	Analysis Date:	8/22/2013

Net Weight	21100.0 g			
Pu mass	2.92E+000	+-	5.45E-001	g
TRU Alpha Activity	1.60E+000	+-	7.22E-001	Ci
TRU Activity Concentration	7.61E+004	+-	3.42E+004	nCi/g
Pu-239 Equivalent Activity	1.62E+000	+-	7.22E-001	Ci
Pu-239 FGE	2.69E+000	+-	4.99E-001	g
Decay heat	5.29E-002	+-	2.40E-002	W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	1.90E-002	1.34E-005	1.69E-006	9.73E-007
PU238	7.48E-004	1.28E-002	2.39E-003	6.68E-005
PU239	2.67E+000	1.65E-001	3.09E-002	8.64E-004
PU240	2.40E-001	5.44E-002	1.02E-002	2.84E-004
AM241	4.00E-001	1.37E+000	7.22E-001	2.21E-002
PU241	5.92E-003	6.10E-001	1.14E-001	3.19E-003
PU242	1.93E-003	7.62E-006	1.42E-006	0.00E+000
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	3.19E-007
U233	<LLD	<LLD	0.00E+000	1.94E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	5.63E-007
U238	<LLD	<LLD	0.00E+000	5.22E-006

Errors quoted at 1.000 sigma

Operator: [illegible] Date: 8-26-13

ITR: [illegible] Date: 8-27-13

Automated Independent Technical Review

Count Sequence Number: 23490 Batch Number: 1LANDA1832
Counter ID: MCS HENC #1
Container ID: 94209
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 8/22/2013

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
Add-a-Source correction factor is less than n-sigma * the correction factor error.	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 passed.	
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-53,52.
Results are marked as invalid.	
Section 5 - Gamma Analysis	
Analysis Status: No errors.	Ok

Comments	Disposition
Miscellaneous	No additional nuclides contributing to 95% of the radiological hazard identified.

Expert Review by: Sheri Chamberlin Date: 8-26-13

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **94209**

BDR Number: **LA13FG12087**

Sampling Date: **9/4/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	168.82	
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\130904c\
Data File : 94209.D
Acq On : 4 Sep 2013 12:43 pm (#1); 4 Sep 2013 12:41 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 04 12:47:09 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	1.897	GC1	48156m	168.82	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-RTR2-13-0103
Examination Date:	8/21/2013
Waste Container ID:	94210
Video/Audio Recorded Media Number:	LA-RTR2-13-0103 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.: 171.5 kg Tare Wt.: 145.1 kg Net Wt.: 26.4 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 1 layer
Volume Utilization Percentage:	75 %

CCP Radiography Data Sheet

Waste Container ID: 94210

Section 3: Container Inventory and Comments (Detailed descriptions)

IM:

AM:

OM:

OI:

C:

R:

XPM:

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):	
Organic Matrix (OR):	
Inorganic Matrix (IN):	26.4
Soils (S):	
Total WMP Weight:	26.4

CCP Radiography Data Sheet

Waste Container ID: 94210

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 the liner and liner lid, therefore, the liner is vented.

RTR Operator:

Benito Maestas		8/21/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	94210	Count Sequence Number:	23495
Operator:	D3PW2DK1\operator		
Assay Start:	8/22/2013 2:52:38 PM		
Description 1:	1LANDA1832		
Description 2:	POC - Gross Wt. = 171.5 Kg		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 26.4 kg	Net:	26.4 kg
Container:	Volume: 208.0 l	Full:	95.0 %
Density:	0.728 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:	23495	Batch Number:	1LANDA1832
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:	94210	Analysis Date:	8/22/2013

Net Weight	26400.0 g		
Pu mass	4.58E+000	+-	1.09E+000 g
TRU Alpha Activity	2.97E+000	+-	1.80E+000 Ci
TRU Activity Concentration	1.12E+005	+-	6.81E+004 nCi/g
Pu-239 Equivalent Activity	2.99E+000	+-	1.80E+000 Ci
Pu-239 FGE	4.23E+000	+-	9.94E-001 g
Decay heat	9.80E-002	+-	5.98E-002 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	4.30E-002	3.03E-005	5.78E-006	2.06E-006
PU238	1.17E-003	2.01E-002	4.77E-003	6.68E-005
PU239	4.19E+000	2.60E-001	6.16E-002	8.64E-004
PU240	3.77E-001	8.55E-002	2.03E-002	2.84E-004
AM241	7.59E-001	2.60E+000	1.80E+000	1.38E-001
PU241	9.30E-003	9.58E-001	2.27E-001	3.19E-003
PU242	3.03E-003	1.20E-005	2.84E-006	0.00E+000
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	5.46E-007
U233	<LLD	<LLD	0.00E+000	3.95E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	1.19E-006
U238	<LLD	<LLD	0.00E+000	1.08E-005

Errors quoted at 1.000 sigma

Operator: D I R [illegible] Date: 8-26-13

ITR: [illegible] Date: 8-27-13

Automated Independent Technical Review

Count Sequence Number: 23495 Batch Number: 1LANDA1832
Counter ID: MCS HENC #1
Container ID: 94210
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 8/22/2013

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-53,52.
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: 8-26-13

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **94210**

BDR Number: **LA13FG12087**

Sampling Date: **9/4/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	223.85	
74-82-8	Methane	13.33	
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\130904c\
Data File : 94210.D
Acq On : 4 Sep 2013 10:07 am (#1); 4 Sep 2013 10:05 am (#2)
Operator : EL
Sample :
Misc : POC through Drum Filter, NucFil-019DS (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 04 10:12:58 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	63853m	223.85	ppmv	
2) Methane	3.723	GC1	1777m	13.33	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-RTR2-13-0103
Examination Date:	8/21/2013
Waste Container ID:	94211
Video/Audio Recorded Media Number:	LA-RTR2-13-0103 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.: 184.0 kg Tare Wt.: 145.1 kg Net Wt.: 38.9 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 1 layer
Volume Utilization Percentage:	95 %

CCP Radiography Data Sheet

Waste Container ID: 94211

Section 3: Container Inventory and Comments	(Detailed descriptions)
IM:	
AM:	
OM:	
OI:	
C:	
R:	
XPM:	
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):	
Organic Matrix (OR):	
Inorganic Matrix (IN):	38.9
Soils (S):	
Total WMP Weight:	38.9

CCP Radiography Data Sheet

Waste Container ID: 94211

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 the liner and liner lid, therefore, the liner is vented.

RTR Operator:

Benito Maestas		8/21/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	94211	Count Sequence Number:	16441
Operator:	DCLTD231\Operator		
Assay Start:	8/22/2013 11:03:44 AM		
Description 1:	2LANDA1216		
Description 2:	POC - GROSS WT. = 184.0		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gal Drum		
Weight:	Net: 38.9 kg	Net:	38.9 kg
Container:	Volume: 208.0 l	Full:	95.0 %
Density:	0.791 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:	16441	Batch Number:	2LANDA1216
Assay Instrument:	HENC #2	Location:	LANL TA-54
Analysis Method:	CCP-TP-063 v 14	Software Version:	NDA 2000 V.4.0
Item ID:	94211	Analysis Date:	8/22/2013

Net Weight	38900.0 g		
Pu mass	1.09E+002	+- 2.20E+001	g
TRU Alpha Activity	1.68E+001	+- 4.65E+000	Ci
TRU Activity Concentration	4.31E+005	+- 1.20E+005	nCi/g
Pu-239 Equivalent Activity	1.71E+001	+- 4.65E+000	Ci
Pu-239 FGE	1.00E+002	+- 2.19E+001	g
Decay heat	5.41E-001	+- 1.54E-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	8.78E-007
U233	<LLD	<LLD	0.00E+000	1.11E-002
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	3.65E-006
NP237	1.15E-001	8.13E-005	1.62E-005	6.00E-006
PU238	3.25E-002	5.56E-001	2.12E-001	4.25E-003
U238	<LLD	<LLD	0.00E+000	2.21E-005
PU239	9.97E+001	6.18E+000	1.36E+000	4.72E-002
PU240	8.67E+000	1.97E+000	4.49E-001	1.50E-002
AM241	2.35E+000	8.07E+000	4.42E+000	9.00E-002
PU241	1.82E-001	1.88E+001	4.15E+000	1.43E-001
PU242	1.50E-001	5.93E-004	1.63E-004	0.00E+000

Errors quoted at 1.000 sigma

Operator: Ann Dalton Date: 8/27/13

ITR: Date: 8·27·13

Automated Independent Technical Review

Count Sequence Number: 16441 Batch Number: 2LANDA1216
Counter ID: HENC #2
Container ID: 94211
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 8/22/2013

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. 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. Analysis Status: Override enabled; data marked not available but were used. 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. FRAM results applied. FRAM results attached.
Section 5 - Gamma Analysis Analysis Status: No errors. Ratio of Pu-239 414 to 129 keV line activities is above the limit of 2.50	OK After EA review, results valid.

Comments	Disposition
Miscellaneous	No additional nuclides contributing to 95% of the radiological hazard identified.

Expert Review by: _____ Date: 8/27/13

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **94211**

BDR Number: **LA14FG12011**

Sampling Date: **1/24/2014**

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	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\140124c\
Data File : 94211.D
Acq On : 24 Jan 2014 2:29 pm (#1); 24 Jan 2014 2:27 pm (#2)
Operator : NW
Sample :
Misc : POC THROUGH DRUM FILTER, NUCFIL-019DS (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jan 24 14:33:02 2014
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

(#) = 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-RTR2-13-0103
Examination Date:	8/21/2013
Waste Container ID:	94212
Video/Audio Recorded Media Number:	LA-RTR2-13-0103 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.: 46.5 kg Tare Wt.: 33.4 kg Net Wt.: 13.1 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:	25 %

CCP Radiography Data Sheet

Waste Container ID: 94212

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):	4.0
Other Inorganic Materials (OI)	
Cellulosics (C):	1.0
Rubber (R):	
Plastics (waste materials) (XPM):	2.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	6.1
Soils (S):	
Total WMP Weight:	13.1

CCP Radiography Data Sheet

Waste Container ID: 94212

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		8/21/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	94212	Count Sequence Number:	23493
Operator:	D3PW2DK1\operator		
Assay Start:	8/22/2013 1:25:30 PM		
Description 1:	1LANDA1832		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 13.1 kg	Net:	13.1 kg
Container:	Volume: 208.0 l	Full:	25.0 %
Density:	0.250 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: 23493
Assay Instrument: MCS HENC #1
Analysis Method: CCP-TP-063 v 14
Item ID: 94212

Batch Number: 1LANDA1832
Location: LANL TA-54
Software Version: NDA 2000 V.4.0
Analysis Date: 8/22/2013

Net Weight	13100.0 g		
Pu mass	4.07E+000	+-	7.22E-001 g
TRU Alpha Activity	3.85E-001	+-	4.45E-002 Ci
TRU Activity Concentration	2.94E+004	+-	3.40E+003 nCi/g
Pu-239 Equivalent Activity	4.00E-001	+-	4.46E-002 Ci
Pu-239 FGE	3.75E+000	+-	6.60E-001 g
Decay heat	1.22E-002	+-	1.39E-003 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	1.54E-002	1.09E-005	1.19E-006	6.52E-007
PU238	1.04E-003	1.79E-002	3.16E-003	6.74E-005
PU239	3.72E+000	2.31E-001	4.09E-002	8.71E-004
PU240	3.35E-001	7.60E-002	1.35E-002	2.87E-004
AM241	1.76E-002	6.03E-002	1.07E-002	2.27E-004
PU241	8.27E-003	8.51E-001	1.51E-001	3.21E-003
PU242	2.69E-003	1.06E-005	1.88E-006	0.00E+000
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	2.27E-007
U233	<LLD	<LLD	0.00E+000	1.30E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	3.48E-007
U238	<LLD	<LLD	0.00E+000	4.93E-006

Errors quoted at 1.000 sigma

Operator: [illegible] Date: 8-26-13

ITR: [illegible] Date: 8-27-13

Automated Independent Technical Review

Count Sequence Number: 23493 Batch Number: 1LANDA1832
Counter ID: MCS HENC #1
Container ID: 94212
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 8/22/2013

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 passed.	
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-53,52.
Results are marked as invalid.	
Section 5 - Gamma Analysis	
Analysis Status: No errors.	Ok
Density is outside range (0.02 to 2.10 g/cc) or fill height is below 30%.	Fill height acceptable, neutron results applied.

Comments	Disposition
Miscellaneous	No additional nuclides contributing to 95% of the radiological hazard identified.

Expert Review by: Sheri Chamberlin Date: 8-26-13

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **94212**

BDR Number: **LA13FG12087**

Sampling Date: **9/4/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	37.11	
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\130904c\
Data File : 94212.D
Acq On : 4 Sep 2013 10:57 am (#1); 4 Sep 2013 10:55 am (#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 04 11:01:13 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	1.893	GC1	10585m	37.11	ppmv	

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

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S832147

S832147

Container Profile 769697

File Options Reports Help

S832147

769697	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

S832147

- S832147
  - 90729 — EMPTY
  - 90728
    - 92487 — EMPTY
    - 92486
      - SB01966
  - 90727
    - 92211
    - 92214 — EMPTY
    - 92213
    - 92212
      - LASB02080
    - 92210

Task History

Transfer Details

Transfer Amount	Transfer Unit	Item	Measured Weight	Measured Weight Unit
24.999738875	%			

Working Copy
Date: 1-5-12

ATTACHMENT 1
Page 1 of 3

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: S832147

6.2[4] Date Processed: 1-5-12

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: NONE

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

4.3[4][B] Platform Scale: Equipment No.: 019065
Cal. Due Date: 5-3-12

4.3[5][B] 3 Liters carbon spheroids or MET-L-X in WCG: ☑ YES ☐ NO

4.3[6] **($)** WCG Fire Watch stationed: (> 56 PE-Ci) (AC 5.2.3)
☐ YES ☐ NO ☑ N/A

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

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

Performed By: Michael Romero Michael Romero 1182723 1-5-12
Waste Handling Tech (print) Signature Z # Date

5.[16] Prepared Parent Drum Weight (lb): 363.4 lb

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

Working Copy
Date: 1-5-12

ATTACHMENT 1
Page 2 of 3

4.1[6][B] Parent Waste Container No.: S832147

6.2[5][B]/ 6.2[6] Total Parent Drum Weight (lb) 363.4 lb

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

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	90727			
10.1[4]	Daughter Drum Filter No.	CL-1149		N	
10.1[4]	Daughter Drum Bag Filter No.	WO-1135		A	
10.1[4]	Daughter Drum Purchase Order No.	4R/992			
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	BOP			
	Model No.	3cpvc 1.5-25pm			
	Serial No.	WO-1601			
	Date of Manufacture	6/11			
10.2[5]	POC ID No	90728			
10.2[7][B]/10.2[6]	POC Item Description	Salts			
10.2[7][D]/10.2[8][D]	Bag-out Bag Filter No.	N/A			
10.2[13]	POC Assembly closed per Manufacturer's instructions. (Initial and Z#)	MR 182723			
10.2[14]	POC Assembly Gross Weight (lb)	340.4			
10.2[15]	POC Rad. Survey Results (mrem/hr)	185.5		N	
10.3[3][A]	Approx. Containerized Liquid Vol./Units	N/A		A	
10.3[7][A]	Opaque/Non-penetrable Item Description:	Lead Shielding			
10.3[5][A]	Free Liquid Volume/Units	1/2 pint			
10.3[9][A]	PCB-contaminated Waste Description	N/A			
10.3[9][B]	PCB Item ID No.				
10.3[10]	Remaining Waste Description	See comments			
10.3[13]/10.4[12]/ 10.5[5]	Daughter Drum % Full (%)	MR 1-12 ~~60%~~ 100%			
10.5[4]	Description Waste Added During Processing	Stob outs			

ATTACHMENT 1
Page 3 of 3

4.1[6][B] Parent Waste Container No.: S832147

Comments: plastic, Salts, Lead shielding.

11.1[1] Performed By: Michael Zamora | Michael Zamora | 1182723 | 1-5-12
Waste Handling Tech (print) Signature Z# Date

11.1[7] Reviewed By: G Martinez | G Martinez | 149235 | 1.9.12
SOS/SOM (print) Signature Z# Date

Attachment 1. Checklist for Overpacking Drums Into an 85–Gal Overpack

85-Gallon Overpack ID Number 90729

RECORD Drum Filter information: AUCFil-013
Filter ID Number: FJ-409
Date of Manufacture: 6/09

TORQUE WRENCH INFORMATION

Filter Torque Wrench		Drum Lid Ring Bolt	
M&TE ID#	040655	M&TE ID#	032122
Cal Expiration Date	9-12-12	Cal Expiration Date	9-18-12
	+/-3% cw		+/-3% cw
Tolerance	+/-6% ccw	Tolerance	+/-6% ccw
Torque wrench is within acceptable range as displayed on Calibration Certificate	☑ Yes ☐ No ☐ N/A	Torque wrench is within acceptable range as displayed on Calibration Certificate	☑ Yes ☐ No

Bung Torque Wrench	
M&TE ID#	040691
Cal Expiration Date	8-2-12
Tolerance +/-3% cw	+/-6% ccw
Torque wrench is within acceptable range as displayed on Calibration Certificate	☑ Yes ☐ No ☐ N/A

Previously used 85-gallon container inspected (as applicable) ☐ SAT ☐ UNSAT

Filter vent torque value: (new container only) 120 in-lb ☐ N/A

Drum lid 2-inch bung torque value: (If applicable) 30 ft-lb ☐ N/A

Drum lid ring-bolt torque value: 60 ft-lb

Drum lid ring threaded end touching jam nut: ☐ YES ☑ NO

Drum lid ring ends touching: ☐ YES ☑ NO

Technician Name (print)	Signature	Initials	I#	Date
Gerald Espinoza	[signature]	GE	237720	1-5-12
Michael Romero	[signature]	MR	182723	1-5-12

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

Drum ID#: 90727

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 #: 414992
Lot #: 217304
Date of Manufacture: 2011

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 #: 3C PVC 1.5-2 PVC
Serial #: W01135
Date of Manufacture: 05-11

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 #: C1-149
Date of Manufacture: 03-11

RECORD torque wrench information:

Filter torque wrench:		Jam Nut / Bung torque wrench:	
M&TE ID #:	040645	M&TE ID #:	032122
Cal Expiration Date:	9-12-12	Cal Expiration Date:	9-12-12
Range (ft-lbs or in-lbs):	40-200	Range (ft-lbs or in-lbs):	20-80
Tolerance:	+/-3% fm +/-6%	Tolerance:	+/-3% fm +/-6%

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

[x] Yes [ ] No

Print Name: Alberto Guerrero Signature [signature] Z#: 238782

5. Weigh Drum Assembly

RECORD weight information

Tare witght (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: Clayton Mullins Operator Sign: [signature] Z#: 240092 Date: 12/12/11

Verifier Print: Michael Romero Verifier Sign: [signature] Z#: 182722 Date: 1-5-12

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

DRUM ID#: 90727

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 # : 032122

Cal expiration date: 9-18-12

Range/ Value (ft-lbs): 20-80

--- 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.): 355.4

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: Gerald Espinoza [signature] Date: 1.5.12

Verifier Print/Sign: [signature] Date: 1-5-12

SP 1

WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Production Control

Container ID: S832147 Container Type: 55-GAL Gross Weight (lbs): 367

Inner Seal #: 013170 Filter Prefix: LAVC Filter Serial #: 02595

AK Waste Stream: LA-MHD01.001 Certified RTR BDR: No BDR

TWSR Comments: LEACHED SOLIDS/MST12 ROOM 434

Total PE-Ci Activity: 3.15E+00 Equivalent Combustible PE-Ci: 1.18E+00 AM-241 PE-Ci: 2.56E-01

Total Fissile Gram Equivalents: 34.8 Total Surface Dose Rate (mrem/hr): No data

EPA Code(s): None

NCR RTR/NDA Comment: None

RTR Pre-Screen Date: 5/29/2007 Comment: Impenetrable Obj,

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:

Performed By: R. W. Jones / R. W. Jones / 117434 / 1.18.11
Production Control (Print) Signature Z Number Date

1.18.11 RW

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: Leached solids - nitrate salts
Net Wt: 307lb, Two items weighing 66lb + 150lb, respectively
May require RWP for >100 and <1,000 mrem/hr at 30cm.

Performed By: Valerie Rhodes / Valerie Rhodes / 112609 / 11/12/11
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: Heavy items. OK to accept per Ops manager.

Performed By: Vanessa Velarde / Vanessa Velarde / 231679 / 12-1-11
TRU Remediation Operations (Print) Signature Z Number Date

Noncertified TRU Waste Drum Item Information

DrumID: 013170

Item No	ItemID	Process Status	Net Wt (kg)	Matrix	Meas Code	SNM (g)	MT	Auth (Pg/Ln)		Comments
1	IXFS-676FB		68.080	NITRATE SALTS		31.88	52	5/11	G468	
2	IXFS-677FA		29.550	NITRATE SALTS		5.02	52	5/11	G468	

Noncertified Waste Drum Material Summary

Gross Wt (kg): 166.3

Material Type	SNM (grams)	Items Net Wt (kg)
52	36.9	97.63
Totals	36.9	97.63

ATTACHMENT 1
Page 1 of 2

HYDROGEN/VOC SAMPLING USING GAS CHROMATOGRAPHY DATA SHEET

7.[1] Sample Date: 8/1/11

7.[7] Certified CCP Technician:

CCP (Print)	Signature	Z #	Date
Sara Aragon	Sara Aragon	1237975	12-15-11
	/	/	/

Container No. (7.[1]):	S832147 LS	S833231 LS	59369
Container Type (SWB, 110/85/55-gal) (7.[1]):	55gal	55gal	55gal
Current Filter Vent No. (7.[1]):	72	72	13
New Filter Vent No.: (7.[8][A]):	72	72	13
WIPP-Approved Filter Vent (7.[8][B]):	☑ SAT ☐ UNSAT	☑ SAT ☐ UNSAT	☑ SAT ☐ UNSAT
VOC	Value (ppm) (7.[10])		
Benzene			
Chlorobenzene			
Cyclohexane			
1,1-Dichloroethane			
1,2-Dichloroethane			
1,1-Dichloroethylene			
cis-1,2-Dichloroethylene			
Ethyl benzene			
Ethyl ether			
Toluene			
1,2,4-Trimethylbenzene			
1,3,5-Trimethylbenzene			
m- and p-Xylene			
o-Xylene			
Acetone			
1-Butanol			
Methanol		243.30	
Methyl ethyl ketone			
Methyl isobutyl ketone			
Total CCP VOC value (ppm) (7.[11]):	Ø	243.30	Ø

ATTACHMENT 1
Page 2 of 2

NOTE *Filtered vent data may be captured on a support organization data sheet.*

Container Number (7.[1]):	S832147	S833231	59369
Hydrogen Reading (ppm) (7.[10]):	Ø ppm	1897.00 ppm	436.65 ppm
Methane Reading (ppm) (7.[10]):	Ø ppm	Ø ppm	Ø ppm
Total VOC Reading (ppm) (7.[11]):	Ø ppm	2433.30 ppm	Ø ppm
Filter Type (7.[9][F][c]/7.[9][G][a]):	72	72	13
WIPP Approved (SAT/UNSAT) (7.[9][F][c]/7.[9][G][a]):	SAT	SAT	SAT
Torque Wrench M&TE/ID Number (7.[9][F][a]/7.[9][G][a]):	N/A	N/A	038371
Torque Wrench Calibration Due Date (7.[9][F][a]/7.[9][G][a]):	N/A	N/A	5/6/11
Torque Wrench Tolerance (7.[9][F][a]/7.[9][G][a]):	N/A	N/A	± 3%
VERIFY Torque Wrench is within acceptable range as specified on Cal Certificate. (7.[9][F][a]/7.[9][G][b])	☐ YES ☐ NO ☑ N/A	☐ YES ☐ NO ☑ N/A	☑ YES ☐ NO ☐ N/A
Filter Torque Value (7.[9][F][a]/7.[9][G][d]) *	N/A	N/A	10 ft/lbs.

* No torque value required for 072 or 073 filters – Record N/A as applicable

Comments:
N/C

11.1[1] Performed By: Alicia Herrera / [signature] 198450 / 10/8/11
Waste Handling Operator (print) Signature Z # Date

11.1[5] ☐ Deficiencies identified and submitted (e.g., PCR or FSR system).

☑ No deficiencies

11.1[7][A] WCRRF waste container satisfies the following criteria: ☑ SAT ☐ UNSAT

- Hydrogen – less than or equal to 32,000 ppm
- VOC – less than or equal to 7,000 ppm

11.1[7][B]/ 11.1[8] Reviewed By: Kenny Romero [signature] 111 2006 / 2-15-11
Waste Handling Supervisor (print) Signature Z # Date

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\110201c\
Data File : S832147.D
Acq On : 1 Feb 2011 12:27 pm (#1); 1 Feb 2011 12:26 pm (#2)
Operator : GR
Sample :
InstName : Unit 8
Misc : 55 GALLON DRUM FROM UNDER DRUM LID. (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Feb 01 12:35:44 2011
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	3.246	96	4295468	209.00 ppm	0.00
15) Chlorobenzene-d5	5.930	117	3528336	184.00 ppm	0.00

Target Compounds	Qvalue

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

Vocgas.m Tue Feb 01 12:36:31 2011

PROJECT NAME _____ NOTEBOOK NO. _____

1-5-12

0000 Assuming WCRRF Operations center Orlando
0019 late entry at 0541 started outside rounds - Orlando
0020 late entry at 0008 completed ~~outside~~ rounds Orlando
0605 Starting inside rounds
0630 Plant up on rounds is OOS per CSE documentation OK to proceed.
0713 Inside and Outside rounds closed off by SOS
0716 Mode Change performed we are now in Operations
0800 Bagging on 5834551
0812 PORS notified Ops Center transportation doors were opened and not latched
0824 Operator notified Operations Center of Fire extinguisher expired. Contacted Orlando and he is on his way to inspect it
0101 Forklift fire extinguisher has been inspected.
0955 Starting movement out of 50-69 to transportation.
1007 Completed movement out 50-69
1010 Starting movement to transport vehicle from transportation permission granted to lower vehicle access gates.
1041 Completed movement from transportation to transport vehicle vehicle access gates have ~~been~~ 1/5/12 been restored.
1107 Bagging off 5834551 and 8 PORS. bagging on 5832147.
1400 Operator inside 50-69 introducing gloves into glovebox
1401 Starting off loading of transport vehicle. permission granted to lower vehicle access gate.
1404 Introduction glove into glovebox completed
1453 Completed off loading of transport vehicle ~~vehicle~~ 1/5/12 vehicle access gates have been restored.
1504 Starting movement out of 50-69 to transportation
1521 Completed movement out of 50-69.
1550 Starting bag off 5832147 and starting to denest.
1612 Completed denesting of drum.
1614 Starting Outside rounds
1630 Starting movement out of 50-69.
1635 Completed movement out of 50-69
1639 Mode Change completed we are now cold in bldg and warm on yard.
1700 end of day. WCRRF Operations center secure Orlando

no further entries this page

SIGNATURE _____ DATE _____ 20__
READ AND UNDERSTOOD _____ DATE _____ 20__

0555 Reviewed shift turnover from previous shift and assumed the WCRR SOM position. Dominic Villarduz
0618 Attended pre-job briefing conducted by Shift Operations Supervisor. Discussed daily the right tool for the job when trying to break apart packages that may be frozen. Distributed stop work authority with all operators. All operators will be attending ISR page change training today. Mod sessions held at TA50-169 0900 hrs and 1330 hrs.
0710 Made shared computer WCRR YARD and 50-69 from WARM to OPERATIONS mode.
0800 Notified by Shift Operations Supervisor that RCTs just entered the facility to support operations.
0810 Notified by the Senior Supervisory Watch that while observing outside operations he noticed that transportations personnel didn't tie transportainer doors down. R&T personnel were notified and instructed to place transportainer doors in a safe configuration.
0825 Notified by Operation Center that operations are in a standstill outside due to the forklift fire extinguisher being expired since the end of the month of December.
0826 SOM notified Jim Gallegos about fire extinguisher. Jim is on his way.
0900 Inspector arrived for fire extinguisher.
0905 ~~0845~~ 0845 Rate entry - Spoke to SSW about safety observations 1-5-12 observed during walk down of outside operations. He notified SOM of some areas of concern. 1) no decals in pins. One in yard. 2) individual walking in back of a forklift during inspection. 3) fire extinguisher on forklift expired.
0850 Rate entry - SOM called a safety panel with all outside operators to discuss observations. SOM called PC inside and had him call a safety panel inside to discuss observations.
0906 Attended WCRR Basics for Returning Operations and Technical Safety Requirements R.2.0 Annual Update and Page Change R.2.1 for TA50-69 Operation Personnel.
1045 Training complete for first half of the crew. Next session will be conducted at 1330 hrs.
1411 Notified by e-mail that drums from solution package #1 and #15 will be shipped to WCRR next week.
1556 Confirmed with Operations Manager and Energy Solutions Manager that WCRR will have enough fluid other for next week to keep operations going for early next week. Therefore 50-69 may go into Cold Mode through the weekend to support maintenance.
1600 Confirmed with Energy Solutions Manager and Shift Operations Supervisor that the chlorine calibration test will be

223

PROJECT NAME _____ NOTEBOOK NO. _____

1-5-12 0600 REVIEWED SOS TURNOVER AND ASSUMING WCRR SOS POSITION

0615 STARTING PRE-JOB BRIEFING

0705 PRE-JOB BRIEFING CONCLUDED

0800 Notified By Inside Personal TRCT's were Just now entering facility

0825 notified by outside Personal Fire extinguisure not vi to date stoping All forklift operations

0830 Notified Inspector to come And check Fire extinguisure

0845 Inspector Arrived And Inspected fire extinguisure

1623 ~~End of s~~ 1-5-12 ~~Turn~~ 1-5-12 Turning over SOS position

1626 late entrie Energy Solutions 6M Conducted brief on Conduct of ops At 1245

1630 TURNING SOS POSITION OVER

1631 Received SOS TURNOVER AND ASSUMING WCRR SOS POSITION

1700 Movement Complete

1700 MODE CHANGE COMPLETE

1710 SECURING WCRR SOS POSITION

No Further Entries ON THIS PAGE

SIGNATURE _____ DATE _____ 20

READ AND UNDERSTOOD _____ DATE _____ 20

UET
10-17-12
10-17-12
10-17-12

ATTACHMENT 1
Page 1 of 4

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: 90727

6.2[4] Date Processed: 10/17/12

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] (S) 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] (S) 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] (S) 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: Clayton Williams, CJA 24082, 10/17/12
Waste Handling Tech (print) Signature Z # Date

ATTACHMENT 1
Page 2 of 4

4.1[6][B]	Parent Waste Container No.:	90127
5.[18]	Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable:	360.0 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)	360.0 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
N/A			

ATTACHMENT 1
Page 3 of 4

4.1[6][B] Parent Waste Container No.: 90727

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	92210	92211	92212	92213
10.1[4]	Daughter Drum Filter No.	AM-836	AM-764	AM-892	AM-765
10.1[4]	Daughter Drum Bag Filter No.	L-3681	L-3665	L-3709	L-1765
10.1[4]	Daughter Drum Purchase Order No.	416265	416265	416265	416265
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	N/A			
10.3[5][A]	Free Liquid Volume/Units				
10.3[7][A]	Opaque/Non-penetrable Item Description:	lead shieldins		N/A	N/A
10.3[9][A]	PCB-contaminated Waste Description	N/A			
10.3[9][B]	PCB Item ID No.				
10.3[10]	Remaining Waste Description	see comments	see comments	see comments	see comments
10.3[13]/10.4[10]/10.5[4]/10.6[8]	Daughter Drum % Full (%)	100%	100%	100%	100%
10.3[3]/10.6[2]	Description Waste Added During Processing	bag-out stabs	bag out stabs	bag-out stabs	bag-out stabs

ATTACHMENT 1
Page 4 of 4

4.1[6][B] Parent Waste Container No.: 90727

Comments: kitty litter, plastics, hex-armours, nitrate salts

11.1[1] Performed By: Clyde Miller [signature] 24081 10/17/12
Waste Handling Tech (print) Signature Z # Date

11.1[7] Reviewed By: Jose Jerez [signature] 22452 10/17/12 1000
SOS or designee (print) Signature Z # Date/Time
10-18-12

Working Copy

ATTACHMENT 2
Page 1 of 1

WCRRF OVERPACK DRUM ASSEMBLY PREPARATION DATA SHEET

5.[3] Overpack drum information:
- Purchase Order No.: 413954
- Lot No.: 211486
- Manufacture Date: 2010

5.[8] Overpack filtered vent information:
- Manufacturer: MacDi
- Model No.: 613
- Serial No.: HL-736
- Manufacture Date: 8/11

Overpack filtered vent and 2 in. bung torque wrench information:

	Filtered Vent	2 in. Bung
M&TE No.:	040694	021151
Cal. Expiration Date:	9-26-13	6-11-13
Tolerance:	+/- 4% CW +/- 6% CCW	+/- 3% CW +/- 6% CCW

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

Performed By: Steven Mendoza / Steven Mendoza / [illegible] / 10-09-12
Waste Handling Technician (print) Signature Z # Date

5.[12] Filtered Vent torque value [120 in-lb (96 to 144 in-lb)]: 120 in-lb

5.[15] 2 in. bung plug torque value: 32 ft-lb

Comments: N/C

8.1[1] Performed By: Steven Mendoza / Steven Mendoza / [illegible] / 10-09-12
Waste Handling Technician (print) Signature Z # Date

8.1[5] ☐ Deficiencies identified and submitted (e.g., PCR or FSR system).
☑ No deficiencies

8.1[7] Reviewed By: Jose Jerez / [illegible] / 224521 / 10/18/12
Supervisor or designee (print) Signature Z # Date

10-17-12

ATTACHMENT 5
Page 1 of 1

10-16-12
10-17-12

WCRRF OVERPACK DRUM CLOSURE DATA SHEET

7.[19] Overpack Drum Unique Identifier No.: 92214

7.[25] Overpack drum closure ring torque wrench information:
M&TE No.: 040329
Cal. Expiration Date: 10/17/12
Range in ft-lb: 16-80
Tolerance: 5% rdg / 2% fs

7.[26] Torque wrench listed above is within the acceptable ranges as displayed on the calibration certificate. ☑ Yes ☐ No

Performed By: Clayton Mullins
Waste Handling Technician (print) Signature Z# 228021 Date 10/17/12

7.[28] Overpack drum closure ring torque value: 60 ft-lb

7.[31] Threaded lug of the drum closure ring is not touching the jam nut and the locking ring lugs are not touching. ☑ SAT ☐ UNSAT

7.[36][B] Platform scale serial number: 019065
Platform scale calibration expiration date: 10/17/12

7.[36][D] 85-gal overpack drum gross weight (lb): 159.6 lb

Comments: N/A

8.1[1] Performed By: Clayton Mullins
Waste Handling Technician (print) Signature Z# 228021 Date 10/17/12

8.1[5] ☐ Deficiencies identified and submitted (e.g., PCR or FSR system).
☑ No deficiencies

8.1[7] Reviewed By: Jose Perez
Supervisor or designee (print) Signature Z# 221452 Date 10-18-12

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

Drum ID#: 92210

1. Drum/Lid Assembly

- [ ] Remove and discard ½" bung from lid
- [x] 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 #: 4118246
Lot #: 0224225
Date of Manufacture: 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: POP
Model #: Micro 1.5-2 spec
Serial #: L-36081
Date of Manufacture: 10-12

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 ½" 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: NUCON
Model #: D1905
Serial #: AM 836
Date of Manufacture: 1-12

RECORD torque wrench information:

Filter torque wrench:
MATE ID #: 020184
Cal Expiration Date: 10-19-12
Range (ft-lbs or in-lbs): 40-200
Tolerance: ±4% CW ±10% CCW

Jam Nut / Bung torque wrench:
MATE ID #: 021157
Cal Expiration Date: 10-31-13
Range (ft-lbs or in-lbs): 110-80
Tolerance: ±4% CW ±10% CCW

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

[x] Yes [ ] No

Print Name: Michael Romero Signature: Michael Romero ID: 182723

5. Weigh Drum Assembly

RECORD weight information

Tare weight (lbs): 77.3
File ID #: 61905

- [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 Romero Operator Sign: Michael Romero ID: 182723 Date: 10-11-12

Verifier Print: Clayton Mullins Verifier Sign: CM ID: 24093 Date: 11/12/12

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

DRUM ID#: 92210

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 #: 640329

Cal expiration date: 3/15/13

Range/Value (ft-lbs): 16 - 80 / 60

~ 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): 348.8

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: Chris Hellas [signature] Date: 10/17/12

Verifier Print/Sign: Brandon Crouse [signature] Date: 10/17/12

Drum 10-3-12

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

Drum ID#: 92211

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 pallet
  - NOTE: Reject damaged drum/lid assembly
- [x] Place 2" duct tape on vertical seam on interior of drum

RECORD drum information:

Purchase Request #: 416.265
Lot #: 292205
Date of Manufacture: 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: Bag P
Model #: CcPur 1.5-2 SDVC
Serial #: L-3665
Date of Manufacture: 6/12

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: Quick!
Model #: 019 DS
Serial #: Am-764
Date of Manufacture: 1/12

RECORD torque wrench information:

Filter torque wrench:
MATE ID #: 020614
Cal Expiration Date: 10-19-12
Range (ft-lbs or in-lbs): 40-200
Tolerance: ±1% FSW ±6% ECW

Jam Nut / Bung torque wrench:
MATE ID #: 021431
Cal Expiration Date: 6-11-13
Range (ft-lbs or in-lbs): 14-80
Tolerance: ±3% FSW ±6% ECW

Torque wrenches listed above are within the acceptable ranges as displayed on the calibration certificate.
[x] Yes [ ] No
Print Name: Michael Romero Signature: Michael Romero ID: 182723

5. Weigh Drum Assembly

RECORD weight information

Tare weight (lbs)
File ID #: 76.8

- [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 Romero Operator Sign: Michael Romero ID: 182723 Date: 10-3-12

Verifier Print: Leyla Willis Verifier Sign: ID: 278091 Date: 10/3/12

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

DRUM ID#: 92211

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 manufacturer 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 #: 640329

Cal expiration date: 3/15/13

Range/ Value (ft-lbs): 16 - 80 / 60

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.): 300.4

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 10/17/12

Verifier Print/Sign: [illegible] Date: 10-17-12

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

Drum ID#: 92212

1. Drum/Lid Assembly

- [x] Remove and discard 16" bung from lid
- [x] Remove Lid
- [x] Inspect drum, lid, and gasket, ring bolt and nut, chines, and pails
  - NOTE: Reject damaged drum/lid assembly
- [x] Place 2" duct tape on vertical seam on interior of drum

RECORD drum information:
- Purchase Request #: 4110276 5
- Lot #: 677.9225
- Date of Manufacture: 12

2. Drum Liner Bag/Filter Assembly:

- [x] Place yellow vinyl tape, with smear contained 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 #: Inc-NL-5-25NC
- Serial #: L-3708
- Date of Manufacture: 6-17

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 16" 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 #: 019105
- Serial #: AM 342
- Date of Manufacture: 1-12

RECORD torque wrench information

Filter torque wrench:		Jam Nut / Bung torque wrench:	
M&TE ID #:	026 [illegible]	M&TE ID #:	021151
Cal Expiration Date:	10-19-17	Cal Expiration Date:	10-11-17
Range (ft-lbs or in-lbs):	40-200	Range (ft-lbs or in-lbs):	10-80
Tolerance:	±2% [illegible]	Tolerance:	±3% [illegible]

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

[x] Yes [ ] No

Print Name: Gerald Espinosa Signature: [signature] ZP: 287720

5. Weigh Drum Assembly

RECORD weight information
- Tare weight (lbs): 77.1
- 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: Gerald Espinosa Operator Sign: [signature] ZP: 287720 Date: 10-11-17

Verifier Print: Clayte Mullins Verifier Sign: [signature] ZP: 240091 Date: 10/12/17

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

DRUM ID#: 92212

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 #: 040329

Cal expiration date: 3/15/13

Range/ Value (ft-lbs): 16-80 / 60

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: on 10-17-12

Gross Weight(lbs.): ~~304.4~~ 322.8

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: 10/17/12

JOE QUINTANA

Verifier Print/Sign: [illegible] Date: 10/17/12

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

Drum ID#: 92213

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 seams on interior of drum

RECORD drum information:

Purchase Request #: 4166265
Lot #: 0209225
Date of Manufacture: 8/12

2. Drum Liner Bag/Filter Assembly:

- [x] Place yellow vinyl tape, with arrows 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 #: 16GPUC 1.5-2 SPUC
Serial #: L-17165
Date of Manufacture: 6-12

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 #: 91905
Serial #: AM7165
Date of Manufacture: 01/12

RECORD torque wrench information:

Filter torque wrench:
M&TE ID #: 020014
Cal Expiration Date: 10-19-12
Range (ft-lbs or in-lbs): 10-200
Tolerance: +/-4% cw and +/-6% ccw

Jam Nut / Bung torque wrench:
M&TE ID #: 02115
Cal Expiration Date: 6-21-13
Range (ft-lbs or in-lbs): ~~[illegible]~~ 10 x 16-80
Tolerance: [illegible] +/-6% ccw

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

[x] Yes [ ] No

Print Name: Michael Romero Signature: [signature] ID: 182723

5. Weigh Drum Assembly:

RECORD weight information

Tare weight (lbs): 76.6
File ID #: 619665

- [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 Romero Operator Sign: [signature] ID: 182723 Date: 10-3-12

Verifier Print: Clayton Mullins Verifier Sign: [signature] ID: 241092 Date: 10/17/12

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

DRUM ID#: 92213

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 Seat 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 #: 040329

Cal expiration date: 3/15/13

Range/ Value (ft-lbs): 16-80 / 60

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.): 316.2

Scale ID#: 049065

☑ 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: Charles Mallyn CM Date: 11/17/12

Verifier Print/Sign: Brian L. Chenoe Date: 11-17-12

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WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Production Control

Container ID: 90727 Container Type: 55-GAL Gross Weight (lbs): 355
Inner Seal #: None Filter Prefix: None Filter Serial #: CL-1149
AK Waste Stream: LA-MHD01.001 Certified RTR BDR: No BDR
TWSR Comments: PARENT #832143
Total PE-Ci Activity: 1.58E+00 Equivalent Combustible PE-Ci: 5.91E-01 AM-241 PE-Ci: 1.28E-01
Total Fissile Gram Equivalents: 17.4 Total Surface Dose Rate (mrem/hr): 15
EPA Code(s): D008 D007 D009 ve 10/9/12
NCR RTR/NDA Comment: None
RTR Pre-Screen Date: 6/27/2012 Comment: Impenetrable, Liquid is present, S3000
Certified RTR Comment: None
Prohibited Items: ☑ Sealed > 4 Liters ☑ Liquid ☐ Pressurized Container ☑ Impenetrable Items ☐ 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: TBD Production Control Comments: Need to add EPA Codes D007 & D009. Nitrate salts mixed with Wastelock 770 from previous repack campaign. A minimum of 1:2 volumes of kitty litter/sorbent must be mixed with 1 volume of nitrate salts.
Performed By: Susan Ramsey (Production Control (Print)) Signature: Susan S. Ramsey Z Number: 100681 Date: 9/4/12

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/debris
Net Wt: 2861b
Parent drum (SEDS attached) was part of WCRR nitrate salt repack campaign. This resulting daughter 55-gal drum may contain nitrate salts or a combination of nitrate salts and debris. RTR PS identifies impenetrable item(s) (likely homogeneous nitrate salts or debris such as lead) and liquids (requiring adjustment to the admixture/nitrate salt ratio). Nitrate salts carry waste codes for chromium, lead, and mercury. No chemicals present. May require RWP for >100 to <1000 mrem/hr.
Performed By: Valerie Rhodes (WDP Engineering (Print)) Signature: Valerie Rhodes Z Number: 112609 Date: 10/10/12

TRU Remediation Operations

Valerie Rhodes
☑ Waste Container Information Evaluated ☐ Less Than 170 lbs ☐ RTR Video Available
Other Specific Safety Concerns: Do not push or press on waste. Use heavy duty gloves when processing waste
Processing Determination: ☑ Accept ☐ Reject
TRU Remediation Operations Comments: Use proper ratio of kitty litter to waste in accordance with the procedure
Performed By: Jose Perez (TRU Remediation Operations (Print)) Signature: Jose Perez Z Number: 221452 Date: 10-11-12

LL Z# 249750 10/15/12

HFS Review: RB 206362 10.11.12

Nonverified TRU Waste Drum Item Information

DrumID: 012190

Item No	Tracklb	Propane Status	Net Wt (kg)	Matrix	Mass Code	SNM (g)	MT	Assay (Bq/Lm)		Comments
1	IRPR-4765R		65.000	NITRATE SALTS		31.86	5%	5/11	0440	
2	IRPR-4770A		30.350	NITRATE SALTS		5.07	5%	5/11	0449	

Nonverified Waste Drum Material Summary

Gross Wt (kg): 166.3

Material Type	SNM (grams)	Items Net Wt. (kg)
5%	36.9	97.63
Totals	36.9	97.63

ATTACHMENT 1
Page 1 of 1

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

5.[1] Sample Date: 10/5/12

Container No. (5.[1])	90727					
Container type sampled (e.g., 55-gal, 85-gal, 110-gal, or SWB) (5.[1])	55 gal					
Filtered Vent Type (5.[1])	19DS					
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])	68.71 ppm	ppm	ppm	ppm	ppm	ppm
Hydrogen Reading (< 64,000 ppm) (5.[5])	4,107.52 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)) 237975 (Z #)

Reviewed By: NATHAN WALES (CCP (Print)) 238866 (Z #)

Comments: None

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 #) 10/10/12 (Date)

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\121005c\
Data File : 90727.D
Acq On : 5 Oct 2012 2:27 pm
Operator : SA
Sample :
InstName : Unit 8
Misc : 55 GAL LFL DRUM THROUGH 19DS-UNOBSTRUCTED (Sig #1), (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Oct 05 14:35:57 2012
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	3.259	96	2340477	206.00	ppm	0.00
15) Chlorobenzene-d5	5.936	117	2125613	179.50	ppm	0.00
Target Compounds						Qvalue
1) Hydrogen	5.770	GC1	1014897m	4107.52	ppm	
4) Methanol	0.785	31	11920	54.04	ppm	100
17) Toluene	4.779	92	72035	14.67	ppm	100

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

Vocgas.m Fri Oct 05 14:36:05 2012

10-17-12

0545 Assuming WCRR operations under JCleman
0557 Beginning outside rounds.
0615 Outside rounds complete.
0616 Late entry at 0609, began inside rounds. JC
0645 Inside rounds complete.
0646 Late entry - pre-job being conducted by SOS JC
0715 Both rounds reviewed by SOS.
0756 Mode change complete. We are now in operations.
0807 Per Sam, he's authorizing the lifting method for placing the empty 55 gallon into an 85 gallon.
0847 Bagging on drum #90727.
0910 Bag on complete.
1022 Bagging off 90727 with 4 daughters.
1430 Beginning inside rounds.
1448 Beginning outside rounds.
1457 Inside rounds complete.
~~1505~~ B JC 10-17-12
1514 Outside rounds complete.
1528 Bag off complete
1606 Mode change complete. We are now in warm standby.
1607 Late entry - at 1605, both rounds reviewed by SOS. JC
1630 End of day. Operations secure. JCleman

No further entries this page

SIGNATURE DATE 20
READ AND UNDERSTOOD DATE 20

0600 Assumed SOM position

0615 Attended pre job brief conducted by SOS. ES Field Manager briefed workers to Access Control Procedure, SOS briefed to authorized manual drum movements, discussed Kitty litter requirements for processing SP 72 drums (Non-POC) and ways to introduce enough into WCC.

0756 Completed Mode Change: WCRR Yard / Bldg 50-69 from Warm / Warm to Operations / Operations.

0807 Obtained written authorization from Proj Manager to repack empty 55's into 85's. (Item #1 on previous e-mail).

0810 Notified by OM that MSS equipment used to perform TE-001, 002 calibration is Out of Cal.

0830 OSP&T expressed concern over outgoing shipments due to winds increasing @ TA-54. Based on tomorrow's forcast and available room @ WCRR we are rescheduling outgoing shipment to tomorrow.

1120 Attended meeting w/ OSP&T, TA-54 Shippers, Shipping & Safe Storage Solution Package managers over container inspection requirements to come up with ways to ensure that receipt inspections @ WCRR and pre shipping inspections @ TA-54 are conducted in a similar way utilizing same criteria.

1230 Calibration of TE-001, 002 equipment will probably not take place prior to 100% date per MSS and OM. FOD being contacted to give a heads up.

~~1500~~ 10/17/12 1500 Identified Bldg 50-69 integrity ISI coming up due 11/2/12. Talked w/ CSE and scheduling to get on work schedule for Monday 10/22/12.

1604 Completed Mode Change: WCRR Yard / Bldg 50-69 from Operations / Operations to Warm / Warm.

1630 Secured SOM position.

10-18-12

No further entries this page

10-17-12 WCR SCS Log Book

0600 Assuming SCS position for the day. [illegible]

0615 Starting Pre Job Brief. Discussed a area where authorization was received for being able to slice drums using the two man pole. Ops Manager Briefed on escorting duties. Safety Topic, Know the Facts drive your back. Processing heavy drums 300+ pounds of Nitrate Salts. Using 1.5 to 1 ratio of kitty litter to waste.

0630 Conclude Pre-Job brief

0705 Signed off on outside rounds

0715 Signed off on inside rounds. Inquiring for permission to proceed with manually being able to box empty 55 gallon drums into 85 gallon drums.

0750 Mike Chung Complete Confined Area in both plus one 50-69.

0807 Permission received from Ops Manager with approval to be able to box the empty 55 gallon drums into the 85 gallon drum by hand using the two man rule.

0830 Shipment going out has been scheduled due to high winds.

0847 Bagging on first drum for the day

0940 Called into Sarah to talk with operators on the 1.5 kitty litter to 1 waste ratio. Should only apply to waste that has nitrate salts out to the plastic bag on stale etc. Also informed me that the nitrate salts are caked over 3/4 of the drum and need to be chipped out.

1130 Operator breaking for lunch. Shortness of on RCT's and unable to support working through lunch. Also shortness on operators. Two operators unable to go into 50-69 to process and two operators calling in as well.

1600 Mike Chung 50-69 and foil are in control

10-18-12 1630 Securing SCS position for the day. [illegible]

~~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-HERTR-13-0101
Examination Date:	9/17/2013
Waste Container ID:	92210
Video/Audio Recorded Media Number:	LA-HERTR-13-0101 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:	S3110
Waste Stream I.D.:	LA-MIN02-V.001
Waste Container Weights:	Gross Wt.: 158.0 kg Tare Wt.: 33.4 kg Net Wt.: 124.6 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: 92210

Section 3: Container Inventory and Comments	(Detailed descriptions)
IM:	
AM:	
OM:	Scrap lead
OI:	Glass containers
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):	22.0
Other Inorganic Materials (OI)	2.5
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	6.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	94.1
Soils (S):	
Total WMP Weight:	124.6

CCP Radiography Data Sheet

Waste Container ID: 92210

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		9/17/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	92210	Count Sequence Number:	16520
Operator:	DCLTD231\Operator		
Assay Start:	9/18/2013 1:47:37 PM		
Description 1:	2LANDA1225		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gal Drum		
Weight:	Net: 125.0 kg	Net:	125.0 kg
Container:	Volume: 208.0 l	Full:	80.0 %
Density:	0.750 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:	16520	Batch Number:	2LANDA1225
Assay Instrument:	HENC #2	Location:	LANL TA-54
Analysis Method:	CCP-TP-063 v 15	Software Version:	NDA 2000 V.4.0
Item ID:	92210	Analysis Date:	9/18/2013

Net Weight	125000.0 g		
Pu mass	6.57E+000	+-	1.35E+000 g
TRU Alpha Activity	1.18E+000	+-	3.88E-001 Ci
TRU Activity Concentration	9.47E+003	+-	3.10E+003 nCi/g
Pu-239 Equivalent Activity	1.20E+000	+-	3.88E-001 Ci
Pu-239 FGE	6.19E+000	+-	1.26E+000 g
Decay heat	3.84E-002	+-	1.29E-002 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	1.41E-002	1.01E-005	1.95E-006	6.92E-007
PU238	6.01E-004	1.04E-002	2.13E-003	3.64E-005
PU239	6.16E+000	3.88E-001	7.95E-002	1.36E-003
PU240	3.94E-001	9.06E-002	1.86E-002	3.17E-004
AM241	2.00E-001	6.95E-001	3.79E-001	1.34E-003
PU241	7.58E-003	7.88E-001	1.62E-001	2.76E-003
PU242	1.31E-003	5.22E-006	1.07E-006	0.00E+000
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	1.12E-007
U233	<LLD	<LLD	0.00E+000	2.56E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	8.84E-007
U238	<LLD	<LLD	0.00E+000	6.21E-006
AM243	1.29E-004	2.60E-005	5.15E-006	3.99E-006

Errors quoted at 1.000 sigma

Operator: _____ Date: 9-19-13

ITR: _____ Date: 9-20-13

Automated Independent Technical Review

Count Sequence Number: 16520 Batch Number: 2LANDA1225
Counter ID: HENC #2
Container ID: 92210
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 9/18/2013

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.	Pu results taken from Passive Neutron data, U 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: Bart B. Marah Date: 9/19/13

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **92210**

BDR Number: **LA13FG2103**

Sampling Date: **9/26/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	151.75	
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\130926C\
Data File : 92210.D
Acq On : 26 Sep 2013 2:09 pm (#1); 26-Sep-13, 14:08:47 (#2)
Operator : NW
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 26 14:17:30 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	3.591	96	4623529	205.75	ppmv	0.07
15) Chlorobenzene-d5	5.891	117	3585314	177.50	ppmv	0.03
Target Compounds						Qvalue
1) Hydrogen	1.541	GC1	1141m	151.75	ppmv	

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

Attachment 4 – Flammable Gas Analysis Form

5832147

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

Waste Container ID: **92210**

BDR Number: **LA13FG8001**

Sampling Date: **1/15/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	92.10	U
74-82-8	Methane	213.40	U
67-56-1	Methanol	27.87	U
60-29-7	Ethyl Ether	1.25	U
75-35-4	1,1-Dichloroethylene	5.71	U
67-64-1	Acetone	16.90	U
75-34-3	1,1-Dichloroethane	4.24	U
156-59-2	cis-1,2-Dichloroethene	0.55	U
78-93-3	Methyl ethyl ketone	9.86	U
110-82-7	Cyclohexane	5.84	U
71-43-2	Benzene	0.71	U
107-06-2	1,2-Dichloroethane	1.51	U
71-36-3	1-Butanol	1.36	U
108-10-1	Methyl isobutyl ketone	9.34	U
108-88-3	Toluene	3.09	U
108-90-7	Chlorobenzene	1.69	U
100-41-4	Ethylbenzene	2.62	U
108-38-3/106-42-3	m- and p-Xylene	1.48	U
95-47-6	o-Xylene	1.76	U
108-67-8	1,3,5-Trimethylbenzene	3.14	U
95-63-6	1,2,4-Trimethylbenzene	3.92	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)

Data Path : C:\msdchem\1\DATA\130115c\
Data File : 92210.D
Acq On : 15 Jan 2013 2:55 pm (#1); 15 Jan 2013 2:54 pm (#2)
Operator : SA
Sample :
InstName : Unit 8
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jan 15 15:03:35 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	3.259	96	2424160	206.00 ppm	0.00
15) Chlorobenzene-d5	5.939	117	2144620	179.50 ppm	0.00

Target Compounds	Qvalue

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

CCP Radiography Data Sheet

5832147

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-HERTR-12-0130
Examination Date:	12/20/2012
Waste Container ID:	92211
Video/Audio Recorded Media Number:	LA-HERTR-12-0130 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 12
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:	LA212
Waste Matrix Code:	S3110
Waste Stream I.D.:	LA-MIN02-V.001
Waste Container Weights:	Gross Wt.: 136.0 kg Tare Wt.: 33.4 kg Net Wt.: 102.6 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 3 layers
Volume Utilization Percentage:	75 %

CCP Radiography Data Sheet

Waste Container ID: 92211

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	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):	3.5
Organic Matrix (OR):	
Inorganic Matrix (IN):	99.1
Soils (S):	
Total WMP Weight:	102.6

CCP Radiography Data Sheet

Waste Container ID: 92211

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:

Dennis Powell	Dennis Powell	12/20/2012
Print Name	Signature	Date

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

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

Item ID:            92211              Count Sequence Number:  21750
Operator:           D3PW2DK1\operator
Assay Start:        12/20/2012  4:10:52 PM
Description 1:      1LANDA1689
Description 2:      N/A
Location:           LANL TA-54
Comment:            AK-6
Matrix Type:        Homo Sol. S3000
Container Type:     55 gallon drum
Weight:             Net:       106.0   kg        Net:   106.0 kg
Container:          Volume:    208.0   l        Full:    75.0 %
Density:                         0.680 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: 21750
Assay Instrument: MCS HENC #1
Analysis Method: CCP-TP-063 v 14
Item ID: 92211

Batch Number: 1LANDA1689
Location: LANL TA-54
Software Version: NDA 2000 V.4.0
Analysis Date: 12/20/2012

Net Weight	106000.0 g		
Pu mass	4.79E+000	+- 9.63E-001	g
TRU Alpha Activity	9.10E-001	+- 1.21E-001	Ci
TRU Activity Concentration	8.58E+003	+- 1.14E+003	nCi/g
Pu-239 Equivalent Activity	9.21E-001	+- 1.21E-001	Ci
Pu-239 FGE	4.52E+000	+- 9.04E-001	g
Decay heat	2.96E-002	+- 3.97E-003	W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	1.40E-002	9.99E-006	1.83E-006	7.04E-007
PU238	4.41E-004	7.63E-003	1.53E-003	3.46E-005
PU239	4.50E+000	2.83E-001	5.69E-002	1.28E-003
PU240	2.88E-001	6.61E-002	1.33E-002	3.00E-004
AM241	1.59E-001	5.53E-001	1.06E-001	2.80E-002
PU241	5.74E-003	5.96E-001	1.20E-001	2.70E-003
PU242	9.60E-004	3.81E-006	7.65E-007	0.00E+000
SR90	4.75E-009	6.56E-007	2.22E-007	0.00E+000
CS137	7.48E-009	6.56E-007	2.22E-007	2.37E-007
U233	<LLD	<LLD	0.00E+000	2.39E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	7.39E-007
U238	<LLD	<LLD	0.00E+000	6.86E-006
CM243	4.40E-007	2.29E-005	4.65E-006	5.36E-006

Errors quoted at 1.000 sigma

Operator: _____ Date: 1-3-13

ITR: _____ Date: 1-8-13

Automated Independent Technical Review

Count Sequence Number: 21750 Batch Number: 1LANDA1689
Counter ID: MCS HENC #1
Container ID: 92211
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 12/20/2012

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 Clearwater Date: 12-21-12

Waste Container ID: **92211**

BDR Number: **LA13FG8008**

Sampling Date: **2/1/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	92.10	U
74-82-8	Methane	213.40	U
67-56-1	Methanol	27.87	U
60-29-7	Ethyl Ether	1.25	U
75-35-4	1,1-Dichloroethylene	5.71	U
67-64-1	Acetone	16.90	U
75-34-3	1,1-Dichloroethane	4.24	U
156-59-2	cis-1,2-Dichloroethene	0.55	U
78-93-3	Methyl ethyl ketone	9.86	U
110-82-7	Cyclohexane	5.84	U
71-43-2	Benzene	0.71	U
107-06-2	1,2-Dichloroethane	1.51	U
71-36-3	1-Butanol	1.36	U
108-10-1	Methyl isobutyl ketone	9.34	U
108-88-3	Toluene	3.09	U
108-90-7	Chlorobenzene	1.69	U
100-41-4	Ethylbenzene	2.62	U
108-38-3/106-42-3	m- and p-Xylene	1.48	U
95-47-6	o-Xylene	1.76	U
108-67-8	1,3,5-Trimethylbenzene	3.14	U
95-63-6	1,2,4-Trimethylbenzene	3.92	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)

Data Path : C:\msdchem\1\DATA\130201c\
Data File : 92211.D
Acq On : 1 Feb 2013 3:47 pm (#1); 1 Feb 2013 3:46 pm (#2)
Operator : SA
Sample :
InstName : Unit 8
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Feb 01 15:55:10 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	2005223	206.00 ppm	0.00
15) Chlorobenzene-d5	5.933	117	1811694	179.50 ppm	0.00

Target Compounds	Qvalue

(#) = 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-13-0002
Examination Date:	1/8/2013
Waste Container ID:	92212
Video/Audio Recorded Media Number:	LA-HERTR-13-0002 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 12
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:	LA212
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:	90 %

CCP Radiography Data Sheet

Waste Container ID: 92212

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	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):	4.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	108.6
Soils (S):	
Total WMP Weight:	112.6

CCP Radiography Data Sheet

Waste Container ID: 92212

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		1/8/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	92212	Count Sequence Number:	21853
Operator:	D3PW2DK1\operator		
Assay Start:	1/16/2013 12:42:50 PM		
Description 1:	1LANDA1697		
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:	90.0 %
Density:	0.600 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: 21853
Assay Instrument: MCS HENC #1
Analysis Method: CCP-TP-063 v 14
Item ID: 92212

Batch Number: 1LANDA1697
Location: LANL TA-54
Software Version: NDA 2000 V.4.0
Analysis Date: 1/16/2013

Net Weight	113000.0 g	
Pu mass	8.98E+000 +-	2.00E+000 g
TRU Alpha Activity	7.66E-001 +-	1.24E-001 Ci
TRU Activity Concentration	6.78E+003 +-	1.09E+003 nCi/g
Pu-239 Equivalent Activity	7.87E-001 +-	1.24E-001 Ci
Pu-239 FGE	8.46E+000 +-	1.87E+000 g
Decay heat	2.41E-002 +-	3.84E-003 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	4.76E-003	3.40E-006	6.26E-007	8.18E-007
PU238	8.25E-004	1.43E-002	3.17E-003	3.35E-005
PU239	8.42E+000	5.30E-001	1.18E-001	1.24E-003
PU240	5.39E-001	1.24E-001	2.75E-002	2.90E-004
AM241	2.83E-002	9.83E-002	2.48E-002	1.86E-002
PU241	1.07E-002	1.11E+000	2.47E-001	2.61E-003
PU242	1.80E-003	7.13E-006	1.59E-006	0.00E+000
SR90	6.12E-009	8.45E-007	1.77E-007	0.00E+000
CS137	9.63E-009	8.45E-007	1.77E-007	1.79E-007
U233	<LLD	<LLD	0.00E+000	1.65E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	5.00E-007
U238	<LLD	<LLD	0.00E+000	5.44E-006
CM243	1.46E-007	7.61E-006	1.66E-006	3.14E-006

Errors quoted at 1.000 sigma

Operator: _____ Date: 1-21-2013

ITR: _____ Date: 1.24.13

Automated Independent Technical Review

Count Sequence Number: 21853 Batch Number: 1LANDA1697
Counter ID: MCS HENC #1
Container ID: 92212
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 1/16/2013

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: Sheri Chambers Date: 1-17-13

Attachment 4 – Flammable Gas Analysis Form

5832147

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

Waste Container ID: **92212**

BDR Number: **LA13FG8008**

Sampling Date: **2/1/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	92.10	U
74-82-8	Methane	213.40	U
67-56-1	Methanol	27.87	U
60-29-7	Ethyl Ether	1.25	U
75-35-4	1,1-Dichloroethylene	5.71	U
67-64-1	Acetone	16.90	U
75-34-3	1,1-Dichloroethane	4.24	U
156-59-2	cis-1,2-Dichloroethene	0.55	U
78-93-3	Methyl ethyl ketone	9.86	U
110-82-7	Cyclohexane	5.84	U
71-43-2	Benzene	0.71	U
107-06-2	1,2-Dichloroethane	1.51	U
71-36-3	1-Butanol	1.36	U
108-10-1	Methyl isobutyl ketone	9.34	U
108-88-3	Toluene	3.09	U
108-90-7	Chlorobenzene	1.69	U
100-41-4	Ethylbenzene	2.62	U
108-38-3/106-42-3	m- and p-Xylene	1.48	U
95-47-6	o-Xylene	1.76	U
108-67-8	1,3,5-Trimethylbenzene	3.14	U
95-63-6	1,2,4-Trimethylbenzene	3.92	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)

Data Path : C:\msdchem\1\DATA\130201c\
Data File : 92212.D
Acq On : 1 Feb 2013 3:57 pm
Operator : SA
Sample :
InstName : Unit 8
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Feb 01 16:05:29 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	1989846	206.00 ppm	0.00
15) Chlorobenzene-d5	5.933	117	1799074	179.50 ppm	0.00

Target Compounds	Qvalue

(#) = 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-RTR2-13-0040
Examination Date:	3/8/2013
Waste Container ID:	92213
Video/Audio Recorded Media Number:	LA-RTR2-13-0040 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 12
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.: 144.5 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 1 layer
Volume Utilization Percentage:	90 %

CCP Radiography Data Sheet

Waste Container ID: 92213

Section 3: Container Inventory and Comments (Detailed descriptions)

IM: Scrap metal

AM:

OM:

OI:

C: Cloth material

R: Rubber glove

XPM:

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 Liner (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	0.7
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	
Other Inorganic Materials (OI)	
Cellulosics (C):	10.0
Rubber (R):	2.5
Plastics (waste materials) (XPM):	
Organic Matrix (OR):	
Inorganic Matrix (IN):	97.9
Soils (S):	
Total WMP Weight:	111.1

CCP Radiography Data Sheet

Waste Container ID: 92213

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		3/8/2013
Print Name	Signature	Date

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

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

Item ID:            92213              Count Sequence Number:  22282
Operator:           D3PW2DK1\operator
Assay Start:        3/14/2013   1:16:55 PM
Description 1:      1LANDA1731
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:    90.0 %
Density:                         0.590 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:	22282	Batch Number:	1LANDA1731
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:	92213	Analysis Date:	3/14/2013

Net Weight	111000.0 g		
Pu mass	1.31E+001	+-	2.76E+000 g
TRU Alpha Activity	2.22E+000	+-	6.94E-001 Ci
TRU Activity Concentration	2.00E+004	+-	6.25E+003 nCi/g
Pu-239 Equivalent Activity	2.25E+000	+-	6.94E-001 Ci
Pu-239 FGE	1.23E+001	+-	2.59E+000 g
Decay heat	7.21E-002	+-	2.31E-002 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	2.75E-002	1.96E-005	3.32E-006	1.55E-006
PU238	1.20E-003	2.08E-002	4.39E-003	3.42E-005
PU239	1.23E+001	7.72E-001	1.63E-001	1.27E-003
PU240	7.85E-001	1.80E-001	3.81E-002	2.97E-004
AM241	3.60E-001	1.25E+000	6.73E-001	3.89E-002
PU241	1.55E-002	1.61E+000	3.40E-001	2.65E-003
PU242	2.62E-003	1.04E-005	2.20E-006	0.00E+000
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	3.49E-007
U233	<LLD	<LLD	0.00E+000	3.31E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	9.87E-007
U238	<LLD	<LLD	0.00E+000	9.40E-006
AM243	2.44E-004	4.93E-005	8.47E-006	4.57E-006

Errors quoted at 1.000 sigma

Operator: Am Baton Date: 3/18/13

ITR: [signature] Date: 3-18-13

Automated Independent Technical Review

Count Sequence Number: 22282 Batch Number: 1LANDA1731
Counter ID: MCS HENC #1
Container ID: 92213
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 3/14/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis No Add-a-Source warnings.	Ok
Section 2 - Passive Neutron Analysis Analysis Status: No errors. 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 Chandler Date: 3-18-13

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **92213**

BDR Number: **LA13FG2029**

Sampling Date: **3/22/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	212.17	
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\130322c\
Data File : 92213.D
Acq On : 22 Mar 2013 1:38 pm (#1); 22-Mar-13, 13:38:02 (#2)
Operator : NW
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 22 13:46:36 2013
Quant Method : C:\msdchem\1\METHODS\vocgas.m
Quant Title : Flammable Gas Analysis
QLast Update : Thu Jan 24 09:52:49 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
3) Fluorobenzene	3.568	96	3869693	201.25	ppmv	0.00
15) Chlorobenzene-d5	5.907	117	3347925	177.00	ppmv	0.00
Target Compounds						Qvalue
1) Hydrogen	1.539	GC1	1508m	212.17	ppmv	

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

UET Copy
12-18-12

ATTACHMENT 1
Page 1 of 4

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: 90728

6.2[4] Date Processed: 12/18/12

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.: 016065
Cal. Due Date: 7-31-13

4.3[5][B] ($) Three 1-Liter containers carbon spheroids or METL-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: Michael Romero [signature] 187723 12/18/12
Waste Handling Tech (print) Signature Z # Date

ATTACHMENT 1
Page 2 of 4

4.1[6][B]	Parent Waste Container No.: 90728	
5.[18]	Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable:	345.6 lb
6.2[5][A]	Parent Drum Lead Blanket Weight (lb):	∅ lb
6.2[5][B] 6.2[6]	Total Parent Drum Weight (lb)	345.6 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	

_____ _____ _____
LWMO-LOD (print) Signature Date

ATTACHMENT 1

Page 3 of 4

4.1[6][B] Parent Waste Container No.: 90728

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	92486			
10.1[4]	Daughter Drum Filter No.	Am-1036		N/A	
10.1[4]	Daughter Drum Bag Filter No.	L-4388			
10.1[4]	Daughter Drum Purchase Order No.	416184			
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				
10.2[13]	POC Assembly closed per Manufacturer's instructions. (Initial and Z#)	N/A			
10.2[14]	POC Assembly Gross Weight (lb)		N/A		
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:				
10.3[9][A]	PCB-contaminated Waste Description				
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[8]	Daughter Drum % Full (%)	80%			
10.5[3]/10.6[2]	Description Waste Added During Processing	stub outs			

ATTACHMENT 1
Page 4 of 4

4.1[6][B] Parent Waste Container No.: 90728

Comments: plastic, bolts pot lid, salts,

4.1[7] Performed By Michael Romero Michael Romero 182723 12/8/12
Waste Handling Tech (print) Signature I # Date

4.1[7] Reviewed By [illegible] [illegible] [illegible] 12 0 45
SOS or designee (print) Signature I # Date-Time

ATTACHMENT 2
Page 1 of 1

12-11-12

WCRRF OVERPACK DRUM ASSEMBLY PREPARATION DATA SHEET

5.[3] Overpack drum information:

Purchase Order No.: 413724
Lot No.: 210114
Manufacture Date: 2010

5.[8] Overpack filtered vent information:

Manufacturer: NUCFIL
Model No.: 013
Serial No.: ZL-228
Manufacture Date: 9-11

Overpack filtered vent and 2 in. bung torque wrench information:

	Filtered Vent	2 in. Bung
M&TE No.:	040694	021151
Cal. Expiration Date:	9-26-13	6-11-13
Tolerance:	±4% cw ±6% ccw	±3% cw ±6% ccw

Torque wrench listed above is within the acceptable ranges as displayed on the calibration certificate. ☒ Yes ☐ No

Performed By: BRIAN GALLEGOS / [signature] / 12-11-12
Waste Handling Technician (print) Signature Z # Date

5.[12] Filtered Vent torque value [120 in-lb (96 to 144 in-lb)]: 30 in-lb

5.[15] 2 in. bung plug torque value: 120 ft-lb

Comments: N/C

8.1[1] Performed By: BRIAN GALLEGOS / [signature] / 126712H / 12-11-12
Waste Handling Technician (print) Signature Z # Date

8.1[5] ☐ Deficiencies identified and submitted (e.g., PCR or FSR system).
☐ No deficiencies

8.1[7] Reviewed By: Gilbert Martinez / [signature] / 14275 / 1-3-13
Supervisor or designee (print) Signature Z # Date

12-18-12 JL

ATTACHMENT 5
Page 1 of 1

WCRRF OVERPACK DRUM CLOSURE DATA SHEET

7.[19] Overpack Drum Unique Identifier No.: 92487

7.[25] Overpack drum closure ring torque wrench information:
M&TE No.: 021151
Cal. Expiration Date: 6-11-13
Range in ft-lb: 16-80
Tolerance: ±3% cw ±6% ccw

7.[26] Torque wrench listed above is within the acceptable ranges as displayed on the calibration certificate. ☑ Yes ☐ No

Performed By: Michael Romero [signature] 182783 12/18/12
Waste Handling Technician (print) Signature Z # Date

7.[28] Overpack drum closure ring torque value: 60 ft-lb

7.[31] Threaded lug of the drum closure ring is not touching the jam nut and the locking ring lugs are not touching. ☑ SAT ☐ UNSAT

7.[36][B] Platform scale serial number: 019065
Platform scale calibration expiration date: 7-31-13

7.[36][D] 85-gal overpack drum gross weight (lb): 324.0 lb

Comments: N/C

8.1[1] Performed By: Michael Romero [signature] 182783 12/18/12
Waste Handling Technician (print) Signature Z # Date

8.1[5] ☐ Deficiencies identified and submitted (e.g., PCR or FSR system).
☑ No deficiencies

8.1[7] Reviewed By: Gilbert Martinez [signature] 141235 1-3-12
Supervisor or designee (print) Signature Z # Date

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

Drum ID#: 92486

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 #: 416184
Lot #: 02292224
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 #: LOCPVC 1.5-2.5 PVC
Serial #: L4388
Date of Manufacture: 7/12

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 #: AM-1036
Date of Manufacture: 1/12

RECORD torque wrench information:

Filter torque wrench:		Jam Nut / Bung torque wrench:	
M&TE ID #:	040694	M&TE ID #:	021151
Cal Expiration Date:	9-26-13	Cal Expiration Date:	6-11-13
Range (ft-lbs or in-lbs):	40-200	Range (ft-lbs or in-lbs):	16-80
Tolerance:	+/- 4% cw and +/- 6% ccw	Tolerance:	+/- 3% cw and +/- 6% ccw

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

☑ Yes ☐ No

Print Name: BRIAN GALLEGOS Signature: [signature] Z#: 267129

5. Weigh Drum Assembly

RECORD weight information

Tare witght (lbs) 76.0
File ID #: 049065

- ☑ 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: BRIAN GALLEGOS Operator Sign: [signature] Z#: 267129 Date: 12-11-12

Verifier Print: Michael Romero Verifier Sign: [signature] Z#: 182723 Date: 12/18/12

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

DRUM ID#: 92486

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 # : 021151

Cal expiration date: 6-11-13

Range/ Value (ft-lbs): 16-80

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): 202.4

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 12-18-12

Verifier Print/Sign: Michael Romero Date: 12-18-12

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WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Production Control

Container ID: 90728 Container Type: POC Gross Weight (lbs): 340

Liner Seal #: None Filter Prefix: None Filter Serial #: EL-259; EL-63

RTK Waste Stream: LA-MIN04-S.001 Certified RTR BDR: LA-RTR2-12-0010

TWSR Comments: PARENT #S832147 WTS-12STD-795

Total PE-Ci Activity: 1.58E+00 Equivalent Combustible PE-Ci: 5.91E-01 AM-241 PE-Ci: 1.28E-01

Total Fissile Gram Equivalents: 17.4 Total Surface Dose Rate (mrem/hr): 0

EPA Code(s): D008 D007 D009 [illegible]

NCR RTR/NDA Comment: None

RTR Pre-Screen Date: None Comment: None

Certified RTR Comment: Greater than 50% homogeneous solid

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: PD Production Control Comments: Need to add EPA Codes D007 & D009

Nitrate salts mixed with Waste Lock 770® from previous repack campaign. A minimum of 1.2 volumes of kitty litter/zeolite must be mixed with 1.0 volume of nitrate salts.

Performed By: Susan Ramsey (Production Control (Print)) Signature: Tom P. Ray Z Number: 100681 Date: 9/4/12

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 – POC

Net Wt: 30 lb Parent drum (SEDS attached) was part of WCRR nitrate salt repack campaign using Waste Lock 770®. This resulting daughter POC is being repacked to adjust the admixture/nitrate salt ratio. Nitrate salts carry waste codes for chromium, lead, and mercury. No chemicals present. May require RWP for > 100 & < 1000 mrem/hr

RTR BDR ~~show 10/9/12~~ inventory shows homogeneous material and plastic bags/horse tails

Performed By: Valerie Rhodes (WDP Engineering (Print)) Signature: Valerie Rhodes Z Number: 112609 Date: 10/3/12

TRU Remediation Operations

✓ Waste Container Information Evaluated | Less Than 170 lbs | RTR Video Available

Other Specific Safety Concerns: Use Kevlar gloves when processing. Do not [illegible] or press on waste with hands.

Processing Determination: ✓ Accept | Reject

TRU Remediation Operations Comments: Use proper ratio of kitty litter to waste in accordance with the procedure

Performed By: Jose Jerez (TRU Remediation Operations (Print)) Signature: [illegible] Z Number: 221452 Date: 10-15-12

OK Z# 249750 10/19/12

HS REVIEW. RS 206262 10.9.12

Noncertified TRU Waste Drum Item Information

DrumID: 013170

Item No	ItemID	Process Status	Net Wt (kg)	Matrix	Meas Code	SNM (g)	NT	Auth (Pg/Lm)		Comments
1	IXFS-676FB		68.080	NITRATE SALTS		31.88	52	5/11	0468	
2	IXFS-677FA		29.550	NITRATE SALTS		5.02	52	5/11	0468	

Noncertified Waste Drum Material Summary

Gross Wt (kg): 166.3

Material Type	SNM (grams)	Items Net Wt (kg)
52	36.9	97.63
Totals	36.9	97.63

Attachment 2 – CCP Radiography Data Sheet

Section 1: General Information	
☑ RTR Examination ☐ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-12-0010
Examination Date:	01/23/2012
Waste Container ID:	90728
Video/Audio Recorded Media Number:	LA-RTR2-12-0010 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-0285-12 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: 154.5 kg. Tare Wt: 145.1 kg. Net Wt: 9.4 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 2 layers
Volume Utilization Percentage:	95 %

Attachment 2 – CCP Radiography Data Sheet (Continued)

Waste Container ID: 90728

Section 3: Container Inventory and Comments (Detailed descriptions)
Plastic bags, horsetails
Homogeneous solid material

Section 4: Packaging Material and Waste Material Parameters	
Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	109.0
Plastics (PP): Rigid Liner, Liner Bag (Inside POC)	8.1
Others: Fiberboard (C), Fiberboard 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):	0.5
Organic Matrix (OR):	
Inorganic Matrix (IN):	8.9
Soils (S):	
Total WMP Weight:	9.4

Attachment 2 – CCP Radiography Data Sheet (Continued)

Waste Container ID: 90728

	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?	☑	☐
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: Standard Pipe Overpack Container (P.O.C.)

NCR-LANL-0285-12: Greater than 50% Homogeneous Solid material
PD 2/20/12

RTR Operator:

Print Name	Signature	Date
Philip Dillard		1/23/12

2/20/12

ATTACHMENT 1
Page 1 of 1

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

5.[1] Sample Date: 10/5/12

Container No. (5.[1])	90738					
Container type sampled (e.g., 55-gal, 85-gal, 110-gal, or SWB) (5.[1])	POC					
Filtered Vent Type (5.[1])	19DS					
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])	6 ppm	ppm	ppm	ppm	ppm	ppm
Hydrogen Reading (< 64,000 ppm) (5.[5])	6 ppm	ppm	ppm	ppm	ppm	ppm
Methane Reading (< 16,000 ppm) (5.[5])	6 ppm	ppm	ppm	ppm	ppm	ppm

N/A

5.[7] Certified CCP Technician:

Performed By: SARA ARAGON (CCP (Print)) 237975 (I #)

Reviewed By: NATHAN WALES (CCP (Print)) 238866 (I #)

Comments: Per attached email, container has been verified as POC.

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 (I #) 10/10/12 (Date)

InstName : Unit 2

Quantitation Report (QT Reviewed

Data Path : C:\msdchem\1\DATA\121005c\
Data File : 90728.D
Acq On : 5 Oct 2012 3:34 pm (#1); 05-Oct-12, 15:33:38 #2)
Operator : NW
Sample :
Misc : 55 gallon LFL drum through 019DS,unobstructed (Sig #1); (Sig #2
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Oct 05 15:42:11 2012
Quant Method : C:\msdchem\1\METHODS\vocgas.m
Quant Title : Flammable Gas Analysis
QLast Update : Wed Sep 05 10:53:25 2012
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
3) Fluorobenzene	3.578	96	5933312	[illegible]	ppmv	[illegible]
15) Chlorobenzene-d5	5.907	117	5366200	[illegible]	ppmv	[illegible]

Target Compounds	Qvalue

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

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12-18-12

PROJECT NAME _____ NOTEBOOK NO. _____

0000 Assuming WCRRF operations center - Crelands
0001 Starting inside and outside rounds
0017 Item 21 is OOS, per CSE documentation OK to proceed.
0021 completed inside rounds
0026 Completed outside rounds.
0705 RCT reduced scm of ~~[illegible]~~ 12-18-12 some contamination on catch pan 50dpm alpha, RCTs will decon resurvey
0710 SOS has been notified
0759 late entry 1655 inside and outside rounds signed off by SOS
0815 mode change performed TASD-69 and WCRRF yard now in operations. starting movement out of 50-69.
0825 Completed movement out of 50-69. PPE check is SAT.
0826 bagging on 90720
0828 Starting movement to transport vehicle. permission granted to lower vehicle access transition.
0837 Bag on complete; PPE check is SAT.
0851 PPE check is SAT.
0852 Starting the movement to transport vehicle
0906 vehicle access gates have restored, movement complete to transport vehicle.
0911 Starting bag off of 90720 and POC, bagging on 90721.
0913 Operator notifying operations center that while performing the bag off, truck 59 noticed a small spring on block by the drumlift SOS has been notified and operations will not be bagging on another drum. SOS has requested another pre-operational check be done on drumlift notifying operations center.
1000 Completed bag off.
1003 starting movement out of 50-69
1009 Completed movement out of 50-69
1010 OK to continue operations, per CSE spring is not from drum lift
1023 bagging on 90721.
1030 PPE check is SAT
1036 bag on is complete
1050 performed shift ~~[illegible]~~ 12-18-12 turnover with Terri Coleman - Crelands
1051 Assuming WCRR operations center - JColeman
1059 Shipment into WCRRF cancelled for today. Will be emerged for tomorrow.
1108 Bagging off 90721, bagging on 90719.
1132 Bag on complete. PPE SAT.
continued on next page - JColeman

SIGNATURE _____ DATE _____ 20 _____
READ AND UNDERSTOOD _____ DATE _____ 20 _____

PROJECT NAME NOTEBOOK NO.

12-18-12 continued from previous page
1155 PPE check SAT.
1159 Bagging off 90719, b.j.c 12-18-12 and 1 POC, bagging on 90722.
1207 Shift turnover with CCO Clarissa Velarde, Coleman
1208 Assuming WCRRF operations center - CVelarde
1210 Starting movement into 50-69
1235 Bag on, bag off complete.
1313 Starting movement out of 50-69, PPE check is Sat.
1400 Completed movement out of 50-69
1409 bagging on 90728, bagging off 90722
1413 PPE check is sat.
1440 bagging off 90728, bagging on 90723
1445 Starting outside rounds
1450 Bag in, bag off complete. PPE check is sat.
1500 Item #1 is OOS per CSE OK to proceed.
1504 Inside rounds complete.
1509 outside rounds complete.
1551 bagging off 90723 and POC. PPE check is sat
1605 bag off is complete
1615 mode change performed TASD-69 and WCRRF yard now in warm ~~standby~~ 05-813 standby.
12-18-12 1643 end of day WCRRF operations decline - CVelarde

pm

Information continues this page

SIGNATURE DATE 20 20

12/18/12

0600 Assumed WCRR SOM position.

0615 Attended pre job brief conducted by SOS. Discussed roles/responsibilities of PIC while processing waste w/ ES Ops Manager expectations. Workers disagreed in that they say PIC is integral to helping in all areas. P300 and DOP's will be looked at to better define. Crew briefed to move out drum #91805 to ship back to TA-54.

0700 Called into daily brief conducted by TA-54 SOM to status WCRR - requested emerge of shipment to Area G. FSS measurements will not take place today - no show by engineers - will reschedule per L. Moore CSE for Jan 13.

0705 Notified by RP-1 Supervisor that RMI's showed 50 dpm/100cm² alpha contamination on catch pan under drum lift operators being sent in to perform decon and RP-1 will resurvey. OM notified

0812 RP-1 Supervisor reported that decon and post surveys were complete.

0815 Completed Mode Change: WCRR Yard / Bldg 50-69 from Warm/Warm to Operations/Operations.

0822 Bagging on first drum.

0855 Verified w/ RP-1 and MSS concerning temperature readings to be obtained during winter closure. Operator will be entering WCRRF up to Rm 102 door without stepping thru - entry under F

0832 Released expedited W.O # 427964-01 to paint stairs on east end of Bldg 50-84.

0930 ~~0930~~ 12/18/12 Notified by OCO that a spring was found laying on ground underneath the drum lift. SOS paused work until verified that spring is not part of drum lift.

0955 Per CSE of drum lift the only springs associated w/ drum lift are used on the tensioner and are large in size. Spring on floor did not come from drum lift. SOS had operators cycle drum lift w/ drum and identified no issues. Notified O.M

1010 Upon further investigation of source of spring on the ground none could be identified. Operators briefed to keep their eyes open and be aware of other equipment/processes. Work pause lifted.

1100 Notified that OSPAT cannot ship from TA 54 today - issues with jump starting tractors. Need to reschedule for tomorrow.

1200 Called in to weekly LFC meeting. Discussed current inventory @ WCRR and what is scheduled to come in tomorrow. w/ inventory control and SOS concurrence looks like that will be sufficient inventory w/ scheduled next incoming to 1/8/13. J. Gallegos provided info that LFL's will be run tomorrow @ TA 54 which will allow for additional 15-18 SP 57 drums to be put on list.

1400 Went to TA-44 to sign off/review Jan 13 work packages.

1530 Completed procedure initiation for Monthly FSS valve alignment check EP-WCRR-FD-DOP-0303 and sent to procedure writer for USQ.

Continued on next page →

12/18/12

1615 Completed mode change! WCRR yard / Blds 50-69 from Operations / Operations to Warm / Warm.

1630 Secures SOM position

No Further Entries this Page

12/18 12

WCRR SOS LOG Book

12-18-12

0600 Assuming SOS Position [illegible]

0605 Conducted shift brief discussed staying focused and that pics cannot work on bex

0705 shift brief concluded.

0708 Late entry Rounds Reviewed at 0655 [illegible] 12-18-12

0800 Performed SOS turnover with Gilbert Martinez Assuming SOS position from [illegible]

0810 Mode Change Complete in Operations Mode in WCRR Vessel and SD-09.

0830 Late Entry (1) At 0805 RCT's notifying of Contaminated on Catch Pan. 50 DPM alpha. Will need to Decon and Re Survey.

0835 Notified by SOM that Contamination has been all Decontaminated

0836 Late Entry (1) At 0826 Bagging on floor drum for the day

0915 Operator notifying Operations Center that they found a Spring on the floor. Operators believe that it may have come from the Drum lift. Instructed Operators not to bag on another drum. Finish the bag off's and call out for further instructions

1015 Resuming Operations. Pictures taken of the spring. Operators are unable to identify where it may have come from. ~~Per CA~~ Per CSE only spring on the drum lift would be the tensioner for the Cable. Operators inspected drum lift and ran it a couple of times without a drum on it and seems to be working OK to resume, instructed operators to keep a close eye on the drum lift and keep an eye out for where it may have come from.

1100 Turning over SOS duties to Gilbert Martinez from [illegible]

1101 Assuming Position [illegible]

1108 Bags off, Bagging on 40719 ISE Check

1155 ISE Check

1157 Bagging off and Bagging on AC 722

[illegible]

Continued from next page

1404 bagging off and bagging on 90728
1413 RPE Check
1440 Bagging on and bagging off 910723
1530 Reviewed inside and outside Counds.
1605 Bagged of Final drum of day
1615 made change complete IWCRF Entwarm
12.18.21 1630 End of shift securing SOS Position
AM

Go further entries on next page

CCP Radiography Data Sheet

5832147

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0013
Examination Date:	1/28/2013
Waste Container ID:	92486
Video/Audio Recorded Media Number:	LA-RTR2-13-0013 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 12
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.: 92.0 kg Tare Wt.: 33.4 kg Net Wt.: 58.6 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 BM 1.30.13
Volume Utilization Percentage:	BM 1.30.13 85 %

TSH 1-30-13

~~20~~

19 TSH 1-30-13

CCP Radiography Data Sheet

Waste Container ID: 92486

Section 3: Container Inventory and Comments (Detailed descriptions)

IM: Hardware, metal lid

AM:

OM:

OI:

C: Fiberboard packing material, fiberboard insert sleeve

R:

XPM: Plastic lid, 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):	22.0
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	
Other Inorganic Materials (OI)	
Cellulosics (C):	14.0
Rubber (R):	
Plastics (waste materials) (XPM):	5.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	17.6
Soils (S):	
Total WMP Weight:	58.6

21 ZSH 1-30-13

20 ZSH 1-30-13

CCP Radiography Data Sheet

Waste Container ID: 92486

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	[signature]	1/28/2013
Print Name	Signature [signature]	Date 1·30·13

7514 1-30-13

~~22~~

21 7514 1-30-13

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

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

Item ID:            92486              Count Sequence Number:  21957
Operator:           D3PW2DK1\operator
Assay Start:        1/31/2013   3:03:32 PM
Description 1:      1LANDA1705
Description 2:      N/A
Location:           LANL TA-54
Comment:            AK-6
Matrix Type:        Debris S5000
Container Type:     55 gallon drum
Weight:             Net:        58.6   kg        Net:    58.6 kg
Container:          Volume:    208.0   l        Full:    85.0 %
Density:                         0.330 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:	21957	Batch Number:	1LANDA1705
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:	92486	Analysis Date:	1/31/2013

Net Weight	58600.0 g			
Pu mass	2.49E+000	+-	8.49E-001	g
TRU Alpha Activity	9.86E-001	+-	2.75E-001	Ci
TRU Activity Concentration	1.68E+004	+-	4.70E+003	nCi/g
Pu-239 Equivalent Activity	1.01E+000	+-	2.76E-001	Ci
Pu-239 FGE	2.39E+000	+-	8.00E-001	g
Decay heat	3.26E-002	+-	9.18E-003	W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	8.91E-003	6.37E-006	8.08E-007	6.78E-007
PU238	8.88E-004	1.54E-002	5.23E-003	1.53E-004
PU239	2.35E+000	1.48E-001	5.03E-002	1.47E-003
PU240	1.23E-001	2.84E-002	9.66E-003	2.83E-004
AM241	2.29E-001	7.94E-001	2.71E-001	7.93E-003
PU241	1.30E-002	1.35E+000	4.59E-001	1.35E-002
PU242	6.98E-003	2.77E-005	9.43E-006	0.00E+000
CO60	4.54E-011	5.18E-008	1.63E-008	4.56E-008
SR90	2.55E-009	3.52E-007	1.39E-007	0.00E+000
CS137	4.01E-009	3.52E-007	1.39E-007	1.80E-007
U233	<LLD	<LLD	0.00E+000	1.31E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	3.80E-007
U238	<LLD	<LLD	0.00E+000	4.67E-006
AM243	7.96E-005	1.61E-005	2.08E-006	1.65E-006

Errors quoted at 1.000 sigma

Operator: _____ Date: 2-4-13

ITR: _____ Date: 2-5-2013

Automated Independent Technical Review

Count Sequence Number: 21957
Batch Number: 1LANDA1705
Counter ID: MCS HENC #1
Container ID: 92486
Waste Matrix Code: Debris S5000
Count Type:
Sequence Type:
Assay Date: 1/31/2013

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 Expert review is recommended; the following validity tests failed: Uncertainty in Pu240 effective (29.0%) is greater than allowed (20.0%).	MGA valid. After EA review, uncertainty value acceptable.
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: 2-3-13

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **92486**

BDR Number: **LA13FG8009**

Sampling Date: **2/6/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	92.10	U
74-82-8	Methane	213.40	U
67-56-1	Methanol	27.87	U
60-29-7	Ethyl Ether	1.25	U
75-35-4	1,1-Dichloroethylene	5.71	U
67-64-1	Acetone	16.90	U
75-34-3	1,1-Dichloroethane	4.24	U
156-59-2	cis-1,2-Dichloroethene	0.55	U
78-93-3	Methyl ethyl ketone	9.86	U
110-82-7	Cyclohexane	5.84	U
71-43-2	Benzene	0.71	U
107-06-2	1,2-Dichloroethane	1.51	U
71-36-3	1-Butanol	1.36	U
108-10-1	Methyl isobutyl ketone	9.34	U
108-88-3	Toluene	4.91	
108-90-7	Chlorobenzene	1.69	U
100-41-4	Ethylbenzene	2.62	U
108-38-3/106-42-3	m- and p-Xylene	1.48	U
95-47-6	o-Xylene	1.76	U
108-67-8	1,3,5-Trimethylbenzene	3.14	U
95-63-6	1,2,4-Trimethylbenzene	3.92	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)

Data Path : C:\msdchem\1\DATA\130206C\
Data File : 92486.D
Acq On : 6 Feb 2013 2:45 pm (#1); 6 Feb 2013 2:44 pm (#2)
Operator : RJ
Sample :
InstName : Unit 8
Misc : 55 Gallon drum through filter (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Feb 06 14:52:45 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	3.256	96	2578203	206.00	ppm	0.00
15) Chlorobenzene-d5	5.936	117	2345900	179.50	ppm	0.00
Target Compounds						Qvalue
17) Toluene	4.776	92	26597	4.91	ppm	96

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

38

S832148

S832148

Container P 47401

File Options Reports Help

S832148

747401	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

S832148

- S832148
  - LA00000069590 EMPTY
  - LA00000069555
    - LASB50424
  - LA00000069559

Working Copy
Date: 3-17-14 w

ATTACHMENT 1
Page 1 of 4

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: S 832148

6.2[4] Date Processed: 3-17-14

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) 3-17-14 (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: Federico Rodriguez / [signature] 1228026 / 3-17-14
Waste Handling Tech (print) Signature Z # Date

ATTACHMENT 1
Page 2 of 4

4.1[6][B] Parent Waste Container No.: S832148

5.[18] Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable: 479.6 lb

6.2[5][A] Parent Drum Lead Blanket Weight (lb): 83 lb ☐ N/A

6.2[5][B]/ 6.2[6] Total Parent Drum Weight (lb) 562.6 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. ____ / ____ / ____ ☑ N/A
Initials Z# Date

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.: S832148

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	69559	69555		
10.1[4]	Daughter Drum Filter No.	KM-346	KM-343	N/A	
10.1[4]	Daughter Drum Bag Filter No.	L-10201	L-12773		
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				
	Model No.				
	Serial No.				
	Date of Manufacture				
10.2[5]	POC ID No				
10.2[6]/10.2[7][B]	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		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 (%)	80%	100%		
10.5[3]/10.6[2]	Description Waste Added During Processing	Plastic Stuff and Bags Kitty Litter	Plastic stuff and Bags Kitty litter		

ATTACHMENT 1
Page 4 of 4

4.1[6][B] Parent Waste Container No.: S832148

Comments: Plastic, Room trash, Kitty litter, lead shielding, Nitrate Salts. 1-plastic poly lid,

11.1[1] Performed By: Frederico Nicholas / [signature] / 1228820 / 3-17-14
Waste Handling Tech (print) Signature Z # Date

11.1[8] Reviewed By: Gilbert Martinez / [signature] / 1142351 / 3/17/14 0400
SOS or designee (print) Signature Z # Date/Time

ATTACHMENT 1
Page 1 of 1

Working Copy
Date: 3/13/14 1145

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:	11/12/14	08/05/14
Tolerance:	±4%cw ±6%ccw	±3%cw ±6%ccw

Overpack filtered vent information:

Manufacturer:	Nucfil
Model No.:	013
Serial No.:	HL-895
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 / 3-13-14
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 / 3-13-14
Waste Handling Technician (print) Signature Z # Date

8.1[6] Reviewed By: Gilbert [illegible] [signature] 190513 / 3/14
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 4
Page 1 of 1

Working Copy
Date: 3-17-14

WCRRF OVERPACK DRUM CLOSURE DATA SHEET

7.[17] Overpack Drum Unique Identifier No.: 69590

7.[23] Overpack drum closure ring torque wrench information:

M&TE No.: 038370
Cal. Expiration Date: 5-2-14
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: Federico Hernandez / [signature] 1272526 / 3-17-14
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): 172.8 lb

Comments: N/C

8.1[1] Performed By: Federico Hernandez [signature] 1272526 / 3-17-14
Waste Handling Technician (print) Signature Z # Date

8.1[7] Reviewed By: Gilberto Martinez / [signature] M9035 / 3/19/14
Supervisor or designee (print) Signature Z # Date

Working Copy
Date: 3-3-14 @

ATTACHMENT 1
Page 1 of 2

WCRRF DRUM PREPARATION DATA SHEET

5.[34][E] Drum ID No.: 69555

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 1.5-2SPVC
Serial No.: L-12723
Manufacture Date: 7-13

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	8/5/14
Range:	40-200 in-lb	16-80 ft-lb
Tolerance (+/-):	+-4% CW AND +-6% CCW	+-4.3% CW AND +-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] Z# 801752 / 3-3-14
Operator (print) Signature Z # Date

5.[23] Filtered vent information:
Manufacturer: NUC FIL
Model No.: 019DS
Serial No.: KM-343
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.: 69555

Comments: N/C

5.[35] Performed By: Brandon Chavez (Operator (print)) [signature] (Signature) 1241742 (Z #) 3-3-14 (Date)

7.1[4] Reviewed By: Gilbert Martinez (Supervisor or designee (print)) [signature] (Signature) 1149355 (Z #) 3/19/14 (Date)

Working Copy
Date: 3-17-14 CV

ATTACHMENT 2
Page 1 of 2

WCRRF DRUM CLOSURE DATA SHEET

6.[3] Drum ID No.: 69555

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: Federico Mabulo (Operator (print)) [signature] (Signature) 1228626 (Z #) 3-17-14 (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-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: Federico Mabulo (Operator (print)) [signature] (Signature) 1228626 (Z #) 3-17-14 (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.: 69555

6.[26] Scale File ID number: 019065

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

6.[28] Drum gross weight: 374.6 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: Frederick Robledo [signature] 1228820 13-12-18
Operator (print) Signature Z # Date

7.1[4] Reviewed By: Gilbert Martinez [signature] 1149351 3/19/14
Supervisor or designee (print) Signature Z # Date

Working Copy
Date: 3-4-14

ATTACHMENT 1
Page 1 of 2

WCRRF DRUM PREPARATION DATA SHEET

5.[34][E] Drum ID No.: 69559

5.[3] Drum information:
Purchase Order No.: 501578
Lot No.: 0240118
Manufacture Date: 13

5.[17] Drum Liner Bag/Filter Assembly:
Manufacturer: BOP
Model No.: 6cpvcl.5-2spvc
Serial No.: L-10201
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	8-5-14
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: GERALD ESPINOZA / [signature] 1237720 3-4-14
Operator (print) Signature Z# Date

5.[23] Filtered vent information:
Manufacturer: NUCFIL
Model No.: 019DS
Serial No.: KM-346
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): 76.0 lbs

5.[34][E] Drum ID No.: 109559

Comments: N/C

5.[35] Performed By: GERAUD ESPINOZA (Operator (print)) [signature] (Signature) 1237720 (Z#) 3-4-14 (Date)

7.1[4] Reviewed By: Gilbert Martinez (Supervisor or designee (print)) [signature] (Signature) 1422357 (Z#) 3/4/14 (Date)

ATTACHMENT 2
Page 1 of 2

WCRRF DRUM CLOSURE DATA SHEET

6.[3] Drum ID No.: 69559

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: Frederico Hernandez / [signature] 1228826 / 3-17-14
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:		
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: Frederico Hernandez / [signature] 1228826 / 3-17-14
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.: 69559

6.[26] Scale File ID number: 019065

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

6.[28] Drum gross weight: 365.6 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: Federico [illegible] | [illegible] | 1270016 | 3-17-14
Operator (print) | Signature | Z # | Date

7.1[4] Reviewed By: Gilbert Martinez | [illegible] | 149351 | 3/19/14
Supervisor or designee (print) | Signature | Z # | Date

Working Copy
Date: 3-17-14

ATTACHMENT 2
Page 1 of 1

WCRRF PARENT 55-GAL DRUM PREPARATION DATA SHEET

6.3[21] Prepared Parent 55-Gal Drum Number: S 832 148

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

6.3[16] Platform scale serial number: 019005
Platform scale calibration expiration date: 10-14-14

6.3[18] Prepared parent 55-gal drum weight (lb): 479.6

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: [illegible] / [signature] 1228826 3-17-14
Waste Handling Technician (print) Signature Z # Date

8.1[7] Reviewed By: Gilbert Martinez / [signature] 1419351 3/19/14
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] 1419351 3/19/14 0910
SOS/SOM or designee (print) Signature Z # Date Time

72
4C
6.10.12

WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Production Control

Container ID: S832148 Container Type: 85-GAL Gross Weight (lbs): 391
Inner Seal #: 012716 Filter Prefix: LAVC Filter Serial #: 02370; 02531
AK Waste Stream: LA-MHD01.001 Certified RTR BDR: No BDR
TWSR Comments: LEACHED SOLIDS MST 12 RM 434
Total PE-Ci Activity: 6.14E+00 Equivalent Combustible PE-Ci: 2.30E+00 AM-241 PE-Ci: 4.98E-01
Total Fissile Gram Equivalents: 67.8 Total Surface Dose Rate (mrem/hr): 25
EPA Code(s): None
NCR RTR/NDA Comment: None
RTR Pre-Screen Date: 1/11/2007 Comment: Impenetrable Obj, Liner Not Punctured,
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: Ensure EPA Codes ~~D007, D008~~ 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: R. W. Jones — Production Control (Print) — Signature — 117434 Z Number — 11.30.11 Date

WDP Engineering

SUSAN S. RAMSEY — Signature — 100281 Z Number — 11/28/12 Date

Chemicals Present (e.g., pyrophorics, acids, bases, shock sensitive, organic liquids, peroxides, crown ethers): ☐ Yes ☒ No ☐ Unknown
Processing Determination: ☒ Accept ☐ Reject
WDP Engineering Comments: Leached solids - nitrate salts
Net Wt: 331lb. Three items; heaviest weighs ~171lb and other two weigh 108lb and 44lb.
55 gal drum overpacked in 85 gal drum

May require RWP for >1000 and <10000 mrem/hr @ 30cm

Drums containing nitrate salts may contain undocumented liquids

Performed By: Valerie Rhodes — WDP Engineering (Print) — Signature — 112609 Z Number — 12/11/11 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 Heavyweight gloves during processing
Processing Determination: ☑ Accept ☐ Reject
TRU Remediation Operations Comments: Use proper ratio of kitty litter to waste in accordance with the procedure

Performed By: Vanessa Valenzuela — TRU Remediation Operations (Print) — Signature — 234079 Z Number — 12/12/11 Date

Jose Jerez — 221452 — 1-7-13
Gilbert Mr — 149035 — 3/4/14
HS Review Johnny Amullano CSP, No HS Concerns 12/4/
Robin Shult — 272995 — 1-14-13
Daniel L. Blair — 218069 — 218069 — 3-4-14

Noncertified TRU Waste Drum Item Information

DrumID: 012716

Item No	ItemID	Process Status	Net Wt (kg)	Matrix	Meas Code	SNM (g)	MT	Auth (Pg/Ln)	Comments
1	IXFS-649-F2		20.000	NITRATE SALTS		40.71	52	5/11	G468, [illegible]
2	IXFS-651-F1		49.090	NITRATE SALTS		15.37	52	5/11	G468, [illegible]
3	IXFS-652-FA		79.770	NITRATE SALTS		15.46	52	5/11	G468, [illegible]

Noncertified Waste Drum Material Summary

Gross Wt (kg): 177.2

Material Type	SNM (grams)	Items Net Wt (kg)
52	71.54	148.86
Totals	71.54	148.86

ATTACHMENT 1
Page 1 of 2

HYDROGEN/VOC SAMPLING USING GAS CHROMATOGRAPHY DATA SHEET

7.[1] Sample Date: 1·11·11

7.[7] Certified CCP Technician:

CCP (Print)	Signature	Z #	Date
Gabe Romero	[signature]	1286923	1-12-11
	/	/	/

Container No. (7.[1]):	S8629C1	S8636G1	S8332148
Container Type (SWB, 110/85/55-gal) (7.[1]):	55gal	55gal	55gal
Current Filter Vent No. (7.[1]):	72	72	72
New Filter Vent No.: (7.[8][A]):	72	72	72
WIPP-Approved Filter Vent (7.[8][B]):	☑ SAT ☐ UNSAT	☑ SAT ☐ UNSAT	☑ SAT ☐ UNSAT
VOC	Value (ppm) (7.[10])		
Benzene			
Chlorobenzene			
Cyclohexane			
1,1-Dichloroethane			
1,2-Dichloroethane			
1,1-Dichloroethylene			
cis-1,2-Dichloroethylene			
Ethyl benzene			
Ethyl ether			
Toluene			
1,2,4-Trimethylbenzene			
1,3,5-Trimethylbenzene			
m- and p-Xylene			
o-Xylene			
Acetone			
1-Butanol			
Methanol			
Methyl ethyl ketone			
Methyl isobutyl ketone			
Total CCP VOC value (ppm) (7.[11]):	Ø	Ø	Ø

ATTACHMENT 1
Page 2 of 2

NOTE *Filtered vent data may be captured on a support organization data sheet.*

Container Number (7.[1]):	5862901	5863691	5832148
Hydrogen Reading (ppm) (7.[10]):	Ø ppm	Ø ppm	708.01 ppm
Methane Reading (ppm) (7.[10]):	Ø ppm	Ø ppm	Ø ppm
Total VOC Reading (ppm) (7.[11]):	Ø ppm	Ø ppm	Ø ppm
Filter Type (7.[9][F][c]/7.[9][G][a]):	72	72	72
WIPP Approved (SAT/UNSAT) (7.[9][F][c]/7.[9][G][a]):	SAT	SAT	SAT
Torque Wrench M&TE/ID Number (7.[9][F][a]/7.[9][G][a]):	N/A	N/A	N/A
Torque Wrench Calibration Due Date (7.[9][F][a]/7.[9][G][a]):	N/A	N/A	N/A
Torque Wrench Tolerance (7.[9][F][a]/7.[9][G][a]):	N/A	N/A	N/A
VERIFY Torque Wrench is within acceptable range as specified on Cal Certificate. (7.[9][F][a]/7.[9][G][b])	☐ YES ☐ NO ☑ N/A	☐ YES ☐ NO ☑ N/A	☐ YES ☐ NO ☑ N/A
Filter Torque Value (7.[9][F][a]/7.[9][G][d]) *	N/A	N/A	N/A

* No torque value required for 072 or 073 filters – Record N/A as applicable

Comments:
All 55 gallon drums were sampled from inside an 85 gallon overpack.

11.1[1] Performed By: Alicia Herrera / [signature] 198450 / 1-12-11
Waste Handling Operator (print) Signature Z # Date

11.1[5] ☐ Deficiencies identified and submitted (e.g., PCR or FSR system).

☑ No deficiencies

11.1[7][A] WCRRF waste container satisfies the following criteria: ☑ SAT ☐ UNSAT

- Hydrogen – less than or equal to 32,000 ppm
- VOC – less than or equal to 7,000 ppm

11.1[7][B]/ Reviewed By: Kenny Romero / [signature] 111788 / 1-13-11
11.1[8] Waste Handling Supervisor (print) Signature Z # Date

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\110111c\
Data File : S832148.D
Acq On : 11 Jan 2011 4:42 pm (#1); 11 Jan 2011 4:41 pm (#2)
Operator : GR
Sample :
InstName : Unit 8
Misc : 55 GAL LFL DRUM FROM INSIDE 85 GAL OVERPACK (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jan 11 16:50:37 2011
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	3.249	96	4423258	209.00 ppm	0.00
15) Chlorobenzene-d5	5.933	117	3695687	184.00 ppm	0.00
Target Compounds					Qvalue
1) Hydrogen	5.320	GC1	179280m	708.01 ppm	

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

Vocgas.m Tue Jan 11 16:50:44 2011

142

3-17-14

0600 Assuming WCRF Operations center - Orlando
0605 Pre job being conducted by SOS and IH, IH briefed on BE results.
0720 Pre job conducted
0726 Shift turnover with 0000 Smith - Orlando
0726 ASSUMING WCRF OPERATION CENTER. H SMITH
0730 STARTING OUTSIDE ROUNDS
0752 COMPLETED OUTSIDE ROUNDS
0810 STARTING INSIDE ROUNDS
0830 ITEM #63 INSIDE ROUNDS OOS. POD IN PLACE. PERMISSION TO PROCEED PER CSE DOCUMENTATION.
0835 INSIDE ROUNDS COMPLETED
0846 ROUNDS REVIEWED BY SOS
0856 MODE CHANGE INCREASE TO OPERATIONS IN TASD AND WCRR YARD
0858 PERMISSION GRANTED TO BEGIN MOVEMENT INTO TASD-69. INVENTORY HAS ADVISED OPERATIONS CENTER 4.1.1 HAS BEEN PERFORMED AND INVENTORY IN BUILDING HAS NOT EXCEEDED HAR LIMITS
0900 TRANSPORTAINER DOOR SECURED, MOVEMENT INTO TASD-69 COMPLETED
1013 DENESTING 1 DRUM, BAGGING ON S832H8
1025 OPERATORS NOTIFIED OPS CENTER BOLT ON RING FOR ~~DENESTING~~ 3/17/14 HS DRUM WAS RUSTED, COULD NOT GET OFF, NOTIFIED SOS PER INSTRUCTION CUT TO REMOVE.
1059 BAG-OH, DENESTING COMPLETED
1200 OPERATORS ADVISED SOS ~~OF~~ 3/17/14 HS THEY ARE HAVING DIFFICULTY REMOVING LEAD AND WASTE FROM DRAM
1234 BAG-OFF, BAG-ON 1 DAUGHTER
1254 BAG OFF - BAG ON COMPLETED
1338 FSR SUBMITTED TO REPLACE BROKEN WINDOW GLASS FSR # 118888
1540 OPERATOR 14 ADVISED OPERATIONS CENTER WORK

CONTINUED ON NEXT PAGE, H SMITH

3-17-14 CONTINUED FROM PREVIOUS PAGE HSMITH

PAUSE, WAITING ON IH AND RCT'S ADJUSTING HAND AND FOOT MONITORS & IH COLLECTING SAMPLE

1554 BAGGING OFF-BAGGING 69372

1623 BAG OFF-BAG-ON COMPLETED

1644 PERMISSION GRANTED TO LEAVE DRUM BAGGED ON OVERNIGHT BY OM.

1650 STARTING OUTSIDE ROUNDS

1651 STARTING INSIDE ROUNDS

1707 COMPLETED OUTSIDE ROUNDS

1709 ITEM # 63 INSIDE ROUNDS DOS. POD IN PLACE. PERMISSION TO PROCEED PER CSE DOCUMENTATION

1720 INSIDE ROUNDS COMPLETED

1738 INSIDE AND OUTSIDE ROUNDS REVIEWED BY SOS

1745 MODE CHANGE DECREASE TO WARM STANDBY IN TASD-6 AND WCRR YARD

1800 PPE RELEASED BY RCT'S.

3/14 1830 END OF DAY WCRR OPS CENTER SECURED HSMITH

NO FURTHER ENTRIES THIS PAGE HSMITH

3-17-14 WCRR-SOM

0600 Reviewed the shift turnover checklist and assumed the WCRR SOM Position John Guadagnoli

0707 Completed the daily phone call with AREA G-OM, updating WCRR PAD activities.

0723 Completed attending the pre-job brief conducted by the SOS-(Gilbert) The safety topic was attention to detail, and Know your surroundings. Discussion focused on the BE sampling program and requirements to wipe down the floor, the WCG glovebox inside and outside, and surfaces in Rm 102/104. Once the wipe down occurs, then operators could remove tyvex. However BE workers will only be allowed to work/process remaining drums - until all sample result come back, in addition, re-wiping the floor, glovebox, and flat surfaces would be required if a drum previously processed comes back to WCRR-(i.e reject/NCR) requiring reprocessing. Upon notification to the OM, - Operations will continue to process the final 8 drums, then initiate wipe down and glove changes. There are no scheduled transfers today. Shift Orders in affect were reviewed and signed off.

0846 Inside Rounds were completed.

0856 Mode Change: 50/69 and yard transition from Cold/warm to Operations/Operations.

0857 Outside Operators initiated transfer of 4 drums into the facility 50/69

0906 Outside operators complete the movement into the facility.

1013 Inside operators complete denesting and prep 58321HB for bag on

1025 Operators report the drum ring bolt is rusted and they could not loosen. Per instruction from the SOS, operators are to cut the bolt per procedure with a hand tool - prior to bag on.

1058 Bag On is noted completed and processing initiated

1215 Completed the noon phone call with OM, SOM and others.

1218 Operators indicated they are having difficulty removing ~~cans~~ 3-17-14 bags ~~fills~~ and lead from drum.

1234 Inside Operators were initiating Bag off, and Bagon of 1 Daughter and continue to process once bag on is completed

1254 Bag on / Bag off is noted completed -

1405 Completed extending shift orders WCRR-SH-13-005 R0, Instructions to Prevent Bag Tears and; WCRR-SH-14-002-R0; Ensure correct filters on 85 gallon containers were extended till March 24, 2014.

1554 Inside Operators initiate bag off and bagon of PARENT 69372 SP-1

1623 Operators note that bag on and bag off is complete.

1644 The SOM notified the OM of current condition of the WCG and that RCTs were required to initiate Tritium Surveys at 1700 hrs, as a result,

PROJECT NAME LWRR SOS LOG Book NOTEBOOK NO.

3/17/14

0600 Assuming SOS Position with mg
0615 Conducted shift Brief went over Path forward on Beryllium After discussion with IH and ES WM and operators mg will continue Forward on Processing the last 8 drums to complete per Brief All drum the Trash will be bagged CE and labeled as such All CE Return will remain In Place Till Drums are complete
0725 Shift Brief Complete.
0846 Reviewed Inside And outside Rounds
0858 Made Change to operations.
0855 Starting work on 77, SC-69
0911 Movement complete
1013 Demasking And Bagging on SR 32145
1025 operators indicated Ring bolt on 85 very Difficult to remove
1059 Deizestoring Bagon Complete
1200 operators indicated Drum 75 Difficult to process
1234 Bag on jd Dumpster
1251 Bag on jd complete
1540 operators indicated work Pause RCDs Adjusting hand and foot
1591 Bagging out on 69372
1623 Bag on all complete
1641 Permission Granted to leave Drum Bagged on
1650 Starting Rounds
1738 Reviewed Inside And outside Rounds
1745 Made Change Complete LWRR ~~[illegible]~~ program and SC-69
1330 End of Shift Security Rounds [illegible]

[illegible]

SIGNATURE _____ DATE _____ 20 _____
READ AND UNDERSTOOD _____ DATE _____ 20 _____

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-14-0037
Examination Date:	3/26/2014
Waste Container ID:	69555
Video/Audio Recorded Media Number:	LA-RTR2-14-0037 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.: 170.0 kg Tare Wt.: 33.4 kg Net Wt.: 136.6 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 1 layer
Volume Utilization Percentage:	90 %

CCP Radiography Data Sheet

Waste Container ID: 69555

Section 3: Container Inventory and Comments (Detailed descriptions)

IM: Hardware

AM:

OM: Scrap lead

OI:

C: Leather gloves

R:

XPM:

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):	1.0
Rubber (R):	
Plastics (waste materials) (XPM):	
Organic Matrix (OR):	
Inorganic Matrix (IN):	120.5
Soils (S):	
Total WMP Weight:	136.6

CCP Radiography Data Sheet

Waste Container ID: 69555

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	3/26/2014
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	69555	Count Sequence Number:	17055
Operator:	DCLTD231\Operator		
Assay Start:	3/26/2014 12:51:02 PM		
Description 1:	2LANDA1277		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6, Be < 1%		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gal Drum		
Weight:	Net: 137.0 kg	Net:	137.0 kg
Container:	Volume: 208.0 l	Full:	90.0 %
Density:	0.730 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:	17055	Batch Number:	2LANDA1277
Assay Instrument:	HENC #2	Location:	LANL TA-54
Analysis Method:	CCP-TP-063 v 15	Software Version:	NDA 2000 V.4.0
Item ID:	69555	Analysis Date:	3/26/2014

Net Weight	137000.0 g		
Pu mass	7.46E+001	+- 3.02E+001	g
TRU Alpha Activity	2.66E+001	+- 1.47E+001	Ci
TRU Activity Concentration	1.94E+005	+- 1.07E+005	nCi/g
Pu-239 Equivalent Activity	2.67E+001	+- 1.47E+001	Ci
Pu-239 FGE	7.04E+001	+- 3.01E+001	g
Decay heat	8.73E-001	+- 4.88E-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	2.45E-006
U233	<LLD	<LLD	0.00E+000	2.15E-002
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	7.11E-006
NP237	3.43E-001	2.42E-004	4.58E-005	5.80E-006
PU238	6.80E-003	1.16E-001	5.26E-002	2.13E-003
U238	<LLD	<LLD	0.00E+000	4.46E-005
PU239	7.00E+001	4.34E+000	1.87E+000	7.95E-002
PU240	4.48E+000	1.02E+000	4.60E-001	1.86E-002
AM241	6.15E+000	2.11E+001	1.46E+001	4.72E-001
PU241	8.41E-002	8.66E+000	3.92E+000	1.59E-001
PU242	1.49E-002	5.90E-005	2.67E-005	0.00E+000
AM243	3.28E-003	6.57E-004	1.25E-004	3.26E-005

Errors quoted at 1.000 sigma

Operator: D R C Date: 3-31-14

ITR: Jim Barten Date: 3/31/14

Automated Independent Technical Review

Count Sequence Number: 17055 Batch Number: 2LANDA1277
Counter ID: HENC #2
Container ID: 69555
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 3/26/2014

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.	Ok
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

Comments	Disposition
Section 3 - Data Combiner Analysis Override enabled; Gamma data specified as input. Analysis Status: Override enabled; data marked not available but were used. 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
MCA Deadtime greater than the upper limit of 50.0%.	MCA deadtime = 71%. No spectral distortion observed.
Miscellaneous	No additional nuclides contributing to 95% of the radiological hazard identified.

Expert Review by: Sheri Chamberlin Date: 3-31-14

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **69555**

BDR Number: **LA14FG2050**

Sampling Date: **4/2/2014**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	535.43	
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\140402c\
Data File : 69555.D
Acq On : 2 Apr 2014 3:38 pm (#1); 02-Apr-14, 15:37:18 (#2)
Operator : SA
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 02 15:46:08 2014
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	3.552	96	3474136	205.75 ppmv	0.03
15) Chlorobenzene-d5	5.858	117	2776936	177.50 ppmv	0.00
Target Compounds					Qvalue
1) Hydrogen	1.622	GC1	4026m	535.43 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-14-0041
Examination Date:	3/27/2014
Waste Container ID:	69559
Video/Audio Recorded Media Number:	LA-HERTR-14-0041 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.: 166.0 kg Tare Wt.: 33.4 kg Net Wt.: 132.6 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: 69559

Section 3: Container Inventory and Comments (Detailed descriptions)

IM:

AM:

OM: Scrap lead

OI:

C:

R:

XPM: Plastic bags, 90 mil plastic 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):	30.0
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	2.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	100.6
Soils (S):	
Total WMP Weight:	132.6

Waste Container ID: 69559

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		3/27/2014
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	69559	Count Sequence Number:	17063
Operator:	DCLTD231\Operator		
Assay Start:	3/31/2014 12:25:14 PM		
Description 1:	2LANDA1278		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6, Be <1%		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gal Drum		
Weight:	Net: 133.0 kg	Net:	133.0 kg
Container:	Volume: 208.0 l	Full:	70.0 %
Density:	0.910 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:	17063	Batch Number:	2LANDA1278
Assay Instrument:	HENC #2	Location:	LANL TA-54
Analysis Method:	CCP-TP-063 v 15	Software Version:	NDA 2000 V.4.0
Item ID:	69559	Analysis Date:	3/31/2014

Net Weight	133000.0 g		
Pu mass	2.36E+001	+- 5.39E+000	g
TRU Alpha Activity	1.38E+001	+- 6.67E+000	Ci
TRU Activity Concentration	1.03E+005	+- 5.02E+004	nCi/g
Pu-239 Equivalent Activity	1.38E+001	+- 6.67E+000	Ci
Pu-239 FGE	2.23E+001	+- 5.37E+000	g
Decay heat	4.54E-001	+- 2.22E-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	1.49E-006
U233	<LLD	<LLD	0.00E+000	1.25E-002
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	4.19E-006
NP237	2.07E-001	1.46E-004	3.15E-005	3.24E-006
PU238	2.15E-003	3.68E-002	1.03E-002	1.46E-003
U238	<LLD	<LLD	0.00E+000	2.54E-005
PU239	2.22E+001	1.38E+000	3.33E-001	5.44E-002
PU240	1.42E+000	3.22E-001	9.03E-002	1.27E-002
AM241	3.50E+000	1.20E+001	6.66E+000	1.17E-001
PU241	2.66E-002	2.74E+000	7.69E-001	1.08E-001
PU242	4.73E-003	1.87E-005	5.24E-006	0.00E+000
AM243	1.03E-003	2.05E-004	4.47E-005	1.73E-005
CM243	5.93E-007	2.91E-005	1.36E-005	2.76E-005

Errors quoted at 1.000 sigma

Operator: _____ Date: 4/1/14

ITR: _____ Date: 4-2-14

Automated Independent Technical Review

Count Sequence Number: 17063 Batch Number: 2LANDA1278
Counter ID: HENC #2
Container ID: 69559
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 3/31/2014

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.
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: 4-1-14

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **69559**

BDR Number: **LA14FG2052**

Sampling Date: **4/4/2014**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	281.81	
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\140404c\
Data File : 69559.D
Acq On : 4 Apr 2014 1:58 pm (#1); 04-Apr-14, 13:57:19 (#2)
Operator : NW
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 04 14:06:48 2014
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	3.552	96	3590264	205.75 ppmv	0.03
15) Chlorobenzene-d5	5.861	117	2845605	177.50 ppmv	0.00
Target Compounds					Qvalue
1) Hydrogen	1.623	GC1	2119m	281.81 ppmv	

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

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S832149

S832149

Container P 747627

File Options Reports Help

S832149

747627	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

S832149
- S832149
  - 90854 - EMPTY
  - 90853
    - 92295 - EMPTY
    - 92294
  - 90852
    - 92579 - EMPTY
    - 92578
  - 90851
    - 92575 - EMPTY
    - 92574
  - 90850
    - 92291 - EMPTY
    - 92290
      - LASB02091
  - 90849
    - 92573 - EMPTY
    - 92572
  - 90848
    - 92182 - EMPTY
    - 92181
  - 90845

ATTACHMENT 1
Page 1 of 3

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: S832149

6.2[4] Date Processed: 2-2-12

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: None

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

4.3[4][B] Platform Scale: Equipment No.: 019065
Cal. Due Date: 9-3-12

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

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

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

Performed By: Michael Romero Michael Romero 186723 / 2-2-12
Waste Handling Tech (print) Signature I.# Date

5.[16] Prepared Parent Drum Weight (lb): 417.4 lb

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

ATTACHMENT 1

Page 2 of 3

4.1[6][B] Parent Waste Container No.: S832149

6.2[5][B]/ 6.2[6] Total Parent Drum Weight (lb) 417.4 lb

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

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	90845			
10.1[4]	Daughter Drum Filter No.	CL-1345		N	
10.1[4]	Daughter Drum Bag Filter No.	WO 1483		A	
10.1[4]	Daughter Drum Purchase Order No.	414992			
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	BOP	BOP	BOP	BOP
	Model No.	3.1.5-2	3.1.5-2	3.1.5-2	3.1.5-2
	Serial No.	WO-2510	WO-2518	WO-2517	WO 2503
	Date of Manufacture	10/11	10/11	10/11	10/11
10.2[5]	POC ID No.	90848	90849	90850	90851
10.2[7][B]/10.2[6]	POC Item Description	Plastic salts	Plastic salts	Plastic Salts	Plastic salts
10.2[7][D] 10.2[8][D]	Bag-out Bag Filter No.	N/A	N/A	N/A	N/A
10.2[13]	POC Assembly closed per Manufacturer's instructions (Initial and Date)	MR 182723	MR 182723	MR 182723	MR 182723
10.2[14]	POC Assembly Gross Weight (lb)	409.4	399.8	397.6	379.8
10.2[15]	POC Rad Survey Results (mrem/hr)	302	502	252	252
10.3[3][A]	Approx. Containerized Liquid Vol./Units	N/A			
10.3[7][A]	Opaque/Non-penetrable Item Description:	Lead shielding			
10.3[5][A]	Free Liquid Volume/Units	10 gallons			
10.3[9][A]	PCB-contaminated Waste Description		N/A		
10.3[9][B]	PCB Item ID No.				
10.3[10]	Remaining Waste Description	see comments			
10.3[13]/10.4[12] 10.5[5]	Daughter Drum % Full (%)	80%			
10.5[4]	Description Waste Added During Processing	plastic			

ATTACHMENT 1
Page 2 of 3

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

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

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

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.				
10.1[4]	Daughter Drum Filter No.				
10.1[4]	Daughter Drum Bag Filter No.				
10.1[4]	Daughter Drum Purchase Order No.				
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	BOP	BOP		
	Model No.	3-1.5-2	3 1.5-2		
	Serial No.	WO 2513	WO-2525		
	Date of Manufacture	6/11	10/11		
10.2[5]	POC ID No	90852	90853		
10.2[7][B]/10.2[6]	POC Item Description	Salts plastic	Salts plastic		
10.2[7][D]/10.2[8][D]	Bag-out Bag Filter No.	N/A	N/A		
10.2[13]	POC Assembly closed per Manufacturer's instructions. (Initial and ZB)	MR 182723	MR 182723		
10.2[14]	POC Assembly Gross Weight (lb)	372.4	368.8		
10.2[15]	POC Rad. Survey Results (mrem/hr)	252	252		
10.3[3][A]	Approx. Containerized Liquid Vol/Units				
10.3[7][A]	Opaque/Non-penetrable Item Description:				
10.3[5][A]	Free Liquid Volume/Units				
10.3[9][A]	PCB-contaminated Waste Description				
10.3[9][B]	PCB Item ID No.				
10.3[10]	Remaining Waste Description				
10.3[13]/10.4[12]/ 10.5[5]	Daughter Drum % Full (%)				
10.5[4]	Description Waste Added During Processing				

ATTACHMENT 1
Page 3 of 3

4.1[6][B] Parent Waste Container No.: S832149

Comments: plastics, salts, Lead Shielding

11.1[1] Performed By: Michael Romero / Michael Romero 185723 12-2-12
Waste Handling Tech (print) Signature I.D. Date

11.1[7] Reviewed By: [illegible]
SOS/SOM (print) Signature I.D. Date/Time

Attachment 1. Checklist for Overpacking Drums Into an 85–Gal Overpack

85-Gallon Overpack ID Number ~~90844~~ 90854 MR 2-2-12

RECORD Drum Filter information: Nucf.1-013	
Filter ID Number: FJ 405	
Date of Manufacture: 6/09	

TORQUE WRENCH INFORMATION

Filter Torque Wrench		Drum Lid Ring Bolt	
M&TE ID#	040695	M&TE ID#	032122
Cal Expiration Date	7-12-12	Cal Expiration Date	9-18-12
			±3% cw
Tolerance ±[illegible]	±[illegible]	Tolerance	±6% ccw
Torque wrench is within acceptable range as displayed on Calibration Certificate	☑ Yes ☐ No ☐ N/A	Torque wrench is within acceptable range as displayed on Calibration Certificate	☑ Yes ☐ No

Bung Torque Wrench	
M&TE ID#	040031
Cal Expiration Date	8-2-12
Tolerance ±[illegible]	±[illegible]
Torque wrench is within acceptable range as displayed on Calibration Certificate	☑ Yes ☐ No ☐ N/A

Previously used 85-gallon container inspected (as applicable) ☐ SAT ☐ UNSAT N/A

Filter vent torque value: (new container only) [illegible] in-lb ☐ N/A

Drum lid 2-inch bung torque value: (If applicable) 30 ft-lb ☐ N/A

Drum lid ring-bolt torque value: 60 ft-lb

Drum lid ring threaded end touching jam nut: ☐ YES ☑ NO

Drum lid ring ends touching: ☐ YES ☑ NO

Technician Name (print)	Signature	Initials	7#	Date
Aaron Montoya	Aaron Montoya	SM	10-1741	2-2-12
Michael Romero	Michael Romero	MR	182723	2-2-12

1-10-12

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

Drum ID#: 90845

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 #: 414992
Lot #: 217304
Date of Manufacture: 11

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 #: 3CPUC 1.5-25DVC
Serial #: WO - 1483
Date of Manufacture: 6/11

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: Strucfil
Model #: 019 DS
Serial #: CL 1345
Date of Manufacture: 3/11

RECORD torque wrench information:

Filter torque wrench:		Jam Nut / Bung torque wrench:	
M&TE ID #:	040655	M&TE ID #:	040691
Cal Expiration Date:	9-12-12	Cal Expiration Date:	8-2-12
Range (ft-lbs or in-lbs):	40-200	Range (ft-lbs or in-lbs):	16-80
Tolerance:	±3% cw ±2% 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: Michael Romero Signature Michael Romero Z#. 182723

5. Weigh Drum Assembly

RECORD weight information

Tare witght (lbs) 75.4
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 Romero Operator Sign: Michael Romero Z#: 182723 Date: 1-10-12

Verifier Print: L M Montaño Verifier Sign: L M Montaño Z#: 085047 Date: 2/2/12

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

DRUM ID#: 90845

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 # : 032122

Cal expiration date: 9-18-12

Range/ Value (ft-lbs): 20-80

--- Tolerance ±37.cw ±6i.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) 129.4

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: JM Montanio Date 2/2/12

Verifier Print/Sign: Michael Romero Date: 2-2-12

WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Production Control

Container ID: S832149 Container Type: 55-GAL Gross Weight (lbs): 413
Inner Seal #: 009973 Filter Prefix: LAVC Filter Serial #: 01737
AK Waste Stream: LA-MHD01.001 Certified RTR BDR: No BDR
TWSR Comments: LEACHED SOLIDS MST 120RM 434
Total PE-Ci Activity: 3.49E+00 Equivalent Combustible PE-Ci: 1.31E+00 AM-241 PE-Ci: 4.71E-01
Total Fissile Gram Equivalents: 31.6 Total Surface Dose Rate (mrem/hr): 30
EPA Code(s): None
NCR RTR/NDA Comment: None
RTR Pre-Screen Date: 4/19/2007 Comment: Impenetrable Obj.
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:

Performed By: R. W. Jones (Production Control (Print)) Signature: R. W. Jones Z Number: 117434 Date: 1/18/11

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: Leached solids - nitrate salts
Net Wt: 353 lb, Four items (2 less than 16 lb each; 1 is 44 lb; + 1 is 194 lb).
May require RWP for >1,000 and <10,000 mrem/hr at 30 cm

Performed By: Valerie Rhodes (WDP Engineering (Print)) Signature: Valerie Rhodes Z Number: 112669 Date: 11/12/11

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: [illegible]

Performed By: [illegible] (TRU Remediation Operations (Print)) Signature: [illegible] Z Number: [illegible] Date: [illegible]

Noncertified TRU Waste Drum Item Information

DrumID: 009973

Item No	ItemID	Process Status	Net Wt (kg)	Matrix	Meas Code	SNM (g)	MT	Auth (Pg/Lm)	Comments
1	IXFS-579-F1	EV	20.000	NITRATE SALTS		2.38	42	13/11	
2	IXFS-577-FB	EV	7.270	NITRATE SALTS		3.66	52	5/11	
3	IXFS-578-F1	EV	1.820	NITRATE SALTS			52	5/11	
4	IXFS-580-F1	EV	88.410	NITRATE SALTS		29.79	52	5/11	#5 ORIGINAL PKG D

Noncertified Waste Drum Material Summary

Gross Wt (kg): 187.2

Material Type	SNM (grams)	Items Net Wt (kg)
42	2.38	20.00
52	33.45	97.50
Totals	35.83	117.50

ATTACHMENT 1
Page 1 of 2

HYDROGEN/VOC SAMPLING USING GAS CHROMATOGRAPHY DATA SHEET

7.[1] Sample Date: 1/20/11

7.[7] Certified CCP Technician:

CCP (Print)	/ Signature	/ Z #	/ Date
CCP (Print)	/ Signature	/ Z #	/ Date

Container No. (7.[1]):	5832149	5860169	59093
Container Type (SWB, 110/85/55-gal) (7.[1]):	55 gal	55 gal	55 gal
Current Filter Vent No. (7.[1]):	72	72	13
New Filter Vent No.: (7.[8][A]):	72	72	13
WIPP-Approved Filter Vent (7.[8][B]):	☑ SAT ☐ UNSAT	☑ SAT ☐ UNSAT	☑ SAT ☐ UNSAT
VOC	Value (ppm) (7.[10])		
Benzene			
Chlorobenzene			
Cyclohexane			
1,1-Dichloroethane			
1,2-Dichloroethane			
1,1-Dichloroethylene			
cis-1,2-Dichloroethylene			
Ethyl benzene			
Ethyl ether			
Toluene			
1,2,4-Trimethylbenzene			
1,3,5-Trimethylbenzene			
m- and p-Xylene			
o-Xylene			
Acetone			
1-Butanol			
Methanol			
Methyl ethyl ketone			
Methyl isobutyl ketone			
Total CCP VOC value (ppm) (7.[11]):	Ø	Ø	Ø

ATTACHMENT 1
Page 2 of 2

NOTE *Filtered vent data may be captured on a support organization data sheet.*

Container Number (7.[1]):	583249	860169	59093
Hydrogen Reading (ppm) (7.[10]):	1509.42 ppm	Ø ppm	558.43 ppm
Methane Reading (ppm) (7.[10]):	Ø ppm	Ø ppm	Ø ppm
Total VOC Reading (ppm) (7.[11]):	Ø ppm	Ø ppm	Ø ppm
Filter Type (7.[9][F][c]/7.[9][G][a]):	72	72	13
WIPP Approved (SAT/UNSAT) (7.[9][F][c]/7.[9][G][a]):	SAT	SAT	SAT
Torque Wrench M&TE/ID Number (7.[9][F][a]/7.[9][G][a]):	N/A	N/A	038371
Torque Wrench Calibration Due Date (7.[9][F][a]/7.[9][G][a]):	N/A	N/A	5/6/11
Torque Wrench Tolerance (7.[9][F][a]/7.[9][G][a]):	N/A	N/A	± 3%
VERIFY Torque Wrench is within acceptable range as specified on Cal Certificate. (7.[9][F][a]/7.[9][G][b])	☐ YES ☐ NO ☑ N/A	☐ YES ☐ NO ☑ N/A	☑ YES ☐ NO ☐ N/A
Filter Torque Value (7.[9][F][a]/7.[9][G][d]) *	N/A	N/A	10 ft lbs.

* No torque value required for 072 or 073 filters – Record N/A as applicable

Comments:
N/C

11.1[1] Performed By: Alicia Herrera / [signature] 198450 / 1/25/11
Waste Handling Operator (print) Signature Z # Date

11.1[5] ☐ Deficiencies identified and submitted (e.g., PCR or FSR system).

☑ No deficiencies

11.1[7][A] WCRRF waste container satisfies the following criteria: ☑ SAT ☐ UNSAT

- Hydrogen – less than or equal to 32,000 ppm
- VOC – less than or equal to 7,000 ppm

11.1[7][B]/ Reviewed By: _____ / _____ / _____ / _____
11.1[8] Waste Handling Supervisor (print) Signature Z # Date

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\110120c\
Data File : S832149.D
Acq On : 20 Jan 2011 3:04 pm (#1); 20 Jan 2011 3:03 pm (#2)
Operator : GR
Sample :
MistName : Unit 8
Misc : 55 GALLON LFL DRUM FROM UNDER DRUM LID. (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jan 20 15:12:55 2011
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	3.246	96	4309256	209.00 ppm	0.00
15) Chlorobenzene-d5	5.933	117	3577748	184.00 ppm	0.00
Target Compounds					Qvalue
1) Hydrogen	5.359	GC1	382210	1509.42 ppm	100

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

Vocgas.m Thu Jan 20 15:13:07 2011

2-2-12

0555 Assuming WCRR operations center - JColeman
0558 Beginning inside and outside rounds
0614 Item #60 is OOS on the rounds. Per CSE documentation, we are okay to proceed.
0620 Inside and outside rounds complete.
0658 Rounds reviewed by SOS.
0700 Shift turnover brief with Clarissa Velarde - JColeman.
0701 Assuming WCRR operations center CVelarde
0744 Mode change performed we are now in operations
0812 bagging on 3832040
0950 bagging off 3832040 and 3 PCCS will not be bagging on another drum due to not having absorbent.
1046 bagging on 3832149
1137 operators introducing absorbent into glovebox. introductory port.
1148 Completed introducing absorbent into glovebox.
1352 Starting movement out of 50-69 to transportainer.
1410 Completed movement out of 50-69.
1415 RCT inside 50-69 reporting rubber like ~~odor~~ odor inside 50-69. SO9 reports truck running outside possibly causing fumes. SO9 and SOM notified. JH evaluating order. per FH this vehicle moved ~~outside~~ odor should OK. All personnel has been removed from building.
1440 ~~1514~~ JH coming to monitor odor. SOM notified OOS and OM.
1445 JH entering facility to perform testing
1500 JH has cleared building and operators are OK to continue with operations.
1507 Starting outside rounds.
1514 Starting inside rounds.
1520 Starting bag off of 3832149 and PCCS
1542 Completed inside rounds.
1630 Completed bag off
1630 Being relieved by BOT TMC Coleman - CColeman
1630 Assuming WCRR operations center - JColeman
1638 Initiating a drum movement from 50-69 to a transportainer
1645 Drum movement out of facility complete. All inventory removed from facility.
1649 Mode change complete. 50-69 is in COLD and WCRF is in warm.
1650 End of day. Operators secure. JColeman

No further entries this page.

READ AND UNDERSTOOD DATE

79 PROJECT NAME 2-2-12 NOTEBOOK

0000 Received shift turnover from previous shift and assumed the WCRR SOM position. [signature]
0020 Pre-job briefing conducted. RCTs conducting RWP brief.
0744 Shift change complete. WCRRF YARD and SOG from WARM mode to OPERATIONS mode.
0950 Reported by the Operation Center that operators can't begin another drum because they don't have absorbent. Waiting on Energy Solutions to obtain absorbent.
1050 Reported by Operation Center that operators will be beginning on another ~~drum~~ drum. Absorbent has been obtained by Energy Solutions.
1157 Absorbent being introduced into WCB.
1415 Operation Center operator reported to SOM that there is a rubber like odor inside SO-109. There is no AOP procedure in place. SOM instructed operation center to instruct operators to place inventory in a safe configuration and exit building. SOS verified that there is a truck parked outside WCRRF foot plant in pajamas and. EH was notified and are in route.
1438 SOM notified OM, FOD and ODE.
1440 All personnel have been accounted for and EH is on their way. No one is in the process area and access has been restricted.
1445 EH arrived at WCRRF and ~~[illegible]~~ entering area.
1500 EH has cleared area. No activity detected on monitor. SOM released operators.
1518 FOD notified by SOM that building has been released.
1049 Shift change complete WCRRF YARD and SOG from ~~[illegible]~~ OPERATIONS, OPERATIONS to WARM and standby mode.
1100 End of Shift. Securing the watch. [signature]

[signature]

SIGNATURE [signature] DATE 2 2 20 12
READ AND UNDERSTOOD DATE 20

PROJECT NAME WCRR SOS LOG BOOK NOTEBOOK NO.

2-2-12

0625 Reviewed SOS Turnover assuming SOS Position [illegible]

0635 Conducted shift brief by Scott

0700 Shift brief Concluded

0705 Review of Inside And Outside Rounds

0744 Mode Change Complete WCRR Yard And SO-69 In Operations mode.

1000 Contacted WMC on Issues with Absorbent gave him drum numbers to verify If there is a substitute for the Absorbent that Is used Presently Having difficulty Getting Absorbent waste Ordered

1040 TALKED TO WMC. WAS NOTIFIED THAT THERE IN NO KNOWN ACCEPTABLE REPLACEMENT FOR WASTE LOCK 770 ABSORBANT WMC WILL DELIVER 2-3 BAGS OF ABORBANT TO WCRRF

1055 NOTIFIED By Inside personal Drum in The NCG Has Significant amounts of Liquids NEED To Get More absorbent

1115 Received 2 bags of ABSORBANT And Taking Em to facility

1415 Notified by Inside personal That a Strange odor In facility Pausing work till further notice.

1420 IH notified will do test. Inside Personal Exiting

1425 IH Going to 54 to pick up sniffer

1445 IH Arrived And did Air test All was OK

1500 Operator cleared to reenter facility

1621 Reviewed Inside And outside Rounds

1649 Mode change Complete WCRR Yard And SO-69 Fill Cold

2-2-12 1700 End of shift Securing WCRR SOS Position [illegible]

GW 2/10/12

No further entries on this page

SIGNATURE _____ DATE _____ 20__

READ AND UNDERSTOOD _____ DATE _____ 20__

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-12-0123
Examination Date:	10/25/2012
Waste Container ID:	90845
Video/Audio Recorded Media Number:	LA-RTR2-12-0123 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 12
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.: 58.5 kg Tare Wt.: 33.4 kg Net Wt.: 25.1 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:	30 %

CCP Radiography Data Sheet

Waste Container ID: 90845

Section 3: Container Inventory and Comments (Detailed descriptions)

IM:

AM:

OM: Scrap lead

OI:

C:

R:

XPM: Plastic bag, plastic lid

OR:

IN: Absorbent

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):	19.1
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	3.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	3.0
Soils (S):	
Total WMP Weight:	25.1

CCP Radiography Data Sheet

Waste Container ID: 90845

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	10/25/2012
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	90845	Count Sequence Number:	21485
Operator:	D3PW2DK1\operator		
Assay Start:	10/26/2012 1:15:07 PM		
Description 1:	1LANDA1662		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6, (MT-42), Not Precision		
Matrix Type:	Debris S5000		
Container Type:	55 gallon drum		
Weight:	Net: 25.1 kg	Net:	25.1 kg
Container:	Volume: 208.0 l	Full:	30.0 %
Density:	0.400 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:	21485	Batch Number:	1LANDA1662
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:	90845	Analysis Date:	10/26/2012

Net Weight	25100.0 g		
Pu mass	2.91E+000	+- 4.90E-001	g
TRU Alpha Activity	6.69E-001	+- 2.38E-001	Ci
TRU Activity Concentration	2.67E+004	+- 9.48E+003	nCi/g
Pu-239 Equivalent Activity	6.79E-001	+- 2.38E-001	Ci
Pu-239 FGE	2.64E+000	+- 4.40E-001	g
Decay heat	2.19E-002	+- 7.94E-003	W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	5.39E-003	3.85E-006	5.49E-007	5.40E-007
PU238	1.10E-003	1.91E-002	3.21E-003	6.97E-005
PU239	2.62E+000	1.65E-001	2.77E-002	6.01E-004
PU240	1.75E-001	4.03E-002	6.78E-003	1.47E-004
AM241	1.28E-001	4.45E-001	2.36E-001	9.33E-003
PU241	5.63E-003	5.85E-001	9.85E-002	2.14E-003
PU242	1.11E-001	4.39E-004	7.39E-005	0.00E+000
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	1.97E-007
U233	<LLD	<LLD	0.00E+000	1.11E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	2.77E-007
U238	<LLD	<LLD	0.00E+000	5.53E-006

Errors quoted at 1.000 sigma

Operator: _____ Date: 10-30-12

ITR: Benedy Brown Date: 10/31/12

Automated Independent Technical Review

Count Sequence Number: 21485
Batch Number: 1LANDA1662
Counter ID: MCS HENC #1
Container ID: 90845
Waste Matrix Code: Debris S5000
Count Type:
Sequence Type:
Assay Date: 10/26/2012

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.
Analysis Status: Override enabled; data marked not available but were used.	
Pu results taken from Passive Neutron data, U from Quantitative Gamma data.	
Results comparison test passed.	
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-52,42.
Results are marked as invalid.	

Comments	Disposition
Section 5 - Gamma Analysis	
Analysis Status: No errors.	Ok
Ratio of Pu-239 414 to 129 keV line activities is above the limit of 2.50	Not data affecting, neutron results applied.
Miscellaneous	No additional nuclides contributing to 95% of the radiological hazard identified.

Expert Review by: Sheri Chambers Date: 10-29-12

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **90845**

BDR Number: **LA12FG12048**

Sampling Date: **10/31/2012**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	8.15	U
74-82-8	Methane	9.63	U
67-56-1	Methanol	30.57	U
60-29-7	Ethyl Ether	1.77	U
75-35-4	1,1-Dichloroethylene	5.36	U
67-64-1	Acetone	11.55	U
75-34-3	1,1-Dichloroethane	2.29	U
156-59-2	cis-1,2-Dichloroethene	0.36	U
78-93-3	Methyl ethyl ketone	2.55	U
110-82-7	Cyclohexane	2.09	U
71-43-2	Benzene	0.47	U
107-06-2	1,2-Dichloroethane	0.92	U
71-36-3	1-Butanol	0.54	U
108-10-1	Methyl isobutyl ketone	3.11	U
108-88-3	Toluene	2.73	U
108-90-7	Chlorobenzene	0.87	U
100-41-4	Ethylbenzene	1.15	U
108-38-3/106-42-3	m- and p-Xylene	0.59	U
95-47-6	o-Xylene	0.63	U
108-67-8	1,3,5-Trimethylbenzene	0.72	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

Quantitation Report (QT Reviewed)

InstName : FGA Unit 12

Data Path : C:\msdchem\1\DATA\121031C\
Data File : 90845.D
Acq On : 31 Oct 2012 3:02 pm (#1); 31 Oct 2012 3:01 pm (#2)
Operator : RJ
Sample :
Misc : 55 Gallon drum through filter (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Oct 31 15:10:29 2012
Quant Method : C:\msdchem\1\METHODS\VOCGAS.M
Quant Title : Flammable Gas Analysis for Transportation Only
QLast Update : Wed Oct 03 14:43:18 2012
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
3) Fluorobenzene	4.057	96	5840721	204.00	ppmv	0.00
15) Chlorobenzene-d5	6.636	117	6158564	179.25	ppmv	0.00

Target Compounds	Qvalue

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

56

UET

10-9-12

ATTACHMENT 1
Page 1 of 4

WCRRF WCG WASTE PROCESSING DATA SHEET

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

6.2[4] Date Processed: [illegible]

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: [illegible]

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.: [illegible]
Cal. Due Date: [illegible]

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-C1 Equivalent Combustible)
(SAC 5.10.1.7.2) [illegible]
(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: [illegible] / [illegible] / [illegible] / [illegible]
Waste Handling Tech (print) Signature Z # Date

ATTACHMENT 1
Page 2 of 4

4.1[6][B] Parent Waste Container No.: 90848

5.[18] Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable: 409.4 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) 409.4 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:

NA

FWMO-FOD (print) Signature Z # Date

ATTACHMENT 1
Page 3 of 4

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

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	[illegible]			
10.1[4]	Daughter Drum Filter No.	[illegible]			
10.1[4]	Daughter Drum Bag Filter No.	[illegible]			
10.1[4]	Daughter Drum Purchase Order No.	[illegible]			
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				
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:			#0	
10.3[9][A]	PCB-contaminated Waste Description				
10.3[9][B]	PCB Item ID No.				
10.3[10]	Remaining Waste Description	See [illegible]			
10.3[13]/10.4[10]/10.5[4]/10.6[8]	Daughter Drum % Full (%)	95%			
10.5[3]/10.6[2]	Description Waste Added During Processing	Bag out Stuff			

ATTACHMENT 1

Page 4 of 4

4.1[6][B] Parent Waste Container No.: 50848

Comments: Wilkinson, phenolic, metal, cord, bolts, bolts, Rich, Cut wires,

11.1[1] Performed By: [illegible] / [illegible] / [illegible] / 10-9-12
Waste Handling Tech (print) Signature Z # Date

11.1[7] Reviewed By: Jose Jerez / [illegible] / 221452 / 10-10-12 1130
SOS or designee (print) Signature Z # Date/Time

Working Copy

10-3-12 **ATTACHMENT 2**
Page 1 of 1

WCRRF OVERPACK DRUM ASSEMBLY PREPARATION DATA SHEET

5.[3] Overpack drum information:

Purchase Order No.: 413954
Lot No.: 211426
Manufacture Date: 2010

5.[8] Overpack filtered vent information:

Manufacturer: Nucfil
Model No.: 013
Serial No.: HL-729
Manufacture Date: 08-11

Overpack filtered vent and 2 in. bung torque wrench information:

	Filtered Vent	2 in. Bung
M&TE No.:	020614	021151
Cal. Expiration Date:	10-19-12	06-11-13
Tolerance:	±4%cw ±8%ccw	±3%cw ±6%ccw

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

Performed By: Don Pacheco / Don Pacheco 240042 10-03-12
Waste Handling Technician (print) Signature Z # Date

5.[12] Filtered Vent torque value [120 in-lb (96 to 144 in-lb)]: 120 (in-lb)

5.[15] 2 in. bung plug torque value: 30 (ft-lb)

Comments: N/C

8.1[1] Performed By: Don Pacheco / Don Pacheco 240042 10-03-12
Waste Handling Technician (print) Signature Z # Date

8.1[5] ☐ Deficiencies identified and submitted (e.g., PCR or FSR system).
☑ No deficiencies

8.1[7] Reviewed By: Jose Jerez / [signature] 221452 10-10-12
Supervisor or designee (print) Signature Z # Date

10-9-12a

ATTACHMENT 5
Page 1 of 1

WCRRF OVERPACK DRUM CLOSURE DATA SHEET

7.[19] Overpack Drum Unique Identifier No.: 92182

7.[25] Overpack drum closure ring torque wrench information:

M&TE No.: [illegible]
Cal. Expiration Date: 3-18-13
Range in ft-lb: 16-26
Tolerance: [illegible]

7.[26] Torque wrench listed above is within the acceptable ranges as displayed on the calibration certificate. ☑ Yes ☐ No

Performed By: [illegible] / [illegible] / [illegible] / 10-9-12
Waste Handling Technician (print) Signature Z# Date

7.[28] Overpack drum closure ring torque value: 60 ft-lb

7.[31] Threaded lug of the drum closure ring is not touching the jam nut and the locking ring lugs are not touching. ☑ SAT ☐ UNSAT

7.[36][B] Platform scale serial number: [illegible]
Platform scale calibration expiration date: 7-31-13

7.[36][D] 85-gal overpack drum gross weight (lb): 38.6 lb

Comments: n/a

8.1[1] Performed By: [illegible] / [illegible] / [illegible] / 10-9-12
Waste Handling Technician (print) Signature Z# Date

8.1[5] ☐ Deficiencies identified and submitted (e.g., PCR or FSR system).
☑ No deficiencies

8.1[7] Reviewed By: Jose Jerez / [illegible] / 221452 / 10-10-12
Supervisor or designee (print) Signature Z# Date

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

Drum ID#: [illegible]

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 #: 416216
Lot #: 0224225
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 #: 6 CPVC 65-2 SPVC
Serial #: L-3679
Date of Manufacture: 06/12

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 #: 019-DS
Serial #: AH-774
Date of Manufacture: 1/12

RECORD torque wrench information:

Filter torque wrench:		Jam Nut / Bung torque wrench:	
M&TE ID #:	020614	M&TE ID #:	021151
Cal Expiration Date:	10-19-13	Cal Expiration Date:	6-11-13
Range (ft-lbs or in-lbs):	40-200	Range (ft-lbs or in-lbs):	16-80
Tolerance:	+/- 3% 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: Steven Mondragon Signature: Steven Mondragon ID#: 104741

5. Weigh Drum Assembly

RECORD weight information

Tare wight (lbs) 71.4
File ID #: 0 HALF

- [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: Steven Mondragon Operator Sign: Steven Mondragon ID: 104741 Date: 10-3-12

Verifier Print: [illegible] Verifier Sign: [illegible] ID: [illegible] Date: [illegible]

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

DRUM ID#: 92181

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 # : 09032A

Cal expiration date: 3-18-13

Range/ Value (ft-lbs): 16-80

--- Tolerance +1-3% to +1-6% [illegible]

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): 279.6

Scale ID#: 016465

✓ 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 10-9-12

Verifier Print/Sign: Brandon Crowe Date: 10-9-12

WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Production Control

Container ID: 90848 Container Type: POC Gross Weight (lbs): 409

Liner Seal #: None Filter Prefix: None Filter Serial #: EL-237; EL-244

RTR Waste Stream: LA-MHD01.001 Certified RTR BDR: No BDR

TWSR Comments: PARENT #S832149 WTS-128TD-709

Total PE-Ci Activity: 4.99E-01 Equivalent Combustible PE-Ci: 1.87E-01 AM-241 PE-Ci: 6.73E-02

Total Fissile Gram Equivalents: 4.5 Total Surface Dose Rate (mrem/hr): 2

EPA Code(s): D008 D007 D009 WL 9/25/12

NCR RTR/NDA Comment: None

RTR Pre-Screen Date: None Comment: None

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: TBD Production Control Comments: Need to add EPA Codes D007 & D009

Nitrate salts mixed with Waste Lx 770® from previous repack campaign. A minimum of 1.2 volumes of kitty litter/zeolite must be mixed with 1.0 volume of nitrate salts

Performed By: Susan Ramsey (Production Control (Print)) Signature: Susan Ramsey Z Number: 100681 Date: 9/6/12

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 - POC

Net Wt: 99 lb. Parent drum (SEDs attached) was part of WCRR nitrate salt repack campaign using Waste Lx 770. The resulting daughter POC is being repacked to adjust the admixture/nitrate salt ratio. Nitrate salts carry waste codes for chromium (D007), lead (D008), + mercury (D009). No hazardous chemicals present

May require RWP for >100 and <1000 mrem/hr

Performed By: Valerie Rhodes (WDP Engineering (Print)) Signature: Valerie Rhodes Z Number: 112609 Date: 9/25/12

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: Mix in kitty litter at a min. of 1:1 kitty litter to 1 part salt.

Performed By: Gilbert Martinez (TRU Remediation Operations (Print)) Signature: G. Martinez Z Number: 149835 Date: 9-27-12

HS Review: CSP, contains lead, chromium & Hg 9-28-12

Document No: EP-DIV-AP-0107 9-28-12 221452

Noncertified WRP Waste Drum Item Information

DrumID: 009973

Item No	ItemID	Process Status	Net Wt (kg)	Matrix	Mess Code	SNM (g)	MT	Auth (Pg/Lm)	Comments
1	LNPS-575-F1	EV	20.000	NITRATE SALTS		2.38	42	13/11	
2	LNPS-577-F8	EV	7.270	NITRATE SALTS		3.46	52	5/11	
3	LNPS-578-F1	EV	1.520	NITRATE SALTS			52	5/11	
4	LNPS-580-F1	EV	88.410	NITRATE SALTS		29.79	52	5/11	68 ORIGINAL PNS D

Noncertified Waste Drum Material Summary

Gross Wt (kg): 187.2

Material Type	SNM (grams)	Items Net Wt (kg)
42	2.38	20.00
52	33.45	97.50
Totals	35.83	117.50

ATTACHMENT 1
Page 1 of 1

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

5.[1] Sample Date: 9.21.12

Container No. (5.[1])	90848					
Container type sampled (e.g., 55-gal, 85-gal, 110-gal, or SWB) (5.[1])	POC					
Filtered Vent Type (5.[1])	19DS					
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])	139.33 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)) 237975 (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: Colleen Martinez (Waste Handling Operator (print)) Colleen Martinez (Signature) 190298 (Z #) 9.24.12 (Date)

InstName : Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\120921c\
Data File : 90848.D
Acq On : 21 Sep 2012 3:03 pm (#1); 21-Sep-12, 15:02:22 (#2)
Operator : NW
Sample :
Misc : LFL POC THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 21 15:11:00 2012
Quant Method : C:\msdchem\1\METHODS\vocgas.m
Quant Title : Flammable Gas Analysis
QLast Update : Wed Sep 05 10:53:25 2012
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
3) Fluorobenzene	3.561	96	6554554	201.25	ppmv	0.02
15) Chlorobenzene-d5	5.887	117	5845965	177.00	ppmv	0.00
Target Compounds						Qvalue
1) Hydrogen	1.610	GC1	985	139.33	ppmv	100

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

10-9-12

0600 Assuming WCRRF operations center - Cleland
0615 Starting outside rounds
0631 Starting inside rounds
0650 Complete outside rounds
0657 Inside rounds completed.
0705 Inside and outside rounds signed off by SOS.
0715 Mode change performed at 1646 TA50-69 and WCRRF now in operations.
0747 Starting movement into 50-69.
0822 bagging on 90848 CY-10-9-11
0830 bag ~~off complete~~ on complete.
0903 bagging off 90848, bagging on 90860
0920 bag on complete
0927 Permission granted to lower vehicle access gates for movement to transport vehicle.
1012 Vehicle access gates have been restored. movement of drums to transport vehicle is complete.
1013 Starting bag off of 90860 and POC will be bagging on 90842.
1035 bag off and bag on complete.
1053 Starting movement into 50-69.
1058 movement complete into 50-69
1100 bagging off 90842, bagging on 90861.
1114 bag on, bag off complete.
1200 bagging off 90861, bagging on 90841
1230 Shift turnover with Peri Coleman - Cleland
1231 Assuming WCRR operations center. - JColeman
1335 Initiating a drum movement from 50-69 to a transportainer.
1354 Drum movement out of facility complete.
1356 Permission granted to lower the vehicle access gates to begin receipt of drums from Area G.
1408 Bagging off 90841, bagging on 90956.
1440 Bag on complete.
1445 Beginning inside rounds
1510 Beginning outside rounds.
1512 Inside rounds complete.
1513 Shipment from Area G has been accepted.
1530 Outside rounds complete.
1542 Vehicle access gates restored. Transportainers secure.
1556 Bagging off 90956.
1612 Both logbooks reviewed by SOS.
1616 Bag off complete.
1645 Mode change complete. We are now in Warm standby
1646 End of day. Operations secure. - JColeman
No further entries this page.

~~10/8/12~~ 10/9/12

0600 Reviewed previous shift turnover and assumed the WCRR SOM position. Genevieve Melendez
0615 Attended pre job briefing conducted by SQS. Discussed procedure compliance, slow and steady start coming back from a long weekend. SED's were not reviewed.
0640 JOD call in. Safety topic: slow start from long weekend, and procedure compliance.
0715 Mode change complete WCRR YARD 50.69 from WARM/COLD to OPERATIONS/OPERATIONS.
0730 SOM to badge office on call.
0805 SOM returned back.
0855 SOM and SSW performing an MOV on shipments.
1015 Completed observation of outgoing shipment from WCRRF to TA-54 Area G. Observed procedure compliance, operators were wearing PPE as required. Procedure being executed was EP-WCRR-DOP 0202. Recommendations is to have procedure with them as a reference. Only attachments were being used. Procedure went through a major revision and should be used as a reference.
1200 Production Control meeting call in. WCRR has 30 drums to process. Production control has submitted 10 additional SEDs to operations (SQS and ES manager). SOM action verify that dose rates have been conducted on incoming shipment.
1315 Released WO# 445640-01 Fire Safety. Not performing any work looking at lighting only. Will be back on 10/10/12 when facility YARD all in WARM.
1400 Notified by RP-1 Supervisor that operations was observed overpacking empty PDC's by hand. Procedure doesn't speak to over-packing of PDC's. SOM instructed SQS not to perform further overpacks until investigated by IH and ESH-Q manager. ES manager and SOM notified ESH-Q and IH will evaluate on 10/10/12
1445 Mode change complete WCRR YARD 50.69 from OPERATIONS/OPERATIONS to WARM/WARM.
1455 Secured watch. Genevieve Melendez

10-15-12

No further entries this page.

Genevieve Melendez 10/9 12

10.9.12 WCRR SOS LOGBOOK

0600 Assuming SOS Position [illegible]

0615 Conducted shift Brief went over Revision on WO-DOD-0202.

0645 Conducted shift Brief.

0705 Reviewed Inside And outside Rounds.

0715 Mode Change Complete WCRRF In Operations Mode

1612 Reviewed Inside And outside Rounds.

1645 Mode Change Complete

1648 end of shift Securing Position [illegible]

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-RTR2-13-0010
Examination Date:	1/23/2013
Waste Container ID:	92181
Video/Audio Recorded Media Number:	LA-RTR2-13-0010 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 12
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.: 126.5 kg Tare Wt.: 33.4 kg Net Wt.: 93.1 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: 92181

Section 3: Container Inventory and Comments (Detailed descriptions)

IM: Hardware, metal lid

AM:

OM: Scrap lead

OI:

C: Fiberboard liner sleeve, tape roll, fiberboard

R: Rubber gloves

XPM: Plastic drum lid, plastic bags. plastic container

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):	2.1
Other Inorganic Materials (OI)	
Cellulosics (C):	10.0
Rubber (R):	2.0
Plastics (waste materials) (XPM):	4.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	53.0
Soils (S):	
Total WMP Weight:	93.1

CCP Radiography Data Sheet

Waste Container ID: 92181

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:

Thad Hasselstrom	[signature]	1/23/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	92181	Count Sequence Number:	14917
Operator:	DCLTD231\Operator		
Assay Start:	1/28/2013 12:55:16 PM		
Description 1:	2LANDA1086		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6, MT-42		
Matrix Type:	Debris S5000		
Container Type:	55 gal Drum		
Weight:	Net: 93.1 kg	Net:	93.1 kg
Container:	Volume: 208.0 l	Full:	90.0 %
Density:	0.500 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:	14917	Batch Number:	2LANDA1086
Assay Instrument:	HENC #2	Location:	LANL TA-54
Analysis Method:	CCP-TP-063 v 14	Software Version:	NDA 2000 V.4.0
Item ID:	92181	Analysis Date:	1/28/2013

Net Weight	93100.0 g		
Pu mass	3.44E+001	+- 4.54E+000	g
TRU Alpha Activity	9.30E+000	+- 8.62E-001	Ci
TRU Activity Concentration	9.99E+004	+- 9.26E+003	nCi/g
Pu-239 Equivalent Activity	9.60E+000	+- 8.62E-001	Ci
Pu-239 FGE	3.21E+001	+- 4.17E+000	g
Decay heat	3.05E-001	+- 2.86E-002	W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	6.91E-002	4.93E-005	7.51E-006	2.69E-006
PU238	3.27E-002	5.66E-001	7.46E-002	2.99E-004
PU239	3.16E+001	1.99E+000	2.62E-001	1.05E-003
PU240	2.48E+000	5.70E-001	7.51E-002	3.01E-004
AM241	1.78E+000	6.17E+000	8.14E-001	3.27E-003
PU241	1.71E-001	1.78E+001	2.35E+000	9.42E-003
PU242	8.62E-002	3.42E-004	4.51E-005	0.00E+000
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	4.09E-007
U233	<LLD	<LLD	0.00E+000	4.93E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	1.57E-006
U238	<LLD	<LLD	0.00E+000	1.44E-005
AM243	4.87E-005	9.83E-006	2.20E-006	6.25E-006

Errors quoted at 1.000 sigma

Operator: Jim Barton Date: 1/31/13

ITR: [illegible] Date: 2-1-13

Automated Independent Technical Review

Count Sequence Number: 14917 Batch Number: 2LANDA1086
Counter ID: HENC #2
Container ID: 92181
Waste Matrix Code: Debris S5000 Count Type:
Sequence Type: Assay Date: 1/28/2013

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. 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; 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 Expert review is recommended; the following validity tests failed: Pu239 weight percent is outside limits [92.5, 95.0].	NQFIT and QFIT within limits. MGA valid.
Section 5 - Gamma Analysis Analysis Status: No errors.	Ok

Comments	Disposition
Miscellaneous	No additional nuclides contributing to 95% of the radiological hazard identified.

Expert Review by: Sherri Chandler Date: 1-30-13

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **92181**

BDR Number: **LA13FG2008**

Sampling Date: **2/1/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	195.99	
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	1.78	
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\130201c\
Data File : 92181.D
Acq On : 1 Feb 2013 11:32 am (#1); 01-Feb-13, 11:32:15 (#2)
Operator : NW
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Feb 01 12:51:00 2013
Quant Method : C:\msdchem\1\METHODS\vocgas.m
Quant Title : Flammable Gas Analysis
QLast Update : Thu Jan 24 09:52:49 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
3) Fluorobenzene	3.610	96	4706841	201.25 ppmv	0.04
15) Chlorobenzene-d5	5.930	117	4328709	177.00 ppmv	0.03
Target Compounds					Qvalue
1) Hydrogen	1.625	GC1	1393	195.99 ppmv	100
12) Benzene	3.290	78	30018	1.78 ppmv	94

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

ATTACHMENT 1
Page 1 of 4

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: 90343

6.2[4] Date Processed: 1-13-13

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] (S) 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.: 019045
Cal. Due Date: 7-31-13

4.3[5][B] (S) 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] (S) 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 / [signature] 269124 1-13-13
Waste Handling Tech (print) Signature Z # Date

ATTACHMENT 1
Page 2 of 4

4.1[6][B] Parent Waste Container No.: 90849

5.[18] Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable: 416.4 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) 416.4 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.: 90841

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	92572			
10.1[4]	Daughter Drum Filter No.	AH-1021		A	
10.1[4]	Daughter Drum Bag Filter No.	L-4364	N		
10.1[4]	Daughter Drum Purchase Order No.	4102265			
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 tag: Manufacturer				
	Model No.				
	Serial No.				
	Date of Manufacture				
10.2[5]	POC ID No				
10.2[7][B]/10.2[6]	POC Item Description			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)		N		
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:				
10.3[9][A]	PCB-contaminated Waste Description				
10.3[9][B]	PCB Item ID No				
10.3[10]	Remaining Waste Description	BAG OUT STUBS		A	
10.3[13]/10.4[10]/10.5[4]/10.6[8]	Daughter Drum % Full (%)	95%	N		
10.5[3]/10.6[2]	Description Waste Added During Processing	SEE COMMENTS			

ATTACHMENT 1
Page 4 of 4

4.1[6][B] Parent Waste Container No.: 90949

Comments: PAC LIDS, CARDBOARD, PLASTICS, SALTS KITTY LITTER, ROOM TRASH

11.1[1] Performed By: BRIAN GALLEGOS [signature] 1269129 1-13-13
Waste Handling Tech (print) Signature Z # Date

11.1[7] Reviewed By: [signature] [signature] [illegible] 1-13-13 1500
SOS or designee (print) Signature Z # Date/Time

COPY
1-9-13 gc

ATTACHMENT 2
Page 1 of 1

WCRRF OVERPACK DRUM ASSEMBLY PREPARATION DATA SHEET

5.[3] Overpack drum information:

Purchase Order No.: 413724
Lot No.: 210114
Manufacture Date: 10

5.[8] Overpack filtered vent information.

Manufacturer: NUCFIL
Model No.: 013
Serial No.: IL-82
Manufacture Date: 9/11

Overpack filtered vent and 2 in. bung torque wrench information:

	Filtered Vent	2 in. Bung
M&TE No.:	0401094	0383307
Cal. Expiration Date:	9-26-13	3-26-13
Tolerance:	40-200	10-80

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

Performed By: Gerald Espinoza [signature] 237720 1-9-13
Waste Handling Technician (print) Signature Z # Date

5.[12] Filtered Vent torque value (120 in-lb (96 to 144 in-lb)): 120 in-lb

5.[15] 2 in. bung plug torque value: 30 ft-lb

Comments: N/C

8.1[1] Performed By: Gerald Espinoza [signature] 237720 1-9-13
Waste Handling Technician (print) Signature Z # Date

8.1[5] ☐ Deficiencies identified and submitted (e.g., PCR or FSR system).
☑ No deficiencies

8.1[7] Reviewed By: J. Martinez [signature] 149235 1-13-13
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 5
Page 1 of 1

WCRRF OVERPACK DRUM CLOSURE DATA SHEET

7.[19] Overpack Drum Unique Identifier No.: 92573

7.[25] Overpack drum closure ring torque wrench information:

M&TE No.: 021151
Cal. Expiration Date: 6-11-13
Range in ft-lb: 16-80
Tolerance: ±3% cw ±6% ccw

7.[26] Torque wrench listed above is within the acceptable ranges as displayed on the calibration certificate. ☑ Yes ☐ No

Performed By: BRIAN GALLEGOS / [signature] / 269129 / 1-13-13
Waste Handling Technician (print) / Signature / Z # / Date

7.[28] Overpack drum closure ring torque value: 60 ft-lb

7.[31] Threaded lug of the drum closure ring is not touching the jam nut and the locking ring lugs are not touching. ☑ SAT ☐ UNSAT

7.[36][B] Platform scale serial number: 019065
Platform scale calibration expiration date: 7-21-13

7.[36][D] 85-gal overpack drum gross weight (lb): 321.2 lb

Comments: N/A

8.1[1] Performed By: BRIAN GALLEGOS / [signature] / 269129 / 1-13-13
Waste Handling Technician (print) / Signature / Z # / Date

8.1[5] ☐ Deficiencies identified and submitted (e.g., PCR or FSR system).
☑ No deficiencies

8.1[7] Reviewed By: / / / /
Supervisor or designee (print) / Signature / Z # / Date

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

Drum ID#: 92572

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 #: 416265
Lot #: 0233370
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 #: WCDVC 1.5-2 SPVC
Serial #: L-4364
Date of Manufacture: 7-12

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 #: 0145DS
Serial #: AM-1021
Date of Manufacture: 1-12

RECORD torque wrench information:

Filter torque wrench:		Jam Nut / Bung torque wrench:	
M&TE ID #:	040694	M&TE ID #:	038307
Cal Expiration Date:	4-26-13	Cal Expiration Date:	3-16-13
Range (ft-lbs or in-lbs):	40-200	Range (ft-lbs or in-lbs):	10-80
Tolerance:	±4% cw/ccw	Tolerance:	±4% cw/ccw

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

[x] Yes [ ] No

Print Name: Gerald Espinoza Signature: [signature] Z#: 237720

5. Weigh Drum Assembly

RECORD weight information

Tare wight (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: Brandon Chavez Operator Sign: [signature] Z#: 294742 Date: 1-9-13

Verifier Print: Brian Gallegos Verifier Sign: [signature] Z#: 269129 Date: 1-13-13

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

DRUM ID#: 92572

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 # : 021151

Cal expiration date: 6-11-13

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): 262.0

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: [signature] Date: 1-13-13

Verifier Print/Sign: [signature] Date: 1-13-13

WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Production Control

Container ID: 90849 Container Type: POC Gross Weight (lbs): 400

Container Seal #: None Filter Prefix: None Filter Serial #: EL-243; EL-578

Waste Stream: LA-MHD01.001 Certified RTR BDR: No BDR

TWSR Comments: PARENT #S832149 WTS-12STD-708

Total PE-Ci Activity: 4.99E-01 Equivalent Combustible PE-Ci: 1.87E-01 AM-241 PE-Ci: 6.73E-02

Total Fissile Gram Equivalents: 4.5 Total Surface Dose Rate (mrem/hr): 2

EPA Code(s): D008 D007 D009 vc 10/2/12

NCR RTR/NDA Comment: None

RTR Pre-Screen Date: None Comment: None

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: TBD Production Control Comments: Need to add EPA Codes D007 & D009 Nitrate salts mixed with Waste Lock 770® from previous repack campaign. A minimum of 1.2 volumes of kitty litter (Zeolite) must be mixed with 1.0 volume of nitrate salts

Performed By: Susan Ramsey (Production Control (Print)) Signature: for S. Ramsey Z Number: 100681 Date: 9/6/12

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 → POC

Net Wt: 90 lb Parent drum (SEDS attached) was part of WCRR nitrate salt repack campaign using Waste Lock 770®. This resulting daughter POC is being repacked to adjust the admixture/nitrate salt ratio. Nitrate salts carry waste codes for [redacted] and mercury. No chemicals present. May require RWP for > 100 & < 1000 mrem/hr

Performed By: Valerie Rhodes (WDP Engineering (Print)) Signature: Valerie Rhodes Z Number: 112609 Date: 10/2/12

TRU Remediation Operations

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

Other Specific Safety Concerns: Use Hexarmour gloves when processing waste. Use tools to remote handle waste. Do not push or press on waste

Processing Determination: ☑ Accept ☐ Reject

TRU Remediation Operations Comments: Use proper ratio of kitty litter to waste in accordance with the procedure.

Performed By: Joe Jerez (TRU Remediation Operations (Print)) Signature: Joe Jerez Z Number: 221452 Date: 10-4-12

AR Z# 249750 10/9/12

HS Review: RB 206362 10.3.12

Nonpartitioned TRU Waste Drum Item Information

DrumID: 909973

Item No	ItemID	Process Status	Net Wt (kg)	Matrix	Hazmat Code	SNM (g)	HT	Activity (Pg/Lm)	Comments
1	IRPS-479-F1	NV	20.000	NITRATE SALTS		2.38	42	13/11	
2	IRPS-577-F3	EV	7.270	NITRATE SALTS		3.66	52	5/11	
3	IRPS-578-F1	EV	1.820	NITRATE SALTS			92	5/11	
4	IRPS-580-F1	EV	68.610	NITRATE SALTS		29.79	53	5/11	@5 ORIGINAL PRO B

Nonpartitioned Waste Drum Material Summary

Gross Wt (kg): 187.2

Material Type	SNM (grams)	Items Net Wt (kg)
42	2.38	20.00
52	33.45	97.90
Totals	35.83	117.90

ATTACHMENT 1
Page 1 of 1

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

5.[1] Sample Date: 9/28/12

Container No. (5.[1])	90849					
Container type sampled (e.g., 55-gal, 85-gal, 110-gal, or SWB) (5.[1])	PUC					
Filtered Vent Type (5.[1])	19D3					
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

N/A

5.[7] Certified CCP Technician:

Performed By: Sara Arayon (CCP (Print)) 237975 (Z #)

Reviewed By: Nathan Wales (CCP (Print)) 238866 (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: Susan S Ramsey (Waste Handling Operator (print)) [signature] (Signature) 10481 (Z #) 10/1/12 (Date)

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\120928C\
Data File : 90849.D
Acq On : 28 Sep 2012 4:08 pm (#1); 28 Sep 2012 4:07 pm (#2)
Operator : SA
Sample :
InstName : Unit 8
Misc : LFL POC THROUGH FILTER-19DS FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 28 16:16:17 2012
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	3.259	96	2428059	206.00 ppm	0.00
15) Chlorobenzene-d5	5.936	117	2143592	179.50 ppm	0.00

Target Compounds	Qvalue

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

Vocgas.m Fri Sep 28 16:16:30 2012

1-13-13
0600 ~~Resuming WCRF operations center evolution~~
0615 Pre job being conducted by SOS.
0630 Pre job concluded.
0637 Outside rounds being started.
0645 Starting inside rounds
0765 Outside rounds complete.
0720 Starting movement out of SC 69
0721 Item #61 is OOS, PCD in place OK to continue
0724 Completed inside rounds.
0740 Inside and outside rounds ~~signed off by~~ SOS. Movement comp
0753 Mode change performed TASD-19 and WCRF now in operations.
0800 Notified by RCT in truck bay that lights ~~in the~~ 1-13 on the UPS are flashing. SOS and SOM have been notified
0801 Have ~~contacted CSE~~ called CSE left message.
0807 Alarm on UPS supporting load RE tac/alarm Power 0%
0811 SOS has checked UPS and its stating system normal.
0812 Will be on a pause waiting to hear from CSE
0850 Per CSE OK to operate UPS is functioning normal. CSE determined UPS alarm due to low temp condition. When entry door was opened for movement out of SC 69 condition was ~~temporary~~ 1-13 temporary and would not of affected operability of UPS. SOM with OPS manager concurrence performed TOO that system was operable and no IOOS were required to be entered.
0839 bagging on 90836
0850 1-13 bag on is complete PPE check is sat.
0946 PPE check is sat.
0949 bagging off 90836, bagging on 90849
1015 bag off is complete, PPE check is sat.
1055 bagging off 90849, bagging on 90851, PPE check is sat
1117 bag off is complete.
1147 notified by inventory that crane system is down. Operations carrying out lock lunch. SOM has contacted department.
— continued on next page —

1/13/13

0600 Assumed WCRR SOM position.

0605 Attended pre-job brief conducted by SOS. Issues brought up from yesterday's operation regards the type of bags being used on daughter drums. Some were prepped with old style bags which are harder to work with - more brittle in colder temps. Operators will allow time for bags to warm up inside facility as much as possible prior to use

0720 Signed off on RCRA rounds for the week.

0753 Completed Mode Change: WCRR Yard / Bldg 50-69 from Warm/Warm to Operations/Operations.

0800 Notified by OCO of flashing light on UPS - first identified by RCT working in high bay. Investigating w/ SOS and placed call in message w/ CSE. OM notified. Processing waste on hold.

0811 While investigating UPS the flashing light turned to steady green.

0830 After discussion w/ CSE determined alarm was probably due to a low temp condition due to opening of outer bay door for waste move out. Condition was temporary and would not have affected operability of UPS according to CSE. SOM w/ OM concurrence performed IOD ~~was~~ 1/13/13 calling UPS operable and LCO's not required to be entered.

0850 First bag on complete

1147 Notified by OCO that Oracle system is down. Contacted Computer Help Desk and gave permission for resetting of system.

1200 Oracle system back on line.

1425 Updated DOP PM of WCRR Status.

1800 Completed Mode Change: WCRR Yard / Bldg 50-69 from Operations/Operations to Warm/Warm.

1830 Secured SOM position

No Further Entries this page

1/13 13

1.13.13 WCRR SOS LOG Book

0600 Assuming SOS Position [illegible]

0615 Conducted shift brief

0630 Conducted shift brief

0740 Reviewed inside And outside Rounds.

0753 Mode Change Complete WCRRF In operations.

0800 noticed by RCTS that lights on UPS were Flashing

0801 Called CSE left Message UPS Reading Notice/Alarm Power 0 %

0811 Checked UPS system normal. On pause till we here back from CSE

0830 Per CSE ok to proceed. low temp was the reason for Flashing light

0834 bagging on First drum of day 90836

0850 rlc check

0946 PPE Check

0949 bagging off and bagging on 90849

1055 bagging of and bagging on 90851 PPE check

1147 notified by Inventory control Oracle system down operators exiting for lunch

1339 bagging off And bagging on 90837

1455 bagging off And bagging on 90852

1615 Reviewed Inside And outside Rounds

1616 Bagging off and bagging on 90881

1654 PPE Check Sat

1737 bagging off last drum off Day

1800 Mode change Complete WCRRF In warm

1.13.13 1830 end of shift Securing Position [illegible]

1.14.13

no further entries on this page

CCP Radiography Data Sheet

5832149

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0040
Examination Date:	3/8/2013
Waste Container ID:	92572
Video/Audio Recorded Media Number:	LA-RTR2-13-0040 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 12
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.: 119.0 kg Tare Wt.: 33.4 kg Net Wt.: 85.6 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: 92572

Section 3: Container Inventory and Comments (Detailed descriptions)

IM: Metal hardware, pipe component lid

AM:

OM:

OI:

C: Fiberboard liner sleeve, fiberboard

R:

XPM: 90 mil plastic liner lid, 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 Liner (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	18.0
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	
Other Inorganic Materials (OI)	
Cellulosics (C):	8.0
Rubber (R):	
Plastics (waste materials) (XPM):	6.4
Organic Matrix (OR):	
Inorganic Matrix (IN):	53.2
Soils (S):	
Total WMP Weight:	85.6

CCP Radiography Data Sheet

Waste Container ID: 92572

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		3/8/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	92572	Count Sequence Number:	15238
Operator:	DCLTD231\Operator		
Assay Start:	3/11/2013 9:30:39 AM		
Description 1:	2LANDA1115		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6, MT-42		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gal Drum		
Weight:	Net: 85.6 kg	Net:	85.6 kg
Container:	Volume: 208.0 l	Full:	75.0 %
Density:	0.550 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:	15238	Batch Number:	2LANDA1115
Assay Instrument:	HENC #2	Location:	LANL TA-54
Analysis Method:	CCP-TP-063 v 14	Software Version:	NDA 2000 V.4.0
Item ID:	92572	Analysis Date:	3/11/2013

Net Weight	85600.0 g			
Pu mass	1.71E+001	+-	2.90E+000	g
TRU Alpha Activity	5.67E+000	+-	2.34E+000	Ci
TRU Activity Concentration	6.63E+004	+-	2.73E+004	nCi/g
Pu-239 Equivalent Activity	5.72E+000	+-	2.34E+000	Ci
Pu-239 FGE	1.55E+001	+-	2.61E+000	g
Decay heat	1.87E-001	+-	7.80E-002	W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	6.84E-002	4.88E-005	7.84E-006	2.63E-006
PU238	6.29E-003	1.09E-001	1.84E-002	7.00E-005
PU239	1.54E+001	9.69E-001	1.64E-001	6.23E-004
PU240	1.03E+000	2.37E-001	4.01E-002	1.52E-004
AM241	1.25E+000	4.36E+000	2.33E+000	4.05E-002
PU241	2.74E-002	2.85E+000	4.82E-001	1.83E-003
PU242	6.52E-001	2.59E-003	4.38E-004	0.00E+000
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	4.59E-007
U233	<LLD	<LLD	0.00E+000	4.87E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	1.51E-006
U238	<LLD	<LLD	0.00E+000	1.84E-005
AM243	2.61E-003	5.26E-004	8.44E-005	3.53E-006

Errors quoted at 1.000 sigma

Operator: [signature] Date: 3-15-13

ITR: [signature] Date: 3-18-13

Automated Independent Technical Review

Count Sequence Number: 15238 Batch Number: 2LANDA1115
Counter ID: HENC #2
Container ID: 92572
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 3/11/2013

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. 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; 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: S Lee Clark Date: 3-12-13

Waste Container ID: **92572**

BDR Number: **LA13FG8018**

Sampling Date: **3/14/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	92.10	U
74-82-8	Methane	213.40	U
67-56-1	Methanol	27.87	U
60-29-7	Ethyl Ether	1.25	U
75-35-4	1,1-Dichloroethylene	5.71	U
67-64-1	Acetone	16.90	U
75-34-3	1,1-Dichloroethane	4.24	U
156-59-2	cis-1,2-Dichloroethene	0.55	U
78-93-3	Methyl ethyl ketone	9.86	U
110-82-7	Cyclohexane	5.84	U
71-43-2	Benzene	2.72	
107-06-2	1,2-Dichloroethane	1.51	U
71-36-3	1-Butanol	1.36	U
108-10-1	Methyl isobutyl ketone	9.34	U
108-88-3	Toluene	3.09	U
108-90-7	Chlorobenzene	1.69	U
100-41-4	Ethylbenzene	2.62	U
108-38-3/106-42-3	m- and p-Xylene	1.48	U
95-47-6	o-Xylene	1.76	U
108-67-8	1,3,5-Trimethylbenzene	3.14	U
95-63-6	1,2,4-Trimethylbenzene	3.92	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)

Data Path : C:\msdchem\1\DATA\130314c\
Data File : 92572.D
Acq On : 14 Mar 2013 12:29 pm (#1); 14 Mar 2013 12:28 pm (#2)
Operator : SA
Sample :
InstName : Unit 8
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 14 12:43:22 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	2307861	206.00	ppm	0.00
15) Chlorobenzene-d5	5.936	117	2111809	179.50	ppm	0.00
Target Compounds						Qvalue
12) Benzene	2.873	78	15910	2.72	ppm	97

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

WP Copy
11-1-12

ATTACHMENT 1
Page 1 of 4

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: 90850

6.2[4] Date Processed: 11-01-12

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] (S) 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. 019045
Cal. Due Date 7-31-12

4.3[5][B] (S) 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] (S) 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 / 247129 11-01-12
Waste Handling Tech (print) Signature Z.# Date

ATTACHMENT 1
Page 2 of 4

4.1[6][B] Parent Waste Container No.: 90850

5.[18] Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable 397.6 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) 397.6 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:

EWMO-FOD (print) Signature Z # Date

ATTACHMENT 1
Page 3 of 4

4.1[6][B] Parent Waste Container No.: 90850

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	92290			
10.1[4]	Daughter Drum Filter No.	AM-829			
10.1[4]	Daughter Drum Bag Filter No.	L-4226			
10.1[4]	Daughter Drum Purchase Order No.	4160265			
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				
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:				
10.3[9][A]	PCB-contaminated Waste Description				
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[8]	Daughter Drum % Full (%)	100%			
10.5[3]/10.6[Z]	Description Waste Added During Processing	BAG OUT STUFF, KITTY LITTER			

N/A

ATTACHMENT 1
Page 4 of 4

4.1[6][B] Parent Waste Container No.: 90850

Comments: POCLIDS, BOLTS, PLASTIC, SALTS, ELECTRICAL CORD, KITTY LITTER.

11.1[1] Performed By: BRIAN GALLEGOS / [signature] / 269129 11-01-12
Waste Handling Tech (print) Signature Z # Date

11.1[7] Reviewed By: JOSE JEREZ / [signature] 221452 / 11-5-12 1033
SOS or designee (print) Signature Z # Date/Time

Working Copy

a 10-30-12 a

ATTACHMENT 2
Page 1 of 1

WCRRF OVERPACK DRUM ASSEMBLY PREPARATION DATA SHEET

5.[3] Overpack drum information:

Purchase Order No.: 413954
Lot No.: 211426
Manufacture Date: 10

5.[8] Overpack filtered vent information:

Manufacturer: NUCFIL
Model No.: 013
Serial No.: EJ-364
Manufacture Date: 509

Overpack filtered vent and 2 in. bung torque wrench information:

	Filtered Vent	2 in. Bung
M&TE No.:	040694	021151
Cal. Expiration Date:	9-26-13	6-11-13
Tolerance:	±4% cw ±6% ccw	±3% cw ±6% ccw

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

Performed By: Brandon Chavez [signature] [illegible] 10-30-12
Waste Handling Technician (print) Signature Z # Date

5.[12] Filtered Vent torque value [120 in-lb (96 to 144 in-lb)]: 120 in-lb

5.[15] 2 in. bung plug torque value: 30 ft-lb

Comments: N/A

8.1[1] Performed By: Brandon Chavez [signature] [illegible] 10-30-12
Waste Handling Technician (print) Signature Z # Date

8.1[5] ☐ Deficiencies identified and submitted (e.g., PCR or FSR system).
☑ No deficiencies

8.1[7] Reviewed By: Jose Jerez [signature] [illegible] 11-5-12
Supervisor or designee (print) Signature Z Date

11-1-12

ATTACHMENT 5
Page 1 of 1

WCRRF OVERPACK DRUM CLOSURE DATA SHEET

7.[19] Overpack Drum Unique Identifier No.: 92291

7.[25] Overpack drum closure ring torque wrench information:

M&TE No.: 040329
Cal. Expiration Date: 3-15-2013
Range in ft-lb: 14-80
Tolerance: ±3% out 6% cal

7.[26] Torque wrench listed above is within the acceptable ranges as displayed on the calibration certificate. ☑ Yes ☐ No

Performed By: BRIAN GALLEGOS / [signature] / [illegible] 11-01-12
Waste Handling Technician (print) Signature Z # Date

7.[28] Overpack drum closure ring torque value: 60 ft-lb

7.[31] Threaded lug of the drum closure ring is not touching the jam nut and the locking ring lugs are not touching. ☑ SAT ☐ UNSAT

7.[36][B] Platform scale serial number: 019065
Platform scale calibration expiration date: 3-15-12

7.[36][D] 85-gal overpack drum gross weight (lb): 327.0 lb

Comments: QB 11/1/12 ~~11/6~~ SLING NUMBERS - 3001973-1-91, [illegible]73-1-93

8.1[1] Performed By: BRIAN GALLEGOS / [signature] / [illegible] 11-01-12
Waste Handling Technician (print) Signature Z # Date

8.1[5] ☐ Deficiencies identified and submitted (e.g., PCR or FSR system).
☑ No deficiencies

8.1[7] Reviewed By: Jose Jerez / [signature] / [illegible] 11-5-12
Supervisor or designee (print) Signature Z # Date

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

Drum ID#: 92290

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 #: 416265
Lot #: 029423
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 #: BCPV 1.5-2 SPVC
Serial #: 6426
Date of Manufacture: 6/12

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: NUFTC
Model #: 2977
Serial #: 77-459
Date of Manufacture: 4/12

RECORD torque wrench information:

Filter torque wrench:		Jam Nut / Bung torque wrench:	
M&TE ID #:	040694	M&TE ID #:	031151
Cal Expiration Date:	9-26-13	Cal Expiration Date:	6-11-13
Range (ft-lbs or in-lbs):	10-250	Range (ft-lbs or in-lbs):	16-80
Tolerance:	± 4% or ± 6 in-lbs	Tolerance:	± 3% or ± 6 in-lbs

Torque wrenches listed above are within the acceptable range and tolerance on the calibration certificate.

[x] Yes [ ] No

Print Name: [illegible] Signature: [signature] Z#: 187822

5. Weigh Drum Assembly

RECORD weight information

Tare wight (lbs) 76.0
File ID #: 049605

- [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: [illegible] Operator Sign: [signature] Z#: 187822 Date: 10-18-12

Verifier Print: BRIAN GALLEGOS Verifier Sign: [signature] Z#: 267129 Date: 11-01-12

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

DRUM ID#: 92290

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 #: 041329

Cal expiration date: 3-15-13

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): 264.2

Scale ID#: 019045

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: BRIAN GALLEGOS Date: 11-01-12

Verifier Print/Sign: Steven Mondragon Date: 11-01-12

WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Production Control

Container ID: 90850 Container Type: POC Gross Weight (lbs): 398

Liner Seal #: None Filter Prefix: None Filter Serial #: EL-213; EL-501

RK Waste Stream: LA-MHD01.001 Certified RTR BDR: No BDR

TWSR Comments: PARENT #S832149 WTS-12STD-711

Total PE-Ci Activity: 4.99E-01 Equivalent Combustible PE-Ci: 1.87E-01 AM-241 PE-Ci: 6.73E-02

Total Fissile Gram Equivalents: 4.5 Total Surface Dose Rate (mrem/hr): 1

EPA Code(s): D008 D007 D009 VE 10/2/12

NCR RTR/NDA Comment: None

RTR Pre-Screen Date: None Comment: None

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: TBD Production Control Comments: Need to add EPA Codes D007 & D009
Nitrate salts mixed with Waste Lock 770® from previous repack campaign. A minimum of 1.2 volumes of kitty litter/zeolite must be mixed with 1.0 volume of nitrate salts

Performed By: Susan Ramsey (Production Control (Print)) Signature: Tom D. Ramsey Z Number: 100681 Date: 9/10/12

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 – POC
Net Wt: 88 lb Parent drum (SEDS attached) was part of WCRR nitrate salt repack campaign using Waste Lock 770®. This resulting daughter POC is being repacked to adjust the admixture/nitrate salt ratio. Nitrate salts carry waste codes for chromium, lead, and mercury. No chemicals present. May require RWP for > 100 + < 1000 mrem/hr

Performed By: Valerie Rhodes (WDP Engineering (Print)) Signature: Valerie Rhodes Z Number: [redacted] Date: 10/2/12

TRU Remediation Operations

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

Other Specific Safety Concerns: Use Hermanard gloves when processing waste. Do not push or press on waste.

Processing Determination: ☑ Accept ☐ Reject

TRU Remediation Operations Comments: Ensure proper ratio of kitty litter to waste is added to this waste stream in accordance with the procedure

Performed By: Jose Jerez (TRU Remediation Operations (Print)) Signature: Jose Jerez Z Number: 221452 Date: 10-4-12

LH Z# 249750 10/9/12
IHS Review. Johnny Smallwood CSP contains Chromium, lead & Hg
10-3-12

Noncertified TRU Waste Drum Item Information

DrumID: 904973

Item No	ItemID	Process Status	Net Wt (kg)	Matrix	Mass Code	SNM (g)	HT	Auth (Pg/Lm)	Comments
1	IRF8-579-F1	RV	20.000	NITRATE SALTS		2.38	42	13/21	
2	IRF8-577-F8	RV	7.370	NITRATE SALTS		3.66	52	5/11	
3	IRF8-578-F1	RV	1.820	NITRATE SALTS			52	5/11	
4	IRF8-580-F1	RV	88.410	NITRATE SALTS		29.79	52	5/11	99 ORIGINAL PMD D

Noncertified Waste Drum Material Summary

Gross Wt (kg): 187.2

Material Type	SNM (grams)	Items Net Wt (kg)
42	2.38	28.00
52	33.45	97.50
Totals	35.83	117.50

ATTACHMENT 1
Page 1 of 1

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

5.[1] Sample Date: 9/28/12

Container No. (5.[1])	40850					
Container type sampled (e.g., 55-gal, 85-gal, 110-gal, or SWB) (5.[1])	PiC.					
Filtered Vent Type (5.[1])	19DS					
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])	77.36 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)) 237975 (I #)

Reviewed By: NATHAN WALES (CCP (Print)) 238866 (I #)

Comments: None

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 S. RAMSEY (Waste Handling Operator (print)) [signature] (Signature) 100681 (I #) 10/2/12 (Date)

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\120928C\
Data File : 90850.D
Acq On : 28 Sep 2012 3:12 pm (#1); 28 Sep 2012 3:11 pm (#2)
Operator : SA
Sample :
InstName : Unit 8
Misc : LFL POC THROUGH FILTER-19DS FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 28 15:19:53 2012
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	3.259	96	2396861	206.00 ppm	0.00
15) Chlorobenzene-d5	5.936	117	2136510	179.50 ppm	0.00
Target Compounds					Qvalue
1) Hydrogen	5.322	GC1	19114m	77.36 ppm	

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

Vocgas.m Fri Sep 28 15:20:02 2012

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PROJECT NAME _____ NOTEBOOK NO. _____

11-1-12

0540 Assuming WCRR operations center. - JColeman
0544 Beginning outside rounds.
0603 Outside rounds complete.
0604 Air quality has arrived to perform weekly stack monitoring.
0608 Air quality stack sampling complete.
0615 Pre-job being conducted by SOS. Beginning inside rounds.
0638 Inside rounds complete.
0701 Both rounds reviewed by SOS.
0715 Mode change complete. We are now in operations.
0810 Initiating a drum movement from 50-69 to a transportainer.
0842 Bagging on 90850. Drum movement complete.
0853 Bag on complete.
~~1625~~ 1005 Bagging off 90850, bagging on 90858.
1020 Bag on complete.
1105 Bagging off 90858, bagging on 90853.
1130 Bag on complete.
1158 Bagging off 90853, bagging on 90866.
1215 Bag off + on complete.
1333 Bagging off 90866.
1404 Bag off complete.
1415 Mode changing to warm standby so that maintenance can perform re-lamping inside 50-69. WO# 4168856.
Initiating a drum movement from 50-69 to a transportainer.
1433 Drum movement complete. All inventory has been removed from the facility.
1442 Mode changed back to operations. Relamping complete. Operators will begin to nest empty 85's into on SUB.
1456 Beginning inside rounds.
1500 Beginning outside rounds
1525 Inside rounds complete.
1530 Outside rounds complete.
1441537 ~~Both~~ JC 11-1-12 Both rounds reviewed by SOS.
1620 Mode change complete. We are now in warm standby in WCRRF yard and a COD in 50-69.
1630 End of day. Operations secure. JColeman

No further entries this page

SIGNATURE _____ DATE _____ 20 ___
READ AND UNDERSTOOD _____ DATE _____ 20 ___

11/1/12

0600 Assumed WCRR SOM position.
0615 Attended pre-job brief conducted by SOS. Discussed production plan for day - will work remaining drums that are already in 50-69 (SP 72 POC's) 4 of them. Work the empty SWB's to repack w/ Empty 85's.
0715 Completed Mode Change: WCRR Yard / Blds 50-69 from Warm / Warm to Operations / Operations.
0830 Per OM and OSP&T are cancelling today's incoming shipment due to potential storage space available being insufficient over weekend. Rescheduling for Monday.
0845 Released W.O # 447598-01 50-69 TSR/ESI Daily & Weekly Rounds.
1038 WMC reported that matching WCRR inventory w/ gamma spec reports yield some discrepancies. He is working on clearing these up and will be on site this afternoon.
1230 RP-1 supervisor reported that 2 ES Technicians did not have proper biossay's for processing RWP - with further investigation it was found that they were in fact current - exit biossays from other worksites counted as baseline for WCRR. RP-1 supervisor will obtain report monthly to verify workers are current on biossay.
1248 Released W.O. 416885-06 54-WCRRF FY12 Relamping. Worker is scoping out what bulbs are required to be replaced but no work will commence until 50-69 is in Warm or Cold per W.O.
1355 Per CSE for TSR requirements to work empty SWB's w/ repacking 85's (Empty) proper mode is operations.
1415 Completed Mode Change WCRR Yard / Blds 50-69 from Operations / Operations to Warm / Warm to support relamping.
1442 Completed Mode Change WCRR Yard / Blds 50-69 from Warm / Warm to Operations / Operations. Maint is complete (Relamp) and SWB packing will commence.
1500 Attended meeting concerning maintenance activities Nov 9/10 and 15th — 19/20. Need to get w/ SOS to schedule workers for those dates (No work Sunday 18th)
1555 Notified by SOS that 2 SWB's are completed - found water in both and needed to be emptied and dried out.
1620 Completed Mode Change WCRR Yard / Blds 50-69 from Operations / Operations to Warm / Cold
1640 Secured SOM position

LB
11-5-12

No further entries this page

11/1 12

11-1-12 WCRR SOS LOG Book

0600 Assuming SOS Position [signature]

0615 Started Pre Job brief went over Monthly BWP 2012-2015

0650 Concluded Pre Job

0701 Reviewed Inside And outside Rounds.

0715 Mode change Complete WCRRF In operations

1415 Mode Change Complete For Elect. could change out bulbs on WCG.

1442 Mode Change Complete WCRRF In operations.

1537 Reviewed Inside And outside Rounds.

1620 Mode Change Complete WCRR Yard In warm SO-69 In Cold.

11-1-12 TM 1631 End of shift Securing SOS Position. [signature]

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-RTR2-13-0105
Examination Date:	9/4/2013
Waste Container ID:	92290
Video/Audio Recorded Media Number:	LA-RTR2-13-0105 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:	S3110
Waste Stream I.D.:	LA-MIN02-V.001
Waste Container Weights:	Gross Wt.: 121.0 kg Tare Wt.: 33.4 kg Net Wt.: 87.6 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:	95 %

CCP Radiography Data Sheet

Waste Container ID: 92290

Section 3: Container Inventory and Comments (Detailed descriptions)

IM: Metal lid, hardware

AM:

OM: Scrap lead

OI:

C: Fiberboard packing material

R:

XPM: Plastic lid, 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):	15.0
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	4.0
Other Inorganic Materials (OI)	
Cellulosics (C):	4.0
Rubber (R):	
Plastics (waste materials) (XPM):	6.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	58.6
Soils (S):	
Total WMP Weight:	87.6

CCP Radiography Data Sheet

Waste Container ID: 92290

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		9/4/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	92290	Count Sequence Number:	23539
Operator:	D3PW2DK1\operator		
Assay Start:	9/5/2013 1:59:39 PM		
Description 1:	1LANDA1836		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6, MT-42 Mix		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 87.6 kg	Net:	87.6 kg
Container:	Volume: 208.0 l	Full:	95.0 %
Density:	0.440 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: 23539
Assay Instrument: MCS HENC #1
Analysis Method: CCP-TP-063 v 15
Item ID: 92290

Batch Number: 1LANDA1836
Location: LANL TA-54
Software Version: NDA 2000 V.4.0
Analysis Date: 9/5/2013

Net Weight	87600.0 g		
Pu mass	2.60E+001	+- 4.86E+000	g
TRU Alpha Activity	9.49E+000	+- 1.39E+000	Ci
TRU Activity Concentration	1.08E+005	+- 1.58E+004	nCi/g
Pu-239 Equivalent Activity	9.76E+000	+- 1.39E+000	Ci
Pu-239 FGE	2.40E+001	+- 4.41E+000	g
Decay heat	3.12E-001	+- 4.59E-002	W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	5.37E-002	3.78E-005	5.39E-006	1.87E-006
PU238	1.70E-002	2.90E-001	5.43E-002	1.55E-004
PU239	2.36E+001	1.46E+000	2.73E-001	7.82E-004
PU240	2.21E+000	5.01E-001	9.38E-002	2.68E-004
AM241	2.11E+000	7.24E+000	1.35E+000	3.87E-003
PU241	1.46E-001	1.51E+001	2.82E+000	8.07E-003
PU242	6.98E-002	2.76E-004	5.15E-005	0.00E+000
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	5.07E-007
U233	<LLD	<LLD	0.00E+000	3.63E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	1.01E-006
U238	<LLD	<LLD	0.00E+000	1.65E-005

Errors quoted at 1.000 sigma

Operator: [signature] Date: 9-9-13

ITR: [signature] Date: 9.19.13

Automated Independent Technical Review

Count Sequence Number: 23539 Batch Number: 1LANDA1836
Counter ID: MCS HENC #1
Container ID: 92290
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 9/5/2013

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; 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 Expert review is recommended; the following validity tests failed: Pu239 weight percent is outside limits [92.5, 95.0].	MGA valid. Drum is mix of 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: Sheri Chamberlin Date: 9-9-13

Waste Container ID: **92290**

BDR Number: **LA13FG2098**

Sampling Date: **9/9/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	90.37	U
74-82-8	Methane	142.14	U
67-56-1	Methanol	42.66	
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	3.71	
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	9.38	
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\130909c\
Data File : 92290.D
Acq On : 9 Sep 2013 12:07 pm (#1); 09-Sep-13, 12:06:23 (#2)
Operator : RJ
Sample :
Misc : 55 Gallon drum through filter. (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 09 12:15:41 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	3.539	96	4816320	205.75 ppmv	0.02
15) Chlorobenzene-d5	5.848	117	3717838	177.50 ppmv	-0.01
Target Compounds					Qvalue
4) Methanol	0.877	31	16417	42.66 ppmv	100
12) Benzene	3.216	78	63130	3.71 ppmv	100
17) Toluene	4.817	92	124827	9.38 ppmv	99

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

ATTACHMENT 1
Page 1 of 4

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: 90881

6.2[4] Date Processed: 1-13-13

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 / [signature] 267129 1-13-13
Waste Handling Tech (print) Signature Z # Date

ATTACHMENT 1
Page 2 of 4

4.1[6][B] Parent Waste Container No.: 90851

5.[18] Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable: 384.8 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) 384.0 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.: 908551

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	92574			
10.1[4]	Daughter Drum Filter No.	AM-1011	N		
10.1[4]	Daughter Drum Bag Filter No.	L-4352		A	
10.1[4]	Daughter Drum Purchase Order No.	501011			
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			A	
10.2[13]	POC Assembly closed per Manufacturer's instructions. (Initial and Z#)		N		
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				
10.3[9][A]	PCB-contaminated Waste Description				
10.3[9][B]	PCB Item ID No.				
10.3[10]	Remaining Waste Description	BAG OUT STUBS		A	
10.3[13]/10.4[10]/10.5[4]/10.6[8]	Daughter Drum % Full (%)	95%			
10.5[3]/10.6[2]	Description Waste Added During Processing	SEE COMMENTS	N		

ATTACHMENT 1
Page 4 of 4

4.1[6][B] Parent Waste Container No.: 90851

Comments: POC LIDS, CARD BOARD, ROOM TRASH, PLASTICS, SALTS, KITTY LITTER.

11.1[1] Performed By: BRIAN GALLEGOS [signature] 129129 / 1-13-13
Waste Handling Tech (print) Signature Z # Date

11.1[7] Reviewed By: G Martinez [signature] 129351 1-16-13 0830
SOS or designee (print) Signature Z # Date/Time

UET

1-9-13

ATTACHMENT 2
Page 1 of 1

WCRRF OVERPACK DRUM ASSEMBLY PREPARATION DATA SHEET

5.[3] Overpack drum information:

Purchase Order No.: 413724
Lot No.: 210114
Manufacture Date: 10

5.[8] Overpack filtered vent information:

Manufacturer: NUCFIL
Model No.: C13
Serial No.: IL-77
Manufacture Date: 9/11

Overpack filtered vent and 2 in. bung torque wrench information:

	Filtered Vent	2 in. Bung
M&TE No.:	0410094	0383607
Cal. Expiration Date:	9-26-13	3-16-13
Tolerance:	40-200	10-80

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

Performed By: Gerald Espinoza [signature] [illegible] 1-9-12
Waste Handling Technician (print) Signature Z # Date

5.[12] Filtered Vent torque value [120 in-lb (96 to 144 in-lb)] 120 in-lb

5.[15] 2 in. bung plug torque value: 30 ft-lb

Comments: N/C

8.1[1] Performed By: Gerald Espinoza [signature] [illegible] 1-9-13
Waste Handling Technician (print) Signature Z # Date

8.1[5] ☐ Deficiencies identified and submitted (e.g., PCR or FSR system).
☑ No deficiencies

8.1[7] Reviewed By: [illegible] [signature] [illegible] 1/16/13
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 5
Page 1 of 1

WCRRF OVERPACK DRUM CLOSURE DATA SHEET

7.[19] Overpack Drum Unique Identifier No.: 92575

7.[25] Overpack drum closure ring torque wrench information:

M&TE No.: 021351
Cal. Expiration Date: 6-11-13
Range in ft-lb: 16-80
Tolerance: ±3% cw ±6% ccw

7.[26] Torque wrench listed above is within the acceptable ranges as displayed on the calibration certificate. ☑ Yes ☐ No

Performed By: Brian Gallegos / [signature] / 267129 / 1-13-13
Waste Handling Technician (print) Signature Z # Date

7.[28] Overpack drum closure ring torque value: 60 ft lb

7.[31] Threaded lug of the drum closure ring is not touching the jam nut and the locking ring lugs are not touching. ☑ SAT ☐ UNSAT

7.[36][B] Platform scale serial number: 0190605
Platform scale calibration expiration date: 7-31-13

7.[36][D] 85-gal overpack drum gross weight (lb): 321.0 lb

Comments: N/C

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

8.1[5] ☐ Deficiencies identified and submitted (e.g., PCR or FSR system).
☑ No deficiencies

8.1[7] Reviewed By: Gilbert Lucero / [signature] / 119251 / 1-16-13
Supervisor or designee (print) Signature Z # Date

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

Drum ID#: 92574

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: Gc 1-4-13

Purchase Request #: 501011

Lot #: 0233370

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 #: 66pvc-1.5-2pvc

Serial #: L-9352

Date of Manufacture: 7-12

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
- [ ] 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 #: D1403

Serial #: AM-1011

Date of Manufacture: 1-12

RECORD torque wrench information:

Filter torque wrench:		Jam Nut / Bung torque wrench:	
M&TE ID #:	0406941	M&TE ID #:	0383609
Cal Expiration Date:	9-26-12	Cal Expiration Date:	3-16-13
Range (ft-lbs or in-lbs):	40-200	Range (ft-lbs or in-lbs):	16-80
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: Gerald Espinoza Signature: [signature] Z#: 237720

5. Weigh Drum Assembly

RECORD weight information

Tare wight (lbs) 74.0

Fts ID #: 019045

- [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: Clayton Mullins Operator Sign: [signature] Z#: 246007 Date: 1/8/13

Verifier Print: Brian Gallegos Verifier Sign: [signature] Z#: 267129 Date: 1-13-13

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

DRUM ID#: 92574

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 #: 021151

Cal expiration date: 6-11-2013

Range/ Value (ft-lbs): 12-80

— Tolerance ±3% cw ±6% ccw

2. DRUM LABELING

NOTE: Do not cover the drum seam with any labels

✓ Place two barcode drum ID labels ~5" 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: 1-13-13 BG

Gross Weight(lbs): ~~92574~~ 239.2

Scale ID#: 0190605

✓ 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 1-13-13

Verifier Print/Sign: [illegible] 1-13-13

WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Production Control

Container ID: 90851 Container Type: POC Gross Weight (lbs): 380

Container Seal #: None Filter Prefix: None Filter Serial #: EL-504; EL-585

RTR Waste Stream: LA-MHD01.001 Certified RTR BDR: No BDR

TWSR Comments: PARENT #S832149 WTS-12STD-710

Total PE-Ci Activity: 4.99E-01 Equivalent Combustible PE-Ci: 1.87E-01 AM-241 PE-Ci: 6.73E-02

Total Fissile Gram Equivalents: 4.8 Total Surface Dose Rate (mrem/hr): 0

EPA Code(s): D008 D007 D009 LK 10/2/12

NCR RTR/NDA Comment: None

RTR Pre-Screen Date: None Comment: None

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: TBD Production Control Comments: Need to add EPA Codes D007 & D009
Nitrate salts mixed with Wastelok 770® from previous repack campaign. A minimum of 1.2 volumes of admixture/zeolite must be mixed with 1.0 volume of nitrate salts.

Performed By: Susan Ramsey (Production Control (Print)) Signature: Susan Ramsey Z Number: 100681 Date: 9/6/12

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 – POC

Net Wt: 88 lb Parent drum (SEDS attached) was part of WCRR nitrate salt repack campaign using Waste Lock 770®. This resulting daughter POC is being repacked to adjust the admixture/nitrate salt ratio. Nitrate salts carry waste codes for chromium, lead, and mercury. No chemicals present. May require RWP for > 100 + < 1000 mrem/hr

Performed By: Valerie Rhodes (WDP Engineering (Print)) Signature: Valerie Rhodes Z Number: 1126091 Date: 10/2/12

TRU Remediation Operations

Waste Container Information Evaluated Less Than 170 lbs RTR Video Available

Other Specific Safety Concerns: Ensure Heavy duty gloves are used when processing waste. Do not push or press on waste

Processing Determination: Accept Reject

TRU Remediation Operations Comments: Ensure proper ratio of Kitty litter to waste is added to the waste stream.

Performed By: Jose Jerez (TRU Remediation Operations (Print)) Signature: Jose Jerez Z Number: 221452 Date: 10-4-12

OK Z# 249250 10/9/12
IHS Review. [illegible] CST, contains lead, chromium & Hg 10-3-12

Noncertified TRU Waste Drum Item Information

DrumID: 009973

Item No	ItemID	Process Status	Net Wt (kg)	Matrix	Mass Code	SNM (g)	MF	Anth (Pg/La)	Comments
1	IXP8-579-F1	EV	20.000	NITRATE SALTS		2.38	42	13/11	
2	IXP8-577-F8	EV	7.270	NITRATE SALTS		3.66	52	5/11	
3	IXP8-578-F1	EV	1.820	NITRATE SALTS			52	5/11	
4	IXP8-580-F1	EV	88.410	NITRATE SALTS		29.79	52	5/11	85 ORIGINAL PRO D

Noncertified Waste Drum Material Summary

Gross Wt (kg): 187.2

Material Type	SNM (grams)	Items Net Wt (kg)
42	2.38	20.00
52	33.45	97.50
Totals	35.83	117.50

ATTACHMENT 1
Page 1 of 1

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

5 [1] Sample Date: 9/28/12

Container No. (5.[1])	90851					
Container type sampled (e.g., 55-gal, 85-gal, 110-gal, or SWB) (5.[1])	POC					
Filtered Vent Type (5.[1])	19 DS					
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: SARA ARAGON, 237975
CCP (Print) Z #

Reviewed By: NATHAN WALES, 238866
CCP (Print) Z #

Comments: None

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 S. RAMSEY, Susan S Ramsey, 100681, 10/2/12
Waste Handling Operator (print) Signature Z # Date

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\120928C\
Data File : 90851.D
Acq On : 28 Sep 2012 11:21 am (#1); 28 Sep 2012 11:20 am (#2)
Operator : SA
Sample :
InstName : Unit 8
Misc : LFL POC THROUGH FILTER-19DS FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 28 11:28:53 2012
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	3.256	96	2500848	206.00 ppm	0.00
15) Chlorobenzene-d5	5.936	117	2194764	179.50 ppm	0.00

Target Compounds	Qvalue

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

Vocgas.m Fri Sep 28 11:29:05 2012

1-13-13
0600 Assuming WCRRF Operations center - Velarde
0615 Pre job being conducted by SOS.
0630 Pre job concluded.
0637 Outside rounds being started.
0645 Starting inside rounds
0765 Outside rounds complete.
0720 Starting movement out of 50-69
0721 Item #61 is OOS, POD in place OK to continue
0724 Completed inside rounds.
0740 Inside and outside rounds signed off by SOS. Movement compl
0753 Mode change performed TA50-69 and WCRRF now in operations.
0800 Notified by RCT in truck bay that lights ~~in the~~ 1-13-13 on the UPS are flashing. SOS and SOM have been notified
0801 Have ~~contacted CSE~~ called CSE. Left message.
0807 Alarm on UPS supporting load notice/alarm Power 0%
0811 SOS has checked UPS and its stating system normal.
0812 Will be on a pause awaiting to hear from CSE
0830 Per CSE OK to operate. UPS is functioning normal. CSE determined UPS alarm due to low temp condition. When outer door was opened for movement out of 50-69. Condition was ~~temporary~~ 1-13-12 temporary and would not of affected operability of UPS. SOM with OPS manager concurrance performed IOO. that system was operable and no LCOS were required to be entered.
0839 bagging on 90836
0850 ~~0850~~ 1-13-12 bag on is complete PPE check is sat.
0946 PPE check is sat.
0949 bagging off 90836, bagging on 90849
1015 bag off is complete, PPE check is sat.
1055 bagging off 90849, bagging on 90851, PPE check is sat.
1117 bag off is complete.
1147 notified by inventory that Oracle system is down. Operators coming out for lunch. SOM has contacted support.

— continued on next page - Velarde

1-13-13 Continued from previous page - on board

1330 Starting movement into 50-69

1338 movement complete into 50-69.

1339 bagging off 90851 and bagging on 90837

1408 bag on, bag off complete PPE Check is out.

1419 starting movement out of 50-69.

1423 movement complete out of 50-69.

1457 bagging off 90837, bagging on 90852 PPE Check is out.

1519 bag on, bag off complete

1524 Starting inside rounds, PPE Check is out

1546 Item #41 is OOS, POD in place, OK to proceed.

1550 ~~Out~~ 1-13-13 Inside rounds completed.

1614 bagging off 90852, bagging on 90881

1640 bag on, bag off complete. PPE Check is out

1730 bagging off 90881, PPE Check is out.

1737 Starting movement out of 50-69

1741 bag off is complete.

1758 ~~TS~~ 1-13-13 movement complete to transportainer.

1800 Mode change performed WCRRF yard and TA50-9 in warm standby.

1830 End of day WCRRF operations certain secure Nelta

No further entries this page.

PROJECT NAME 1/13/13 NOTEBOOK NO.

0600 Assumed WCRR SOM position.

0605 Attended pre job brief conducted by SOS. Issues brought up from yesterdays operation regards the type of bags being used on daughter drums. Some were prepped with old style bags which are harder to work with - more brittle in colder temps. Operators will allow time for bags to warm up inside facility as much as possible prior to use.

0720 Signed off on RCRA rounds for the week.

0753 Completed Mode Change: WCRR Yard / Bldg 50-69 from Warm/Warm to Operations/Operations.

0800 Notified by OCO of flashing light on UPS - first identified by RCT working in high bay. Investigating w/ SOS and placed call in message w/ CSE. OM notified. Processing waste on hold.

0811 While investigating UPS the flashing light turned to steady green.

0830 After discussion w/ CSE determined alarm was probably due to a low temp condition due to opening of outer bay door for waste move out. Condition was temporary and would not have affected operability of UPS according to CSE. SOM w/ OM concurrence performed IOD ~~was~~ 1/13/13 calling UPS operable and LCO's not required to be entered.

0850 First bag on complete

1147 Notified by OCO that Oracle system is down. Contacted Computer Help Desk and gave permission for resetting of system.

1200 Oracle system back on line.

1425 Updated DDP PM of WCRR Status.

1800 Completed Mode change: WCRR Yard / Bldg 50-69 from Operations/Operations to Warm / Warm.

1830 Secured SOM position

No Further Entries this page

SIGNATURE DATE 1/13 20 13

READ AND UNDERSTOOD DATE 20

1.13.13 WCRR SOS LOG Book

0600 Assuming SOS Position [signature]

0615 Conducted shift brief

0630 Conducted shift brief

0740 Reviewed Inside And outside Rounds.

0753 Mode Change Complete WCRRF In operations.

0800 noticed by ACTS that lights on UPS were Flashing

0801 Called CSE left Message UPS Reading Notice/Alarm Power 0 %

0811 checked UPS system normal. On pause till we here back from CSE

0830 for CSE ok to proceed. low temp was the reason for flashing light

0839 bagging on First drum of day 90836

0850 PPE Check

0946 PPE Check

0949 bagging off and bagging on 90849

1055 bagging of and bagging on 90851 PPE check

1147 notified by Inventory control Oracle System down operators exiting for lunch

1339 bagging off And bagging on 90837

1455 bagging off And bagging on 90852

1615 Reviewed Inside And outside Rounds

1616 Bagging off and bagging on 90881

1654 PPE Check Sat

1737 bagging off last drum off Day

1800 Mode change Complete WCRRF In warm

1.13.13 1830 end of shift Securing Position [signature]

(NE) 1-14-13

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-RTR2-13-0040
Examination Date:	3/8/2013
Waste Container ID:	92574
Video/Audio Recorded Media Number:	LA-RTR2-13-0040 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 12
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.: 108.5 kg Tare Wt.: 33.4 kg Net Wt.: 75.1 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: 92574

Section 3: Container Inventory and Comments (Detailed descriptions)

IM: Metal hardware, pipe component lid

AM:

OM:

OI:

C: Fiberboard liner sleeve, fiberboard

R:

XPM: 90 mil plastic liner lid, 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 Liner (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	16.0
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	
Other Inorganic Materials (OI)	
Cellulosics (C):	8.0
Rubber (R):	
Plastics (waste materials) (XPM):	3.7
Organic Matrix (OR):	
Inorganic Matrix (IN):	47.4
Soils (S):	
Total WMP Weight:	75.1

CCP Radiography Data Sheet

Waste Container ID: 92574

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		3/8/2013
Print Name	Signature	Date

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

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

Item ID:            92574              Count Sequence Number:  22253
Operator:           D3PW2DK1\operator
Assay Start:        3/12/2013  11:06:20 AM
Description 1:      1LANDA1729
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:        75.1   kg        Net:    75.1 kg
Container:          Volume:    208.0   l        Full:    65.0 %
Density:                         0.560 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:	22253	Batch Number:	1LANDA1729
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:	92574	Analysis Date:	3/12/2013

Net Weight	75100.0 g		
Pu mass	7.09E+000	+-	1.23E+000 g
TRU Alpha Activity	3.07E+000	+-	1.36E+000 Ci
TRU Activity Concentration	4.09E+004	+-	1.81E+004 nCi/g
Pu-239 Equivalent Activity	3.09E+000	+-	1.36E+000 Ci
Pu-239 FGE	6.43E+000	+-	1.22E+000 g
Decay heat	1.02E-001	+-	4.53E-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	4.77E-007
U233	<LLD	<LLD	0.00E+000	3.50E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	1.03E-006
NP237	4.99E-002	3.56E-005	5.80E-006	1.75E-006
PU238	2.61E-003	4.51E-002	1.07E-002	2.18E-003
U238	<LLD	<LLD	0.00E+000	1.20E-005
PU239	6.38E+000	4.01E-001	7.70E-002	1.94E-002
PU240	4.27E-001	9.82E-002	2.33E-002	4.74E-003
AM241	7.28E-001	2.53E+000	1.36E+000	3.86E-002
PU241	1.13E-002	1.18E+000	2.81E-001	5.69E-002
PU242	2.70E-001	1.07E-003	2.55E-004	0.00E+000

Errors quoted at 1.000 sigma

Operator: [signature] Date: 3-15-13

ITR: [signature] Date: 3/18/13

Automated Independent Technical Review

Count Sequence Number: 22253 Batch Number: 1LANDA1729
Counter ID: MCS HENC #1
Container ID: 92574
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 3/12/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis No Add-a-Source warnings.	Ok
Section 2 - Passive Neutron Analysis Analysis Status: No errors. 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.	Ok
Miscellaneous	No additional nuclides contributing to 95% of the radiological hazard identified.

Expert Review by: Sheri Chambers Date: 3-13-13

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **92574**

BDR Number: **LA13FG2026**

Sampling Date: ***3/15/2013***

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	90.37	U
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\130315c\
Data File : 92574.D
Acq On : 15 Mar 2013 1:29 pm (#1); 15-Mar-13, 13:29:04 (#2)
Operator : SA
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 15 13:38:05 2013
Quant Method : C:\msdchem\1\METHODS\vocgas.m
Quant Title : Flammable Gas Analysis
QLast Update : Thu Jan 24 09:52:49 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
3) Fluorobenzene	3.604	96	3950374	201.25	ppmv	0.04
15) Chlorobenzene-d5	5.923	117	3432649	177.00	ppmv	0.02

Target Compounds	Qvalue

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

ATTACHMENT 1
Page 1 of 4

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: 90852

6.2[4] Date Processed: 1-13-13

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: Bryan Gonzales Bi Gonzales A67129 1-13-13
Waste Handling Tech (print) Signature Z # Date

ATTACHMENT 1
Page 2 of 4

4.1[6][B] Parent Waste Container No.: 90852

5.[18] Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable: 377.4 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) 377.4 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.: 90852

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	92578			
10.1[4]	Daughter Drum Filter No.	JL-1237		A	
10.1[4]	Daughter Drum Bag Filter No.	L-3707	N		
10.1[4]	Daughter Drum Purchase Order No.	50101			
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			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				
10.3[5][A]	Free Liquid Volume/Units				
10.3[7][A]	Opaque/Non-penetrable Item Description.				
10.3[9][A]	PCB-contaminated Waste Description				
10.3[9][B]	PCB Item ID No.				
10.3[10]	Remaining Waste Description	BAG OUT STUBS		A	
10.3[13]/10.4[10]/10.5[4]/10.6[8]	Daughter Drum % Full (%)	100%	N		
10.5[3]/10.6[2]	Description Waste Added During Processing	SEE COMMENTS			

ATTACHMENT 1
Page 4 of 4

4.1[6][B] Parent Waste Container No.: 90852

Comments: PBC LIDS, ROOM TRASH, CARD BOARD, PLASTICS, SALTS, KITTY-LITTER

11.1[1] Performed By: BRIAN GALLEGOS [signature] 247129 1-13-13
Waste Handling Tech (print) Signature Z# Date

11.1[7] Reviewed By: [signature] [signature] 149235 1-16-13 0900
SOS or designee (print) Signature Z # Date/Time

UNCONTROLLED COPY
Date: 1-9-13

ATTACHMENT 2
Page 1 of 1

WCRRF OVERPACK DRUM ASSEMBLY PREPARATION DATA SHEET

5.[3] Overpack drum information:

Purchase Order No.: 413724
Lot No.: 210114
Manufacture Date: 10

5.[8] Overpack filtered vent information:

Manufacturer: NUCFIL
Model No.: 013
Serial No.: IL-85
Manufacture Date: 9/11

Overpack filtered vent and 2 in. bung torque wrench information:

	Filtered Vent	2 in. Bung
M&TE No.:	0460944	0383607
Cal. Expiration Date:	9-26-13	3-10-13
Tolerance:	40-200	10-80

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

Performed By: Gerald Espinoza [signature] [illegible] 1-9-13
Waste Handling Technician (print) Signature Z # Date

5.[12] Filtered Vent torque value (120 in-lb (96 to 144 in lb)): 120 in-lb

5.[15] 2 in. bung plug torque value: 30 ft-lb

Comments: N/C

8.1[1] Performed By: Gerald Espinoza [signature] [illegible] 1-9-13
Waste Handling Technician (print) Signature Z # Date

8.1[5] ☐ Deficiencies identified and submitted (e.g., PCR or FSR system).
☑ No deficiencies

8.1[7] Reviewed By: [illegible] [signature] [illegible] 1/10/13
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 5
Page 1 of 1

WCRRF OVERPACK DRUM CLOSURE DATA SHEET

7.[19] Overpack Drum Unique Identifier No.: 92579

7.[25] Overpack drum closure ring torque wrench information:

M&TE No.: 019065
Cal. Expiration Date: 6-11-13
Range in ft-lb: 1 to 80
Tolerance: ±3% CW ± 6% CCW

7.[26] Torque wrench listed above is within the acceptable ranges as displayed on the calibration certificate. ☑ Yes ☐ No

Performed By: Brian Gallegos / [signature] 267129 1-13-13
Waste Handling Technician (print) Signature Z # Date

7.[28] Overpack drum closure ring torque value: 60 ft-lb

7.[31] Threaded lug of the drum closure ring is not touching the jam nut and the locking ring lugs are not touching. ☑ SAT ☐ UNSAT

7.[36][B] Platform scale serial number: 019065
Platform scale calibration expiration date: 7-31-13

7.[36][D] 85-gal overpack drum gross weight (lb): 325.6 lb

Comments: N/A

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

8.1[5] ☐ Deficiencies identified and submitted (e.g., PCR or FSR system).
☑ No deficiencies

8.1[7] Reviewed By: [signature] / [signature] HPB5 1-16-13
Supervisor or designee (print) Signature Z # Date

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

Drum ID#: 92578

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 #: 501011
Lot #: 0233370
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 #: 10SPVC1 5-2SPVC
Serial #: 2-8207
Date of Manufacture: 10-12

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: NUCETL
Model #: 019B3
Serial #: JL-7277
Date of Manufacture: 10-11

RECORD torque wrench information:

Filter torque wrench:		Jam Nut / Bung torque wrench:	
M&TE ID #:	C-100094	M&TE ID #:	0383607
Cal Expiration Date:	9-26-13	Cal Expiration Date:	3-11-13
Range (ft-lbs or in-lbs):	40-200	Range (ft-lbs or in-lbs):	10-80
Tolerance:	±1/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: Gerald Espinoza Signature: [signature] Z#: 237720

5. Weigh Drum Assembly

RECORD weight information

Tare wight (lbs) 76.2
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: Brandon Chavez Operator Sign: [signature] Z#: 204782 Date: 1-9-13

Verifier Print: Brian Gallegos Verifier Sign: [signature] Z#: 267129 Date: 1-13-13

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

DRUM ID#: 92578

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 #: 0190665

Cal expiration date: 10-11-13

Range/ Value (ft-lbs): 16-80

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): 221.8

Scale ID#: 0190665

✓ 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 1-13-13

Verifier Print/Sign: [illegible] 1-13-13

WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Production Control

Container ID: 90852 Container Type: POC Gross Weight (lbs): 372

Container Seal #: None Filter Prefix: None Filter Serial #: EL-536; EL-597

Waste Stream: LA-MHD01.001 Certified RTR BDR: No BDR

TWSR Comments: PARENT #S832149 WTS-12STD-714

Total PE-Ci Activity: 4.99E-01 Equivalent Combustible PE-Ci: 1.87E-01 AM-241 PE-Ci: 6.73E-02

Total Fissile Gram Equivalents: 4.5 Total Surface Dose Rate (mrem/hr): 2

EPA Code(s): D008 D007 D009 [illegible] 9/12

NCR RTR/NDA Comment: None

RTR Pre-Screen Date: None Comment: None

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: TBD Production Control Comments: Need to add EPA Codes D007 & D009

Nitrate salts mixed with Waste Lock 770® from previous repack campaign. 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 9/10/12

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: Nitrate Salts – POC

Net Wt: 6 21b Parent drum (SEDS attached) was part of WCRR nitrate salt repack campaign using Waste Lock 770®. This resulting daughter POC is being repacked to adjust the admixture/nitrate salt ratio. Nitrate salts carry waste codes for chromium, lead, and mercury. No chemicals present. May require RWP for > 100 & < 1000 mrem/hr.

Performed By: Valerie Rhodes 102609 10/2/12

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: Use Hexamum gloves for processing waste. Do not push or press on waste.

Processing Determination: Accept Reject

TRU Remediation Operations Comments: Ensure proper ratio of kitty litter to waste is added in accordance with the procedure.

Performed By: Jose Perez 221452 10-4-12

TRU Remediation Operations (Print) Signature Z Number Date

LL Z# 249750 10/9/12

HS Review. [illegible] CSP, contains lead, Chromium & Hg 10-3-12

Noncertified TRU Waste Drum Item Information

DrumID: 009973

Item No	ItemID	Process Status	Net Wt (kg)	Matrix	Nmms Code	SNM (g)	MT	Auth (Pg/Lm)	Comments
1	IXPS-579-P1	EV	20.000	NITRATE SALTS		2.38	42	13/11	
2	IXPS-577-P2	EV	7.370	NITRATE SALTS		3.66	52	5/11	
3	IXPS-578-P1	EV	1.820	NITRATE SALTS			52	5/11	
4	IXPS-580-P1	EV	88.410	NITRATE SALTS		29.79	52	5/11	45 ORIGINAL PKG D

Noncertified Waste Drum Material Summary

Gross Wt (kg): 187.2

Material Type	SNM (grams)	Items Net Wt (kg)
42	2.38	20.00
52	33.45	97.50
Totals	35.83	117.50

ATTACHMENT 1
Page 1 of 1

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

5.[1] Sample Date: 9/28/12

Container No. (5.[1])	90852					
Container type sampled (e.g., 55-gal, 85-gal, 110-gal, or SWB) (5.[1])	PUC					
Filtered Vent Type (5.[1])	19DS					
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])	4005.75 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)) 237975 (Z #)

Reviewed By: NATHAN WALES (CCP (Print)) 238866 (Z #)

Comments: None

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 S. RAMSEY (Waste Handling Operator (print)) [signature] 100681 (Z #) 10/2/12 (Date)

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\120928C\
Data File : 90852.D
Acq On : 28 Sep 2012 4:18 pm (#1); 28 Sep 2012 4:17 pm (#2)
Operator : SA
Sample :
InstName : Unit 8
Misc : LFL POC THROUGH FILTER-19DS FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 28 16:26:01 2012
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	3.259	96	2407527	206.00 ppm	0.00
15) Chlorobenzene-d5	5.936	117	2139917	179.50 ppm	0.00
Target Compounds					Qvalue
1) Hydrogen	5.772	GC1	989750m	4005.75 ppm	

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

Vocgas.m Fri Sep 28 16:26:15 2012

1-13-13
0600 Assuming WCRRF operations center evolution
0615 Pre job being conducted by SOS.
0630 Pre job concluded.
0637 Outside rounds being started.
0645 Starting inside rounds
0705 Outside rounds complete.
0720 Starting movement out of St 69
0721 Item #61 is OOS, POD in place OK to continue
0724 Completed inside rounds.
0740 Inside and outside rounds ~~signed off by~~ SOS. Movement comp
0753 Mode change performed TASD-69 and WCRRF now in operations.
0800 Notified by RCT in truck bay that lights ~~in the~~ 1-13-13 on the UPS are flashing. SOS and SOM have been notified
0801 Have ~~contacted CSE~~ called CSE left message.
0807 Alarm on UPS supporting load acknowledge/alarm Power Δ%
0811 SOS has checked UPS and its stating system normal.
0812 Will be on a pause waiting to hear from CSE
0850 Per CSE OK to operate UPS is functioning normal. CSE determined UPS alarm due to low temp condition. When entrance door was opened for movement out of St 69 condition was ~~temporary~~ 1-13-13 temporary and would not affected operability of UPS. SOM with Ops manager consultance performed TOO that system was operable and no LCOS were required to be entered.
0859 bagging on 90834
0850 1-13-13 bag on is complete PPE check is sat.
0946 PPE check is sat.
0949 bagging off 90836, bagging on 90849
1015 bag off is complete, PPE check is sat.
1055 bagging off 90849, bagging on 90851, PPE check is sat
1117 bag off is complete.
1147 Notified by inventory that Oracle system is down. Operations carrying out lock lunch. SOM has contacted support.
-- continued on next page -continued

1-13-13 Continued from previous page - on board
1330 Starting movement into 50-69
1338 movement complete into 50-69
1339 bagging off 90851 and bagging on 90837
1408 bag on, bag off complete PPE check is out
1419 starting movement out of 50-69.
1423 movement complete out of 50-69.
1457 bagging off 90837, bagging on 90852 PPE check is out
1519 bag on, bag off complete
1524 starting inside rounds, PPE check is out
1546 item #41 is OCS PAD in place, OK to proceed.
1550 ~~At~~ 1313 Inside rounds completed.
1641 bagging off 90852, bagging on 90881
1640 bag on, bag off complete. PPE check is out
1730 bagging off 90881, PPE check is out
1737 starting movement out of 50-69
1741 bag off is complete.
1758 ~~TS~~ 1313 movement complete to transportation.
1800 Mode change performed WCREF yard and TAST is in warm standby.
1850 End of day WCREF operations [illegible]

no further entries this page.

1/13/13

0600 Assumed WCRR SOM position.

0605 Attended pre-job brief conducted by SOS. Issues brought up from yesterday's operation regards the type of bags being used on daughter drums. Some were prepped with old style bags which are harder to work with - more brittle in colder temps. Operators will allow time for bags to warm up inside facility as much as possible prior to use

0720 Signed off on RCRA rounds for the week.

0753 Completed Mode Change: WCRR Yard / Bldg 50-69 from Warm/Warm to Operations/Operations.

0800 Notified by OCO of flashing light on UPS - first identified by RCT working in high bay. Investigating w/ SOS and placed call in message w/ CSE. OM notified. Processing waste on hold.

0811 While investigating UPS the flashing light turned to steady green.

0830 After discussion w/ CSE determined alarm was probably due to a low temp condition due to opening of outer bay door for waste move out. Condition was temporary and would not have affected operability of UPS according to CSE. SOM w/ OM concurrence performed IOD ~~was~~ 1/13/13 calling UPS operable and LCO's not required to be entered.

0850 First bag on complete

1147 Notified by OCO that Oracle system is down. Contacted Computer Help Desk and gave permission for resetting of system.

1200 Oracle system back on line.

1425 Updated DDP PM of WCRR Status.

1800 Completed Mode Change: WCRR Yard / Bldg 50-69 from Operations/Operations to Warm/Warm.

1830 Secured SOM position

No Further Entries this page

1/13 13

1.13.13 WCRR SOS LOG Book

0600 Assuming SOS Position [illegible]

0615 Conducted shift brief

0630 Conducted shift brief

0740 Reviewed inside And outside Rounds.

0753 Mode Change Complete WCRRF In operations.

0800 noticed by ACTS that lights on UPS were Flashing

0801 Called CST Left Message UPS Reading Noticed Alarm Power 0 %

0811 Checked UPS system normal. On pause till we here back from CSTs

0830 for CST ok to proceed. low temp was the reason for flashing light

0839 bagging on First room of day 90836

0850 rlc check

0946 PPE Check

0949 bagging off and bagging on 90849

1055 bagging of and bagging on 90851 PPE check

1147 notified by Inventory control Oracle system down operators exiting for lunch

1339 bagging off And bagging on 90837

1455 bagging off And bagging on 90852

1615 Reviewed Inside And outside Rounds

1616 Bagging off and bagging on 90881

1654 PPE Check Sat

1737 bagging off last room off Day

1800 Mode change Complete WCRRF In warm

1.13.13 1830 end of shift Securing Position [illegible]

1.14.13

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-RTR2-13-0040
Examination Date:	3/8/2013
Waste Container ID:	92578
Video/Audio Recorded Media Number:	LA-RTR2-13-0040 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 12
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.: 100.5 kg Tare Wt.: 33.4 kg Net Wt.: 67.1 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: 92578

Section 3: Container Inventory and Comments (Detailed descriptions)

IM: Metal hardware, pipe component lid

AM:

OM:

OI:

C: Fiberboard liner sleeve, fiberboard

R:

XPM: Plastic bags, 90 mil plastic 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 Liner (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	16.0
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	
Other Inorganic Materials (OI)	
Cellulosics (C):	6.0
Rubber (R):	
Plastics (waste materials) (XPM):	4.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	41.1
Soils (S):	
Total WMP Weight:	67.1

CCP Radiography Data Sheet

Waste Container ID: 92578

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		3/8/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	92578	Count Sequence Number:	15246
Operator:	DCLTD231\Operator		
Assay Start:	3/11/2013 3:15:55 PM		
Description 1:	2LANDA1115		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6, MT-42		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gal Drum		
Weight:	Net: 67.1 kg	Net:	67.1 kg
Container:	Volume: 208.0 l	Full:	75.0 %
Density:	0.430 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:	15246	Batch Number:	2LANDA1115
Assay Instrument:	HENC #2	Location:	LANL TA-54
Analysis Method:	CCP-TP-063 v 14	Software Version:	NDA 2000 V.4.0
Item ID:	92578	Analysis Date:	3/11/2013

Net Weight	67100.0 g			
Pu mass	6.57E+000	+-	1.20E+000	g
TRU Alpha Activity	4.05E+000	+-	1.88E+000	Ci
TRU Activity Concentration	6.04E+004	+-	2.80E+004	nCi/g
Pu-239 Equivalent Activity	4.07E+000	+-	1.88E+000	Ci
Pu-239 FGE	5.96E+000	+-	1.08E+000	g
Decay heat	1.34E-001	+-	6.27E-002	W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	6.49E-002	4.63E-005	6.48E-006	1.98E-006
PU238	2.41E-003	4.18E-002	7.64E-003	7.06E-005
PU239	5.91E+000	3.72E-001	6.80E-002	6.28E-004
PU240	3.96E-001	9.09E-002	1.66E-002	1.54E-004
AM241	1.02E+000	3.55E+000	1.88E+000	3.44E-002
PU241	1.05E-002	1.09E+000	2.00E-001	1.85E-003
PU242	2.50E-001	9.92E-004	1.81E-004	0.00E+000
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	5.81E-007
U233	<LLD	<LLD	0.00E+000	3.94E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	1.24E-006
U238	<LLD	<LLD	0.00E+000	1.22E-005

Errors quoted at 1.000 sigma

Operator: [signature] Date: 3-15-13

ITR: [signature] Date: 3-18-13

Automated Independent Technical Review

Count Sequence Number: 15246 Batch Number: 2LANDA1115
Counter ID: HENC #2
Container ID: 92578
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 3/11/2013

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. 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; 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: Sheri Chamber Date: 3-12-13

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **92578**

BDR Number: **LA13FG8018**

Sampling Date: **3/14/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	775.19	
74-82-8	Methane	213.40	U
67-56-1	Methanol	27.87	U
60-29-7	Ethyl Ether	1.25	U
75-35-4	1,1-Dichloroethylene	5.71	U
67-64-1	Acetone	16.90	U
75-34-3	1,1-Dichloroethane	4.24	U
156-59-2	cis-1,2-Dichloroethene	0.55	U
78-93-3	Methyl ethyl ketone	9.86	U
110-82-7	Cyclohexane	5.84	U
71-43-2	Benzene	1.77	
107-06-2	1,2-Dichloroethane	1.51	U
71-36-3	1-Butanol	1.36	U
108-10-1	Methyl isobutyl ketone	9.34	U
108-88-3	Toluene	3.09	U
108-90-7	Chlorobenzene	1.69	U
100-41-4	Ethylbenzene	2.62	U
108-38-3/106-42-3	m- and p-Xylene	1.48	U
95-47-6	o-Xylene	1.76	U
108-67-8	1,3,5-Trimethylbenzene	3.14	U
95-63-6	1,2,4-Trimethylbenzene	3.92	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)

Data Path : C:\msdchem\1\DATA\130314c\
Data File : 92578.D
Acq On : 14 Mar 2013 1:23 pm (#1); 14 Mar 2013 1:22 pm (#2)
Operator : SA
Sample :
InstName : Unit 8
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 14 13:30:45 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	3.256	96	2342961	206.00 ppm	0.00
15) Chlorobenzene-d5	5.936	117	2129052	179.50 ppm	0.00
Target Compounds					Qvalue
1) Hydrogen	5.725	GC1	191536m	775.19 ppm	
12) Benzene	2.874	78	10478	1.77 ppm	98

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

Admin Com
11-1-12

ATTACHMENT 1
Page 1 of 4

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: 90853

6.2[4] Date Processed: 11-01-12

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.: 019045
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 / 267124 11-01-12
Waste Handling Tech (print) Signature Z # Date

ATTACHMENT 1
Page 2 of 4

4.1[6][B] Parent Waste Container No.: 90853

5.[18] Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable: 369.0 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) 369.0 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:

CWMO-FOD (print) Signature Z # Date

ATTACHMENT 1
Page 3 of 4

4.1[6][B] Parent Waste Container No.: 90853

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	92294			
10.1[4]	Daughter Drum Filter No.	AM-783			
10.1[4]	Daughter Drum Bag Filter No.	L-4268			
10.1[4]	Daughter Drum Purchase Order No.	4116184			
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:				
10.3[9][A]	PCB-contaminated Waste Description				
10.3[9][B]	PCB Item ID No.				
10.3[10]	Remaining Waste Description	See COMMENTS		N/A	
10.3[13]/10.4[10]/10.5[4]/10.6[8]	Daughter Drum % Full (%)	80%			
10.5[3]/10.6[2]	Description Waste Added During Processing	STUB OUT BAGS, KITTY LITTER			

ATTACHMENT 1
Page 4 of 4

4.1[6][B] Parent Waste Container No.: 90853

Comments: PLASTIC, SALTS, KITTY LITTER, POC LIDS, BOLTS

11.1[1] Performed By: BRIAN GALLEGOS / [signature] 267129 11-01-12
Waste Handling Tech (print) Signature Z # Date

11.1[7] Reviewed By: Jose Perez / [signature] 221452 11-5-12 1043
SOS or designee (print) Signature Z # Date/Time

1D-3D-12CV

ATTACHMENT 2
Page 1 of 1

WCRRF OVERPACK DRUM ASSEMBLY PREPARATION DATA SHEET

5.[3] Overpack drum information:
- Purchase Order No.: 413954
- Lot No.: 211426
- Manufacture Date: 2010

5.[8] Overpack filtered vent information:
- Manufacturer: NUCFIL
- Model No.: 013
- Serial No.: ES 361
- Manufacture Date: 5/9

Overpack filtered vent and 2 in. bung torque wrench information:

	Filtered Vent	2 in. Bung
M&TE No.:	040694	211511
Cal. Expiration Date:	9-26-13	6-11-13
Tolerance:	+- 4% cw +- 6% ccw	+- 3% cw +- 6% ccw

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

Performed By: JOE QUINTANA [signature] 237987 10/30/12
Waste Handling Technician (print) Signature Z # Date

5.[12] Filtered Vent torque value [120 in-lb (96 to 144 in-lb)]: 120 in-lb

5.[15] 2 in. bung plug torque value: 30 ft-lb

Comments: N/C

8.1[1] Performed By: JOE QUINTANA [signature] 237987 10/30/12
Waste Handling Technician (print) Signature Z # Date

8.1[5] ☐ Deficiencies identified and submitted (e.g., PCR or FSR system).
☑ No deficiencies

8.1[7] Reviewed By: Jose Perez [signature] 221452 11-5-12
Supervisor or designee (print) Signature Z Date

ATTACHMENT 5
Page 1 of 1

11-1-12

WCRRF OVERPACK DRUM CLOSURE DATA SHEET

7.[19] Overpack Drum Unique Identifier No.: 92295

7.[25] Overpack drum closure ring torque wrench information:

M&TE No.: 040329
Cal. Expiration Date: 3-15-13
Range in ft-lb: 16-80
Tolerance: ±3% CW 5% CCW

7.[26] Torque wrench listed above is within the acceptable ranges as displayed on the calibration certificate. ☑ Yes ☐ No

Performed By: Brian Gallegos [signature] 267129 11-01-12
Waste Handling Technician (print) Signature Z # Date

7.[28] Overpack drum closure ring torque value: 60 ft-lb

7.[31] Threaded lug of the drum closure ring is not touching the jam nut and the locking ring lugs are not touching. ☑ SAT ☐ UNSAT

7.[36][B] Platform scale serial number: 019065
Platform scale calibration expiration date: 7-31-13

7.[36][D] 85-gal overpack drum gross weight (lb): 328.6 lb

Comments: SLING Serial # – 3006973-1-118, 3006973-1-121

8.1[1] Performed By: Brian Gallegos [signature] 267129 11-01-12
Waste Handling Technician (print) Signature Z # Date

8.1[5] ☐ Deficiencies identified and submitted (e.g., PCR or FSR system).
☑ No deficiencies

8.1[7] Reviewed By: Jose Perez [signature] 221452 11-5-12
Supervisor or designee (print) Signature Z.# Date

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

Drum ID#: ~~92292~~ 92294 11-8-12

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 #: 416184
Lot #: 229224
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 #: ACPUC-5-25DVC
Serial #: L-4268
Date of Manufacture: 2-12

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 liner 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: Autofil
Model #: 919 DS
Serial #: Am-783
Date of Manufacture: 11/12

RECORD torque wrench information:

Filter torque wrench:		Jam Nut / Bung torque wrench:	
M&TE ID #:	04694	M&TE ID #:	02115
Cal Expiration Date:	9-26-13	Cal Expiration Date:	6-11-13
Range (ft-lbs or in-lbs):	40-200	Range (ft-lbs or in-lbs):	16-80
Tolerance:	24% cw ±4% 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: Michael Romero Signature: [signature] Z#: 182223

5. Weigh Drum Assembly

RECORD weight information

Tare wtght (lbs): 75.6
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 Romero Operator Sign: [signature] Z#: 182223 Date: 10-23-12

Verifier Print: BRIAN GALLEGOS Verifier Sign: [signature] Z#: 267129 Date: 11-01-12

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

DRUM ID#: 92292

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 #: 040329

Cal expiration date: 3-15-13

Range/ Value (ft-lbs): 16-80

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): 245.2

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: BRIAN GALLEGOS Date 11-01-12

Verifier Print/Sign: Steven Martinez Date: 11-01-12

WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Production Control

Container ID: 90853 Container Type: POC Gross Weight (lbs): 369

Liner Seal #: None Filter Prefix: None Filter Serial #: EL-2; EL-72

TRU Waste Stream: LA-MHD01.001 Certified RTR BDR: No BDR

TWSR Comments: PARENT #S832169 WTS-12STD-775

Total PE-Ci Activity: 4.99E-01 Equivalent Combustible PE-Ci: 1.87E-01 AM-241 PE-Ci: 6.73E-02

Total Fissile Gram Equivalents: 4.5 Total Surface Dose Rate (mrem/hr): 2

EPA Code(s): D008 ~~D001~~ D009 VK 10/6/12

NCR RTR/NDA Comment: None

RTR Pre-Screen Date: None Comment: None

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: TBD Production Control Comments: Need to add EPA Codes D007 & D009 Nitrate salts mixed with WasteLoc 770® from previous repack campaign. A minimum of 1.2 volumes of bentonite product must be mixed with 1.0 volume of nitrate salts

Performed By: Susan Ramsey (Production Control (Print)) Signature: Susan J. Ramsey Z Number: 000681 Date: 9/6/12

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 – POC

Net Wt: 59lb Parent drum (SEDS attached) was part of WCRR nitrate salt repack campaign using Waste Lock 770®. This resulting daughter POC is being repacked to adjust the admixture/nitrate salt ratio. Nitrate salts carry waste codes for [redacted] and mercury. No chemicals present. May require RWP for > 100 + < 1000 mrem/hr

Performed By: Valerie Rhodes (WDP Engineering (Print)) Signature: Valerie Rhodes Z Number: 111209 Date: 10/2/12

TRU Remediation Operations

Waste Container Information Evaluated Less Than 170 lbs RTR Video Available

Other Specific Safety Concerns: Use Hexamax gloves when processing waste in the glove box. Do not push or press on waste

Processing Determination: Accept Reject

TRU Remediation Operations Comments: Use proper ratio of kitty litter to waste in accordance with the procedure

Performed By: Jose Jerez (TRU Remediation Operations (Print)) Signature: Jose Jerez Z Number: 221452 Date: 10-4-12

OK Z# 249750 10/9/12

IHS Review: RS 206362 10.3.12

Noncertified TRU Waste Drum Item Information

DrumID: 009973

Item No	ItemID	Process Status	Net Wt (kg)	Matrix	Mass Code	SNM (g)	HF	Auth (Pg/Im)	Comments
1	XXPS-579-F1	EV	20.000	NITRATE SALTS		2.38	42	13/11	
2	IXPS-577-F2	EV	7.270	NITRATE SALTS		1.66	52	5/11	
3	IXPS-578-F1	EV	1.820	NITRATE SALTS			52	5/11	
4	IXPS-580-F1	EV	88.410	NITRATE SALTS		29.79	52	5/11	55 ORIGINAL PKG D

Noncertified Waste Drum Material Summary

Gross Wt (kg): 187.2

Material Type	SNM (grams)	Items Net Wt (kg)
42	2.38	20.00
52	33.45	97.50
Totals	35.83	117.50

ATTACHMENT 1
Page 1 of 1

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

5.[1] Sample Date: 9/25/12

Container No. (5.[1])	90853					
Container type sampled (e.g., 55-gal, 85-gal, 110-gal, or SWB) (5.[1])	POC					
Filtered Vent Type (5.[1])	MDS					
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])	39.25 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: [illegible] Arrazola — CCP (Print) — Z # 23975

Reviewed By: Nathan [illegible]es — CCP (Print) — Z # Z[illegible]

Comments: None

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] — Z # 100081 — Date 10/2/12

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\120928C\
Data File : 90853.D
Acq On : 28 Sep 2012 3:47 pm (#1); 28 Sep 2012 3:46 pm (#2)
Operator : SA
Sample :
InstName : Unit 8
Misc : LFL POC THROUGH FILTER-19DS FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 28 15:56:24 2012
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	3.256	96	2353346	206.00 ppm	0.00
15) Chlorobenzene-d5	5.936	117	2138596	179.50 ppm	0.00
Target Compounds					Qvalue
1) Hydrogen	5.332	GC1	9697m	39.25 ppm	

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

Vocgas.m Fri Sep 28 15:56:34 2012

PROJECT NAME

11-1-12

0510 Assuming WKR operations center. JC Clemen
0544 Beginning outside rounds.
0603 Outside rounds complete.
0604 Air quality has arrived to perform weekly stack monitoring.
0608 Air quality stack sampling complete.
0615 Pre-job being conducted by SCS. Beginning inside rounds.
0638 Inside rounds complete.
0701 Both rounds reviewed by SCS.
0715 Mode change complete. We are now in operations.
0810 Initiating drum movement from SC-69 to a temporary
0842 Bagging on 90852. Drum movement complete.
0853 Bag on complete
~~1025~~ Bagging off 90852. bagging on 90858.
1020 Bag on complete.
1105 Bagging off 90858, bagging on 90853.
1136 Bag on complete.
1158 Bagging off 90853, bagging on 90866.
1215 Bag off + on complete.
1333 Bagging off 90866.
1404 Bag off complete.
1415 Mode changing to warm standby so that maintenance can perform relamping inside SC-69. WO#416885CL
Initiating drum movement from SC-69 to a temporary
1433 Drum movement complete. Inventory has been removed from the facility
1442 Mode changed back to operations. Relamping complete. Operations will begin to next empty ESIS drum on SCB.
1455 Beginning inside rounds.
1517 Beginning outside rounds
1525 Inside rounds complete.
1530 Outside rounds complete.
1537 ~~Both~~ JC 11-1-12 Both rounds reviewed by SCS.
1620 Mode change complete. We are now in warm standby in WKRF area and CCLD in SC-69.
1630 End of day. Operations leave. JC Clemen

No journeyman this day

192351

Intermediate Dozer - 90937

11/1/12

0600 Assumed WCRR SOM position.

0615 Attended pre job brief conducted by SOS. Discussed production plan for day - will work remaining drums that are already in 50-69 (SP. 72 POC's) 4 of them. Work the empty SWB's to repack w/ Empty 85's.

0715 Completed Mode Change: WCRR Yard / Bldg 50-69 from Warm / Warm to Operations / Operations.

0830 Per OM and OSP&T are cancelling todays incoming shipment due to potential storage space available being insufficient over weekend. Rescheduling for Monday.

0845 Released W.O # 447598-01 50-69 TSR/ESI Daily & Weekly Rounds.

1038 WMC reported that matching WCRR inventory w/ gamma spec reports yield some discrepencies. He is working on clearing these up and will be on site this afternoon.

1230 RP-1 supervisor reported that 2 ES Technicians did not have proper bioassay's for processing RWP - with further investigation it was found that they were in fact current - exit bioassays from other worksites counted as baseline for WCRR. RP-1 supervisor will obtain report monthly to verify workers are current on bioassy.

1248 Released W.O. 414885-06 54-WCRRF FY12 Relamping. Worker is scoping out what bulbs are required to be replaced but no work will commence until 50-69 is in Warm or Cold per W.O.

1355 Per CSE for TSR requirements to work empty SWB's w/ repacking 85's (Empty) proper mode is operations.

1415 Completed Mode Change: WCRR Yard / Bldg 50-69 from Operations / Operations to Warm / Warm to support relamping.

1442 Completed Mode Change. WCRR Yard / Bldg 50-69 from Warm / Warm to Operations / Operations. Maint is complete (Relamp) and SWB picking will commence.

1500 Attended meeting concerning maintenance activities Nov 9/10 and 15th — 19/20. Need to get w/ SOS to schedule workers for those dates (No work Sunday 18th)

1555 Notified by SOS that 2 SWB's are completed - found water in both and needed to be emptied and dried out.

1620 Completed Mode Change WCRR Yard / Bldg 50-69 from Operations / Operations to Warm / Cold.

1640 Secured SOM position

JS 11-5-12

No further entries this page

11/1 12

11-1-12 WCRR SOS LOG Book

0600 Assuming SOS Position

0615 Started Pre Job brief went over Monthly BWP 2012-2015

0650 Concluded Pre Job

0701 Reviewed Inside And outside Rounds.

0715 Mode change Complete WCRRF In operation's

1415 Mode Change Complete For Elect. could change out bulbs on WCG.

1442 Mode Change Complete WCRRF In operations.

1537 Reviewed Inside And outside Rounds.

1620 Mode Change Complete WCRR Yard In warm 50-69 In Cold.

11-1-12 1630 End of shift Securing SOS Position.

no further entries on this Pg.

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0105
Examination Date:	9/4/2013
Waste Container ID:	92294
Video/Audio Recorded Media Number:	LA-RTR2-13-0105 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:	S3110
Waste Stream I.D.:	LA-MIN02-V.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:	70 %

CCP Radiography Data Sheet

Waste Container ID: 92294

Section 3: Container Inventory and Comments (Detailed descriptions)

IM: Hardware, metal lid

AM:

OM:

OI:

C: Fiberboard packing material

R:

XPM: Plastic lids, 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):	12.0
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	
Other Inorganic Materials (OI)	
Cellulosics (C):	4.0
Rubber (R):	
Plastics (waste materials) (XPM):	8.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	54.1
Soils (S):	
Total WMP Weight:	78.1

CCP Radiography Data Sheet

Waste Container ID: 92294

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		9/4/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	92294	Count Sequence Number:	23537
Operator:	D3PW2DK1\operator		
Assay Start:	9/5/2013 12:30:43 PM		
Description 1:	1LANDA1836		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6, MT-42 Mix		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 78.1 kg	Net:	78.1 kg
Container:	Volume: 208.0 l	Full:	70.0 %
Density:	0.540 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

08 6/12/14 35

NDA 2000 Assay Report

Item Information

Item ID: 92294 Count Sequence Number: 23537
Operator: D3PW2DK1\operator
Assay Start: 9/5/2013 12:30:43 PM
Description 1: 1LANDA1836
Description 2: N/A
Location: LANL TA-54
Comment: AK-6, MT-42 Mix
Matrix Type: Homo Sol. S3000
Container Type: 55 gallon drum
Weight: Net: 78.1 kg Net: 78.1 kg
Container: Volume: 208.0 l Full: 70.0 %
Density: 0.540 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

SUPERSEDED

CS 6/12/14

CS 6/12/14 35A

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number: 23537
Assay Instrument: MCS HENC #1
Analysis Method: CCP-TP-063 v 15
Item ID: 92294

Batch Number: 1LANDA1836
Location: LANL TA-54
Software Version: NDA 2000 V.4.0
Analysis Date: 9/5/2013

Net Weight	78100.0 g		
Pu mass	7.09E+000	+- 1.26E+000	g
TRU Alpha Activity	3.73E+000	+- 5.74E-001	Ci
TRU Activity Concentration	4.77E+004	+- 7.34E+003	nCi/g
Pu-239 Equivalent Activity	3.75E+000	+- 5.74E-001	Ci
Pu-239 FGE	6.44E+000	+- 1.14E+000	g
Decay heat	1.23E-001	+- 1.90E-002	W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	7.17E-002	5.06E-005	8.07E-006	2.44E-006
PU238	2.60E-003	4.44E-002	7.92E-003	6.29E-005
PU239	6.38E+000	3.96E-001	7.05E-002	5.61E-004
PU240	4.27E-001	9.70E-002	1.73E-002	1.37E-004
AM241	9.30E-001	3.19E+000	5.69E-001	4.52E-003
PU241	1.11E-002	1.14E+000	2.03E-001	1.62E-003
PU242	2.70E-001	1.07E-003	1.90E-004	0.00E+000
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	6.10E-007
U233	<LLD	<LLD	0.00E+000	4.71E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	1.40E-006
U238	<LLD	<LLD	0.00E+000	1.33E-005

Errors quoted at 1.000 sigma

Operator: [signature] Date: 6-6-14

ITR: [signature] Date: 6·10·14

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CS 6/12/14

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number: 23537
Assay Instrument: MCS HENC #1
Analysis Method: CCP-TP-063 v 15
Item ID: 92294

Batch Number: 1LANDA1836
Location: LANL TA-54
Software Version: NDA 2000 V.4.0
Analysis Date: 9/5/2013

Net Weight	78100.0 g		
Pu mass	7.09E+000	+-	1.26E+000 g
TRU Alpha Activity	6.42E-001	+-	7.54E-002 Ci
TRU Activity Concentration	8.22E+003	+-	9.65E+002 nCi/g
Pu-239 Equivalent Activity	6.60E-001	+-	7.54E-002 Ci
Pu-239 FGE	6.42E+000	+-	1.14E+000 g
Decay heat	2.03E-002	+-	2.36E-003 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	7.17E-002	5.06E-005	8.07E-006	2.44E-006
PU238	2.60E-003	4.44E-002	7.92E-003	6.29E-005
PU239	6.38E+000	3.96E-001	7.05E-002	5.61E-004
PU240	4.27E-001	9.70E-002	1.73E-002	1.37E-004
AM241	3.03E-002	1.04E-001	1.85E-002	1.47E-004
PU241	1.11E-002	1.14E+000	2.03E-001	1.62E-003
PU242	2.70E-001	1.07E-003	1.90E-004	0.00E+000
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	6.10E-007
U233	<LLD	<LLD	0.00E+000	4.71E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	1.40E-006
U238	<LLD	<LLD	0.00E+000	1.33E-005

Errors quoted at 1.000 sigma

Operator: _____ Date: 9-9-13

ITR: _____ Date: 9.19.13

CS 6/12/14

CS 6/12/14 36A

Automated Independent Technical Review

Count Sequence Number: 23537 Batch Number: 1LANDA1836
Counter ID: MCS HENC #1
Container ID: 92294
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 9/5/2013

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.
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; 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 passed.	

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PS 6/12/14

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-52,42.
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. Am-241 direct reported from gamma results.

Expert Review by: Bart B. Marak Date: 6/5/14

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CS 6/12/14

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **92294**

BDR Number: **LA13FG2098**

Sampling Date: **9/9/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	90.37	U
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	10.11	
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\130909c\
Data File : 92294.D
Acq On : 9 Sep 2013 12:29 pm (#1); 09-Sep-13, 12:29:07 (#2)
Operator : RJ
Sample :
Misc : 55 Gallon drum through filter. (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 09 12:37:55 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	3.552	96	4837808	205.75	ppmv	0.03
15) Chlorobenzene-d5	5.855	117	3740124	177.50	ppmv	0.00
Target Compounds						Qvalue
17) Toluene	4.824	92	135375	10.11	ppmv	99

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

S832150

S832150

Container Profile 747191

File Options Reports Help

S832150

747191	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

Genealogy

S832150

S832150

- LA00000069000 – Empty
- LA00000068668
- LA00000068670

Working Copy
Date: 11-18-13

ATTACHMENT 1
Page 1 of 4

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: 3832150

6.2[4] Date Processed: 11-18-13

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: N/A

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: Frederick [illegible] / [signature] / [illegible] / 11-18-13
Waste Handling Tech (print) Signature Z # Date

ATTACHMENT 1
Page 2 of 4

4.1[6][B] Parent Waste Container No.: S 832150

5.[18] Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable: 432.8 lb

6.2[5][A] Parent Drum Lead Blanket Weight (lb): 83 lb

6.2[5][B]/ 6.2[6] Total Parent Drum Weight (lb) 515.8 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.: S832150

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	68668	68670		
10.1[4]	Daughter Drum Filter No.	LM-851	LM-853		
10.1[4]	Daughter Drum Bag Filter No.	L-11499	L-6748	N/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		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	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		
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 (%)	80%	85%		
10.5[3]/10.6[2]	Description Waste Added During Processing	1-lead wicked kitty litter shoe Rag gloves	lead shielding kitty litter stab vest Rags		

ATTACHMENT 1
Page 4 of 4

4.1[6][B] Parent Waste Container No.: S832150

Comments: N trade Salts, kitty litter, Plastic, 3 gallons pH-3 liquid, also neutralized, ~~Plastic~~ 1 - poly liner lid, glove Box gloves, 1 lead window,

11.1[1] Performed By: Frederick [illegible] / [signature] 122562 11-18-13
Waste Handling Tech (print) Signature Z # Date

11.1[8] Reviewed By: Gilbert [illegible] / [signature] 149335 11/15/13 0920
SOS or designee (print) Signature Z # Date/Time

Working Copy
Date: 11-18-13

ATTACHMENT 2
Page 1 of 1

WCRRF OVERPACK DRUM ASSEMBLY PREPARATION DATA SHEET

5.[3] Overpack drum information:

Purchase Order No.: 501563
Lot No.: 02285367
Manufacture Date: 2013

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

	Filtered Vent	2-in. Bung
M&TE No.:		
Cal. Expiration Date:		
Tolerance:		

Overpack filtered vent information

Manufacturer:
Model No.:
Serial No.:
Manufacture Date:

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

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)]: _____ in-lb

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

Comments: Not Reqd at WCRRF

8.1[1] Performed By: Frederick [illegible] [illegible] [illegible] 11-18-13
Waste Handling Technician (print) Signature Z # Date

8.1[6] Reviewed By: Gilbert [illegible] [illegible] [illegible] [illegible] 11/18/13
Supervisor or designee (print) Signature Z # Date

UET Working Copy
Date: 11-18-13

ATTACHMENT 5
Page 1 of 1

WCRRF OVERPACK DRUM CLOSURE DATA SHEET

7.[17] Overpack Drum Unique Identifier No.: 69000

7.[23] Overpack drum closure ring torque wrench information:

M&TE No.: 038369
Cal. Expiration Date: 12-18-13
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: Frederick Ashlock / [signature] 1228826 / 11-18-13
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): 171.4 lb

Comments: N/C

8.1[1] Performed By: Frederick Ashlock / [signature] 1228826 / 11-18-13
Waste Handling Technician (print) Signature Z # Date

8.1[7] Reviewed By: Gilberto Martinez / [signature] 1149255 / 11/19/13
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 1
Page 1 of 2

Working Copy
Date: 11/18/13 HS

WCRRF DRUM PREPARATION DATA SHEET

5.[34][E] Drum ID No.: 68668

5.[3] Drum information:
Purchase Order No.: 501578
Lot No.: 0240119
Manufacture Date: 2013

5.[17] Drum Liner Bag/Filter Assembly:
Manufacturer: BOP
Model No.: 6CAVC 1.5-2 SPVC
Serial No.: L-11499
Manufacture Date: 6/13

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

	Filtered Vent	2 in. Bung
M&TE No.:	100216	036245
Cal. Expiration Date:	12-18-13	8-5-14
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: Frederick A. Webb [signature] [illegible] 11-13-13
Operator (print) Signature Z # Date

5.[23] Filtered vent information:
Manufacturer: Nucfil
Model No.: 019 DS
Serial No.: LM-851
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.: 68668

Comments: NC

5.[35] Performed By: Frederick Arbuckle | [signature] | 1223826 | 11-13-13
Operator (print) | Signature | Z # | Date

7.1[4] Reviewed By: Gilbert Martinez | [signature] | N92357 | 11/13/13
Supervisor or designee (print) | Signature | Z # | Date

ATTACHMENT 2
Page 1 of 2

WCRRF DRUM CLOSURE DATA SHEET

6.[3] Drum ID No.: 68668

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

M&TE No.: 038369
Cal. Expiration Date: 12 18-13
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: [illegible] / [illegible] 122[illegible] / 11-18-13
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-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: / / /
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.: 68668

6.[26] Scale File ID number: 019065

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

6.[28] Drum gross weight: 284.8 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: [illegible] / [signature] 1220874 / 11-18-13
Operator (print) Signature Z # Date

7.1[4] Reviewed By: Gilbert Martinez / [signature] H9215 11/19/13
Supervisor of designee (print) Signature Z # Date

ATTACHMENT 1
Page 1 of 2

Working Copy
Date: 11/13/13 HS

WCRRF DRUM PREPARATION DATA SHEET

5.[34][E] Drum ID No.: 68670

5.[3] Drum information:
Purchase Order No.: 501578
Lot No.: 0240119
Manufacture Date: 2013

5.[17] Drum Liner Bag/Filter Assembly:
Manufacturer: BOP
Model No.: 6CNC 1.5-2-SPVC
Serial No.: L-6748
Manufacture Date: 1/13

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

	Filtered Vent	2 in. Bung
M&TE No.:	100216	036245
Cal. Expiration Date:	12-18-13	8-5-14
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: [illegible] [illegible] [illegible] 11-13-13
Operator (print) Signature Z # Date

5.[23] Filtered vent information:
Manufacturer: NuCel
Model No.: 019 DS
Serial No.: LM-853
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.: 68670

Comments: N/C

5.[35] Performed By: [illegible] / [illegible] [illegible] [illegible]
Operator (print) Signature Z # Date

7.1[4] Reviewed By: Gilbert Martinez / [illegible] 145259 [illegible]
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 2
Page 1 of 2

WCRRF DRUM CLOSURE DATA SHEET

6.[3] Drum ID No.: 608670

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

M&TE No.: 038369
Cal. Expiration Date: 12-18-13
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: Federico Hebbeta / [signature] / 1228826 / 11-18-13
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	N
Range:	N/A in-lb	N/A 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: _____ 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.: 68670

6.[26] Scale File ID number: 019065

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

6.[28] Drum gross weight: 361.6 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: [illegible] / [signature] / [illegible] / 11-8-13
Operator (print) Signature Z # Date

7.1[4] Reviewed By: Gilbert Martinez / [signature] / [illegible] / 11/8/13
Supervisor or designee (print) Signature Z # Date

Working Copy
Date: 11-18-13

ATTACHMENT 3
Page 1 of 1

WCRRF PARENT 55-GAL DRUM PREPARATION DATA SHEET

6.3[21] Prepared Parent 55-Gal Drum Number: S832150

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): 432.8

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: [illegible] / [signature] [illegible] 11-18-13
Waste Handling Technician (print) Signature Z # Date

8.1[7] Reviewed By: Gilbert Martinez / [signature] 14925 11/18/13
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] 14925 11/18/13 0915
SOS/SOM or designee (print) Signature Z # Date Time

72
NR
6.10.12

WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Production Control

85 11-4-12

Container ID: S832150 Container Type: 55-GAL Gross Weight (lbs): 479
Inner Seal #: 009343 Filter Prefix: LAVC Filter Serial #: 02308
AK Waste Stream: LA-MHD01.001 Certified RTR BDR: No BDR
TWSR Comments: LEACHED SOLIDS MST 12 RM 434
Total PE-Ci Activity: 1.13E+01 Equivalent Combustible PE-Ci: 4.23E+00 AM-241 PE-Ci: 1.55E+00
Total Fissile Gram Equivalents: 101.2 Total Surface Dose Rate (mrem/hr): 7
EPA Code(s): None
NCR RTR/NDA Comment: None
RTR Pre-Screen Date: 5/2/2007 Comment: Liquids, Impenetrable Obj.
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: 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 the volume of nitrate salts.

Performed By: R. W. Jones (Production Control (Print)) Signature: R. Jones Z Number: 117434 Date: 12.8.11

WDP Engineering

SUSAN S. RAMSEY Signature: Susan S. Ramsey Z Number: 100681 Date: 11/28/12

Chemicals Present (e.g., pyrophorics, acids, bases, shock sensitive, organic liquids, peroxides, crown ethers): ☐ Yes ☒ No ☐ Unknown
Processing Determination: ☐ Accept ☐ Reject
WDP Engineering Comments: Leached solids - nitrate salts
Net Wt: 419lb. Six items ranging from 12lb to 65lb.
Drums w/ nitrate salts may contain undocumented liquids.
May require RWP for >1000 and <10000 mrem/hr @ 30 cm
Drum may have lead liner

Performed By: Valerie Rhodes (WDP Engineering (Print)) Signature: Valerie Rhodes Z Number: 112409 Date: 12/15/11

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 Hexarmour gloves when processing waste.
Processing Determination: ☒ Accept ☐ Reject
TRU Remediation Operations Comments: Use proper ratio of kitty litter to waste in accordance with the procedure

Performed By: Jose Jerez (TRU Remediation Operations (Print)) Signature: Jose Jerez Z Number: 221452 Date: 1-8-13

ROBIN SHUIT 282955 1-14-13
MTS Review Julie Anderson CSO, No HT concerns 12/4/12

Noncertified TRU Waste Drum Item Information

DrumID: 009343

Item No	ItemID	Process Status	Net Wt (kg)	Matrix	Meas Code	SNM (g)	MT	Auth (Pg/Ln)	Comments
1	IXFS-596-FA		5.450	NITRATE SALTS		9.11	52	5/11	ROOM 434 G468
2	IXFS-598-F1		29.310	NITRATE SALTS		8.69	52	5/11	ROOM 434 G468
3	IX597OX15		26.360	NITRATE SALTS		17.5	52	5/11	ROOM 434 G468
4	IXFS599-F1		13.180	NITRATE SALTS		53.11	52	5/11	ROOM 434 G468
5	IXFS-600-F1		18.180	NITRATE SALTS		8.48	42	13/11	ROOM 434 G468
6	IXFS-601-FA		24.320	NITRATE SALTS		18.56	52	5/11	ROOM 434 G468

Noncertified Waste Drum Material Summary

Gross Wt (kg): 217.3

Material Type	SNM (grams)	Items Net Wt (kg)
42	8.48	18.18
52	106.97	98.62
Totals	115.45	116.80

ATTACHMENT 1
Page 1 of 1

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

5.[1] Sample Date: 3/29/12

	72	72	72	72	72	72
Container No. (5.[1])	S825021	S833931	S841292	S823221	S832150	S824660
Filtered Vent Type (5.[1])	72	72	72	72	72	72
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])	Ø ppm	Ø ppm	Ø ppm	Ø ppm	245 ppm	Ø ppm
Hydrogen Reading (< 64,000 ppm) (5.[5])	123.62 ppm	435.44 ppm	Ø ppm	409.31 ppm	614.31 ppm	382.91 ppm
Methane Reading (< 16,000 ppm) (5.[5])	Ø ppm	Ø ppm	Ø ppm	Ø ppm	Ø ppm	Ø ppm

5.[7] Certified CCP Technician:

Performed By: Erik Loechell, 234183
CCP (Print) Z#

Reviewed By: Sara Aragon, 237975
CCP (Print) Z#

Comments: N/a

6.1[2][A] (S) WCRRF waste container satisfies the following criteria: ☑ SAT ☐ UNSAT

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

6.1[2][B]/ 6.1[3] Performed By: Alicia Herrera, 198460, 4/2/12
Waste Handling Operator (print) Signature Z# Date

InstName : Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\120329c\
Data File : S832150.D
Acq On : 29 Mar 2012 2:23 pm (#1); 29-Mar-12, 14:22:44 (#2)
Operator : SA
Sample :
Misc : 55 GALLON LFL DRUM THROUGH FILTER, 72 FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 29 14:32:06 2012
Quant Method : C:\msdchem\1\METHODS\vocgas.m
Quant Title : Flammable Gas Analysis
QLast Update : Tue Mar 06 12:05:15 2012
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
3) Fluorobenzene	3.655	96	4071476	209.00	ppmv	0.03
15) Chlorobenzene-d5	5.964	117	2760343	185.50	ppmv	0.02
Target Compounds						Qvalue
1) Hydrogen	1.611	GC1	4537m	614.31	ppmv	
12) Benzene	3.335	78	30384	2.45	ppmv	100

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

vocgas.m Thu Mar 29 14:32:13 2012

11-18-13

0600 ASSUMMING WCRRF OPERATIONS CENTER H SMITH

0604 STARTING PRE-JOB BREIFING

0630 PRE JOB COMPLETED

0635 STARTING OUTSIDE ROUNDS

0653 OPERATORS ENTERING BUILDING TO BEGIN PROCESSING

0710 RCT'S WHILE CHECKING CAMS, REMOVED PORT COVERS AND GOT READINGS OF 2000 DPM ON PORT #1 RIGHT HAND, WILL REPLACE COVER FINISH CHECKING CAMS AND RECHECK

0715 COMPLETED OUTSIDE ROUNDS

0730 STARTING INSIDE ROUNDS

0758 TECH 14 NOTIFIED OPS CENTER NEED TO CHANGE OUT GLOVEBOX GLOVES AT STATIONS #2 AND #8 ALSO

0755 ITEM #63 INSIDE ROUNDS ODS. PERMISSION GRANTED TO PROCED, POP IN PLACE PER CSE DOCUMENTATION

0805 INSIDE ROUNDS COMPLETED

0827 LATE ENTRY STARTING SHIPMENT OUT TO TA-54 0800 HS

0830 INSIDE AND OUTSIDE ROUNDS ~~SH~~ HS 11/18/13 REVIEWED BY SD

0835 PERMISSION GRANTED TO LOWER VEHICLE ACCESS GATES ~~TO ACCEPT SHIPMENT FROM TA50 TO~~ 11/18/13 HSMITH FOR SHIPMENT TO TA-54

0847 STARTING GLOVEBOX GLOVE CHANGES AT STATIONS #1, #2

0912 SHIPMENT OUT TO TA-54 IS COMPLETED. TRANSPORTAINER DOOR ARE CLOSED AND LATCHED, VEHICLE ACCESS GATES ARE RESTORED.

0920 RCT NOTIFIED OPS. CENTER OF 2 PIN HOLES ON STATION 1 RIGHT HAND GLOVE FOREARM AREA, 8000 DPM ALPHA, 200 DPM LAS, 48 DPM REMOVABLE INSIDE GLOVE AREA ENTERING EP-WCRR-RM-0210. SOM NOTIFIED AND WILL MAKE NOTIFICATIONS

1023 GLOVEBOX GLOVE CHANGES ARE COMPLETED, 50 COUNT SMEARS BEING CONDUCTED BY RCTS

1123 MODE CHANGE WCRRF AND TA50-69. MODE INCREASE TO OPERATIONS MODE, ALL SMEAR RETURNED NDA

1151 LATE ENTRY EXIT EP-WCRR-RM-0210 1120 HS

CONTINUED ON NEXT PAGE (SOUTH)

11-18-93 CONTINUED FROM PREVIOUS PAGE H SMITH
1152 PERMISSION GRANTED TO MANIPULATE WASTE, MOVE WASTE FROM TA 50-194/75 TO TA-50/69.
1250 MOVEMENT INTO TA50-69 COMPLETED
1252 PERMISSION GRANTED TO LOWER VEHICLE ACCESS GATE FOR SHIPMENT INTO TA50-69 WCRRF.
1315 BEING RELIEVED BY OCO CLARISSA VERLARDE H SMITH
1315 11-18-93 ASSUMING WCRRF OPERATIONAL CENTER - VERLARDE
1330 STARTING TO DENST 3 DRUMS THEN WILL BE BAGGING ON 3832150.
1445 DENESTING AND BAG ON IS COMPLETE
1510 MOVEMENT INTO TRANSPORTAINERS FROM TRANSPORT VEHICLE IS COMPLETE
1600 STARTING OUTSIDE ROUNDS
1619 BAGGING OFF 1 DAUGHTER, BAGGING ON 1 DAUGHTER
1620 COMPLETED OUTSIDE ROUNDS
1637 BAG OFF COMPLETE CONTINUING TO PROCESS.
1645 STARTING INSIDE ROUNDS
1700 ITEM 40 IS OCS PCD IN PLACE OK TO PROCEED PER CSE DOCUMENTATION
1718 INSIDE ROUNDS COMPLETE
1738 BAGGING OFF, BAGGING ON 3852590
1800 BAG ON; BAG OFF COMPLETE.
1810 1810 RELIEVED BY OCO TERRI COLEMAN - VERLARDE

NO further entries this page

11-18-2013 DAYSHIFT

0555 Reviewed shift logs and assumed the SOM position from Goodynski

0635 Completed attending the pre-job brief conducted by the SOM (Carissa) The safety topic discussed was shift work and hand injuries. The JSR topic was dropping the vehicle barrier gate - when is it allowed. There is a transfer scheduled in from AREA G of 16 IR drums and a transfer out of 16 drums. The current shift orders WERR-SH-13-003 Rq and WERR-SH-13-005 were reviewed

0707 Completed daily call in to update Facility FOD status with AREA G SOM

0710 RCTs were performing routine surveys with WCG and changing out CAM filters they identified at station one under the port cover on the glove box glove 2000 dpm direct. This was at the Ref limit. RCTs will complete CAM filter change outs, then continue surveys after donning respirators. The port cover was placed back onto station

0744 Outside operators initiate staging TRU waste drums for the transfer cart and the transport truck arrives at WERR.

0751 Inside Operators report stations 2 and 8 both port require changing due to wear marks

0844 Inside Operators obtain supplies, hex-nuts, tape, cheesecloth, etc. for restock, also they note station 3 lead window, previously taped up was noted on the WCG, glovebox floor and pretty much shattered (spider cracked with tape) - Operators requested a stainless steel plate with velcro, to place over the small window at station 3. Requested SOS to follow-up with ES procurement on paperwork/quote for drums to cut lead windows

0917 Inside operators report they will initiate glove changes on stations 1, 2, and 8, both left and right hands

0922 RP-1 reported station 1 right hand was identified with 8K direct, Alpha removable on the Large Area Survey (LAS) was noted at 200 dpm. The glove swipe by the inner cuff was reported at 48 dpm Alpha removable. There were two pin holes located about 1" down from the cuff where the glove attaches to the glovebox. EP WERR-RM-AOP 0210 Loss of GB Integrity was entered by the OCC. The glove will be changed. Notification was made to Cum. RP-1 indicated that an RPO will be written

0940 Notification was made to DOE Fac Rep (R Tirrel)

0955 All glovebox glove changes were noted completed. Additional 50 surveys post glove change is being conducted.

1123 Mode Change: 50/59 and 4/and transition from Cold/Warm to Operations/Operations

1152 Outside operations initiate a transfer in of 3 Parent drums

1205 Completed escorting Fire Safety Engineer (R. Plinski) through LEVEL B storage Area with support from the custodian, and he obtained spec sheets for the

11-18-2013 DAYSHIFT CONT.

heater blankets, then we escorted to the yard to observe the Forktruck battery charging station and transportainer where the electrical pass-through would support the heater blankets. Information was provided to the OM.

1230 Completed the noon facility status call in with OM, SOM, and others.

1250 The transfer into 50/69 cans completed.

1330 Upon receipt and staging, inside operations initiate ~~bag~~ denesting and bag on of Parent drum SE32150.

1354 Completed extending shift orders WCRR-SM-13 003 R2 and WCRR-SM-13-005 R0 through 11-23-13.

1443 Denesting and bag on are noted completed.

1506 Discussed with production control (V. Norris) our next transfer to WCRRF. Email noted SF-3. Additional discussion with RP-1 identified some drums 55 Parent were noted with 1M dpm alpha removable at AREA 6 - These drums were bagged and placed into an overpack 85. A list of these drums were requested to verify which drums are wrapped in plastic and those not wrapped. WCRRF will review to comply with current RWP requirements and precautions.

1620 Inside operations initiate bag off of daughter and bag on another and continue to process.

1622 - Late entry for 1510, Outside operations complete the movement of 12 drums into the facility, receive them in WCATS and transfer them to the transportainers.

1637 Bag on is completed and operations continue to process.

1800 Inside Operation completed Bag off of daughter and bag on of Parent drum SE52590.

1805 Completed Shift turnover checklist review with oncoming SOM.

1816 Relieved by R. ARTELL as SOM

No further Entries this Page

11-18-13

PROJECT NAME _____ NOTEBOOK NO. _____

0600 Assuming WCRRF 305 position - cleared.
0615 Pre job being conducted, discussion, monday morning start up, PPE precautions, following procedures, working safe.
0635 Pre job concluded, starting outside rounds
0653 Operators entering 50-69.
0710 RCT's notified Operator that while doing RMIS on RCT removed port off of station 1 glove. Dec found 2000dpm. RCT's placed port cover back on which can pickers and cam checks ~~[illegible]~~ 11-18-13 are complete then they will check gloves again.
0715 Outside rounds complete.
0730 Starting inside rounds
0731 RCT will have operators go into respirators when rounds are complete to do glove inspections and complete further check on Station 1.
0750 Operators going into respirators, will need to change gloves on station 1, 2 and 8. when inspection of station 1 is complete.
0805 Inside rounds complete
0850 Rounds and weekly scalls have been signed off. Starting movement out of WCRRF to area G.
0847 Starting glove changes on station 1, 2, 8 left and right hand.
0912 movement out of ~~50-69~~ 11-18-13 WCRRF yard is complete to area G.
0920 RCT's notified OPO center of 2 Pin holes on station 1 right hand forearm area, 8000 dpm Alpha, 200 dpm LAS, 48 dpm removable inside glove area, entering EP-WCRRF-RM-0210. SOM notified and will make notifications
1023 Glove changes are complete. RCTs performing post job survey (50 smears.
1123 RCT smears are NDA, Performing mode change to Operations in TA50 69 and WCRRF yard. Enter EP-WCRRF-RM 0210.
1152 Starting movement into 50-69.
1250 Completed movement into 50-69
1252 Starting of loading of transport vehicle for shipment into WCRRF from area G.
1308 Starting to direct 3 drums
1310 ~~Being relieved~~ Being relieved by 305 gilbert morning shift turnover to complete - cleared.
1311 Assuming 305 position with [illegible]
1330 Starting to direct 3 drums they will be on S8.32 PC
1443 Directing drums are on Complete
1118-13 1516 Movement Task transporting from Transport vehicle complete

SIGNATURE Continued on Next Page DATE _____ 20 ___
READ AND UNDERSTOOD _____ DATE _____ 20 ___

PROJECT NAME _____ NOTEBOOK NO. _____

11-13-13 Continued from Previous Page
1600 starting outside Bounds
1614 Bagging off 1 daughter Bagging on Another
16:32 Bag off Complete Continuing to Process
1738 Bagging off for 58 57 590
1800 Bag on lot Complete.
1810 Reviewed Inside and outside Records
11-13-2013 Delivered By Clayton Mullins [signature]
RIG

In

Further

entries

on

this

Page

SIGNATURE _____ DATE _____ 20
READ AND UNDERSTOOD _____ DATE _____ 20

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0131
Examination Date:	11/21/2013
Waste Container ID:	68668
Video/Audio Recorded Media Number:	LA-RTR2-13-0131 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.: 129.5 kg Tare Wt.: 33.4 kg Net Wt.: 96.1 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: 68668

Section 3: Container Inventory and Comments (Detailed descriptions)

IM:

AM:

OM: Scrap lead

OI:

C:

R: Leaded rubber gloves

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):	20.0
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	10.0
Plastics (waste materials) (XPM):	8.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	58.1
Soils (S):	
Total WMP Weight:	96.1

CCP Radiography Data Sheet

Waste Container ID: 68668

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		11/21/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	68668	Count Sequence Number:	23919
Operator:	D3PW2DK1\operator		
Assay Start:	12/3/2013 1:13:07 PM		
Description 1:	1LANDA1871		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6, MT-42 MIX		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 96.1 kg	Net:	96.1 kg
Container:	Volume: 208.0 l	Full:	70.0 %
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:	23919	Batch Number:	1LANDA1871
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:	68668	Analysis Date:	12/3/2013

Net Weight	96100.0 g			
Pu mass	9.51E+001	+-	1.70E+001	g
TRU Alpha Activity	1.52E+001	+-	4.35E+000	Ci
TRU Activity Concentration	1.58E+005	+-	4.53E+004	nCi/g
Pu-239 Equivalent Activity	1.55E+001	+-	4.35E+000	Ci
Pu-239 FGE	8.35E+001	+-	1.69E+001	g
Decay heat	4.91E-001	+-	1.44E-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	1.08E-006
U233	<LLD	<LLD	0.00E+000	1.07E-002
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	3.04E-006
NP237	1.60E-001	1.13E-004	2.02E-005	5.42E-006
PU238	5.48E-002	9.36E-001	2.32E-001	1.65E-002
U238	<LLD	<LLD	0.00E+000	4.51E-005
PU239	8.28E+001	5.14E+000	1.05E+000	9.07E-002
PU240	5.74E+000	1.30E+000	3.23E-001	2.30E-002
AM241	2.27E+000	7.78E+000	4.21E+000	1.12E-001
PU241	1.80E-001	1.85E+001	4.59E+000	3.27E-001
PU242	6.32E+000	2.50E-002	6.18E-003	0.00E+000

Errors quoted at 1.000 sigma

Operator: Jim Bailey Date: 12/10/13

ITR: Date: 12-10-13

Automated Independent Technical Review

Count Sequence Number: 23919 Batch Number: 1LANDA1871
Counter ID: MCS HENC #1
Container ID: 68668
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 12/3/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis No Add-a-Source warnings.	Ok
Section 2 - Passive Neutron Analysis Analysis Status: No errors.	Ok
NCC Pu mass was above calibration range. The Standard NCC Pu effective mass exceeds the Upper Calibration Limit. No roots found within the limits while determining the Standard NCC Pu Mass, Chose largest positive root. Ones Rate Analysis complete with warnings. - Error calculating the Ones Rate Pu-240 Effective MDA.	Multiplication in drum. Neutron results rejected. Gamma results applied. 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.

Comments	Disposition
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: 12-4-13

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **68668**

BDR Number: **LA13FG2124**

Sampling Date: **12/6/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	219.84	
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\131206C\
Data File : 68668.D
Acq On : 6 Dec 2013 10:09 am (#1); 06-Dec-13, 10:09:06 (#2)
Operator : SA
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Dec 06 10:17:50 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	4035411	205.75	ppmv	0.06
15) Chlorobenzene-d5	5.878	117	3125350	177.50	ppmv	0.02
Target Compounds						Qvalue
1) Hydrogen	1.602	GC1	1653m	219.84	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-RTR2-13-0131
Examination Date:	11/21/2013
Waste Container ID:	68670
Video/Audio Recorded Media Number:	LA-RTR2-13-0131 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.: 164.0 kg Tare Wt.: 33.4 kg Net Wt.: 130.6 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: 68670

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):	8.2
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	6.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	116.4
Soils (S):	
Total WMP Weight:	130.6

CCP Radiography Data Sheet

Waste Container ID: 68670

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		11/21/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	68670	Count Sequence Number:	23918
Operator:	D3PW2DK1\operator		
Assay Start:	12/3/2013 12:16:13 PM		
Description 1:	1LANDA1871		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	MT-42 MIX, AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 131.0 kg	Net:	131.0 kg
Container:	Volume: 208.0 l	Full:	80.0 %
Density:	0.790 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:	23918	Batch Number:	1LANDA1871
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:	68670	Analysis Date:	12/3/2013

Net Weight	131000.0 g		
Pu mass	1.14E+002	+- 2.16E+001	g
TRU Alpha Activity	2.62E+001	+- 9.63E+000	Ci
TRU Activity Concentration	2.00E+005	+- 7.35E+004	nCi/g
Pu-239 Equivalent Activity	2.66E+001	+- 9.63E+000	Ci
Pu-239 FGE	1.01E+002	+- 2.14E+001	g
Decay heat	8.56E-001	+- 3.20E-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	1.70E-006
U233	<LLD	<LLD	0.00E+000	1.42E-002
U234	3.63E-002	2.26E-004	8.32E-005	0.00E+000
U235	2.59E+000	5.60E-006	2.06E-006	5.09E-006
NP237	2.77E-001	1.95E-004	3.88E-005	7.20E-006
PU238	6.54E-002	1.12E+000	2.89E-001	1.34E-002
U238	<LLD	<LLD	0.00E+000	7.24E-005
PU239	9.90E+001	6.14E+000	1.33E+000	7.37E-002
PU240	6.86E+000	1.56E+000	4.01E-001	1.87E-002
AM241	5.07E+000	1.74E+001	9.53E+000	1.35E-001
PU241	2.15E-001	2.21E+001	5.70E+000	2.66E-001
PU242	7.55E+000	2.98E-002	7.69E-003	0.00E+000

Errors quoted at 1.000 sigma

Operator: Ann Sutton Date: 12/10/13

ITR: [illegible] Date: 12·10·13

Automated Independent Technical Review

Count Sequence Number: 23918 Batch Number: 1LANDA1871
Counter ID: MCS HENC #1
Container ID: 68670
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 12/3/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis	
Add-a-Source WARNINGS:	
Add-a-Source correction factor was set to one.	Ok
Add-a-Source correction factor is less than n-sigma * the correction factor error.	Ok
Section 2 - Passive Neutron Analysis	
Analysis Status: No errors.	Ok
NCC Pu mass was above calibration range.	Multiplication in drum. Neutron results rejected. Gamma results applied.
Add-a-Source reals correction factor uncert. above calib. upper limit.	
The Standard NCC Pu effective mass exceeds the Upper Calibration Limit.	
No roots found within the limits while determining the Standard NCC Pu Mass, Chose largest positive root.	
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; 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-52,42.
Section 5 - Gamma Analysis Analysis Status: No errors.	Ok
Miscellaneous	No additional nuclides contributing to 95% of the radiological hazard identified.

Expert Review by: Sheri Chamberlin Date: 12-4-13

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **68670**

BDR Number: **LA13FG12133**

Sampling Date: **12/20/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	320.79	
74-82-8	Methane	6.56	U
67-56-1	Methanol	4.33	
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	0.89	
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

Quantitation Report (QT Reviewed)

InstName : FGA Unit 12

Data Path : C:\msdchem\1\DATA\131220c\
Data File : 68670.D
Acq On : 20 Dec 2013 2:30 pm (#1); 20 Dec 2013 2:29 pm (#2)
Operator : SA
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Dec 20 14:38:35 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	7524127	207.75	ppmv	0.00
15) Chlorobenzene-d5	6.636	117	6137485	178.75	ppmv	0.00
Target Compounds						Qvalue
1) Hydrogen	1.913	GC1	91507m	320.79	ppmv	
4) Methanol	0.834	31	1721	4.33	ppmv	100
12) Benzene	3.717	78	27469	0.89	ppmv #	93

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

42
~~44~~
EL 1-5-14

S832155

S832155

Container Profile 756760

File Options Reports Help

S832155

756760	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

S832155

- S832155
  - 90898 – EMPTY
  - 90897
    - 92362
      - LASB02087
    - 92363 - EMPTY
  - 90896
    - 92666 - EMPTY
    - 92665
      - LASB02093
  - 90895
    - 92238 – EMPTY
    - 92237

Task History

Transfer Details

Transfer Amount	Transfer Unit	Item	Measured Weight	Measured Weig...
99.9989555	%			

9-9-12

ATTACHMENT 1
Page 1 of 3

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: 5832155

6.2[4] Date Processed: 9-2-12

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: NONE

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

4.3[4][B] Platform Scale: Equipment No.: 019065
Cal. Due Date: 9-3-12

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

4.3[6] ($) Stationary Fire Watch has been established:
(> 300 PE-Ci Equivalent Combustible)
(SAC 5.10.1.7.2) NA
(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

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

Performed By: GERALD ESPINOSA / [signature] 123720 2-9-12
Waste Handling Tech (print) Signature Z # Date

5.[16] Prepared Parent Drum Weight (lb): 474.4 lb

6.2[5][A] Parent Drum Lead Blanket Weight (lb): 80 lb

ATTACHMENT 1
Page 2 of 3

4.1[6][B] Parent Waste Container No.: 5832155

6.2[5][B]/ 6.2[6] Total Parent Drum Weight (lb) 564.4 lb

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

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	90895		N/A	
10.1[4]	Daughter Drum Filter No.	CL 13360			
10.1[4]	Daughter Drum Bag Filter No.	W011602			
10.1[4]	Daughter Drum Purchase Order No.	415090			
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	NUKFIL	NUKFIL		
	Model No.	036DA	036DA		
	Serial No.	LL 207	LL 244		
	Date of Manufacture	12-11	12-11		
10.2[5]	POC ID No	90896	90897		
10.2[7][B]/10.2[6]	POC Item Description	SALTS PLASTIC	SALTS PLASTIC		
10.2[7][D]/10.2[8][D]	Bag-out Bag Filter No.	LL-207	LL-244		
10.2[13]	POC Assembly closed per Manufacturer's instructions. (Initial and Z#)	CM 240092	CM 240092		
10.2[14]	POC Assembly Gross Weight (lb)				
10.2[15]	POC Rad. Survey Results (mrem/hr)	250.5	241		
10.3[3][A]	Approx. Containerized Liquid Vol./Units	NA		N/A	
10.3[7][A]	Opaque/Non-penetrable Item Description:	LEAD SHIELDING			
10.3[5][A]	Free Liquid Volume/Units	3GAL			
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			
10.3[13]/10.4[12]/ 10.5[5]	Daughter Drum % Full (%)	40%			
10.5[4]	Description Waste Added During Processing	PLASTIC ABSORBANT			

ATTACHMENT 1
Page 3 of 3

4.1[6][B] Parent Waste Container No.: 5832155

Comments: SALTS, LEAD SHIELDING, PLASTIC, TAPE.

11.1[1] Performed By: Gerald ESPINOZA / Gerald E / 1237720 / 2-9-12
Waste Handling Tech (print) Signature Z # Date

11.1[7] Reviewed By: Anthony Vigil / Anthony V. / 1184864 / 2-23-12 0854
SOS/SOM (print) Signature Z # Date/Time

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

Drum ID#: 90895

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 #: 415090
Lot #: 0220644
Date of Manufacture: 2011

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 #: 3CPVC-1526PVC
Serial #: WO-1602
Date of Manufacture: 6/11

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 #: CL-1336
Date of Manufacture: 3/11

RECORD torque wrench information:

Filter torque wrench:		Jam Nut / Bung torque wrench:	
M&TE ID #:	040695	M&TE ID #:	040691
Cal Expiration Date:	9/12/12	Cal Expiration Date:	8/12/12
Range (ft-lbs or in-lbs):	40-200	Range (ft-lbs or in-lbs):	16-80
Tolerance:	+/-390 cw +/-690 ccw	Tolerance:	+/-390 cw +/-690 ccw

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

[x] Yes [ ] No

Print Name: L M Montaño Signature: LM Montaño Z#: 085042

5. Weigh Drum Assembly

RECORD weight information

Tare witght (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: L M Montaño Operator Sign: LM Montaño Z#: 085042 Date: 2/2/21

Verifier Print: GERALD ESPINOZA Verifier Sign: Gerald Espinoza Z#: 237720 Date: 2/9/12

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

DRUM ID#: 90895

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: 5-30-12

Range/ Value (ft-lbs): 20-80

--- 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.): 295.4

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: GERALD ESPINOZA [signature] Date: 2-9-12

Verifier Print/Sign: Don Pashvco [signature] Date: 02-09-12

WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

SR L 5

Production Control

Container ID: S832155 Container Type: 55-GAL Gross Weight (lbs): 320
Inner Seal #: 012061 Filter Prefix: LAVC Filter Serial #: 06503
AK Waste Stream: LA-MHD01.001 Certified RTR BDR: No BDR
TWSR Comments: LEACHED SOLIDS MST 12 RM 434
Total PE-Ci Activity: 7.33E+00 Equivalent Combustible PE-Ci: 2.75E+00 AM-241 PE-Ci: 5.95E-01
Total Fissile Gram Equivalents: 81.0 Total Surface Dose Rate (mrem/hr): 2
EPA Code(s): None
NCR RTR/NDA Comment: None
RTR Pre-Screen Date: 6/2/2007 Comment: Impenetrable Obj.
Certified RTR Comment: None

Prohibited Items:	☐ Sealed > 4 Liters	☑ Liquid	☐ Pressurized Container	☑ Impenetrable Item	☐ Other
Security Determination:				☑ Green	☐ Yellow
Remediation Determination:		☑ VE	RJ 12-1-11 ~~☐ 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: POC

Performed By: R. W. Jones / Signature / 117434 / 11-8-11
Production Control (Print) 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: Leached solids – nitrate salts
Net Wt: 260 lb. ~~Three items (2 about 66 lb each; 1 is 185 lb).~~ e VR 11/12/11 Three items (2 are ~66 lb each; and 1 is 185 lb). 11/12/11
May require RWP for >1,000 and <10,000 mrem/hr at 30cm

Performed By: Valerie Rhodes / Valerie Rhodes / 112609 / 11/12/11
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: OK to process. Heavy items. OK to proceed per Ops Mngr

Performed By: Clarissa Yolande / CYolande / 234079 / 12/1/11
TRU Remediation Operations (Print) Signature Z Number Date

Noncertified TRU Waste Drum Item Information

DrumID: 012061

Item No	ItemID	Process Status	Net Wt (kg)	Matrix	Meas Code	SNM (g)	MT	Auth (Pg/Ln)	Comments
1	IXFS-694-FB	EV	83.630	NITRATE SALTS		61.41	52	6/11	
2	IXFS-695-FB	EV	31.810	NITRATE SALTS		7.73	52	6/11	
3	IXFS-696-FC	EV	29.550	NITRATE SALTS		16.85	52	6/11	

Noncertified Waste Drum Material Summary

Gross Wt (kg): 144.9

Material Type	SNM (grams)	Items Net Wt (kg)
52	85.99	144.99
Totals	85.99	144.99

ATTACHMENT 1
Page 1 of 2

HYDROGEN/VOC SAMPLING USING GAS CHROMATOGRAPHY DATA SHEET

7.[1] Sample Date: 1/27/11

7.[7] Certified CCP Technician:

CCP (Print)	Signature	Z #	Date
Erik Loechell	Erik Loechell	1234153	1-31-11
	/	/	/

Container No. (7.[1]):	5832155	591424	5855200
Container Type (SWB, 110/85/55-gal) (7.[1]):	55gal	55gal	55gal
Current Filter Vent No. (7.[1]):	72	72	72
New Filter Vent No.: (7.[8][A]):	72	72	72
WIPP-Approved Filter Vent (7.[8][B]):	☑ SAT ☐ UNSAT	☑ SAT ☐ UNSAT	☑ SAT ☐ UNSAT
VOC	Value (ppm) (7.[10])		
Benzene			
Chlorobenzene			
Cyclohexane			
1,1-Dichloroethane			
1,2-Dichloroethane			
1,1-Dichloroethylene			
cis-1,2-Dichloroethylene			
Ethyl benzene			
Ethyl ether			
Toluene			
1,2,4-Trimethylbenzene			
1,3,5-Trimethylbenzene			
m- and p-Xylene			
o-Xylene			
Acetone			
1-Butanol			
Methanol			
Methyl ethyl ketone			
Methyl isobutyl ketone			
Total CCP VOC value (ppm) (7.[11]):	Ø	Ø	Ø

ATTACHMENT 1
Page 2 of 2

NOTE *Filtered vent data may be captured on a support organization data sheet.*

Container Number (7.[1]):	S832155	59424	S855200
Hydrogen Reading (ppm) (7.[10]):	397.60 ppm	1477.16 ppm	Ø ppm
Methane Reading (ppm) (7.[10]):	Ø ppm	Ø ppm	Ø ppm
Total VOC Reading (ppm) (7.[11]):	Ø ppm	Ø ppm	Ø ppm
Filter Type (7.[9][F][c]/7.[9][G][a]):	72	72	72
WIPP Approved (SAT/UNSAT) (7.[9][F][c]/7.[9][G][a]):	SAT	SAT	SAT
Torque Wrench M&TE/ID Number (7.[9][F][a]/7.[9][G][a]):	N/A	N/A	N/A
Torque Wrench Calibration Due Date (7.[9][F][a]/7.[9][G][a]):	N/A	N/A	N/A
Torque Wrench Tolerance (7.[9][F][a]/7.[9][G][a]):	N/A	N/A	N/A
VERIFY Torque Wrench is within acceptable range as specified on Cal Certificate. (7.[9][F][a]/7.[9][G][b])	☐ YES ☐ NO ☑ N/A	☐ YES ☐ NO ☑ N/A	☐ YES ☐ NO ☑ N/A
Filter Torque Value (7.[9][F][a]/7.[9][G][d]) *	N/A	N/A	N/A

* No torque value required for 072 or 073 filters – Record N/A as applicable

Comments:
N/C

11.1[1] Performed By: Alicia Herrera / [signature] 198450 / 1/31/11
Waste Handling Operator (print) Signature Z # Date

11.1[5] ☐ Deficiencies identified and submitted (e.g., PCR or FSR system).

☑ No deficiencies

11.1[7][A] WCRRF waste container satisfies the following criteria: ☑ SAT ☐ UNSAT

- Hydrogen – less than or equal to 32,000 ppm
- VOC – less than or equal to 7,000 ppm

11.1[7][B]/ Reviewed By: Kenny Romero Kenny Romero 111886 / 2.3.11
11.1[8] Waste Handling Supervisor (print) Signature Z # Date

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\110127c\
Data File : S832155.D
Acq On : 27 Jan 2011 1:45 pm (#1); 27 Jan 2011 1:44 pm (#2)
Operator : GR
Sample :
ListName : Unit 8
Misc : 55 GAL LFL DRUM FROM UNDER DRUM LID (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jan 27 13:53:16 2011
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	3.249	96	4299943	209.00 ppm	0.00
15) Chlorobenzene-d5	5.933	117	3574694	184.00 ppm	0.00
Target Compounds					Qvalue
1) Hydrogen	5.356	GC1	100678	397.60 ppm	100

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

Vocgas.m Thu Jan 27 13:53:24 2011

72-9-12 PROJECT NAME _____ NOTEBOOK NO. _____

2911 @ 2-9-12

0600 Assuming OCPF operations center Chelande
0615 Outside rounds started
0624 Starting inside rounds.
0634 Item #6 on rounds is OOS. Per CSE documentation OK to proceed.
0640 Inside rounds completed
0645 Outside rounds completed.
0711 Inside and outside rounds signed off by SOS.
0723 mode change performed we are now in operations.
0800 Starting to process drum 3845201
0833 Stack monitoring being performed.
0840 Starting movement from transportainer to transport vehicle.
0907 Bagging off 3845201 and POC, bagging on 3832155.
0931 movement complete from ~~transportation vehicle~~ transportainer to transport vehicle. Vehicle access gates have been restored.
0949 Starting movement ~~out of~~ into @ 2-9-12 59-69 from transportainer
0951 Loupia by SOS during bag out operations daughter bag out filter has fallen off. No contamination has been detected. SOM has been notified.
1003 Completed movement into 59-69.
1004 SOM notified QA and QA instructing that it is OK to continue operations per our compensatory measures currently in place. QA will be performing further testing on bags.
1010 CCP confirmed OK to continue with drum OK to ship drum will not need to HCR drum.
1040 ~~per~~ SOM not notified OPO center that when filter or bag came a piece of tape was immediately placed on opening. Tape was sampled within minutes and some contamination was detected levels were below 200dpm. RWP limits were not exceeded.
1313 Starting to direct 5 drums.
1406 Bagging on 3823187 and bagging off ~~3823~~ @ 2-9-12 3832155 and 2 POCS.
1412 bag off complete
1415 Operators reporting to SOS about filter starting to peel off on another bag during bag off. No contamination detected.
1438 Starting movement out 59-69.
1515 Starting inside rounds
1525 Starting outside rounds
1526-1535 Item #10 on rounds is OOS. Per CSE documentation OK to proceed.

SIGNATURE Continued on next page DATE Chelande 20

2-9-12 ~~1-9-12~~ @ 2-9-12

PROJECT NAME _____ NOTEBOOK NO. _____

1539 bagging OB 3823187 and PCC and bagging on 3862959
1540 Completed inside rounds.
1633 Inside and Outside rounds signed off by SLS.
1634 mode change performed we are now ~~[illegible]~~ arm.
1640 end of day DCCEF Operations center secure Closed

No further entries this page

PROJECT NAME 2.9.12 NOTEBOOK NO.

0600 Reviewed shift turnover from previous shift and assumed the WCRR SOM position (Allen Sherf)

0605 Attended the pre-job briefing conducted by Shift Operations Supervisor. Concerns brought up by operators was the amount of liquid in the drum and the amount of absorbent being used per manufacture instructions. SOS will follow up with manufacture and will speak with Energy Solutions on ordering additional absorbent.

0625 Mode change complete. WCRR GRED and SD-69 from WARM to OPERATIONS.

0951 Reported by the operation center and SOS that operations personnel notified them that while they were bagging the waste a daughter drum the operator removed the tape from the nuclear bag and the filter came off. The operator was following their procedure as written and all compensatory measures from standing bag were being followed. No CAMs were reported as elevated and no contamination was detected. The bag was immediately placed back on to the daughter drum.

1004 SOM spoke to QA Robert Trujillo ~~and~~ regarding nuclear bag and incident that occurred inside the bag with a bad filter. He advised that as long as the compensatory measures were in place and being followed and because this was the first bag from the batch that operation has successfully done operation should remain as usual. He will notify his management and will follow up with a phone call if anything changes.

1006 SOM notified DM about nuclear bag issue. He concurred with QA recommendations. SOM spoke with RP-I supervisor and he concurred as well.

1020 QA Robert Trujillo followed up with a phone call and he said his management concurred with forward. He also said he might come by today to look at nuclear bag in ARTIC. He recommend that operations follows up with any new issues identified with bag with QA.

1032 SOM spoke with SOS and requested he follow up with visiting prepping operations in ARTIC and ensuring nothing has changed.

1040 Reported by an RCT that when he/she on bag came a piece of tape was immediately placed on opening. Tape was removed within minutes and some contamination

SIGNATURE DATE 20

DATE 20

PROJECT NAME 2.9.12 continued. NOTEBOOK NO.

1040 was detected. Pumps were below 200 RPM. No RWP limits were exceeded.

1300 Staff meeting held at 50-54. SOM discussed issues with HW support (facility) to inspect new room trash from WCRRF. Lieutenant Joe K. Sandoval will work on EWD and OM will work on getting a facility. WARM Monday through weekend in order to meet liquid in drums.

1445 Reported Jerry SOS that an additional bag inside 50-69 had integrity issues with liner.

1450 Hotel entry - ~~SOS walked down~~ 2.9.12 1400 SOS, OA, OA manager walked down prepping operations in ARTIC. Per SOS OA and SOS determined that maybe using a smaller piece of tape on filter will help prevent that the filter doesn't come apart with the force of the tape. Operators will be briefed on using smaller piece of tape. If other bags are still failing OA will be notified.

1500 OM was given status of bags with positive dispatch letters.

1632 Model change complete: WCRR YARD and 50-69 from OPERATIONS to WARM.

1705 Relinquishing the watch [signature]

[signature]

SIGNATURE [signature] DATE 2.9 20 12
READ AND UNDERSTOOD DATE 20

247

PROJECT NAME WCRR SOS LOG BOOK NOTEBOOK NO.

2-19-12

0602 Reviewed SOS Turnover Assuming SOS Position
0615 shift brief Conducted.
0700 Shift brief Concluded
0711 Reviewed inside and outside Rounds
0723 Mode change complete WCRR Yard And SO-69 IN operations mode.
0951 notified by Inside personal that during bag out operation A Filter tape was peeled off and top layer off filter was peeled of SOS notified operators ok to continue do to All Comp. measures In place. for this issue.
1010 CCP Notified ok to use bag as is no further action necessary to ship
1040 notified by RCT That during bag off operation off of the drum above There was contamination detected at 200dpm well ~~bellow~~ below RWP limit.
1215 Securing SOS Position
1215 Reviewed SOS Turnover Assuming SOS Position
1400 WENT WITH QA TO LOOK AT FILTERS ON NUCFIL BAGS WE DETERMINED THAT MAYBE USING A SMALLER TAPE ON FILTER WILL HELP!
1445 NOTIFIED ~~NRC~~ THAT ANOTHER BAG HAD INTEGRETY ISSUES.
1633 REVIEWED INSIDE AND OUTSIDE ROUNDS
1634 MODE CHANGE COMPLETE WE ARE IN ~~WARM~~ WARM MODE.
1640 END OF SHIFT SECURING WCRR SOS POSITION.

GMO 2/10/12

No Further entries on this PAGE.

SIGNATURE _____ DATE _____ 20 ____
READ AND UNDERSTOOD _____ DATE _____ 20 ____

Working Copy
Date: 10-23-12 JL

ATTACHMENT 1
Page 1 of 4

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: 90895

6.2[4] Date Processed: 10-23-12

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, D011

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: 7-31-12

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 [illegible] / 10-23-12
Waste Handling Tech (print) Signature Z # Date

ATTACHMENT 1
Page 2 of 4

4.1[6][B]	Parent Waste Container No.:	90895
5.[18]	Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable:	295.4 lb
6.2[5][A]	Parent Drum Lead Blanket Weight (lb):	123.0 lb
6.2[5][B]/ 6.2[6]	Total Parent Drum Weight (lb)	418.4 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
	N/A		

ATTACHMENT 1
Page 3 of 4

4.1[6][B] Parent Waste Container No.: 90895

	Daughter Drums				
10.1[4] 10.2[4]	Daughter Drum No.	98237			
10.1[4]	Daughter Drum Filter No.	AM-840		N/A	
10.1[4]	Daughter Drum Bag Filter No.	L-3686			
10.1[4]	Daughter Drum Purchase Order No.	4162165			
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			N/A	
10.3[7][A]	Opaque/Non-penetrable Item Description:	LEAD			
10.3[9][A]	PCB-contaminated Waste Description	N/A			
10.3[9][B]	PCB Item ID No.				
10.3[10]	Remaining Waste Description	SEE COMMENTS			
10.3[11]/10.4[10]/ 10.5[4]/10.6[8]	Daughter Drum % Full (%)				
10.5[3]/10.6[2]	Description Waste Added During Processing	KITTY LITTER, BAG OUT STUBS			

ATTACHMENT 1
Page 4 of 4

4.1[6][B] Parent Waste Container No.: 90895

Comments: PLASTIC, SALTS, LEAD, KITTY LITTER, HEX ARMOR GLOVES

11.1[1] Performed By: BRIAN GALLEGOS / [signature] / 247129 / 10-23-12
Waste Handling Tech (print) Signature Z # Date

11.1[7] Reviewed By: JOE JEREZ / [signature] / 224152 / 10-24-12 1205
SOS or designee (print) Signature Z # Date/Time

ATTACHMENT 2
Page 1 of 1

WCRRF OVERPACK DRUM ASSEMBLY PREPARATION DATA SHEET

5.[3] Overpack drum information:

Purchase Order No.: 413854
Lot No.: 2114226
Manufacture Date: 10

5.[8] Overpack filtered vent information:

Manufacturer: NucFil
Model No.: 013
Serial No.: HL-798
Manufacture Date: 8-11

Overpack filtered vent and 2 in. bung torque wrench information:

	Filtered Vent	2 in. Bung
M&TE No.:	040694	021151
Cal. Expiration Date:	9-26-13	6-11-13
Tolerance:	±4% cw ±6% ccw	±3% cw ±6% ccw

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

Performed By: Steven Mandragin / Steven Mandragin 122478 10-23-12
Waste Handling Technician (print) Signature Z # Date

5.[12] Filtered Vent torque value [120 in-lb (96 to 144 in-lb)]: 120 in-lb

5.[15] 2 in. bung plug torque value: 30 ft-lb

Comments: N/A

8.1[1] Performed By: Steven Mandragin / Steven Mandragin 122478 10-23-12
Waste Handling Technician (print) Signature Z # Date

8.1[5] ☐ Deficiencies identified and submitted (e.g., PCR or FSR system).
☑ No deficiencies

8.1[7] Reviewed By: Jose Jerez / [signature] 122458 10-24-12
Supervisor or designee (print) Signature Z # Date

Working Copy
Date: 10-23-12

ATTACHMENT 5
Page 1 of 1

WCRRF OVERPACK DRUM CLOSURE DATA SHEET

7.[19] Overpack Drum Unique Identifier No.: 92238

7.[25] Overpack drum closure ring torque wrench information:
M&TE No.: 040329
Cal. Expiration Date: 3-15-2013
Range in ft-lb: 16-80
Tolerance: ±3% CW ± 6% CCW

7.[26] Torque wrench listed above is within the acceptable ranges as displayed on the calibration certificate. ☑ Yes ☐ No

Performed By: BRIAN GALLEGOS / [signature] / [illegible] 10-23-12
Waste Handling Technician (print) Signature Z # Date

7.[28] Overpack drum closure ring torque value: 60 ft-lb

7.[31] Threaded lug of the drum closure ring is not touching the jam nut and the locking ring lugs are not touching. ☑ SAT ☐ UNSAT

7.[36][B] Platform scale serial number: 019065
Platform scale calibration expiration date: 7-31-13

7.[36][D] 85-gal overpack drum gross weight (lb): 1161.10 lb

Comments: N/C

8.1[1] Performed By: BRIAN GALLEGOS / [signature] / [illegible] 10-23-12
Waste Handling Technician (print) Signature Z # Date

8.1[5] ☐ Deficiencies identified and submitted (e.g., PCR or FSR system).
☑ No deficiencies

8.1[7] Reviewed By: Jose Perez / [signature] 221452 10-24-12
Supervisor or designee (print) Signature Z # Date

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

Drum ID#: 90237

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 #: 4162605
Lot #: 0229225
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 #: 60CPVC1.5-25PVC
Serial #: L-36846
Date of Manufacture: 06-2012

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 #: AN-840
Date of Manufacture: 01-2012

RECORD torque wrench information:

Filter torque wrench:		Jam Nut / Bung torque wrench:	
M&TE ID #:	040694	M&TE ID #:	021151
Cal Expiration Date:	09-26-13	Cal Expiration Date:	06-11-13
Range (ft-lbs or in-lbs):	40-200	Range (ft-lbs or in-lbs):	16-80
Tolerance:	±4% CWI ±3% CCW	Tolerance:	±3% CWI 6% CCW

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

☑ Yes ☐ No

Print Name: BRIAN GALLEGOS Signature: [signature] ZR: 267129

5. Weigh Drum Assembly

RECORD weight information

Tare wight (lbs): 75.6
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: BRIAN GALLEGOS Operator Sign: [signature] ZR: 267129 Date: 10-18-12

Verifier Print: DON PACHECO Verifier Sign: [signature] ZR: 24602-2 Date: 10-23-12

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

DRUM ID#: 92237

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 #: 040329

Cal expiration date: 3-15-13

Range/ Value (ft-lbs): 14-80

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.): 389.8

Scale ID#: 019005

✓ 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: BRIAN GALLEGOS [signature] Date: 10-23-12

Verifier Print/Sign: [signature] Date: 10-23-12

WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

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Production Control

Container ID: 90895 Container Type: 55-GAL Gross Weight (lbs): 295
Liner Seal #: None Filter Prefix: None Filter Serial #: CL-1336
WDP Waste Stream: LA-MHD01.001 Certified RTR BDR: No BDR
TWSR Comments: PARENT #S832155
Total PE-Ci Activity: 2.44E+00 Equivalent Combustible PE-Ci: 9.16E-01 AM-241 PE-Ci: 1.98E-01
Total Fissile Gram Equivalents: 27.0 Total Surface Dose Rate (mrem/hr): 26
EPA Code(s): D008 D007 D009 VE 10/9/12
NCR RTR/NDA Comment: None
RTR Pre-Screen Date: 6/27/2012 Comment: Impenetrable, Liquid is present, S3000
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: TBD Production Control Comments: Need to add EPA Codes D007 & D009.
Nitrate salts mixed with Waste Lot 778 from previous repack campaign. A minimum of 1.2 volumes of kitty litter/zeolite must be mixed with 1.0 volume of nitrate salts.
Performed By: Susan Ramsey / Susan B. Ramsey / 100681 / 9/4/12
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: Nitrate Salts/debris
Net Wt
Parent drum (SEDS attached) was part of WCRR nitrate salt repack campaign. This resulting daughter 55-gal drum may contain nitrate salts or a combination of nitrate salts and debris. RTR PS identifies impenetrable item(s) (likely homogeneous nitrate salts or debris such as lead) and liquids (requiring adjustment to the admixture/nitrate salt ratio). Nitrate salts carry waste codes for chromium, lead, and mercury. No chemicals present. May require RWP for > 100 & < 1000 mrem/hr
Net Wt: 226 lb
Performed By: Valerie Rhodes / Valerie Rhodes / 112609 / 10/10/12
WDP Engineering (Print) Signature Z Number Date
Valerie Rhodes

TRU Remediation Operations

☑ Waste Container Information Evaluated ☐ Less Than 170 lbs RTR Video Available
Other Specific Safety Concerns: Use Kevlar gloves when processing waste. Do not push or press on waste
Processing Determination: ☑ Accept ☐ Reject
TRU Remediation Operations Comments: Use proper ratio of kitty litter to waste in accordance with the procedure
Performed By: Jose Perez / Jose Perez / 221452 / 10-11-12
TRU Remediation Operations (Print) Signature Z Number Date
LL Z# 249750 10/15/12

IHS Review: RB 206362 10.11.12

Noncertified TRU Waste Drum Item Information

DrumID: 012061

Item No	ItemID	Process Status	Net Wt (kg)	Matrix	Mass Code	SNM (g)	MT	Auth (Pg/Ln)	Comments
1	IXFS-694-FB	EV	83.610	NITRATE SALTS		61.41	52	6/11	
2	IXFS-695-FB	EV	31.810	NITRATE SALTS		7.73	52	6/11	
3	IXFS-696-FC	EV	29.550	NITRATE SALTS		16.85	52	6/11	

Noncertified Waste Drum Material Summary

Gross Wt (kg): 144.9

Material Type	SNM (grams)	Items Net Wt (kg)
52	85.99	144.99
Totals	85.99	144.99

ATTACHMENT 1
Page 1 of 1

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

5.[1] Sample Date: 10/5/12

Container No. (5.[1])	90895					
Container type sampled (e.g., 55-gal, 85-gal, 110-gal, or SWB) (5.[1])	55-gal					
Filtered Vent Type (5.[1])	1995					
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: SARA ARAGON (CCP (Print)) 237475 (Z #)

Reviewed By: NATHAN WALES (CCP (Print)) 238866 (Z #)

Comments: None

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 #) 10/10/12 (Date)

InstName : Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\121005c\
Data File : 90895.D
Acq On : 5 Oct 2012 12:55 pm (#1); 05-Oct-12, 12:54:20 (#2)
Operator : NW
Sample :
Misc : 55 gallon LFL drum through 019DS,unobstructed (Sig # ; Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Oct 05 13:02:37 2012
Quant Method : C:\msdchem\1\METHODS\vocgas.m
Quant Title : Flammable Gas Analysis
QLast Update : Wed Sep 05 10:53:25 2012
Response via : Initial Calibration

Compound	R.T.	Qion	Response	Conc Units	Dev(Min)
Internal Standards					
3) Fluorobenzene	3.578	96	6801699	201.25 ppmv	3.04
15) Chlorobenzene-d5	5.904	117	5853478	177.[illegible] ppmv	3.03
Target Compounds					Qvalue

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

10-23-12

0700 Assuming WRRF operations center Cleland.
0705 Starting outside and inside rounds.
0715 Pre-job being conducted by SOS.
0734 Inside rounds complete.
0730 Outside rounds complete.
0750 Inside and outside rounds signed off by SOS
0742 CSE completed 151631 TASD-69 building structure integrity.
0800 Mode change entered TASD-69 and WRRF grand now in operations
0802 bagging on 90888
0804 bag on to complete.
0814 notified by lead RCT they will no be able to support lunch coverage due to training.
0903 Bagging off 90888 and bagging on 90993
0910 Bagging off complete.
1001 bagging off 90993 and bagging on 90939
1013 starting movement into SD-69
1022 bag on and bag off is complete.
1115 bagging off 90939 and bagging on 90965
1134 bag on bag off complete.
1149 Operators building TASD-69 for lunch no RCT coverage.
1250 Operators entering TASD-69 to continue processing.
1405 starting inside rounds.
1410 starting outside rounds.
1426 bagging off 90965 and bagging on 90895.
1435 Outside rounds completed
1438 Completed inside rounds.
1451 bag on, bag off complete.
1546 bagging off 90895
1604 bag off to complete
1630 mode change performed TASD-69 and WRRF grand now in warm mode.
1631 end of day WRRF operations center secure - Cleland.

JR

no further entries this page

SIGNATURE DATE 20
READ AND UNDERSTOOD DATE 20

10-23-12 UXRR 505 Log Book

0600 Assuming 505 position for the day - Jan Jay
0605 Starting Pre Job brief. Engineering performing Building integrity inspection. Should take about 30 minutes. No shipments in or out today. Processing daughter drums from SP#2.
0630 Concluded Pre-Job brief
0650 Inside and outside rounds signed off
0742 Engineer completed building integrity ~~inspect~~ inspection 10-23-12
0754 Waiting for SSW to be onsite to go into Ops Mode.
0800 Mode Change Completed. In Operations Mode.
0815 Lead RCT notifying Operations that they will not be able to support us working through lunch due to mandatory training they need to attend and also short handed on RCT's due to wounds.
0830 Late Entry. At 0800 first drum was bagged on
1145 First Crew breaking for lunch. Second Crew on standby waiting for RCT's so that they can go into process drum #4 that was bagged on prior to breaking for lunch.
1245 Second Crew going in to start processing Parent drum #4 for the day
1430 Signed off on outside rounds
1512 Signed off on inside rounds
1630 Mode Change WARM in the yard and SG-69.
10-23-12 1634 Securing 505 position for the day. Jan Jay
HG

No further entries on this page.

10-23-12

0100 Assumed the WCRR SOM position. [signature]
0115 Per per taping conducted by SOS. Disposed supplies needed such as kitty litter. Also the building integrity ISI will be conducted first thing this morning.
0630 Notified by OCO that there is a hole in the mens restroom causing mice to come into the building. Pest control was called out to come and pick up another rodent. SOM notified Jack Vigil who will get with MSS on a path forward.
0800 Made change complete WCRR YARD 150 69 from WARM/WARM to OPERATIONS/OPERATIONS.
0830 Notified by RP-1 Supervisor that they will not be able to support operations through lunch due to being short staffed due to training.
1129 SOM and SSM worked on ensuring an LWD is available for D/S steps WOS testing. OM was notified and is helping in getting proper approvals for NFT to use existing LAWS LWD to allow changing of parts.
1300 Met with Jack Vigil to go over maintenance for the upcoming months. Offered weekends in November. Jack Vigil will work with MSS on maintenance.
1535 Notified by inventory control that he is having problems with printing labels through oracle database. A request to update help has been sent. SOM requested inventory control to try using the operation center computer.
1547 Signed off on WCRRF Quarterly Combustible Loading Surveillance 4.4.1. Requested Operation center to update status board and TSR/ISI compliance tracking database. The total combustible quantity equalled to 0.56 lb/ft² which meets are 0.60 lb/ft² requirement.
1630 Made change complete WCRR YARD 150 69 from OPERATIONS/OPERATIONS to WARM/WARM.
1645 Securing the SOM watch. [signature]

11-6-12

No further entries this page

[signature] 10-23 12

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-HERTR-13-0022
Examination Date:	3/7/2013
Waste Container ID:	92237
Video/Audio Recorded Media Number:	LA-HERTR-13-0022 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 12
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.: 175.5 kg Tare Wt.: 33.4 kg Net Wt.: 142.1 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: 92237

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 Liner (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):	22.1
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	8.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	112.0
Soils (S):	
Total WMP Weight:	142.1

CCP Radiography Data Sheet

Waste Container ID: 92237

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 and liner lid, therefore, liner is vented.~~ N/A ms 3-7-13 MS 3-7-13

RTR Operator:

Michael Simmons		3/7/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	92237	Count Sequence Number:	22324
Operator:	D3PW2DK1\operator		
Assay Start:	3/21/2013 9:20:14 AM		
Description 1:	1LANDA1735		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 142.0 kg	Net:	142.0 kg
Container:	Volume: 208.0 l	Full:	90.0 %
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:	22324	Batch Number:	1LANDA1735
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:	92237	Analysis Date:	3/21/2013

Net Weight	142000.0 g		
Pu mass	4.95E+001	+-	9.34E+000 g
TRU Alpha Activity	8.00E+000	+-	2.43E+000 Ci
TRU Activity Concentration	5.64E+004	+-	1.71E+004 nCi/g
Pu-239 Equivalent Activity	8.12E+000	+-	2.43E+000 Ci
Pu-239 FGE	4.67E+001	+-	8.76E+000 g
Decay heat	2.59E-001	+-	8.08E-002 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	8.17E-002	5.84E-005	1.14E-005	3.23E-006
PU238	4.55E-003	7.86E-002	1.48E-002	3.62E-005
PU239	4.65E+001	2.92E+000	5.51E-001	1.35E-003
PU240	2.97E+000	6.83E-001	1.29E-001	3.15E-004
AM241	1.24E+000	4.32E+000	2.36E+000	7.97E-002
PU241	5.86E-002	6.09E+000	1.15E+000	2.81E-003
PU242	9.91E-003	3.93E-005	7.42E-006	0.00E+000
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	7.61E-007
U233	<LLD	<LLD	0.00E+000	7.05E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	2.11E-006
U238	<LLD	<LLD	0.00E+000	2.19E-005
AM243	1.27E-003	2.57E-004	5.05E-005	9.54E-006

Errors quoted at 1.000 sigma

Operator: _____ Date: 3-26-13

ITR: _____ Date: 3-27-13

Automated Independent Technical Review

Count Sequence Number: 22324 Batch Number: 1LANDA1735
Counter ID: MCS HENC #1
Container ID: 92237
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 3/21/2013

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: 3-25-13

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **92237**

BDR Number: **LA13FG2032**

Sampling Date: **3/28/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	90.37	U
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\130328c\
Data File : 92237.D
Acq On : 28 Mar 2013 1:13 pm (#1); 28-Mar-13, 13:13:17 (#2)
Operator : NW
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 28 13:21:42 2013
Quant Method : C:\msdchem\1\METHODS\vocgas.m
Quant Title : Flammable Gas Analysis
QLast Update : Thu Jan 24 09:52:49 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
3) Fluorobenzene	3.548	96	3981148	201.25	ppmv	-0.02
15) Chlorobenzene-d5	5.887	117	3404250	177.00	ppmv	-0.01

Target Compounds Qvalue

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

ATTACHMENT 1
Page 1 of 4

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: 90896

6.2[4] Date Processed 1-22-13

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] (S) 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] (S) 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] (S) 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 / [signature] / 267129 1-22-13
Waste Handling Tech (print) Signature Z # Date

ATTACHMENT 1
Page 2 of 4

4.1[6][B] Parent Waste Container No.: 90896

5.[18] Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable: 378.2 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) 378.2 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:

N/A

EWMO-FOD (print) Signature Z # Date

ATTACHMENT 1
Page 3 of 4

4.1[6][B] Parent Waste Container No.: 708940

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No	92605			
10.1[4]	Daughter Drum Filter No.	JL-1148	N		
10.1[4]	Daughter Drum Bag Filter No.	L-6083		A	
10.1[4]	Daughter Drum Purchase Order No.	501011			
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				
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				
10.3[5][A]	Free Liquid Volume/Units		N		
10.3[7][A]	Opaque/Non-penetrable Item Description.		N		
10.3[9][A]	PCB-contaminated Waste Description				
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[8]	Daughter Drum % Full (%)	100%			
10.5[3]/10.6[2]	Description Waste Added During Processing	BAM OUT STUBS			

ATTACHMENT 1
Page 4 of 4

4.1[6][B] Parent Waste Container No.: 90896

Comments: ROOM TRASH, PLASTICS, SALTS, POC LIDS, CARDBOARD
KITTY LITTER

11.1[1] Performed By: BRIAN GALLEGOS [signature] 2071129 1-22-13
Waste Handling Tech (print) Signature Z # Date

11.1[7] Reviewed By: G Mk [signature] H9235 1-24-13 1050
SOS or designee (print) Signature Z # Date Time

Work ~~Mk~~ UET Copy
Date: 1-17-13

ATTACHMENT 2
Page 1 of 1

WCRRF OVERPACK DRUM ASSEMBLY PREPARATION DATA SHEET

5.[3] Overpack drum information:

Purchase Order No.: 413724
Lot No.: 220114
Manufacture Date: 10

5.[8] Overpack filtered vent information:

Manufacturer: Duc Fil
Model No.: 013
Serial No.: IL-56
Manufacture Date: 9-11

Overpack filtered vent and 2 in. bung torque wrench information:

	Filtered Vent	2 in. Bung
M&TE No.:	040654	038369
Cal. Expiration Date:	9-26-13	12-19-13
Tolerance:	±4% cw ±6% ccw	±3% cw ±6% ccw

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

Performed By: Michael Ramirez / [signature] 1457231 1-17-13
Waste Handling Technician (print) Signature Z # Date

5.[12] Filtered Vent torque value [120 in-lb (96 to 144 in-lb)]. 120 in-lb

5.[15] 2 in. bung plug torque value: 30 ft-lb

Comments: N/C

8.1[1] Performed By: Michael Ramirez / [signature] 1457231 1-17-13
Waste Handling Technician (print) Signature Z # Date

8.1[5] ☐ Deficiencies identified and submitted (e.g., PCR or FSR system).
☑ No deficiencies

8.1[7] Reviewed By: [signature] / [signature] 1457231 1-20-13
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 5
Page 1 of 1

WCRRF OVERPACK DRUM CLOSURE DATA SHEET

7.[19] Overpack Drum Unique Identifier No.: 92666

7.[25] Overpack drum closure ring torque wrench information:
M&TE No.: 038367
Cal. Expiration Date: 3-16-13
Range in ft-lb: 10-80
Tolerance: ±3% CW ±6% CCW

7.[26] Torque wrench listed above is within the acceptable ranges as displayed on the calibration certificate. ☑ Yes ☐ No

Performed By: Brian Gallegos / [signature] / 267129 1-22-13
Waste Handling Technician (print) Signature Z # Date

7.[28] Overpack drum closure ring torque value: 60 ft-lb

7.[31] Threaded lug of the drum closure ring is not touching the jam nut and the locking ring lugs are not touching. ☑ SAT ☐ UNSAT

7.[36][B] Platform scale serial number: 019065
Platform scale calibration expiration date: 7-31-13

7.[36][D] 85-gal overpack drum gross weight (lb): 324.4 lb

Comments: N/A

8.1[1] Performed By: Brian Gallegos / [signature] / 267129 1-22-13
Waste Handling Technician (print) Signature Z # Date

8.1[5] ☑ Deficiencies identified and submitted (e.g., PCR or FSR system).
☐ No deficiencies

8.1[7] Reviewed By: [signature] / [signature] / 149238 1-24-13
Supervisor or designee (print) Signature Z # Date

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

Drum ID#: 92465

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 #: 56101
- Lot #: 533572
- Date of Manufacture: 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 #: AC PVC 1-3-2-SPUC
- Serial #: [illegible] 1208
- Date of Manufacture: 6-12

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 #: 019 DA
- Serial #: 3L-1148
- Date of Manufacture: 10/11

RECORD torque wrench information

Filter torque wrench:
- M&TE ID #: 046654
- Cal Expiration Date: 6-28-13
- Range (ft-lbs or in-lbs): 40-200
- Tolerance: ±4 cw ±6 ccw

Jam Nut / Bung torque wrench:
- M&TE ID #: 028369
- Cal Expiration Date: 12-18-13
- Range (ft-lbs or in-lbs): 10-300
- Tolerance: ±3% cw ±3% ccw

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

Print Name: Michael Romero Signature: [signature] ZP: 182723

5. Weigh Drum Assembly

RECORD weight information
- Tare weight (lbs): 76.0
- File ID #: 017CAP5

- [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, ~8" 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 Romero Operator Sign: [signature] ZP: 182723 Date: 1-17-13

Verifier Print: Brian Gaudens Verifier Sign: [signature] ZP: 267129 Date: 1-22-13

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

DRUM ID#: 92605

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 #: 034387

Cal expiration date: 3-14-13

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): 255.6

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 1-22-13

Verifier Print/Sign: [illegible] Date 1-22-13

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WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Production Control

Container ID: 90896 Container Type: POC Gross Weight (lbs): 375

Container Seal #: None Filter Prefix: None Filter Serial #: EL-441; EL-484

Waste Stream: LA-MHD01.001 Certified RTR BDR: No BDR

TWSR Comments: PARENT #S832155 WTS-12STD-896

Total PE-Ci Activity: 2.44E+00 Equivalent Combustible PE-Ci: 9.16E-01 AM-241 PE-Ci: 1.98E-01

Total Fissile Gram Equivalents: 27.0 Total Surface Dose Rate (mrem/hr): 2

EPA Code(s): D008 D007 D009 Nitrate salts

NCR RTR/NDA Comment: None

RTR Pre-Screen Date: None Comment: None

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: TBD Production Control Comments: Need to add EPA codes D007 & D009

Nitrate salts mixed with Waste Lock 770® from previous repack campaign. A minimum of 1:2 volume of kitty litter to waste must be mixed with 1:0 volume of vermiculite.

Performed By: Susan Ramsey (Production Control (Print)) Signature: [signature] Z Number: 100681 Date: 9/10/12

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 – POC

Net Wt: 65 lb Parent drum (SEDS attached) was part of WCRR nitrate salt repack campaign using Waste Lock 770®. This resulting daughter POC is being repacked to adjust the admixture/nitrate salt ratio. Nitrate salts carry waste codes for [redacted] and mercury. No chemicals present. May require RWP for > 100 & < 1000 mrem/hr

Performed By: Valerie Rhodes (WDP Engineering (Print)) Signature: [signature] Z Number: 112609 Date: 10/3/12

TRU Remediation Operations

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

Other Specific Safety Concerns: Use proper PPE when processing 10-11-12 waste. Do not push or press on waste with hands. Utilize hazmat gloves & tools to handle waste.

Processing Determination: ✓ Accept Reject

TRU Remediation Operations Comments: Use proper ratio of kitty litter to waste in accordance with the procedure

Performed By: Jose Jerez (TRU Remediation Operations (Print)) Signature: [signature] Z Number: 221452 Date: 10-11-12

Job Z# 249750 10/19/12

HS REVIEW: RB 206362 10.4.12

Noncertified TRU Waste Drum Item Information

DrumID: 012061

Item No	ItemID	Process Status	Net Wt (kg)	Matrix	Mass Code	SNM (g)	WT	Auth (Pg/Ln)	Comments
1	IXPS-494-PB	EV	51.650	NITRATE SALTS		61.41	52	6/11	
2	IXPS-495-PM	EV	11.510	NITRATE SALTS		7.73	52	6/11	
3	IXPS-496-PC	EV	29.550	NITRATE SALTS		16.88	52	6/11	

Noncertified Waste Drum Material Summary

Gross WT (kg): 144.9

Material Type	SNM (grams)	Items Net Wt (kg)
52	85.99	144.99
Totals	85.99	144.99

ATTACHMENT 1
Page 1 of 1

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

5.[1] Sample Date: 10/5/12

Container No. (5.[1])	908896					
Container type sampled (e.g., 55-gal, 85-gal, 110-gal, or SWB) (5.[1])	POC					
Filtered Vent Type (5.[1])	19 DS					
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 N/A	☐ 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: SARA ARAGON (CCP (Print)) 237975 (Z #)

Reviewed By: NATHAN WALES (CCP (Print)) 238866 (Z #)

Comments: Per attached email, container has been verified as POC

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 #) 10/10/12 (Date)

InstName : Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\121005c\
Data File : 90896.D
Acq On : 5 Oct 2012 2:36 pm (#1); 05-Oct-12, 14:36:08 (#2)
Operator : NW
Sample :
Misc : 55 gallon LFL drum through 019DS,unobstructed (Sig #1); (Sig #2;
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Oct 05 14:44:35 2012
Quant Method : C:\msdchem\1\METHODS\vocgas.m
Quant Title : Flammable Gas Analysis
QLast Update : Wed Sep 05 10:53:25 2012
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
3) Fluorobenzene	3.588	96	6202670	201.25 ppmv	0.05
15) Chlorobenzene-d5	5.904	117	5494301	177.00 ppmv	0.03

Target Compounds	Qvalue

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

1-22-13
0600 Assuming WCRRF operations center - Arelande.
0615 Pre job briefing being conducted by SRS.
0635 Starting inside rounds and outside rounds
0644 Pre job concluded.
0659 Item 61 OOS, POD in place, OK to proceed with rounds
0702 Inside rounds complete ~~0702~~ 01-22-13
0715 Inside and outside rounds signed off by OOO.
0730 Notified by Operators that station 1 Right and left hand gloves will need to be changed out per RCT's.
0739 RCT's having some problems with benthold wading OOR smears to be counted prior to starting glove changes.
0858 Starting glove changes on station 1.
0928 Completed glove changes on station 1
0930 mode change performed 50-69 and WCRRF yard in operations.
0932 Starting to denist and will be bagging on 97936B3
0951 Permission granted to lower vehicle access gates for loading of transport vehicle
0959 Denesting and bag on is complete.
1025 PPE Check is sat.
1052 bagging off 97936B3 and POC, bagging on 90896
1057 Vehicle access gates have been restored, movement to transport vehicle is complete.
1120 bag on, bag off complete, PPE Check is complete.
1207 bagging off 90896, bagging on 90893, PPE Check is sat.
1234 bag on, bag off complete, PPE Check is sat
1406 Starting movement into 50-69
1430 notified by Operators center liquid in drum with pH of 3 notifying SRS. Operators will be introducing neutralizer on next bag off. PPE Check is sat
1532 bagging off 90893, bagging on 90900 ppe check is sat
1600 Starting inside rounds
1610 Starting outside rounds
1629 Item 61 is OOS POD in place, OK to continue
continued on next page - Arelande

Int

1-22-13 Continued from previous page - Crelande
1629 Completed inside rounds. PPE Check w/ Sat.
1702 Starting movement out of 50-69.
1719 Movement Complete out of 50-69.
1722 Bagging off 90900
1746 bag off complete.
1758 mode change performed TA50-69 and WCRRF yard no
1/22/13 ~~1830~~ 2/1/2013 in warm standby.
JJ 1830 end of day WCRRF Operations Center Secure - Crelande
MG

No further entries this page

0600 Assumed WCRR SOM position
0615 Attended pre job brief conducted by SOS. Safety topic covered use of seat belts, both on the job and off
0630 Talked to OSPOT regarding todays shipments. They may be able to support 2 outgoing shipments and leave tomorrow for incoming.
0705 Notified by SOS that gloves on Station 1 will require to be changed out prior to going operational
0715 Rounds completed and reviewed as well as RCRA inspection
0805 Left message w/ Southwest Office Supply regarding Xerox copier - need repairs on current copier and/or have new one on order delivered.
0820 Notified by DUS PIC that he is no longer authorized as Area G operator core quals - needs to be reauthorized by OM prior to DUS being able to operate.
0928 Glovebox glove change out complete
0930 Completed Mode Change: WCRR Yard / Bldg 50-69 from Warm / Warm to Operations / Operations
0932 Bagging on first drum.
1050 Reviewed WO # 454194-01 to repair heater in 50-194
1200 Called into weekly solution package meeting and LFL status. This weeks shipments are on schedule. Area G will LFL 40 drums between today and tomorrow which will fill in next weeks shipments (all SP-57 drums).
1400 Notified by OM that tomorrows AM shipment will not be able to ship until after mandatory ADEP meeting.
1430 Notified by OM that FOD is approving AM shipments tomorrow both to and from Area G
1440 Notified by OCO that current drum on WCG (SP-72 POC) had ≈ 1 liter of liquid @ pH of 3. Operators will bag on neutralizer w/ next bag on.
1500 Attended meeting w/ CCP, PM, OM, SSW and production control for SP-57 drums which were NCR'd due to multiple confinement levels not allowing H_2 levels to decrease normally
1758 Completed Mode Change: WCRR Yard / Bldg 50-69 from Operations / Operations to Warm / Warm.
1830 Secured SOM position.

No further entries this date

SIGNATURE DATE 1/22 20
READ AND UNDERSTOOD DATE 20

1-22-13 WCVR SOS LOG BOOK

0600 Assuming SOS Position [illegible]

0610 Conducted shift Brief Safety tape seat belts

0645 Concluded shift Brief

0716 Reviewed Inside And outside Rounds operators entering Facility need to change and Officers on Station before Going to operational mode

0739 notified by Inside RCT's They are having Problems with breathold waiting for smears Prior to Glove Changes

0815 OK to proceed Per RCT breathold ok

0858 Started Glove Change

0928 completed Glove Change

0930 Mode Change Complete WCVRF In operations

0932 Dewatering 1 drum And bagging on 579368 3

1025 PPE Check

1052 bagging off and bagging on 90896

1120 PPE Check

1207 bagging off And bagging on 90893 PPE Check

1234 PPE Check

1430 notified by Inside personal A drum with liquid in box had A PH of 3 Making In a acid bagged In neutrals And remediated the Issue

1532 bagging off and bagging on 90900 PPE Check

1650 Inside And Outside Rounds Complete

1745 ~~1755~~ 1755 bagged off last drum of day

1758 Mode Change Complete WCVRF In warm

1-22-13 1830 end of shift Securing SOS Position [illegible]

RIA

No further entries on this Page

Best Available Copy

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0017
Examination Date:	2/1/2013
Waste Container ID:	92665
Video/Audio Recorded Media Number:	LA-RTR2-13-0017 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 12
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:	LA212
Waste Matrix Code:	S3110
Waste Stream I.D.:	LA-MIN02-V.001
Waste Container Weights:	Gross Wt.: 116.0 kg Tare Wt.: 33.4 kg Net Wt.: 82.6 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: 92665

Section 3: Container Inventory and Comments (Detailed descriptions)

IM: Hardware, metal lid

AM:

OM:

OI:

C: Fiberboard liner sleeve, fiberboard, tape roll

R:

XPM: Plastic bags, plastic 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):	20.0
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	
Other Inorganic Materials (OI)	
Cellulosics (C):	10.0
Rubber (R):	
Plastics (waste materials) (XPM):	4.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	48.6
Soils (S):	
Total WMP Weight:	82.6

CCP Radiography Data Sheet

Waste Container ID: 92665

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	2/1/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	92665	Count Sequence Number:	21994
Operator:	D3PW2DK1\operator		
Assay Start:	2/5/2013 3:39:20 PM		
Description 1:	1LANDA1708		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 82.6 kg	Net:	82.6 kg
Container:	Volume: 208.0 l	Full:	80.0 %
Density:	0.500 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:	21994	Batch Number:	1LANDA1708
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:	92665	Analysis Date:	2/5/2013

Net Weight	82600.0 g		
Pu mass	1.15E+001	+-	1.97E+000 g
TRU Alpha Activity	3.14E+000	+-	1.22E+000 Ci
TRU Activity Concentration	3.80E+004	+-	1.48E+004 nCi/g
Pu-239 Equivalent Activity	3.16E+000	+-	1.22E+000 Ci
Pu-239 FGE	1.08E+001	+-	1.85E+000 g
Decay heat	1.03E-001	+-	4.08E-002 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	4.70E-002	3.36E-005	5.14E-006	1.82E-006
PU238	1.06E-003	1.83E-002	3.13E-003	3.46E-005
PU239	1.08E+001	6.79E-001	1.16E-001	1.29E-003
PU240	6.90E-001	1.59E-001	2.72E-002	3.00E-004
AM241	6.57E-001	2.28E+000	1.22E+000	4.49E-002
PU241	1.37E-002	1.42E+000	2.44E-001	2.69E-003
PU242	2.30E-003	9.13E-006	1.56E-006	0.00E+000
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	4.90E-007
U233	<LLD	<LLD	0.00E+000	3.92E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	1.16E-006
U238	<LLD	<LLD	0.00E+000	1.05E-005
AM243	6.16E-004	1.24E-004	1.93E-005	5.33E-006

Errors quoted at 1.000 sigma

Operator: Dean R Ortiz Date: 2-6-13

ITR: [illegible] Date: 2-7-13

Automated Independent Technical Review

Count Sequence Number: 21994 Batch Number: 1LANDA1708
Counter ID: MCS HENC #1
Container ID: 92665
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 2/5/2013

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: 2-6-13

Attachment 4 – Flammable Gas Analysis Form

5832155

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

Waste Container ID: **92665**

BDR Number: **LA13FG8015**

Sampling Date: **3/1/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	92.10	U
74-82-8	Methane	213.40	U
67-56-1	Methanol	27.87	U
60-29-7	Ethyl Ether	1.25	U
75-35-4	1,1-Dichloroethylene	5.71	U
67-64-1	Acetone	16.90	U
75-34-3	1,1-Dichloroethane	4.24	U
156-59-2	cis-1,2-Dichloroethene	0.55	U
78-93-3	Methyl ethyl ketone	9.86	U
110-82-7	Cyclohexane	5.84	U
71-43-2	Benzene	0.71	U
107-06-2	1,2-Dichloroethane	1.51	U
71-36-3	1-Butanol	1.36	U
108-10-1	Methyl isobutyl ketone	9.34	U
108-88-3	Toluene	3.09	U
108-90-7	Chlorobenzene	1.69	U
100-41-4	Ethylbenzene	2.62	U
108-38-3/106-42-3	m- and p-Xylene	1.48	U
95-47-6	o-Xylene	1.76	U
108-67-8	1,3,5-Trimethylbenzene	3.14	U
95-63-6	1,2,4-Trimethylbenzene	3.92	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)

Data Path : C:\msdchem\1\DATA\130301c\
Data File : 92665.D
Acq On : 1 Mar 2013 1:14 pm
Operator : NW
Sample :
InstName : Unit 8
Misc : 55 GALLON DRUM THROUGH FILTER
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 01 13:22:11 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	2390767	206.00 ppm	0.00
15) Chlorobenzene-d5	5.933	117	2133044	179.50 ppm	0.00

Target Compounds	Qvalue

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

35

Working Copy
Date: 11-13-12

ATTACHMENT 1
Page 1 of 4

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: 90847

6.2[4] Date Processed: 11/13/12

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] / 1281720 / 11/13/12
Waste Handling Tech (print) Signature Z # Date

ATTACHMENT 1
Page 2 of 4

4.1[6][B] Parent Waste Container No.: 90547

5.[18] Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable: 4658 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) 4658 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.: 90857

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	923602			
10.1[4]	Daughter Drum Filter No.	JL 1364		N/A	
10.1[4]	Daughter Drum Bag Filter No.	L 1747			
10.1[4]	Daughter Drum Purchase Order No.	416184			
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				
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)		N/A		
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:				
10.3[9][A]	PCB-contaminated Waste Description				
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[8]	Daughter Drum % Full (%)	100%		N/A	
10.5[3]/10.6[2]	Description Waste Added During Processing	Plastic			

ATTACHMENT 1
Page 4 of 4

4.1[6][B] Parent Waste Container No.: 90897

Comments: SHTS, Plastic, Cheese Cloth, ICE.

11.1[1] Performed By: [illegible] 129704 11/13/12
Waste Handling Tech (print) Signature Z # Date

11.1[7] Reviewed By: Gilbert Martinez [illegible] 14235 11/19/12
SOS or designee (print) Signature Z # Date/Time

Working Copy
Date: 11/8/12

ATTACHMENT 2
Page 1 of 1

WCRRF OVERPACK DRUM ASSEMBLY PREPARATION DATA SHEET

5.[3] Overpack drum information:

Purchase Order No.:	413954
Lot No.:	211426
Manufacture Date:	2010

5.[8] Overpack filtered vent information:

Manufacturer:	NUCFIL
Model No.:	013
Serial No.:	IL-254
Manufacture Date:	9-11

Overpack filtered vent and 2 in. bung torque wrench information:

	Filtered Vent	2 in. Bung
M&TE No.:	040694	021151
Cal. Expiration Date:	9-26-13	6-11-13
Tolerance:	±4% cw ±6% ccw	±3% cw ±6% ccw

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

Performed By: Brandon Chavez / [signature] [illegible] 11-8-12
Waste Handling Technician (print) Signature Z # Date

5.[12] Filtered Vent torque value (120 in-lb (96 to 144 in-lb)): 120 in-lb

5.[15] 2 in. bung plug torque value: 30 ft-lb

Comments: N/C

8.1[1] Performed By: Brandon Chavez / [signature] [illegible] 11-8-12
Waste Handling Technician (print) Signature Z # Date

8.1[5] ☐ Deficiencies identified and submitted (e.g., PCR or FSR system).
☑ No deficiencies

8.1[7] Reviewed By: Gilbert Martinez / [signature] 147235 11-19-12
Supervisor or designee (print) Signature Z # Date

Working Copy
Date 11-13-12 gl

ATTACHMENT 5
Page 1 of 1

WCRRF OVERPACK DRUM CLOSURE DATA SHEET

7.[19] Overpack Drum Unique Identifier No.: 92363

7.[25] Overpack drum closure ring torque wrench information:
M&TE No.: 040329
Cal. Expiration Date: 3-15-13
Range in ft-lb: 160-80
Tolerance: ±3%=6 ft-lbs

7.[26] Torque wrench listed above is within the acceptable ranges as displayed on the calibration certificate. ☑ Yes ☐ No

Performed By: Gerald Espinoza, [signature] 127770 11/13/12
Waste Handling Technician (print) Signature Z # Date

7.[28] Overpack drum closure ring torque value: 160 ft-lb

7.[31] Threaded lug of the drum closure ring is not touching the jam nut and the locking ring lugs are not touching. ☑ SAT ☐ UNSAT

7.[36][B] Platform scale serial number: 019065
Platform scale calibration expiration date: 7-31-13

7.[36][D] 85-gal overpack drum gross weight (lb): 324.8 lb

Comments: N/C

8.1[1] Performed By: Joe Quintana, [signature] 239987, 11/13/12
Waste Handling Technician (print) Signature Z # Date

8.1[5] ☐ Deficiencies identified and submitted (e.g., PCR or FSR system).
☑ No deficiencies

8.1[7] Reviewed By: Gilbert Martinez, [signature] 149255, 11-19-12
Supervisor or designee (print) Signature Z # Date

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

Drum ID#: 92362

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 #: 416184
Lot #: 239224
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 #: 6CPVC 1.5-2 SPVC
Serial #: L1 147
Date of Manufacture: 2-12

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: Avcf.1
Model #: 019 DS
Serial #: TL 1344
Date of Manufacture: 10-11

RECORD torque wrench information:

Filter torque wrench:		Jam Nut / Bung torque wrench:	
M&TE ID #:	040654	M&TE ID #:	021151
Cal Expiration Date:	7-26-13	Cal Expiration Date:	6-11-13
Range (ft-lbs or in-lbs):	40-200	Range (ft-lbs or in-lbs):	16-80
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: Michael Romero Signature: Michael Romero ZH: 182723

5. Weigh Drum Assembly

RECORD weight information

Tare wight (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: Michael Romero Operator Sign: Michael Romero ZH: 182723 Date: 11-7-12

Verifier Print: Gerald Espinoza Verifier Sign: [signature] ZH: 237720 Date: 11/13/12

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

DRUM ID#: 922602

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 #: 028329

Cal expiration date: 3-15-13

Range/ Value (ft-lbs): 16-80

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): 287.8

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: [signature] Date: 11/12/12

Verifier Print/Sign: Brandon Chase BC 11-13-12 Date: 11-13-12

WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Production Control

Container ID: 90897 Container Type: POC Gross Weight (lbs): 406
Liner Seal #: None Filter Prefix: None Filter Serial #: EL-347; EL-365
WDP Waste Stream: LA-MHD01.001 Certified RTR BDR: No BDR
TWSR Comments: PARENT #S832155 WTS-12STD-829
Total PE-Ci Activity: 2.44E+00 Equivalent Combustible PE-Ci: 9.16E-01 AM-241 PE-Ci: 1.98E-01
Total Fissile Gram Equivalents: 27.0 Total Surface Dose Rate (mrem/hr): +
EPA Code(s): D008 D007 D009 VR 10/2/12
NCR RTR/NDA Comment: None
RTR Pre-Screen Date: None Comment: None
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: TBD Production Control Comments: Need to add EPA Codes D007 & D009
Nitrate salts mixed with Waste Lock 770 from previous repack campaign. A minimum 9:1 volume ratio of kitty litter to salts must be mixed with nitrate salts

Performed By: Susan Ramsey / Signature: Susan Ramsey / 100681 / 9/10/12
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: Nitrate Salts – POC
Net Wt: 96lb Parent drum (SEDS attached) was part of WCRR nitrate salt repack campaign using Waste Lock 770®. This resulting daughter POC is being repacked to adjust the admixture/nitrate salt ratio. Nitrate salts carry waste codes for chromium, lead, and mercury. No chemicals present. May require RWP for > 100 + < 1000 mrem/hr

Performed By: Valerie Rhodes / Valerie Rhodes / 111209 / 10/2/12
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: Use Hexarmour gloves inside of the glove box when processing waste. Do not push or press on waste.
Processing Determination: Accept Reject
TRU Remediation Operations Comments: Ensure proper ratio of kitty litter as added to waste stream in accordance with the procedure
Performed By: Jose Juarez / Jose Juarez / 221452 / 10-4-12
TRU Remediation Operations (Print) Signature Z Number Date
LL Z# 249750 10/9/12

HS Review: RS 206362 10.3.12

Noncertified TRU Waste Drum Item Information

DrumID: 012061

Item No	ItemID	Process Status	Net Wt (kg)	Matrix	Meas Code	SNM (g)	NT	Auth (Pg/Ln)	Comments
1	IXFS-694-FB	EV	83.630	NITRATE SALTS		61.41	S2	6/11	
2	IXFS-695-FB	EV	31.810	NITRATE SALTS		7.75	S2	6/11	
3	IXFS-696-FC	EV	29.550	NITRATE SALTS		16.85	S2	6/11	

Noncertified Waste Drum Material Summary

Gross Wt (kg): 144.9

Material Type	SNM (grams)	Items Net Wt (kg)
S2	85.99	144.99
Totals	85.99	144.99

ATTACHMENT 1
Page 1 of 1

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

5.[1] Sample Date: 9/28/12

Container No. (5.[1])	90847					
Container type sampled (e.g., 55-gal, 85-gal, 110-gal, or SWB) (5.[1])	POC					
Filtered Vent Type (5.[1])	19DS					
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: SARA ARAGON (CCP (Print)) 237975 (Z #)

Reviewed By: NATHAN WALES (CCP (Print)) 238866 (Z #)

Comments: None

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 S. RAMSEY (Waste Handling Operator (print)) [signature] (Signature) 100681 (Z #) 10/2/12 (Date)

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\120928C\
Data File : 90897.D
Acq On : 28 Sep 2012 1:43 pm (#1); 28 Sep 2012 1:42 pm (#2)
Operator : SA
Sample :
InstName : Unit 8
Misc : LFL POC THROUGH FILTER-19DS FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 28 13:51:25 2012
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	3.262	96	2360520	206.00 ppm	0.00
15) Chlorobenzene-d5	5.939	117	2153379	179.50 ppm	0.00

Target Compounds	Qvalue

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

Vocgas.m Fri Sep 28 13:51:39 2012

11-13-12
0600 Assuming WCRRF operations center clearance
0615 Pre job being conducted by SOS
0620 Started inside rounds completed outside rounds.
0655 Inside rounds complete
0718 Inside and outside rounds signed off by SOS
0731 Mode Change performed TASD-69 and WCRRF yard now in operation
0739 Final lift inspections complete
0805 Permission granted to start movement into SD-69
0817 bagging on 90884
0900 Completed movement into SD-69, bag on complete.
0913 Permission granted to lower vehicle access gate for load of transport vehicle.
0931 bagging off 90884, bagging on 90941
0956 bag on, bag off complete
1024 Vehicle access gates have been restored. loading of the vehicle is complete.
1037 bagging off 90941, bagging on 90890
1052 starting movement into SD 69
1101 movement into SD-69 is complete
1105 bag on, bag off complete.
1152 bagging off 90890, bagging on. 90897
1212 bag off, bag on complete.
1319 bagging off 90897 and bagging on 90972
1346 bag off, bag on complete
1413 bagging off 90972, bagging on 90974
1454 bag on, bag off complete.
1455 starting inside rounds
1526 completed inside rounds
1528 starting movement out of SD 69
1552 bagging off 90974
1556 Completed movement out of SD-69.
1600 Starting outside rounds
1615 Completed outside rounds
1616 bag off is complete.
1618 Rounds have been signed off by SOS.
1620 mode change performed TASD-69 and WCRRF yard now in warm standby.
1640 end of day WCRRF operations center secure clearance
MN

Continued on next page

11/13/12

0600 Assumed WCRR SOM position

0615 Attended prejob brief conducted by SOS, Discussed winter weather early closure / late opening plans for safety topic, use of handrails, weekend work including contamination event.

0702 CSE completed signoff of work packages from weekend maintenance.

0739 Completed Mode Change: WCRR Yard / Bldg 50-69 from Warm / Cold to Operations / Operations.

1100 Briefed to RWP for entering radiation areas.

1200 Conducted call in for solution package processing @ WCRR and team call in regarding production @ WCRR and DUS

1400 Attended meeting for DUS Filter change out w/ RPI and DDP Management. Discussed possibility of utilizing Bldg 412 instead of setting up temporary enclosure in one of the domes. PM will give guidance.

1510 (Late Entry 1310) Performed walkdown of containers in TRU storage transportainers w/ Tech 39.

1620 Completed Mode Change: WCRR Yard / Bldg 50-69 from Operations / Operations to Warm / Warm.

1745 Secured SOM position.

No Further Entries this Date

11-13-12 WCRR SOS Log Book

0600 Assuming SOS position for the day

0615 Pre Job brief Started. Discussed Changes to Snow and ice event weather procedure Delayed Starts and early dismissals / Shipment out eight hours remaining to process prior to removing equipment from the yard and 20-29 to put in Cat.

0640 Pre-Job concluded

0755 Signed off on outside rounds

0718 Signed off on inside rounds

0739 Mode Change to Operations in Yard and Building 20-29

1618 GM 11-13-12 ~~Mode Change Complete WCRRF In~~ Reviewed Inside and outside Rounds

1620 Mode Change Complete WCRRF In warm standby

11-13-12 1630 end of shift Securing SOS Position

HA

no Problem 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-RTR2-13-0106
Examination Date:	9/5/2013
Waste Container ID:	92362
Video/Audio Recorded Media Number:	LA-RTR2-13-0106 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:	S3110
Waste Stream I.D.:	LA-MIN02-V.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 2 layers
Volume Utilization Percentage:	75 %

CCP Radiography Data Sheet

Waste Container ID: 92362

Section 3: Container Inventory and Comments (Detailed descriptions)

IM: Hardware, metal lid

AM:

OM: Scrap lead

OI:

C: Fiberboard liner sleeve, fiberboard

R:

XPM: Liner lid, 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):	20.0
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	0.1
Other Inorganic Materials (OI)	
Cellulosics (C):	9.5
Rubber (R):	
Plastics (waste materials) (XPM):	7.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	60.5
Soils (S):	
Total WMP Weight:	97.1

CCP Radiography Data Sheet

Waste Container ID: 92362

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:

Thad Hasselstrom	Thad Hasselstrom	9/5/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	92362	Count Sequence Number:	16468
Operator:	DCLTD231\Operator		
Assay Start:	9/6/2013 11:09:37 AM		
Description 1:	2LANDA1219		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gal Drum		
Weight:	Net: 97.1 kg	Net:	97.1 kg
Container:	Volume: 208.0 l	Full:	75.0 %
Density:	0.620 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:	16468	Batch Number:	2LANDA1219
Assay Instrument:	HENC #2	Location:	LANL TA-54
Analysis Method:	CCP-TP-063 v 15	Software Version:	NDA 2000 V.4.0
Item ID:	92362	Analysis Date:	9/6/2013

Net Weight	97100.0 g		
Pu mass	4.14E+001	+-	7.36E+000 g
TRU Alpha Activity	7.25E+000	+-	2.31E+000 Ci
TRU Activity Concentration	7.47E+004	+-	2.38E+004 nCi/g
Pu-239 Equivalent Activity	7.34E+000	+-	2.31E+000 Ci
Pu-239 FGE	3.90E+001	+-	6.90E+000 g
Decay heat	2.35E-001	+-	7.67E-002 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	8.56E-002	6.04E-005	1.04E-005	1.79E-006
PU238	3.78E-003	6.47E-002	1.15E-002	3.40E-005
PU239	3.88E+001	2.41E+000	4.28E-001	1.27E-003
PU240	2.48E+000	5.63E-001	1.00E-001	2.96E-004
AM241	1.23E+000	4.22E+000	2.27E+000	6.09E-002
PU241	4.79E-002	4.93E+000	8.77E-001	2.59E-003
PU242	8.28E-003	3.27E-005	5.82E-006	0.00E+000
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	5.76E-007
U233	<LLD	<LLD	0.00E+000	7.05E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	2.35E-006
U238	<LLD	<LLD	0.00E+000	1.98E-005
AM243	1.35E-003	2.70E-004	4.64E-005	1.07E-005
CM243	4.90E-007	2.40E-005	1.05E-005	1.80E-005

Errors quoted at 1.000 sigma

Operator: _____ Date: 9-11-13

ITR: _____ Date: 9-11-13

Automated Independent Technical Review

Count Sequence Number: 16468
Batch Number: 2LANDA1219
Counter ID: HENC #2
Container ID: 92362
Waste Matrix Code: Homo Sol. S3000
Count Type:
Sequence Type:
Assay Date: 9/6/2013

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.	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.	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.	
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 Chandler Date: 9-10-13

Waste Container ID: **92362**

BDR Number: **LA13FG12093**

Sampling Date: **9/13/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	138.71	
74-82-8	Methane	9.63	U
67-56-1	Methanol	37.71	
60-29-7	Ethyl Ether	1.77	U
75-35-4	1,1-Dichloroethylene	5.36	U
67-64-1	Acetone	11.55	U
75-34-3	1,1-Dichloroethane	2.29	U
156-59-2	cis-1,2-Dichloroethene	0.36	U
78-93-3	Methyl ethyl ketone	2.55	U
110-82-7	Cyclohexane	2.09	U
71-43-2	Benzene	0.47	U
107-06-2	1,2-Dichloroethane	0.92	U
71-36-3	1-Butanol	0.54	U
108-10-1	Methyl isobutyl ketone	3.11	U
108-88-3	Toluene	4.81	
108-90-7	Chlorobenzene	0.87	U
100-41-4	Ethylbenzene	1.15	U
108-38-3/106-42-3	m- and p-Xylene	0.59	U
95-47-6	o-Xylene	0.63	U
108-67-8	1,3,5-Trimethylbenzene	0.72	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

Quantitation Report (QT Reviewed)

InstName : FGA Unit 12

Data Path : C:\msdchem\1\DATA\130913c\
Data File : 92362.D
Acq On : 13 Sep 2013 2:17 pm (#1); 13 Sep 2013 2:16 pm (#2)
Operator : SA
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 13 14:25:32 2013
Quant Method : C:\msdchem\1\METHODS\VOCGAS.M
Quant Title : Flammable Gas Analysis for Transportation Only
QLast Update : Wed May 22 12:06:27 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
3) Fluorobenzene	4.063	96	8103263	207.75	ppmv	0.00
15) Chlorobenzene-d5	6.636	117	6096623	178.75	ppmv	0.00
Target Compounds						Qvalue
1) Hydrogen	1.897	GC1	39568m	138.71	ppmv	
4) Methanol	0.827	31	16148m	37.71	ppmv	
17) Toluene	5.577	92	118330	4.81	ppmv	95

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