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: OCT 2 8 2014
Symbol: ENV-DO-14-0325
LAUR: 14-28090
Locates Action No.: Not Applicable

RECEIVED
OCT 2 8 2014
NMED
Hazardous Waste Bureau

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 21

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 remediation of the 267 original nitrate salt-bearing waste containers and is the twenty-first submittal in response to comment 5 in the June 10, 2014 email request. Because documentation to fulfill the request is still being compiled, the response to comment 5 of the email request will be transmitted in packages as they become available.

Enclosure 1 includes the pertinent documentation for ten 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/kt

Enclosures: (1) Remediation and Repacking Documentation for Nitrate Salt-Bearing Waste Containers – Package 21

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)
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)
Enrique Torres, ADEP, (E-File)
James S. Clemmons, LTP, (E-File)
Donald L. Allen, LTP, (E-File)
Scott A. Miller, LTP-SSS, (E-File)
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 21
ENV-DO-14-0325
LA-UR-14-28090

October 2014

Los Alamos
NATIONAL LABORATORY
EST. 1943

ENCLOSURE 1

Remediation and Repacking Documentation for Nitrate Salt-Bearing Waste Containers – Package 21

ENV-DO-14-0325

LA-UR-14-28090

Date: OCT 2 8 2014

ParentID	Intermediate Daughters	PKG_ID
S824967		68498
S824967		68503
S825021		68436
S825021		68398
S825021		68462
S825021		68463
S825639		90752
S825639	90756	92136
S825639	90760	92154
S825639	90755	92158
S825639	90759	92162
S825639	90757	92540
S825639	90758	92557
S832141		93588
S832141		93589
S832141		93590
S832156		90835
S832156	90838	92347
S832156	90836	92570
S832156	90837	92576
S832241		93601
S832241		93602
S832241		93603
S832340		90712
S832340	90713	92463
S833409		68584
S833409		68606
S833409		68637
S841239		69162
S841239		69180
S844684	68756	69073
S844684	68756	69077
S844684	68756	69102
S844684	68756	69154

5824967

S824967

Container Profile 754195

File Options Reports Help

S824967

754195	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

S824967

- S824967
  - LA00000068498
  - LA00000068503
  - LA00000068487 – EMPTY

Task History

Transfer Details

Transfer Amount	Transfer Unit	Item	Measured Weight	Measured Weig...
0.01	%			

ATTACHMENT 1
Page 1 of 4

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: 5824967

6.2[4] Date Processed: 10-2-13

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: 10-19-14

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: Melinda Stewart / Melinda Stewart / 127768 / 10-2-13
Waste Handling Tech (print) Signature Z # Date

ATTACHMENT 1
Page 2 of 4

4.1[6][B] Parent Waste Container No.: 5824967

5.[18] Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable: 429.8 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) 429.8 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 N/A N/A
Initials Z# Date

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

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

ATTACHMENT 1
Page 3 of 4

4.1[6][B] Parent Waste Container No.: S 824967

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	68503	68498		
10.1[4]	Daughter Drum Filter No.	LM-286	LM-363		
10.1[4]	Daughter Drum Bag Filter No.	L-10295	L-10293		
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				
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	N/A		
10.3[5][A]	Free Liquid Volume/Units	1 gallon	N/A		
10.3[7][A]	Opaque/Non-penetrable Item Description:	Lead shielding	Lead Shielding		
10.3[9][A]	PCB-contaminated Waste Description				
10.3[9][B]	PCB Item ID No.				
10.3[10]	Remaining Waste Description	See Comments	See Comment		
10.3[13]/10.4[10]/ 10.5[4]/10.6[10]	Daughter Drum % Full (%)	100%	100%		
10.5[3]/10.6[2]	Description Waste Added During Processing	Kitty Litter plastic	Kitty Litter plastic		

ATTACHMENT 1
Page 4 of 4

4.1[6][B] Parent Waste Container No.: 582497

Comments: Kitty Litter, Salts, Plastic 1 gallon liquid
Lead Shielding, Hexamors Gloves, Knife

11.1[1] Performed By: Melinda Stewart Melinda Stewart 1277268, 10-3-13
Waste Handling Tech (print) Signature Z # Date

11.1[8] Reviewed By: Gilbert Wh, [illegible] [illegible] M9BJT, 10-7-13 1352
SOS or designee (print) Signature Z # Date/Time

ATTACHMENT 2
Page 1 of 1

Working Copy
Date: 9-24-13

WCRRF OVERPACK DRUM ASSEMBLY PREPARATION DATA SHEET

5.[3] Overpack drum information:

Purchase Order No.: 501563
Lot No.: 0238367
Manufacture Date: 2013

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

	Filtered Vent	2-in. Bung
M&TE No.:	100216	038369
Cal. Expiration Date:	12-18-13	12-18-13
Tolerance:	+/- 4% CW +/- 6% CCW	+/- 3% CW +/- 6% CCW

Overpack filtered vent information:

Manufacturer: Nucfil
Model No.: 013
Serial No.: JL-921
Manufacture Date: 10-11

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

5. [11] Performed By: Fredrick [illegible] / [signature] 122[illegible] 9-26-13
Waste Handling Technician (print) Signature Z # Date

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

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

Comments: n/a

8.1[1] Performed By: Fredrick [illegible] / [signature] 122[illegible] 9-26-13
Waste Handling Technician (print) Signature Z # Date

8.1[6] Reviewed By: Gilbert Martinez / [signature] 149235 10-2-13
Supervisor or designee (print) Signature Z # Date

Working Copy
Date: 10-2-13

ATTACHMENT 5
Page 1 of 1

WCRRF OVERPACK DRUM CLOSURE DATA SHEET

7.[17] Overpack Drum Unique Identifier No.: 68487

7.[23] Overpack drum closure ring torque wrench information:
M&TE No.: 037418
Cal. Expiration Date: 3-6-14
Range in ft-lb: 10-80
Tolerance: ±3% CW & ±6% CCW

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

Performed By: Melinda Stewart / Melinda Stewart / 1272268 / 10/3/13
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: 10-14-13

7.[34][D] 85-gal overpack drum gross weight (lb): 166.0 lb

Comments: N/C

8.1[1] Performed By: Frederick Parkhurst / [signature] / 1272268 / 10-3-13
Waste Handling Technician (print) Signature Z# Date

8.1[7] Reviewed By: Gilbert Martinez / [signature] / 149225 / 10-7-13
Supervisor or designee (print) Signature Z# Date

Working Copy
Date: 10-1-13

ATTACHMENT 1
Page 1 of 2

WCRRF DRUM PREPARATION DATA SHEET

5.[34][E] Drum ID No.: 68498

5.[3] Drum information:
Purchase Order No.: 501578
Lot No.: 0240999
Manufacture Date: 2013

5.[17] Drum Liner Bag/Filter Assembly:
Manufacturer: BOP
Model No.: 6CPVC 1.5-2SPVC
Serial No.: L-10293
Manufacture Date: 5/13

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

	Filtered Vent	2 in. Bung
M&TE No.:	100216	038369
Cal. Expiration Date:	12-18-13	12-18-13
Range in ft-lb:	40-200	10-80
Tolerance:	±4%cw ±6%ccw	±3%cw ±6%ccw

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

Performed By: MICHAEL MONTOYA [signature] 191352 / 10/01/13
Operator (print) Signature Z# Date

5.[23] Filtered vent information:
Manufacturer: NUCFIL
Model No.: 019DS
Serial No.: LM-363
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.: 68498

Comments: N/C

5.[35] Performed By: MICHAEL MONTOYA (Operator (print)) [signature] (Signature) 191352 (Z #) 10/01/13 (Date)

7.1[4] Reviewed By: Gilbert Martinez (Supervisor or designee (print)) [signature] (Signature) 149275 (Z #) 10-7-13 (Date)

ATTACHMENT 2
Page 1 of 2

Working Copy
Date: _____

WCRRF DRUM CLOSURE DATA SHEET

6.[3] Drum ID No.: 68498

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

M&TE No.: 037418
Cal. Expiration Date: 3-6-14
Range in ft-lb: 10-80
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: Melinda Stewart / Melinda Stewart / 1277268 / 10/3/13
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 ft-lb:		
Tolerance:		

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

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

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

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

ATTACHMENT 2
Page 2 of 2

6.[3] Drum ID No.: 168498

6.[26] Scale File ID number: 019065

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

6.[28] Drum gross weight: 346.2 lbs

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

Comments: N/C

6.[32] Performed By: Frederick [illegible] | [illegible] | 122[illegible] | 10-3-13
Operator (print) | Signature | Z # | Date

7.1[4] Reviewed By: Gilbert Martinez | [illegible] | 149235 | 10-7-13
Supervisor or designee (print) | Signature | Z # | Date

ATTACHMENT 1
Page 1 of 2

Working Copy
Date: 10-1-13

WCRRF DRUM PREPARATION DATA SHEET

5.[34][E] Drum ID No.: 68503

5.[3] Drum information:
Purchase Order No.: 301578
Lot No.: 0240999
Manufacture Date: 2013

5.[17] Drum Liner Bag/Filter Assembly:
Manufacturer: DOP
Model No.: 6CPVC 1.5-2SPVC
Serial No.: L-10295
Manufacture Date: 5/13

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

	Filtered Vent	2 in. Bung
M&TE No.:	100216	038369
Cal. Expiration Date:	12-18-13	12-18-13
Range in ft-lb:	40-200	10-80
Tolerance:	±4%cw ±6%ccw	±3% cw ±6%ccw

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

Performed By: MICHAEL MONTOYA [signature] Z1352 10/01/13
Operator (print) Signature Z # Date

5.[23] Filtered vent information:
Manufacturer: NUFIL
Model No.: 019DS
Serial No.: UM-286
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.: 68503

Comments: N/C

5.[35] Performed By: MICHAEL MONTOYA [signature] 191352, 10/01/13
Operator (print) Signature Z # Date

7.1[4] Reviewed By: [illegible] [signature] [illegible]
Supervisor or designee (print) Signature Z # Date

Working Copy
Date:_____

ATTACHMENT 2
Page 1 of 2

WCRRF DRUM CLOSURE DATA SHEET

6.[3] Drum ID No.: 68503

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

M&TE No.: 037418
Cal. Expiration Date: 3-6-14
Range in ft-lb: 10-80
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: MICHAEL MONTOYA / [signature] / 1191752 / 10-7-13
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.:	N/A	N/A
Cal. Expiration Date:		
Range in ft-lb:		
Tolerance:		

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

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

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

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

ATTACHMENT 2
Page 2 of 2

6.[3] Drum ID No.: ms 10 3 13 ~~019060~~ 68503

6.[26] Scale File ID number: 019065

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

6.[28] Drum gross weight: 317.2 lbs

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

Comments: N/A

6.[32] Performed By: Melinda Stewart (Operator (print)) | Melinda Stewart (Signature) | 1272681 (Z #) | 10 3 13 (Date)

7.1[4] Reviewed By: Gilbert Martinez (Supervisor or designee (print)) | [signature] (Signature) | 947229 (Z #) | 10 7 13 (Date)

Working Copy
Date: 10-2-13 gc

ATTACHMENT 3
Page 1 of 1

WCRRF PARENT 55-GAL DRUM PREPARATION DATA SHEET

6.3[21] Prepared Parent 55-Gal Drum Number: ~~68503~~ 5824967 U2 9-24-14

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): 429.8

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

Comments:

8.1[1] Performed By: Melinda Stewart / Melinda Stewart 1277281 10-2-13
Waste Handling Technician (print) Signature Z # Date

8.1[7] Reviewed By: Gilbert Martinez / [signature] 14925 10-7-13
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 10-7-13 1304
SOS/SOM or designee (print) Signature Z # Date Time

N2
HC
6.10.12

WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Production Control

Container ID: S824967 Container Type: 85-GAL Gross Weight (lbs): 438
Inner Seal #: 012718 Filter Prefix: LAVC Filter Serial #: 00276; 03394
AK Waste Stream: LA-MHD01.001 Certified RTR BDR: No BDR
TWSR Comments: LEACHED SOLIDS MST12 NITRATE SALTS
Total PE-Ci Activity: 5.70E+00 Equivalent Combustible PE-Ci: 2.14E+00 AM-241 PE-Ci: 4.67E-01
Total Fissile Gram Equivalents: 62.6 Total Surface Dose Rate (mrem/hr): 4
EPA Code(s): None
NCR RTR/NDA Comment: None
RTR Pre-Screen Date: 1/10/2007 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: Ensure EPA Codes D007, D008, and D009 are on the label. A minimum of 1:2 volume of kitty litter/zeolite must be mixed with the volume of nitrate salts.

Performed By: R.W. Jones (Production Control (Print)) Signature 117434 Z Number 11.30.11 Date

WDP Engineering

GUSAN S. RAMSEY Susan S. Ramsey 100681 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: 378lb. Five items; heaviest weighing ~123lb and other four are less than 75lb each.
55gal drum overpacked within 85 gal drum.
May require RWP for >1000 and <10000 mrem/hr @ 30cm
Drums w/ nitrate salts may contain undocumented liquids

Performed By: Valerie Rhodes (WDP Engineering (Print)) Valerie Rhodes 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: Use kevlar gloves during processing. Do not push 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: Vanessa Velarde (TRU Remediation Operations (Print)) Signature 234079 Z Number 12/12/11 Date
Joe Jerez Joe Jerez 221452 1-8-13

IHS Review Julius Amadeus CSP, No IH Concerns 12/4/12
ROBIN SHULT RS 277995 1-14-13

Discardable Waste Log Sheet

DrumID: 012718

Item#	ItemID	Net (kg)	Matrix	M Code	NM	MT	Auth	Remarks
1	IXFS 652F8	34.09	NITRATE SALTS		17.43	52	5/11	RM 432, 6468
2	I6530X23A	12.05	NITRATE SALTS		8.22	52	5/11	
3	IXFS 655 FD	9.09	NITRATE SALTS		2.01	53	5/11	
4	IXFS 635 F1	16.82	NITRATE SALTS		9.03	52	5/11	
5	IXFS 659 FA	55.69	NITRATE SALTS		29.85	52	5/11	
		127.74 kg						

1 7 7 3 9 9 4 1

SP 1

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	[redacted]	1286281	1-12-11
	/	/	/

Container No. (7.[1]):	S824967	S822894	S832450
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			85.23
Methyl ethyl ketone			
Methyl isobutyl ketone			
Total CCP VOC value (ppm) (7.[11]):	Ø	Ø	85.23

ATTACHMENT 1
Page 2 of 2

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

Container Number (7.[1]):	5824967	5822894	5832450
Hydrogen Reading (ppm) (7.[10]):	316.35 ppm	Ø ppm	264.29 ppm
Methane Reading (ppm) (7.[10]):	Ø ppm	Ø ppm	Ø ppm
Total VOC Reading (ppm) (7.[11]):	Ø ppm	Ø ppm	85.23 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]/ 11.1[8] Reviewed By: Kenny Romero, [signature] 111706, 1-13-11
Waste Handling Supervisor (print) Signature Z # Date

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\110111c\
Data File : S824967.D
Acq On : 11 Jan 2011 3:46 pm (#1); 11 Jan 2011 3:45 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 15:54:04 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	4538611	209.00	ppm	0.00
15) Chlorobenzene-d5	5.933	117	3818841	184.00	ppm	0.00
Target Compounds						Qvalue
1) Hydrogen	5.357	GC1	206713	816.35	ppm	100

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

10-2-13

0609 Documenting WERF operations center - Chelanda

0613 The job has been completed by SOS

0634 The job has been concluded

0650 Operations starting at 50-69.

0800 Bagging off 1 daughter, Bagging on 1 daughter, remain to proceed

0825 Bag on, Bag off is complete. Sams OVID-2-13 are elevated. Cam C at C.4 DAC has all other cams are normal. RAS scan are NDA

0839 Cam monitoring large operations continuing to proceed

0940 Bagging off, Bagging on S11C17C

1015 Bag on, Bag off complete

1156 Bagging off 1 daughter, Bagging on 1 daughter.

1219 Bag on of 1 daughter complete.

1410 Operators notifying operations center the copper piping is coming loose over the glovebox. SOS and SOM have been notified.

1422 SOS and SOM have determined that copper piping is OK and stable, FSR will be submitted.

1437 FSR#112562 submitted for copper piping repair.

1503 Bagging off 1 daughter 1 POC, Bagging on S843528

1520 Starting movement into 50-69.

1540 movement into 50-69 is complete.

1550 Bag on, Bag off complete

1606 Starting inside rounds.

1615 Starting movement out of 50 69.

1630 Item #63 is OOS, POD in place okay. to proceed per CSE

1634 Inside rounds complete.

1706 Starting outside rounds.

1717 Bagging off 1 daughter, Bagging on another

1723 Item 19 is unsat FSR in place, OK to proceed.

1734 Bag on, Bag off complete continuing to proceed

1735 Rounds signed off by SOS.

10-2-13 1802 Being relieved by OCC Terrie Coleman - Chelanda

RLG

no further entries this page

10.2.13

1802 Assuming WCRR operations center. KColeman

1819 Pre-job being conducted by SOS

1833 Pre-job concluded.

1859 Operators entering 5069 to resume operations.

2151 Operators beginning to denest 3 drums.

2300 Denesting completed. Operators state they were only able to denest 2 drums, 1 drum was too degraded to denest. Bagged off 1 daughter, bagged on 5824967. Operators also found a 4in slit in the top bag when bagged off. Operators taped over it. The drum not denested was 5832148.

2357 Operators out for lunch.

0135 ~~1335~~ Operators back from lunch.

10313 0200 Relieved by CCO Clayton Mullens. KColeman

No further entries this page

10/3/13

0201 Assuming WCRRF Operations Center. CA

0202 Late entry @ 0155 Starting outside rounds.

0206 Item #19 UNSAT, FSR in place, ok to proceed.

0215 Outside rounds complete.

0300 Starting inside rounds.

0320 Item #63 is OOS, POD in place, ok to proceed

0407 Bagging off 1st daughter, bagging on a 2nd.

0410 Bag off/on complete.

0555 here to perform stack sampling, first briefing to RWP's

0600 Inside rounds complete.

0603 Stack sampling complete.

0604 ~~Inside rounds complete.~~ 10.5.13 SOS signed off on the rounds.

0607 Stations 7R and 3L need to be changed. Stations 1R, 3R, 4R, and 7L need to be watched.

0610 Relieved by Clarissa Velarde CA 10/3/13

No Further Entries on this Page

10-3-13

0610 Assuming WCRRF OCD position CKelards
0617 Pre job being conducted by SOS
0633 ~~0683~~ 10-3-13 Pre job concluded.
0750 Bagging off and bagging 3846096
0808 Permission granted to lower vehicle access DOR movement to transport vehicles
0829 Bag on, bag off complete
0906 mode change being performed TA50-69 and WCRRF yard in warm standby.
0916 Starting glove changes on station 3 and 7 right and left.
0945 Vehicle access gates have been restored, movement complete to transport vehicle
1000 Glove changes are complete on stations 3 and 7
1010 mode change performed TA50-69 and WCRRF yard now in operations
1113 Bagging off 1 daughter, bagging on another
1130 Bag on, Bag off complete.
1136 Vehicle access gates have been restored,
1137 late entry Permission granted to lower vehicle access gates DOR loading of transport vehicle. 1100 CKelards
1139 movement out of WCRRF is complete.
1427 Starting movement into 50-69.
1442 movement into 50-69 is complete
1540 Permission granted to lower vehicle access gates to unload transport vehicle
1557 Starting to direct 3846037
1633 Directing is complete, Bagging off Bagging on ~~3840371~~ 10-3-13 3846037
1706 Bag on, Bag off is complete.
1720 Starting inside rounds
1723 Starting outside rounds.
1730 Item # 63 is CCS, POD in place okay to proceed per CSE documentation.
-Continued on next page -CKelards

10-3-13 -Continued from previous page-CKelards
1736 Vehicle access gates have been restored, movement out of 50CY43-13 10-3-13 transport vehicle to transportation is complete
1740 Item #19 is unseat, FSR in place okay to proceed.
1743 Starting movement out of 50-69
1744 Inside rounds complete.
1746 10-3-13 Completed movement out of 50-69
1817 Being relieved by OCO Terri Coleman - CKelards

no further entries this page

10/2/13 Night Shift

1810 Reviewed Shift turnover checklist and assumed WCRR SOM position.

1817 Approved and posted night shift operations watchbill. Attending pre job brief conducted by SOS, JH discussed use of gloves inside 50-69 for general use - displaying a new type that has been evaluated and approved. Shared the safety start message of PII safeguarding

2151 Operators reported starting denesting operations on the 3 drums that were moved in on day shift so that when drum in process is completed a bag on can occur directly.

2300 Denesting ops completed - operators reported 1 drum was degraded to the point they were not comfortable de-nesting (#5832148) - Completed bag offs for parent # 5843528 (2 daughters total) and bagged on drum # 5824967.

2354 Operators breaking for lunch

0135 Resuming operations.

0420 Completed bag off of 1 daughter - continuing to process.

0545 SOS provided update to processing - drum on WCG was packed full w/ initial release of liquids - will not have completed prior to turnover. Cleanup of WCG taking place.

0613 Relieved by J. Guadagnoli as SOM.

No further entries this page

10-3-13 DAYSHIFT

0613 Obtained and reviewed shift turnover checklist and assumed the WCRR SOM position

0614 Completed review and approved the day shift operations watchbill.

0625 Completed attending the pre-job brief conducted by the SOS (Gilbert) The safety topic was to wear proper PPE and to stay focused, there are a lot of distractions and personnel need to watch out for each other. There are two transfers scheduled out and one scheduled in. Operations discussed the 85 gallon drum grabber - ensure its gripping when using and zip ties are breaking. Ensure they are secure and RCTs discussed tears could occur during bag on's and bag off's. Excellent awareness of exchange and sharing information noted. Discussed current shift orders in place.

0715 Completed the Facility POD Status phone call with AREA-G.

0750 Inside operators initiate bagging off and bagging on Parent 5846096 Parent drum 5824967 from night shift has generated 2 daughters

0829 Operations completed Bag offs and Bag Ons.

0906 Mode Change 50/69 and Yard Transition from Operations/Operations to Warm/WARM due to glove changes required per RCT. Glovebox WCG is in safe configuration.

0911 P&T completes inspection and labelling of 110 drums to be transfered on two transfer vehicles to Area G. P&T inspections started at 0805 hrs. Two transfer vehicles are staged, one ready to load at the gate. Operators initiate moves.

0946 Inside Operators initiate glove changes on Station 3 and Station 7, both pair.

0950 Issues were identified with the 2nd transfer to AREA G - associated with WCRTs, Waste help was notified for support. The OM was notified that an error message of 6-20 PEC, is non-compliant to receive in G.

1010 Mode Change: 50/69 and Yard transition from WARM/WARM to Operations/Operations.

1049 The WCRTs issue was resolved noting the non-compliant drums were required to be changed to yes compliant by Waste help for acceptance to AREA G. P&T is checking with AREA G for acceptance of 2nd transfer after lunch if not delivered prior to lunch.

1158 Completed attending the weekly Project Status meeting.

1245 P&T arrives to perform the transfer / remove from WCRR and transfer vehicle to AREA G

1330 CSE/Fire protection arrives to perform combustible loading surveillance.

1350 Weeds in the MDA-C were observed being cut.

1422 CSE/Fire protection exited facility and completes the walkdown, report forthcoming.

1427 Movement into WCRRF being initiated.

1442 Movement into facility Completed.

(Continued on Next Page)

10/2/13 WCRR 505 Log Book

1816 Assuming 505 position. CA

1817 Starting Pre-Job with turnover from day shift and status inside 50-69 and WCG. IH went over new safety gloves that could be used inplace of leather gloves.

1833 Pre-Job complete.

2151 Bagging off, bagging on 5824967 after denesting the remaining 3 parents inside 50-69.

2300 Bag off/on complete as well as denesting complete. Unable to denest 5832148 due to degradation also drum bagged had a 4inch slit in the bag when bagged off, patched with tape.

Hr

0604 Signed off on the rounds.

0607 Stations 7R and 3L need to be changed. Stations 1R, 3R, 4R, and 7L all need to be watched.

0610 Relieved by Gilbert Martinez. CA 10/3/13

No Further Entries on this Page

10-3-13 WCRR SOS LOG Book

0610 Assuming SOS position

0615 Conducted shift brief got turnover from off going shift

0633 Concluded shift brief.

0750 Bagging off /on S846096

0808 Starting shipment out of ~~50-69~~ WCRRF

0829 Bag on/off complete.

0946 Mode Change complete WCRRF In warm need to Change Gloves on station's 3 and 7 both lands

0916 Started Glove changes

0945 shipment out complete.

1000 Glove Changes complete

1010 Mode change complete WCRRF In operations

1113 Bagging off 1 daughter bagging on another

1130 Bagg on/off complete

1131 Late entry started 2nd shipment out of ~~50-69~~ WCRRF @ 1100.

1136 shipment out complete

1427 Starting Movement Into 50-69

1442 Movement In Complete.

1540 Starting shipment Into WCRRF

1557 Starting Denesting Process S846037

1637 Denesting Complete Bag on S846037

1706 Bag on/off Complete.

1720 Starting Rounds

1736 Shipment In to 50-69 Complete

1743 Starting Move out of 50-69

1753 Reviewed Inside and outside Rounds

1816 Movement out of 50-69 complete

1826 Relieved by Clayton Mullins

No Further entries on this page

10/3/13 WCRR SOS Log Book

1821 Assuming SOS position. CT

1824 Starting Pre-Job with turnover with day shift. Also discussed good housekeeping.

1845 Pre-Job complete.

2000 Relieved by Jose Jerez. CT 10/3/13

2000 Assuming SOS position. Turned over with Clayton Mullins.

2046 Starting drum movement from Transportainer to 50-69

2055 Bagging off 1 daughter, Bagging on another daughter and continuing to process

2104 Bag off complete

2109 Drum movement Complete

2129 Bagging off one daughter bagging on another and continuing to process

2140 Bag off complete

2226 Operators on pause due to next parent to process not having dose sheet with it 90971, they are also low on kitty litter for processing SP72 waste stream. Per procedure waste needs a 3 to 1 mixture

2238 Pause ended, operators continuing to process.

2241 Bagging off third daughter and will be bagging on Parent 90971

2316 Bag off complete.

2335 Operators breaking for lunch.

0030 Operators returning from lunch will continue to process remainder of Parent 90971, they will not be bagging on another Parent due to not having enough kitty litter to continue processing.

0103 Bagging off final daughter for the shift.

0120 Bag off complete.

0223 Mode change WCRR yard is in WARM 50-69 is in COLD all TRU waste has been moved out of 50-69.

0230 Rounds complete and signed

0530 Securing SOS position for the day.

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-RTR2-13-0117
Examination Date:	10/22/2013
Waste Container ID:	68498
Video/Audio Recorded Media Number:	LA-RTR2-13-0117 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.: 157.0 kg Tare Wt.: 33.4 kg Net Wt.: 123.6 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:	85 %

CCP Radiography Data Sheet

Waste Container ID: 68498

Section 3: Container Inventory and Comments	(Detailed descriptions)
IM:	Hand tool
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):	1.0
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	5.0
Other Inorganic Materials (OI)	
Cellulosics (C):	2.0
Rubber (R):	
Plastics (waste materials) (XPM):	2.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	113.6
Soils (S):	
Total WMP Weight:	123.6

CCP Radiography Data Sheet

Waste Container ID: 68498

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

Comments: N/A

RTR Operator:

Eric Lyles		10/22/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	68498	Count Sequence Number:	16628
Operator:	DCLTD231\Operator		
Assay Start:	10/24/2013 3:50:54 PM		
Description 1:	2LANDA1234		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gal Drum		
Weight:	Net: 124.0 kg	Net:	124.0 kg
Container:	Volume: 208.0 l	Full:	85.0 %
Density:	0.700 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:	16628	Batch Number:	2LANDA1234
Assay Instrument:	HENC #2	Location:	LANL TA-54
Analysis Method:	CCP-TP-063 v 15	Software Version:	NDA 2000 V.4.0
Item ID:	68498	Analysis Date:	10/24/2013

Net Weight	124000.0 g		
Pu mass	1.89E+001	+-	3.55E+000 g
TRU Alpha Activity	7.93E+000	+-	2.98E+000 Ci
TRU Activity Concentration	6.39E+004	+-	2.40E+004 nCi/g
Pu-239 Equivalent Activity	7.87E+000	+-	2.98E+000 Ci
Pu-239 FGE	1.72E+001	+-	3.20E+000 g
Decay heat	2.61E-001	+-	9.90E-002 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	8.92E-002	6.29E-005	1.16E-005	1.69E-006
PU238	6.07E-002	1.04E+000	1.95E-001	7.39E-004
PU239	1.71E+001	1.06E+000	1.99E-001	7.54E-004
PU240	1.62E+000	3.67E-001	6.89E-002	2.61E-004
AM241	1.59E+000	5.46E+000	2.97E+000	5.45E-002
PU241	1.63E-002	1.68E+000	3.15E-001	1.20E-003
PU242	1.23E-001	4.88E-004	9.15E-005	0.00E+000
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	7.52E-007
U233	<LLD	<LLD	0.00E+000	6.27E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	2.12E-006
U238	<LLD	<LLD	0.00E+000	1.61E-005
AM243	4.10E-004	8.20E-005	1.55E-005	8.99E-006

Errors quoted at 1.000 sigma

Operator: Ann Barton Date: 11/4/13

ITR: [illegible] Date: 11·4·13

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **68498**

BDR Number: **LA13FG2107**

Sampling Date: **10/28/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	264.92	
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\131028c\
Data File : 68498.D
Acq On : 28 Oct 2013 11:21 am (#1); 28-Oct-13, 11:21:07 (#2)
Operator : EL
Sample :
Misc : 55 Gallon Drum Through Filter (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Oct 28 11:29:46 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	5226680	205.75 ppmv	0.03
15) Chlorobenzene-d5	5.858	117	4047353	177.50 ppmv	0.00
Target Compounds					Qvalue
1) Hydrogen	1.614	GC1	1992m	264.92 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-RTR2-13-0118
Examination Date:	10/22/2013
Waste Container ID:	68503
Video/Audio Recorded Media Number:	LA-RTR2-13-0118 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 14
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3110
Waste Stream I.D.:	LA-MIN02-V.001
Waste Container Weights:	Gross Wt.: 144.0 kg Tare Wt.: 33.4 kg Net Wt.: 110.6 kg
Rigid Liner and Liner Vent Description:	Liner: [X] No [ ] Yes Lid: [X] No [ ] Yes Type: [ ] 30-mil [ ] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [ ] Yes [X] N/A Punctured: [X] No [ ] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [ ] No [X] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 2 layers
Volume Utilization Percentage:	80 %

CCP Radiography Data Sheet

Waste Container ID: 68503

Section 3: Container Inventory and Comments (Detailed descriptions)

IM:

AM:

OM:

OI:

C: Leather gloves

R:

XPM: Plastic bag, liner lid

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP): Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	
Other Inorganic Materials (OI)	
Cellulosics (C):	1.0
Rubber (R):	
Plastics (waste materials) (XPM):	3.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	106.6
Soils (S):	
Total WMP Weight:	110.6

CCP Radiography Data Sheet

Waste Container ID: 68503

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

Comments: N/A

RTR Operator:

Eric Lyles		10/22/2013
Print Name	Signature	Date

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NDA 2000 Assay Report

Item Information

Item ID:	68503	Count Sequence Number:	16625
Operator:	DCLTD231\Operator		
Assay Start:	10/24/2013 12:58:26 PM		
Description 1:	2LANDA1234		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gal Drum		
Weight:	Net: 111.0 kg	Net:	111.0 kg
Container:	Volume: 208.0 l	Full:	80.0 %
Density:	0.670 kg /l		

System Configuration

Counter:	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:	16625	Batch Number:	2LANDA1234
Assay Instrument:	HENC #2	Location:	LANL TA-54
Analysis Method:	CCP-TP-063 v 15	Software Version:	NDA 2000 V.4.0
Item ID:	68503	Analysis Date:	10/24/2013

Net Weight	111000.0 g		
Pu mass	3.11E+001	+-	6.07E+000 g
TRU Alpha Activity	1.17E+001	+-	5.09E+000 Ci
TRU Activity Concentration	1.05E+005	+-	4.59E+004 nCi/g
Pu-239 Equivalent Activity	1.18E+001	+-	5.09E+000 Ci
Pu-239 FGE	2.94E+001	+-	6.05E+000 g
Decay heat	3.84E-001	+-	1.69E-001 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	1.14E-006
U233	<LLD	<LLD	0.00E+000	1.14E-002
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	5.39E-006
NP237	1.65E-001	1.17E-004	2.10E-005	2.89E-006
PU238	3.30E-003	5.64E-002	1.40E-002	1.43E-003
U238	<LLD	<LLD	0.00E+000	2.76E-005
PU239	2.92E+001	1.81E+000	3.75E-001	4.58E-002
PU240	1.89E+000	4.29E-001	1.08E-001	1.09E-002
AM241	2.74E+000	9.38E+000	5.08E+000	1.05E-001
PU241	6.38E-002	6.58E+000	1.65E+000	1.67E-001
PU242	6.69E-003	2.64E-005	6.57E-006	0.00E+000
AM243	1.20E-003	2.39E-004	4.37E-005	2.63E-005

Errors quoted at 1.000 sigma

Operator: Jim Barton Date: 11/4/13

ITR: [illegible] Date: 11-4-13

Automated Independent Technical Review

Count Sequence Number: 16625 Batch Number: 2LANDA1234
Counter ID: HENC #2
Container ID: 68503
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 10/24/2013

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. 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.	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-52,53.
Section 5 - Gamma Analysis Analysis Status: No errors. MCA Deadtime greater than the upper limit of 50.0%.	OK No spectral distortion observed.

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

Expert Review by: _____ Date: 11/4/13

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **68503**

BDR Number: **LA13FG12108**

Sampling Date: **10/25/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	309.24	
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\131025c\
Data File : 68503.D
Acq On : 25 Oct 2013 2:05 pm (#1); 25 Oct 2013 2:04 pm (#2)
Operator : SA
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Oct 25 14:14:08 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	7540637	207.75 ppmv	0.00
15) Chlorobenzene-d5	6.639	117	5631080	178.75 ppmv	0.00
Target Compounds					Qvalue
1) Hydrogen	1.907	GC1	88211m	309.24 ppmv	

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

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S825021

S825021

Contai 760707

File Options Reports Help

S825021

760707	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

S825021

- S825021
  - LA00000068462
  - LA00000068436
  - LA00000068398
  - LA00000068463
  - LA00000068445 – EMPTY

Working Copy
Date: 9-26-13

ATTACHMENT 1
Page 1 of 4

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: 5825021

6.2[4] Date Processed: 9-26-13

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

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

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

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

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

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

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

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

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

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

Performed By: Adam Segovia [signature] Z76702 9-26-13
Waste Handling Tech (print) Signature Z # Date

ATTACHMENT 1
Page 2 of 4

4.1[6][B] Parent Waste Container No.: S825021

5.[18] Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable: 447.6 lb

6.2[5][A] Parent Drum Lead Blanket Weight (lb): 80.0 lb

6.2[5][B]/ 6.2[6] Total Parent Drum Weight (lb) 527.6 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.: 5825621

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	68462	684463		
10.1[4]	Daughter Drum Filter No.	LM-253	LM285		
10.1[4]	Daughter Drum Bag Filter No.	L-6797	L-10313		
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	BOP	BOP		
	Model No.	6CPVC1.5-23PVC	6CPVC1.5-23PVC		
	Serial No.	L-6785	L-6706		
	Date of Manufacture	1-13	1-13 LR 9.24.14		
10.2[5]	POC ID No	68456-02562	68397-02585		
10.2[7][B]/10.2[6]	POC Item Description	Liquid AND Kitty Litter	NITRATE SALTS		
10.2[13]	POC Assembly closed per Manufacturer's instructions. (Initial and Z#)	EM 239911	EM 239911		
10.2[14]	POC Assembly Gross Weight (lb)	390.0	404.0		
10.2[15]	POC Rad. Survey Results (mrem/hr)	~~LR~~ 1000 08-27-13	1100		
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 Shielding		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		
10.3[13]/10.4[10]/10.5[4]/10.6[10]	Daughter Drum % Full (%)	40%	90%	N/A	
10.5[3]/10.6[2]	Description Waste Added During Processing	Kitty Litter Strbout BAGS	PLASTIC		

ATTACHMENT 1
Page 4 of 4

4.1[6][B] Parent Waste Container No.: 5825621

Comments: Nitrate SALTS, Lead shielding, kitty litter, Stab out Bags
3gallons of liquid acid Neutralized and absorbed with kitty litter

11.1[1] Performed By: GERALD ESPINOZA / [signature] / 1237720 / 9-27-13
Waste Handling Tech (print) Signature Z # Date

11.1[8] Reviewed By: Clayton Mullins / [signature] / 1240092 / 10/22/13 1518
SOS or designee (print) Signature Z # Date/Time

Working Copy
Date: 9-18-13

ATTACHMENT 2
Page 1 of 1

WCRRF OVERPACK DRUM ASSEMBLY PREPARATION DATA SHEET

5.[3] Overpack drum information:

Purchase Order No.: 501563
Lot No.: 0238367
Manufacture Date: 2013

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

	Filtered Vent	2-in. Bung
M&TE No.:	100216	0238369
Cal. Expiration Date:	12/18/13	12/18/13
Tolerance:	+/- 4% CW +/- CCW	+/- 3% CW +/- 6% CCW

Overpack filtered vent information:

Manufacturer: NUCFIL
Model No.: 013
Serial No.: JL 922
Manufacture Date: 10/11

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

5. [11] Performed By: Brandon Chavez / [signature] 2017421 9-18-13
Waste Handling Technician (print) Signature Z # Date

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

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

Comments: N/C

8.1[1] Performed By: Brandon Chavez / [signature] 2017421 9-18-13
Waste Handling Technician (print) Signature Z # Date

8.1[6] Reviewed By: Clayton Mullins / [signature] 1240074 10/22/13
Supervisor or designee (print) Signature Z # Date

Working Copy
Date: 9-26-13

ATTACHMENT 5
Page 1 of 1

WCRRF OVERPACK DRUM CLOSURE DATA SHEET

7.[17] Overpack Drum Unique Identifier No.: ~~501563~~ 68445 9-24-14

7.[23] Overpack drum closure ring torque wrench information:
- M&TE No.: 038370
- Cal. Expiration Date: 8-2-14
- Range in ft-lb: 10-80
- Tolerance: ±3% cw ±6% ccw

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

Performed By: GERALD ESPINOZA / [signature] / 237720 / 9.27.13
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): 172.6 lb

Comments: N/c

8.1[1] Performed By: GERALD ESPINOZA / [signature] / 237720 / 9.27.13
Waste Handling Technician (print) Signature Z# Date

8.1[7] Reviewed By: Clayton Mullins / [signature] / 240092 / 10/22/13
Supervisor or designee (print) Signature Z# Date

ATTACHMENT 1
Page 1 of 2

9/23/13 HS

WCRRF DRUM PREPARATION DATA SHEET

5.[34][E] Drum ID No.: 68462

5.[3] Drum information:
Purchase Order No.: 501578
Lot No.: 0240999
Manufacture Date: 2013

5.[17] Drum Liner Bag/Filter Assembly:
Manufacturer: BOP
Model No.: 6CPUC 1.5-25PUC
Serial No.: L-6797
Manufacture Date: 1/13

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

	Filtered Vent	2 in. Bung
M&TE No.:	100216	038369
Cal. Expiration Date:	12-18-13	12-18-19
Range in ft-lb:	40-200	10-80
Tolerance:	±4% cw ±6% ccw	±3% cw ±6% ccw

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

Performed By: IAN MARQUET [signature] [illegible] 9-25-13
Operator (print) Signature Z # Date

5.[23] Filtered vent information:
Manufacturer: NUCFIL
Model No.: 019DS
Serial No.: LM-253
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.: 68462

Comments:

5.[35] Performed By: IAN MARZUKE / [signature] / 1276208 / 9-23-13
Operator (print) Signature Z # Date

7.1[4] Reviewed By: Clayton Mullins / [signature] / 1240092 / 10/22/12
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 2
Page 1 of 2

9-27-13

WCRRF DRUM CLOSURE DATA SHEET

6.[3] Drum ID No.: 68462 9-24-14 ~~98462~~

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

M&TE No.: 038370
Cal. Expiration Date: 8-2-14
Range in ft-lb: 10-80
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: Justin Lopez / [signature] 1266361
Operator (print) Signature Z # Date

6.[12] Drum closure ring torque value: 9-26-13 ft-lb

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

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

	Filtered Vent	2 in. Bung
M&TE No.:		
Cal. Expiration Date:		
Range in ft-lb:		
Tolerance:		

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

Performed By: GERALD ESPINOZA / [signature] 1237720 / 9-27-13
Operator (print) Signature Z # Date

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

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

ATTACHMENT 2
Page 2 of 2

6.[3] Drum ID No.: 68462 R9.24.14 ~~984~~02

6.[26] Scale File ID number: 0190105

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

6.[28] Drum gross weight: 203.0 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: GERALD ESPINOZA (Operator (print)) [signature] (Signature) 1237720 (Z #) 9-27-13 (Date)

7.1[4] Reviewed By: Clayton Mullins (Supervisor or designee (print)) [signature] (Signature) 1240092 (Z #) 10/22/13 (Date)

ATTACHMENT 1
Page 1 of 2

WCRRF DRUM PREPARATION DATA SHEET

5.[34][E] Drum ID No.: 68463

5.[3] Drum information:
Purchase Order No.: 501578
Lot No.: 0240999
Manufacture Date: 2013

5.[17] Drum Liner Bag/Filter Assembly:
Manufacturer: BOP
Model No.: 6 C PVC 1.5 - 2 AVE
Serial No.: L - 10313
Manufacture Date: 5/13

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

	Filtered Vent	2 in. Bung
M&TE No.:	100216	038369
Cal. Expiration Date:	12/18/13	12/18/13
Range in ft-lb:	40 - 200	10 - 80
Tolerance:	+/- 4% cw +/- 6% ccw	+/- 8% cw +/- 6% ccw

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

Performed By: Brandon Chavez / [signature] 1204742 9-24-13
Operator (print) Signature Z # Date

5.[23] Filtered vent information:
Manufacturer: NucFil
Model No.: 019 DS
Serial No.: LM 285
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.: 68463

Comments: N/C

5.[35] Performed By: Brandon Chavez / [signature] 1204742 9-24-13
Operator (print) Signature Z # Date

7.1[4] Reviewed By: Clayton Mullins / [signature] 1240094 10/22/13
Supervisor or designee (print) Signature Z # Date

9.27.13 JE

ATTACHMENT 2
Page 1 of 2

WCRRF DRUM CLOSURE DATA SHEET

6.[3] Drum ID No.: 68463

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

M&TE No.: 038370
Cal. Expiration Date: 8-7-14
Range in ft-lb: 10-80
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: GERALD ESPINOZA / [signature] / 1237720 / 9.27.13
Operator (print) Signature Z # Date

6.[12] Drum closure ring torque value: 160 ft-lb

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

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

	Filtered Vent	2 in. Bung
M&TE No.:		
Cal. Expiration Date:		
Range in ft-lb:		
Tolerance:		

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

Performed By: GERALD ESPINOZA / [signature] / 1237720 / 9.27.13
Operator (print) Signature Z # Date

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

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

ATTACHMENT 2
Page 2 of 2

6.[3] Drum ID No.: 684463

6.[26] Scale File ID number: 019065

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

6.[28] Drum gross weight: 395.1 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: GERALD ESPINOZA / [signature] / 1237724 / 8-27-13
Operator (print) / Signature / Z # / Date

7.1[4] Reviewed By: Clayton Mullins / [signature] / 1240092 / 10/22/13
Supervisor or designee (print) / Signature / Z # / Date

72
NR
6.10.12

WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Production Control

Container ID: S825021 Container Type: 55-GAL Gross Weight (lbs): 457
Inner Seal #: 010980 Filter Prefix: LAVC Filter Serial #: 03548
AK Waste Stream: LA-MHD01.001 Certified RTR BDR: No BDR
TWSR Comments: LEACHED SOLIDS MST 12, RM 434
Total PE-Ci Activity: 7.96E+00 Equivalent Combustible PE-Ci: 2.98E+00 AM-241 PE-Ci: 6.46E-01
Total Fissile Gram Equivalents: 87.9 Total Surface Dose Rate (mrem/hr): 120
EPA Code(s): None
NCR RTR/NDA Comment: None
RTR Pre-Screen Date: 5/2/2007 Comment: Liquids, Impenetrable Obj, Liquid Location: 15
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: ~~Because~~ EPA Codes D007, D008, and D009 are on the label. A minimum of 1.2 volumes of kitty litter/zeolite must be mixed with 1.0 volume of nitrate salts.

Performed By: R. W. Jones (Production Control (Print)) Signature: R. W. Jones Z Number: 117434 Date: 12.8.11

WDP Engineering

Performed By: 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: 397 lb. Two items; heaviest weighs 226 lb and other weighs 47 lb. Heaviest item also has all SNM (94 g) ~~HI package~~ 12/14/11
Drums w/ nitrate salts may contain undocumented liquids
May require RWP for >1000 and <10000 mrem/hr. Note surface dose rate of 120 mrem/hr
Drum may have lead liner
Performed By: Valerie Rhodes (WDP Engineering (Print)) Signature: Valerie Rhodes Z Number: 112609 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 during processing of 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: 1-7-13

Robinson R82 272995 1-14-13
HS Review. Jeffrey Lindland CSP, No HS Concerns 12/4/12

Discardable Waste Log Sheet

DrumID: 010980

Item#	ItemID	Net (kg)	Matrix	M Code	NM	MT	Auth	Remarks
1	IXFS638FB	21.14	NITRATE SALTS		0	52	5/11	
2	IXFS639FI	102.73	NITRATE SALTS		93.3	52	5/11	
		123.87 kg						

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	S833987	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 [signature] 198480, 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 : S825021.D
Acq On : 29 Mar 2012 1:25 pm (#1); 29-Mar-12, 13:24:18 (#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 13:41:34 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	3.622	96	5324205	209.00 ppmv	0.00
15) Chlorobenzene-d5	5.942	117	3320961	185.50 ppmv	0.00
Target Compounds					Qvalue
1) Hydrogen	1.610	GC1	913m	123.62 ppmv	

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

vocgas.m Thu Mar 29 13:41:47 2012

9-26-13

0605 Assuming WCRRF Operations Center - Clelands
0615 Pre job being conducted by SOS
0645 Operators entering 50-69, Procedure driven work is released
0759 Bagging off, Bagging on 3841320
0915 Bag on, Bag off complete. had a brief pause then continued while performing bag on
1141 Bagging off 1 daughter and a POC, will continue to process drum.
1210 Bag on, Bag off complete
1225 Being relieved by OCO - Howard Smith - Clelands
1225 ASSUMING OCO POSITION HASMITH
1240 OPERATORS EXIT BUILDING FOR LUNCH
1300 OPERATORS ENTER BUILDING TA50-69 TO CONTINUE PROCESSING
1353 BAGGING OFF 1 DAUGHTER, BAGGING ON 5842234
1431 BAG OFF COMPLETE
1435 STARTING OUTSIDE ROUNDS
1440 BEING RELIEVED BY OCO C VELARDE - H SMITH
1441 Assuming WCRRF Operations Center - Clelands
1446 Starting inside rounds.
1500 Item #43 is OOS, POD in place. Okay to proceed per CSE documentation.
1503 Item #19 is unsat, FSR in place, okay to proceed.
1505 Completed outside rounds.
1508 Outside rounds complete.
1533 Bagging off 1 daughter, bagging one daughter continuing to process.
1559 Bag on Bag off complete.
1612 Inside and outside rounds signed off by SOS.
1655 Bagging off daughter and POC, bagging on 9825021
1735 Bag on, off complete
1741 Starting movement out of 50-69.
1810 Movement complete out of 50-69.
9-24-13 1810 Relieved by OCO Terri Coleman - Clelands
HA

no further entries complete.

9-26-13

1810 Assuming WCRR operations center: TColeman
1824 Pre-job being conducted by SOS.
1912 Pre job concluded. Procedure driven work is released.
1943 Operators entering 50-69 to resume operations.
2031 Initiating a drum movement from 50-69 to a transportainer.
2100 Drum movement complete.
2335 Bagging off 1 daughter and 2 POC's, bagging on another daughter.
9-27-13 0018 Bag off/on complete.
0035 Operators out for lunch.
0140 Beginning outside rounds.
0203 Item #19 on the rounds is unsat, okay to proceed, FSR in place.
0204 Late entry at 0155, operators back from lunch. JC
0438 Beginning inside rounds.
0458 Item #63 on the rounds is OOS, okay to proceed per CSE documentation
0459 Inside rounds complete.
0506 Operators have completed glovebox clean up and have identified gloves to be changed on Monday. (2) L (3) R.
0507 Bagging off last daughter of the day.
(1) 0509 Both rounds reviewed by SOS.
HA 0530 ~~Bagg-on/off/on~~ JC 9-27-13 Bag off complete.
0550 Initiating a drum movement from 50-69 to a transportainer.
0551 SOS reports that the bottom fell off of the torque wrench inside 50-69, torque wrench #038370, so a new torque wrench will need to be introduced on Monday morning for processing.
0605 RCRA inspections have been completed.
0612 Drum movement out of 50-69 complete. All inventory has been removed from the facility.
0619 Mode change complete. We are now cold standby in 50-69 and warm standby in WCRRF yard.
9-27-13 0621 End of day. OCO position secured. TColeman

no further entries this page

9-26-13 DAYSHIFT

0614 Reviewed the shift turnover checklist and assumed the SOM position [signature]

0638 Completed attending the prejob brief conducted by the SOS (Gilbert) the safety topic was wearing the proper PPE, watch out for each other. RCT discussed using good techniques and ALARA practices. The current drums have high dose rates. Operation feedback indicates the liquid neutralizer is working well. No transfer of drums will be scheduled until the bio in AREA G is implemented. Shift orders on drum movements and precautions to prevent bag cuts.

0644 Procedure driven work is released.

0652 DOE facility representative entered facility with PIC, to observe.

0712 Completed daily facility update with AREA G SOM.

0745 Crafts arrived to scope the small forklift and determine microswitch parts to order. All numbers were obtained

0800 Inside operators report bag offs completed and bag on of Parent 5841320

0925 Completed receiving de-brief on 50/69 activities from DOE facility representative. SOM/SOS/DOE present. Concerns were noted and the SOS will share with night shift and initiate improvements. The OM was notified and briefed.

0928 Late Entry for 0915, Bag on and bag off complete.

1141 Bag off 1 daughter and a POC, operations will continue to process

1225 OCO being relieved by H. Smith -

1307 EWMD came to 50-84 and requested to take photos of Rm 102. of 50/69 and received RWP brief.

1321 EWMD exited the 50-69. The purpose was to update their records.

1341 Completed review of 6 work packages to be conducted within next 3 months

1353 Bagging off 1 daughter and bagging on 5842234

1431 Bag off complete

1536 Inside operators report bag on of daughter and bag off and continue to process

1559 Operators report bag off of 1 daughter and bag on of another was bagged completed 9-26-13

1655 Bagging off 1 daughter and 1 POC and bagging on Parent 5825021

1734 Bag off and Bag on Completed.

1747 Move out from 50-69 to the transportainer being initiated.

1805 Completed conducting shift turnover checklist and relieved by the oncoming SOM R. Artel [signature]

(no further entries this page)

9/26/13 Night Shift

1805 Reviewed shift turnover and assumed WCRR SOM position. R ⟶

1814 Approved and posted Night Shift Operations watch bill.

1815 Attending pre job brief conducted by SOS. Discussed items from DOE FR visit on day shift. Again identified discrepancy between Operations and RP-1 turnovers. Recommendation was made to conduct turnover w/ both orgs involved - ES Prod Manager will follow up.

1945 Discussed yesterdays turnover issue w/ RP-1 lead, ES - prod manager, SOS via phone con w/ OM.

2100 Completed drum movement of 4 drums from 50-69 to transportainers.

2350 Completed Issuing new part 2 forms for the following IWD's:
ES-WCRRF-DDP-11-08-18-1002 Daughter Drum Preparation
ES-WCRRF-MOP-2011-08-18-1003 Mop Floors in Room 102
ES-WCRRF-SWB/85G L/UL-081911-1004 Loading/Unloading SWB's and 85g overpacks
1005-22848-10-09-1001-092611 Conducting Rounds @ TA-50 WCRRF
1006-22848-10-09-1001-092611 Glove Box Maint and Install of Lead Windows/Blank Kits
Signed off for monthly review of IWD binder.

0003 0018 Completed bag off of 1 daughter and 2 POC's, continuing to process.

0035 Operators breaking for lunch

0155 Resuming operations.

0215 Notified by SOS that Verse Lift is now inside 50-69 (was at beginning of shift) but that no inspection/load test sticker was located on it. Directed operators not to use it until Verse lift is labeled.

0506 Operators identified gloves @ stations #2-L and 3-R will require changing prior to operations on Monday.

0530 ~~0507~~ Completed all bag offs for parent # 5825021 - 2 daughters, 2 POC's total.

0551 SOS reported that torque wrench # 038370 broke inside 50-69.

0612 TA-50-69 inventory has been moved to Transportainer 50-75

0619 Completed Mode Change: WCRR Yard / Bldg 50-69 from Operations / Operations to Warm / Cold.

0625 Secured WCRR SOM position. R ⟶

No further entries this page

KRG

9/26/13 26 cm

WCRR SOS LOG Book

0600 Assuming SOS position
0615 Conducting shift brief.
0635 Concluded shift brief
0645 operator entering Facility
0759 Bagging off/on S841320
0915 Bag on/off Complete had pause then continued bag off
1141 Bagging off 1 daughter And Poc And continuing.
1210 Bag on/off complete
1240 Operators Exiting For Lunch.
1300 Operators Entering 50-69
1355 Bagging off 1 Daughter Bagging on S842234
1431 Bag on/off complete
1435 Starting Rounds
1533 Bagging off 1 daughter bagging on another continuing
1559 Bag on/off complete.
1612 Reviewed Inside And outside Rounds.
1655 bagging off /on S825021
1735 bag on /off complete.
1741 started move out of 50-69.
1810 Move out complete
1815 Relieved by Clayton Mullins

no further entry on this Page

9/26/13

WCRR SOS Log Book

1816 Assuming SOS position. CA
1823 Starting Pre-Job, discussed attending all ~~training~~ 9-26-13 cm trainings and if unable to attend notify SOS. ~~Also~~ 9-26-13 cm Also discussed all issues brought up by DOE were discussed.
1915 Pre-Job complete
2031 Starting movement out of 50-69.
2100 Movement out complete.
2335 Bagging off 1 daughter and 2 POC's, bagging on 2nd daughter.
0018 Bag off/on complete.
0509 Signed off on the rounds.
0510 Late entry @ 0507 bagging off 2nd daughter to complete drum.
0529 Bag off complete.
0550 Started movement out of 50-69.
0612 Movement out complete.
0618 Mode change complete, WCRRF Yard in Warm Standby and 50-69 in Cold Standby.
0620 Securing SOS position. CA

No Further Entries on this Page

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0116
Examination Date:	10/4/2013
Waste Container ID:	68398
Video/Audio Recorded Media Number:	LA-RTR2-13-0116 C&D
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.: 183.5 kg Tare Wt.: 145.1 kg Net Wt.: 38.4 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:	90 %

CCP Radiography Data Sheet

Waste Container ID: 68398

Section 3: Container Inventory and Comments	(Detailed descriptions)
IM:	
AM:	
OM:	
OI:	
C:	
R:	
XPM:	Plastic bag
OR:	
IN:	Homogeneous solids
S:	

Section 4: Packaging Material and Waste Material Parameters	
Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	109.0
Plastics (PP): Rigid Liner/Lid Liner Bag (Inside POC)	8.1
Other: Fiberboard (CP), Liner/Sleeve(Inside POC)	28.0
Total Packaging Weight	145.1
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	2.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	36.4
Soils (S):	
Total WMP Weight:	38.4

CCP Radiography Data Sheet

Waste Container ID: 68398

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:

Eric Lyles		10/4/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	68398	Count Sequence Number:	23720
Operator:	D3PW2DK1\operator		
Assay Start:	10/25/2013 12:25:19 PM		
Description 1:	1LANDA1853		
Description 2:	POC 183.5		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 38.4 kg	Net:	38.4 kg
Container:	Volume: 208.0 l	Full:	95.0 %
Density:	0.788 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:	23720	Batch Number:	1LANDA1853
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:	68398	Analysis Date:	10/25/2013

Net Weight	38400.0 g			
Pu mass	6.84E+000	+-	1.86E+000	g
TRU Alpha Activity	5.41E+000	+-	3.40E+000	Ci
TRU Activity Concentration	1.41E+005	+-	8.85E+004	nCi/g
Pu-239 Equivalent Activity	5.42E+000	+-	3.40E+000	Ci
Pu-239 FGE	6.47E+000	+-	1.75E+000	g
Decay heat	1.79E-001	+-	1.13E-001	W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	6.58E-002	4.64E-005	9.24E-006	2.74E-006
PU238	6.25E-004	1.07E-002	2.91E-003	3.22E-005
PU239	6.42E+000	3.98E-001	1.08E-001	1.20E-003
PU240	4.10E-001	9.31E-002	2.54E-002	2.81E-004
AM241	1.43E+000	4.91E+000	3.40E+000	1.81E-001
PU241	7.86E-003	8.10E-001	2.21E-001	2.44E-003
PU242	1.37E-003	5.41E-006	1.47E-006	0.00E+000
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	7.64E-007
U233	<LLD	<LLD	0.00E+000	5.32E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	1.60E-006
U238	<LLD	<LLD	0.00E+000	1.18E-005

Errors quoted at 1.000 sigma

Operator: D. R. [illegible] Date: 10.29.13

ITR: Marsha [illegible] Date: 10.29.13

Automated Independent Technical Review

Count Sequence Number: 23720 Batch Number: 1LANDA1853
Counter ID: MCS HENC #1
Container ID: 68398
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 10/25/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis No Add-a-Source warnings.	Ok
Section 2 - Passive Neutron Analysis Analysis Status: No errors. Ones Rate Analysis complete with warnings. - Error calculating the Ones Rate Pu-240 Effective MDA.	Ok Not data affecting.
Section 3 - Data Combiner Analysis Override enabled; 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 Chandler Date: 10-28-13

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **68398**

BDR Number: **LA13FG2115**

Sampling Date: **11/13/2013**

3825021

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	2015.38	
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\131113c\
Data File : 68398.D
Acq On : 13 Nov 2013 3:09 pm (#1); 13-Nov-13, 15:09:06 (#2)
Operator : NW
Sample :
Misc : POC THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Nov 13 15:17:25 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	3.522	96	4439669	205.75 ppmv	0.00
15) Chlorobenzene-d5	5.845	117	3468092	177.50 ppmv	-0.02
Target Compounds					Qvalue
1) Hydrogen	1.624	GC1	15154	2015.38 ppmv	100

(#) = 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-RTR2-13-0117
Examination Date:	10/21/2013
Waste Container ID:	68436
Video/Audio Recorded Media Number:	LA-RTR2-13-0117 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.: 177.0 kg Tare Wt.: 145.1 kg Net Wt.: 31.9 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:	85 %

CCP Radiography Data Sheet

Waste Container ID: 68436

Section 3: Container Inventory and Comments (Detailed descriptions)

IM:

AM:

OM:

OI:

C:

R:

XPM: Plastic bag

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	109.0
Plastics (PP): Rigid Liner/Lid Liner Bag (Inside POC)	8.1
Other: Fiberboard (CP), Liner/Sleeve(Inside POC)	28.0
Total Packaging Weight	145.1
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	2.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	29.9
Soils (S):	
Total WMP Weight:	31.9

CCP Radiography Data Sheet

Waste Container ID: 68436

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:

Eric Lyles		10/21/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	68436	Count Sequence Number:	23732
Operator:	D3PW2DK1\operator		
Assay Start:	10/28/2013 1:40:42 PM		
Description 1:	1LANDA1854		
Description 2:	POC - 177.0		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 31.9 kg	Net:	31.9 kg
Container:	Volume: 208.0 l	Full:	95.0 %
Density:	0.756 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:	23732	Batch Number:	1LANDA1854
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:	68436	Analysis Date:	10/28/2013

Net Weight	31900.0 g			
Pu mass	1.07E+001	+-	1.93E+000	g
TRU Alpha Activity	3.04E+000	+-	4.59E-001	Ci
TRU Activity Concentration	9.54E+004	+-	1.44E+004	nCi/g
Pu-239 Equivalent Activity	3.07E+000	+-	4.59E-001	Ci
Pu-239 FGE	1.01E+001	+-	1.81E+000	g
Decay heat	9.96E-002	+-	1.52E-002	W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	4.17E-002	2.94E-005	5.73E-006	2.11E-006
PU238	9.74E-004	1.67E-002	3.02E-003	3.43E-005
PU239	1.00E+001	6.20E-001	1.12E-001	1.28E-003
PU240	6.39E-001	1.45E-001	2.63E-002	2.99E-004
AM241	6.60E-001	2.26E+000	4.44E-001	4.41E-002
PU241	1.22E-002	1.26E+000	2.29E-001	2.59E-003
PU242	2.13E-003	8.43E-006	1.53E-006	0.00E+000
SR90	7.13E-009	9.84E-007	5.29E-007	0.00E+000
CS137	1.13E-008	9.84E-007	5.29E-007	5.16E-007
U233	<LLD	<LLD	0.00E+000	4.09E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	1.23E-006
U238	<LLD	<LLD	0.00E+000	9.48E-006

Errors quoted at 1.000 sigma

Operator: D R-a Date: 10.30.13

ITR: Brittnight Date: 10-31-13

Automated Independent Technical Review

Count Sequence Number: 23732 Batch Number: 1LANDA1854
Counter ID: MCS HENC #1
Container ID: 68436
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 10/28/2013

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: 10-30-13

Waste Container ID: **68436**

BDR Number: **LA13FG2115**

Sampling Date: **11/13/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	452.58	
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\131113c\
Data File : 68436.D
Acq On : 13 Nov 2013 2:31 pm (#1); 13-Nov-13, 14:30:59 (#2)
Operator : NW
Sample :
Misc : POC THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Nov 13 14:39:56 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	3.584	96	4574814	205.75 ppmv	0.07
15) Chlorobenzene-d5	5.884	117	3589092	177.50 ppmv	0.02
Target Compounds					Qvalue
1) Hydrogen	1.540	GC1	3403m	452.58 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-RTR2-13-0117
Examination Date:	10/21/2013
Waste Container ID:	68462
Video/Audio Recorded Media Number:	LA-RTR2-13-0117 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.: 91.5 kg Tare Wt.: 33.4 kg Net Wt.: 58.1 kg
Rigid Liner and Liner Vent Description:	Liner: [X] No [ ] Yes Lid: [X] No [ ] Yes Type: [ ] 30-mil [ ] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [ ] Yes [X] N/A Punctured: [X] No [ ] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [ ] No [X] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 2 layers
Volume Utilization Percentage:	50 %

CCP Radiography Data Sheet

Waste Container ID: 68462

Section 3: Container Inventory and Comments	(Detailed descriptions)
IM:	
AM:	
OM:	Scrap lead
OI:	
C:	
R:	
XPM:	Plastic bags, liner lid
OR:	
IN:	Homogeneous solids
S:	

Section 4: Packaging Material and Waste Material Parameters	
Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP): Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	1.0
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	3.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	54.1
Soils (S):	
Total WMP Weight:	58.1

CCP Radiography Data Sheet

Waste Container ID: 68462

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

RTR Operator:

Eric Lyles		10/21/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	68462	Count Sequence Number:	23739
Operator:	D3PW2DK1\operator		
Assay Start:	10/29/2013 9:50:30 AM		
Description 1:	1LANDA1855		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 58.1 kg	Net:	58.1 kg
Container:	Volume: 208.0 l	Full:	50.0 %
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

009
CS 6/17/14

NDA 2000 Assay Report

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

Item ID:	68462	Count Sequence Number:	23739
Operator:	D3PW2DK1\operator		
Assay Start:	10/29/2013 9:50:30 AM		
Description 1:	1LANDA1855		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 58.1 kg	Net:	58.1 kg
Container:	Volume: 208.0 l	Full:	50.0 %
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

SUPERSEDED CS 6/17/14

CS 6/17/14 009A

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number: 23739
Assay Instrument: MCS HENC #1
Analysis Method: CCP-TP-063 v 15
Item ID: 68462

Batch Number: 1LANDA1855
Location: LANL TA-54
Software Version: NDA 2000 V.4.0
Analysis Date: 10/29/2013

Net Weight	58100.0 g		
Pu mass	1.40E+001	+-	2.49E+000 g
TRU Alpha Activity	6.51E+000	+-	9.87E-001 Ci
TRU Activity Concentration	1.12E+005	+-	1.70E+004 nCi/g
Pu-239 Equivalent Activity	6.54E+000	+-	9.87E-001 Ci
Pu-239 FGE	1.32E+001	+-	2.34E+000 g
Decay heat	2.14E-001	+-	3.28E-002 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	1.11E-001	7.84E-005	1.28E-005	3.30E-006
PU238	1.28E-003	2.19E-002	3.90E-003	3.46E-005
PU239	1.31E+001	8.15E-001	1.45E-001	1.29E-003
PU240	8.40E-001	1.91E-001	3.40E-002	3.02E-004
AM241	1.60E+000	5.48E+000	9.76E-001	8.68E-003
PU241	1.61E-002	1.66E+000	2.95E-001	2.62E-003
PU242	2.80E-003	1.11E-005	1.97E-006	0.00E+000
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	9.06E-007
U233	<LLD	<LLD	0.00E+000	6.28E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	1.88E-006
U238	<LLD	<LLD	0.00E+000	1.58E-005
AM243	4.62E-005	9.25E-006	2.69E-006	7.42E-006

Errors quoted at 1.000 sigma

Operator: [signature] Date: 6-6-14

ITR: [signature] Date: 6-10-14

010
CD 6/17/14

CS 6/17/14

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number: 23739
Assay Instrument: MCS HENC #1
Analysis Method: CCP-TP-063 v 15
Item ID: 68462

Batch Number: 1LANDA1855
Location: LANL TA-54
Software Version: NDA 2000 V.4.0
Analysis Date: 10/29/2013

Net Weight	58100.0 g		
Pu mass	1.40E+001	+-	2.49E+000 g
TRU Alpha Activity	1.16E+000	+-	1.51E-001 Ci
TRU Activity Concentration	2.00E+004	+-	2.60E+003 nCi/g
Pu-239 Equivalent Activity	1.19E+000	+-	1.51E-001 Ci
Pu-239 FGE	1.32E+001	+-	2.34E+000 g
Decay heat	3.66E-002	+-	4.71E-003 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	1.11E-001	7.84E-005	1.28E-005	3.30E-006
PU238	1.28E-003	2.19E-002	3.90E-003	3.46E-005
PU239	1.31E+001	8.15E-001	1.45E-001	1.29E-003
PU240	8.40E-001	1.91E-001	3.40E-002	3.02E-004
AM241	3.94E-002	1.35E-001	2.40E-002	2.14E-004
PU241	1.61E-002	1.66E+000	2.95E-001	2.62E-003
PU242	2.80E-003	1.11E-005	1.97E-006	0.00E+000
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	9.06E-007
U233	<LLD	<LLD	0.00E+000	6.28E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	1.88E-006
U238	<LLD	<LLD	0.00E+000	1.58E-005
AM243	4.62E-005	9.25E-006	2.69E-006	7.42E-006

Errors quoted at 1.000 sigma

Operator: [signature] Date: 10/31/13

ITR: [signature] Date: 10-31-13

CS 6/17/14 010A

Automated Independent Technical Review

Count Sequence Number: 23739 Batch Number: 1LANDA1855
Counter ID: MCS HENC #1
Container ID: 68462
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 10/29/2013

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.	

OIL
QC 6/17/14

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.
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 analysis.

Expert Review by: Bart B. Marah Date: 6/3/14

012
CJ 6/19/14

Automated Independent Technical Review

Count Sequence Number: 23739 Batch Number: 1LANDA1855
Counter ID: MCS HENC #1
Container ID: 68462
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 10/29/2013

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.	

SCRIBED 01 6/17/14

012A
06/17/14 011

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

Expert Review by: Sherri Chamberlin Date: 10-30-13

CS 6/17/14

CS 6/17/14 0123

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **68462**

BDR Number: **LA13FG2109**

Sampling Date: **10/30/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	1203.59	
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\131030C\
Data File : 68462.D
Acq On : 30 Oct 2013 10:06 am (#1); 30-Oct-13, 10:05:35 (#2)
Operator : EL
Sample :
Misc : 55 Gallon Drum Through Filter (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Oct 30 10:14:46 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	3.555	96	5288975	205.75 ppmv	0.04
15) Chlorobenzene-d5	5.861	117	4056997	177.50 ppmv	0.00
Target Compounds					Qvalue
1) Hydrogen	1.553	GC1	9050m	1203.59 ppmv	

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

14

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0117
Examination Date:	10/21/2013
Waste Container ID:	68463
Video/Audio Recorded Media Number:	LA-RTR2-13-0117 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.: 179.0 kg Tare Wt.: 33.4 kg Net Wt.: 145.6 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: 68463

Section 3: Container Inventory and Comments	(Detailed descriptions)
IM:	Scrap metal, razor blade
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):	1.0
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	8.0
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	2.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	134.6
Soils (S):	
Total WMP Weight:	145.6

CCP Radiography Data Sheet

Waste Container ID: 68463

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

Comments: N/A

RTR Operator:

Eric Lyles		10/21/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	68463	Count Sequence Number:	23731
Operator:	D3PW2DK1\operator		
Assay Start:	10/28/2013 12:56:39 PM		
Description 1:	1LANDA1854		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 146.0 kg	Net:	146.0 kg
Container:	Volume: 208.0 l	Full:	90.0 %
Density:	0.780 kg /l		

System Configuration

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

Errors quoted at 1.000 sigma

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number:	23731	Batch Number:	1LANDA1854
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:	68463	Analysis Date:	10/28/2013

Net Weight	146000.0 g		
Pu mass	4.32E+001	+-	8.65E+000 g
TRU Alpha Activity	2.21E+001	+-	3.82E+000 Ci
TRU Activity Concentration	1.51E+005	+-	2.62E+004 nCi/g
Pu-239 Equivalent Activity	2.22E+001	+-	3.82E+000 Ci
Pu-239 FGE	4.09E+001	+-	8.12E+000 g
Decay heat	7.27E-001	+-	1.27E-001 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	3.35E-001	2.37E-004	4.67E-005	7.80E-006
PU238	3.95E-003	6.76E-002	1.35E-002	3.43E-005
PU239	4.06E+001	2.52E+000	5.04E-001	1.28E-003
PU240	2.59E+000	5.89E-001	1.18E-001	2.99E-004
AM241	5.51E+000	1.89E+001	3.78E+000	9.59E-003
PU241	4.97E-002	5.12E+000	1.02E+000	2.59E-003
PU242	8.66E-003	3.42E-005	6.84E-006	0.00E+000
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	2.05E-006
U233	<LLD	<LLD	0.00E+000	1.51E-002
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	4.24E-006
U238	<LLD	<LLD	0.00E+000	3.84E-005

Errors quoted at 1.000 sigma

Operator: D. R. [illegible] Date: 10-30-13

ITR: [illegible] Date: 10-31-13

Automated Independent Technical Review

Count Sequence Number: 23731 Batch Number: 1LANDA1854
Counter ID: MCS HENC #1
Container ID: 68463
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 10/28/2013

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
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

Waste Container ID: **68463**

BDR Number: **LA13FG2108**

Sampling Date: **10/29/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	773.89	
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\131029c\
Data File : 68463.D
Acq On : 29 Oct 2013 2:09 pm (#1); 29-Oct-13, 14:09:02 (#2)
Operator : NW
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Oct 29 14:17:28 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	3.594	96	5229373	205.75 ppmv	0.08
15) Chlorobenzene-d5	5.891	117	4092561	177.50 ppmv	0.03
Target Compounds					Qvalue
1) Hydrogen	1.622	GC1	5819m	773.89 ppmv	

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

S825639

S825639

S825639

762766	TBD-TRU	T-TTRU-TEMP	Active	Decommissione

- 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

S825639
- S825639
  - 90761 – Empty
  - 90760
    - 92155 – Empty
    - 92154
  - 90759
    - 92163 – Empty
    - 92162
  - 90758
    - 92557
    - 92558 – Empty
  - 90757
    - 92540
    - 92541 – Empty
  - 90756
    - 92138 – Empty
    - 92136
  - 90755
    - 92159 – Empty
    - 92158
  - 90752
    - SB02012

Task History

Transfer Details

Transfer Amount	Transfer Unit	Item	Measured Weight	Measured Weight Unit
100.0	%	90752	0.0	lb

Working Copy
Date: 1/11/12 CV.

ATTACHMENT 1
Page 1 of 3

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: 5825639

6.2[4] Date Processed: 1·11·12

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] 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: Gerald Espinoza / Gerald Espinoza / 237120 / 1.11.12
Waste Handling Tech (print) Signature Z # Date

5.[16] Prepared Parent Drum Weight (lb): 403.8 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.: 5825639

6.2[5][B]/ 6.2[6] Total Parent Drum Weight (lb) NA 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.				
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.	3CPV1.5-25PVC	3CPV1.5-25PVC		
	Serial No.	W011607	W011634		
	Date of Manufacture	6-11	6-11		
10.2[5]	POC ID No	90759	90760		
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.	W011607 DP	W011634 DP		
10.2[13]	POC Assembly closed per Manufacturer's instructions. (Initial and Z#)	240012	240012		
10.2[14]	POC Assembly Gross Weight (lb)	377.6	378.4		
10.2[15]	POC Rad. Survey Results (mrem/hr)	150.25	800.25		
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				

N/A

ATTACHMENT 1
Page 2 of 3

4.1[6][B] Parent Waste Container No.: 5825639

6.2[5][B]/ 6.2[6] Total Parent Drum Weight (lb) 483.8 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.	90752		N/A	
10.1[4]	Daughter Drum Filter No.	CL1335			
10.1[4]	Daughter Drum Bag Filter No.	W01573		N/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.	3CPV1.5-2SPVC	3CPV1.5-2SPVC	3CPV1.5-2SPVC	3CPV1.5-2SPVC
	Serial No.	W01307	W01301	W01556	W011633
	Date of Manufacture	6-11	6-11	6-11	6-11
10.2[5]	POC ID No	90755	90756	90757	90758
10.2[7][B]/10.2[6]	POC Item Description	Salts plastic	Salts plastic	Salts plastic	Salts plastic
10.2[7][D]/10.2[8][D]	Bag-out Bag Filter No.	W01307	W01301	W01556	W011633
10.2[13]	POC Assembly closed per Manufacturer's instructions. (Initial and Z#)	DP 240012	DP 240012	DP 240012	DP 240012
10.2[14]	POC Assembly Gross Weight (lb)	344.4	359.8	373.0	373.0
10.2[15]	POC Rad. Survey Results (mrem/hr)	450.5	200.25	1800.25	260.25
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				
10.3[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			
10.3[13]/10.4[12]/ 10.5[5]	Daughter Drum % Full (%)	80%			
10.5[4]	Description Waste Added During Processing	plastic Cheesecloth			

ATTACHMENT 1
Page 3 of 3

4.1[6][B] Parent Waste Container No.: 5825639

Comments: lead, salts, plastic,

11.1[1] Performed By: Gerald Espinoza / Gerald [signature] 1237120 / 1-11-12
Waste Handling Tech (print) Signature Z # Date

11.1[7] Reviewed By: Gilbert Martinez / [signature] 1492351 / 1-17-12
SOS/SOM (print) Signature Z # Date

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

85-Gallon Overpack ID Number 90761

RECORD Drum Filter information:	NUCFIL 013
Filter ID Number:	FS 151
Date of Manufacture:	1-00

TORQUE WRENCH INFORMATION			
Filter Torque Wrench		**Drum Lid Ring Bolt**	
M&TE ID#		M&TE ID#	032128
Cal Expiration Date		Cal Expiration Date	9.18.12
			53% cw
Tolerance		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#	
		Cal Expiration Date	
		Tolerance	
		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) _____ in-lb ☑ N/A

Drum lid 2-inch bung torque value: (If applicable) _____ 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	Z#	Date
Gerald Espinoza	Gerald Espinoza	GE	237720	1.11.12
Clayton Mullins	[illegible]	CM	240092	1/11/12

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

Drum ID#: 90752

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 #: 3CPVC 1.5-2SPVC
Serial #: WO 1523
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 #: 019DS
Serial #: CL-1335
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:	8.2.12
Range (ft-lbs or in-lbs):	40-200	Range (ft-lbs or in-lbs):	10-80
Tolerance:	+/- 3% CW +/- 6% CW	Tolerance:	+/- 3% CW +/- 6% CW

Torque wrenches listed above are within the acceptable ranges as displayed on the calibration certificate.
[x] Yes [ ] No
Print Name: James Sandoval Signature: [signature] Z#: 116662

5. Weigh Drum Assembly

RECORD weight information
Tare witght (lbs) 75.0
File ID #: 019005

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

6. Label Drum Assembly

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

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

Operator Print: James Sandoval Operator Sign: [signature] Z#: 116662 Date: 1.4.12
Verifier Print: Gerald Espinoza Verifier Sign: [signature] Z#: 237720 Date: 1.11.12

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

DRUM ID#: 90752

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): 70-80

--- 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): 157.0

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: Gerald Espinoza Date: 1.11.12

Verifier Print/Sign: Clayton Mullis Date: 1/11/12

WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Production Control

Container ID: S825639 Container Type: 85-GAL Gross Weight (lbs): 410
Inner Seal #: 010866 Filter Prefix: LAVC Filter Serial #: 00103; 03361
AK Waste Stream: LA-MHD01.001 Certified RTR BDR: No BDR
TWSR Comments: LEACHED SOLIDS MST12
Total PE-Ci Activity: 3.53E+00 Equivalent Combustible PE-Ci: 1.32E+00 AM-241 PE-Ci: 3.00E-01
Total Fissile Gram Equivalents: 39.3 Total Surface Dose Rate (mrem/hr): 10
EPA Code(s): None
NCR RTR/NDA Comment: None
RTR Pre-Screen Date: 7/21/2007 Comment: Liquids, Impenetrable Obj, Liquid Location: 26
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 117434 (Z Number) 11.30.11 (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: 350lb. For VE 12-9-11 Ten items; heaviest item weighs ~ 68lb and all others weigh less than 36 lb each.
55 gal drum overpacked in 85 gal drum
May require RWP for >100 and < 1000 mrem/hr @ 30 cm
Drums containing nitrate salts may contain undocumented liquids

Performed By: Valerie Rhodes (WDP Engineering (Print)) Valerie Rhodes (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:

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

Performed By: Clarissa Valluzzo (TRU Remediation Operations (Print)) (Signature) 234079 (Z Number) 12/12/11 (Date)

Discardable Waste Log Sheet

DrumID: 010866

Item#	ItemID	Net (kg)	Matrix	M Code	NM	MT	Auth	Remarks
1	IXFS-660 FI	12.73	NITRATE SALTS		0	52	5/11	
2	IXFS-659 FB	16.28	NITRATE SALTS		3.28	52	5/11	
3	IXFS-661 FD	0.68	NITRATE SALTS		1	72	1/1	
4	IXFS-662 FI	2.27	NITRATE SALTS		0.98	54	5/11	
5	IXFS-664 FD		NITRATE SALTS		2.29	52	5/11	#4&#5 NET WT COMBINED
6	IXFS 646 FI	11.14	NITRATE SALTS		8.8	52	5/11	
7	IXFS-665 OX25	30.69	NITRATE SALTS		11.92	52	5/11	
8	IXFS-666 FA	7.27	NITRATE SALTS		3.04	52	5/11	
9	IXFS-667 FI	11.36	NITRATE SALTS		3.21	52	5/11	
10	IXFS-669 FB	12.27	NITRATE SALTS		7.36	52	5/11	
		104.69 kg						

SP 1

ATTACHMENT 1
Page 1 of 2

HYDROGEN/VOC SAMPLING USING GAS CHROMATOGRAPHY DATA SHEET

7.[1] Sample Date: 1/26/11

7.[7] Certified CCP Technician:

CCP (Print)	Signature	Z #	Date
Sara Aragon	Sara Aragon	1237975	1-31-11
	/	/	/

Container No. (7.[1]):	S910171 OK	S825639	S851682
Container Type (SWB, 110/85/55-gal) (7.[1]):	55 gal	55 gal	55 gal
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]):	S910171	S825639	S851682
Hydrogen Reading (ppm) (7.[10]):	Ø ppm	Ø 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:
All 55 gallon drums were sampled from inside an 85 gallon overpack.

11.1[1] Performed By: Alicia Herrera / [signature] 198450 11/31/11
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 / [signature] 117886 1/31/11
11.1[8] Waste Handling Supervisor (print) Signature Z # Date

InstName : Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\110126c\
Data File : S825639.D
Acq On : 26 Jan 2011 4:11 pm (#1); 26-Jan-11, 16:10:22 (#2)
Operator : EL
Sample :
Misc : 55 GAL DRUM FROM 85 GAL OVERPACK (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jan 26 16:28:17 2011
Quant Method : C:\msdchem\1\METHODS\vocgas.m
Quant Title : Flammable Gas Analysis
QLast Update : Mon Jan 10 10:28:07 2011
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
3) Fluorobenzene	3.671	96	7538332	205.50 ppmv	0.04
15) Chlorobenzene-d5	6.001	117	6227955	182.75 ppmv	0.04

Target Compounds	Qvalue

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

vocgas.m Wed Jan 26 16:28:45 2011

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7-11-12

PROJECT NAME _____ NOTEBOOK NO. _____

0600 Assumed WCRF operation center. Coleman
Beginning inside rounds.
0615 Pre-job being conducted by SOS. Beginning outside rounds.
0629 Item #1e1 on the rounds is OOS. Per CSE, we are okay to proceed.
0634 Both rounds completed.
0727 Both rounds reviewed by
0740 Per CSE and SOM, all that is required to be looked at on the rounds regarding the vehicle barrier ropes is the wire directly connected at the links
0748 Mode change completed. We are now in operations mode.
0750 Continuing to process drum #6047.
0826 Bagging off 6047 and PCC bagging on 5825639.
0833 Initiating drum movement from transportainer to 50-69.
0840 Drum movement into facility complete.
0923 Shift brief conducted with OIC Clarissa Velarde-Coleman
0904 Assuming Direct Operations Center - Velarde.
1000 Pre-job being conducted by electricians for badge reader work being performed in operations center.
1030 Notified by per Inside Operator #28 that Adm Albertson in their eyes suspended all operations inside and entered EP-WCRF-RM-EDP-0309 injured person and EP-DIV-A
1037 SOS and SOM have been notified by Operations Center
1039 IH notified and E.S manager notified
1040 Operations have been OK'd to resume by SOS/SOM
1043 Bagging off 5825639 and to PCS, will be bagging on 5824433. Board has been notified.
1046 All notifications have been notified according to WDP-Notification Checklist.
1048 Operator to be being transported to decon by IH and SOS
1110 Per RCT instruction we will need to place all inventory 50-69 in a safe configuration and suspend operations due to lack of RCTs and safety concern.
1233 Notified by SOS, Operator is OK and AD instructions able to perform all duties.
1327 Being notified by OIC Tech Coleman - Velarde
1328 Assuming WCR operation center. Coleman
1332 Initiating drum movement from 50-69 to transportainer
1342 Drum movement completed.
1453 Notified by operators inside that Ventilation has gone down and RAM's down as well. Entering response manual EP-WCRF-RM-ADP0205 and EP-WCRF-RM-ADP0209.
All personnel accounted for, following RCT instruction, leaving facility in a controlled manner.
1454 SOS, SOM notified.
1455 ~~Sam arrived~~ IC 141-12 on arrived at WCRF and notified.

SIGNATURE continued on next page. DATE _____ 20__
READ AND UNDERSTOOD _____ DATE _____ 20__

PROJECT NAME _____ NOTEBOOK NO. _____

0600 Received shift turnover from previous shift and assumed the WCRR SDM position. (Operations Manager)
0615 Pre-job briefing conducted with Shift Operations Supervisor. Discussed WR to begin 1-11-12. Discussed item #2 on the outside rounds vehicle barrier inspection. DOE believes that wire rope should be inspected. SDM's interpretation is only uninspected wire rope connections. SDM will follow up with CSE.
0745
0748 SDM spoke with CSE on inspecting vehicle barriers and delay giving inspections on wire rope. Per CSE wire rope connections are the only thing the operators should be checking for verses the entire wire rope. DOE was notified and he concurred with SDM. change complete. WCRR YARD and 50-69 from WARM to OPERATIONS.
1000 Maintenance crew arrived to work on TA54 bridge crane.
1021 Work package rejected due to a hold point stating that WCRR and 50-69 needed to be in WARM or COLD standby. SDM notified Supervisor (PIC) and a change is being made to work package.
1037 Notified by the Operation Center that it was reported by the PIC that an individual got waste LOCK-OUT on his eye while handling it inside 50-69. Operation Center entered EOP-309 minor injury. The individual flushed his eye in the nearby eye wash station and is being escorted by IH and Energy Solutions Supervision to Occupational Medicine for further evaluation.
1041 SDM notified Operations Manager and he will notify DOE.
1050 Left message with secretary for FOD.
1120 Followed up with sending a text message to FOD due to answer on LANL or cell phone line.
1130 Date entry 1112 notified by Operation Center that RP-1 supervisor is going to place operations in a safe configuration because they don't have enough RCTs to cover work inside 50-69 due to an RCT escorting individual (minor injury) to Occupational Medicine. Not a TSR requirement. A safety concern from RP-1 supervisor. Operations will take our lowest lunch.
1132 Date Centers - 1126 OM will make notifications to ADEP, ADNHHC, and the project director. OM will send out notification.
1232 Reported by Shift Operations Supervisor that minor injured person was cleared by Occupational Medicine and released back to work with no restrictions.
1235 Met with operators, SDSs, IH, SSW and ES manager to discuss the use of safety glasses or goggles inside 50-69 and ARTIC operations.

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

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PROJECT NAME WCRR SOS LOG BOOK NOTEBOOK NO.

1-11-12

0604 Reviewed SOS Turnover And assuming SOS Position
0615 Conducted Shift brief Went over RWP. Reviewed Tr new TSRs And Rounds sheet Also Procedure Compliance.
0718 Shift brief Concluded
0727 Reviewed Inside And outside Rounds.
0730 SSW ~~brent~~ GM 1-11-12 brought up Issues about Rounds About Inspecting wire ropes
0742 per CSE The only thing that need Inspecting Is wire rope Connectors.
0748 Mode change Complete WCRR Yard And SO-69 In operations.
1035 Notified by Inside personal operator Inside Got Absorbent in eye. Operator exiting facility Operator Also used eye wash station to flush eye. operator will be transported to OC Med for further evaluation Operations Inside Continuing
1046 Waiting on EH to transport operator to OC med
1105 Individual was taken to OC med.
1113 Head RCT stopping work due to insufficient Coverage 1 RCT had to go with individual to OC Med.
1114 Late entry Notified CS OM 1101 GM
1233 Operator Returned From OC Med with no Restrictions
1315 Went over all MSDs sheets for all chemicals And Made a List of what chemical needed what eye Protection ES personal Is making SWO to say when and for what eye protection Is Required.
1454 Notified by Inside Personal ventilation went down
1459 ~~Lat~~ GM 1-11-12 Inside Personal Instructed to do A Controlled Exit And entering Appropriate LCO's
1514 RCTs entering high bay to verify In UPS If lights on
1515 Per RCTs No lights on UPS
1534 RCTs entering Facility high bay And Areas out Area to Take Surveys
1609 Shutting down Cells
1620 Per RCT no contaminations found
1642 Per Engineering ok to Start up ventilation
1712 RCT entering to perform Performance test on all instrumentation
1805 CSE doing Operability Status UPS Operable Per CSE
1858 Starting up Ventilation
1901 Electricians by passing UPS upstream
1910 Starting ventilation ~~back up~~ GM 1-11-12 shut Down
1934 Starting up ventilation
1943 Starting outside Rounds
1950 Starting Inside Rounds
2000 Reviewed Inside And outside Rounds
2027 Mode change Complete WCRR Yard And SO-69 In work
2030 end of Shift Securing SOS Position

No further entries on this Page

SIGNATURE DATE 20
READ AND UNDERSTOOD DATE 20

CCP Radiography Data Sheet

5825639

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-HERTR-13-0051
Examination Date:	5/3/2013
Waste Container ID:	90752
Video/Audio Recorded Media Number:	LA-HERTR-13-0051 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.: 71.5 kg Tare Wt.: 33.4 kg Net Wt.: 38.1 kg
Rigid Liner and Liner Vent Description:	Liner: [X] No [ ] Yes Lid: [X] No [ ] Yes Type: [ ] 30-mil [ ] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [ ] Yes [X] N/A Punctured: [X] No [ ] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [ ] No [X] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 2 layers
Volume Utilization Percentage:	50 %

CCP Radiography Data Sheet

Waste Container ID: 90752

Section 3: Container Inventory and Comments (Detailed descriptions)

IM: Utility knives

AM:

OM: Scrap lead

OI:

C: Tape roll

R: Rubber gloves

XPM: Plastic bags, liner lid, plastic containers

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 Linner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	0.2
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	27.8
Other Inorganic Materials (OI)	
Cellulosics (C):	0.1
Rubber (R):	5.0
Plastics (waste materials) (XPM):	3.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	2.0
Soils (S):	
Total WMP Weight:	38.1

CCP Radiography Data Sheet

Waste Container ID: 90752

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	5/3/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	90752	Count Sequence Number:	15750
Operator:	DCLTD231\Operator		
Assay Start:	5/10/2013 11:55:22 AM		
Description 1:	2LANDA1156		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Debris S5000		
Container Type:	55 gal Drum		
Weight:	Net: 38.1 kg	Net:	38.1 kg
Container:	Volume: 208.0 l	Full:	50.0 %
Density:	0.370 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:	15750	Batch Number:	2LANDA1156
Assay Instrument:	HENC #2	Location:	LANL TA-54
Analysis Method:	CCP-TP-063 v 14	Software Version:	NDA 2000 V.4.0
Item ID:	90752	Analysis Date:	5/10/2013

Net Weight	38100.0 g		
Pu mass	2.40E+000	+-	5.56E-001 g
TRU Alpha Activity	8.82E-001	+-	1.57E-001 Ci
TRU Activity Concentration	2.31E+004	+-	4.13E+003 nCi/g
Pu-239 Equivalent Activity	8.87E-001	+-	1.57E-001 Ci
Pu-239 FGE	2.17E+000	+-	4.98E-001 g
Decay heat	2.90E-002	+-	5.24E-003 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	7.35E-003	5.25E-006	7.51E-007	1.13E-006
PU238	1.82E-003	3.15E-002	7.31E-003	1.70E-004
PU239	2.15E+000	1.35E-001	3.13E-002	7.31E-004
PU240	2.36E-001	5.43E-002	1.26E-002	2.94E-004
AM241	1.90E-001	6.61E-001	1.53E-001	3.58E-003
PU241	3.95E-003	4.11E-001	9.53E-002	2.22E-003
PU242	7.79E-003	3.09E-005	7.17E-006	0.00E+000
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	1.74E-007
U233	<LLD	<LLD	0.00E+000	1.20E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	3.28E-007
U238	<LLD	<LLD	0.00E+000	5.39E-006
AM243	2.60E-005	5.25E-006	7.99E-007	1.56E-006

Errors quoted at 1.000 sigma

Operator: D. R. [illegible] Date: 5-15-13

ITR: Brit Trujillo Date: 5-15-13

Automated Independent Technical Review

Count Sequence Number: 15750 Batch Number: 2LANDA1156
Counter ID: HENC #2
Container ID: 90752
Waste Matrix Code: Debris S5000 Count Type:
Sequence Type: Assay Date: 5/10/2013

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	
Expert review is recommended; the following validity tests failed:	MGA valid.
Pu239 weight percent is outside limits [92.5, 95.0].	Pu239 percent consistent with AK. Mix of MT-52,54.
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 Chambers Date: 5-14-13

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **90752**

BDR Number: **LA13FG2055**

Sampling Date: **5/14/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	16688.64	
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\130514c\
Data File : 90752.D
Acq On : 14 May 2013 1:35 pm (#1); 14-May-13, 13:34:40 (#2)
Operator : SA
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 14 13:45:11 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	3.529	96	4197380	201.25	ppmv	-0.04
15) Chlorobenzene-d5	5.868	117	3671451	177.00	ppmv	-0.03
Target Compounds						Qvalue
1) Hydrogen	1.574	GC1	118613m	16688.64	ppmv	

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

Working Copy
Date: 10-3-12

ATTACHMENT 1
Page 1 of 4

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: 90755

6.2[4] Date Processed: 10/3/12

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: D002, 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: Clayte Mullins CM 290092 10/3/12
Waste Handling Tech (print) Signature Z # Date

ATTACHMENT 1
Page 2 of 4

4.1[6][B] Parent Waste Container No.: 90755

5.[18] Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable: 368.8 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) 368.8 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:

NA

Jose Perez			22452	10-4-12
EWMO-FOD (print)	JJ 10-4-12	Signature	Z #	Date

5

ATTACHMENT 1
Page 3 of 4

4.1[6][B] Parent Waste Container No.: 90755

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	92158			
10.1[4]	Daughter Drum Filter No.	AM-761			
10.1[4]	Daughter Drum Bag Filter No.	L-3666			
10.1[4]	Daughter Drum Purchase Order No.	916265			
10.1[13][C]	WCG Fire Watch Stationed		☐ YES	☐ NO	☑ N/A
10.1[14][C][d]3/11.1[3]	WCG Fire Watch Secured		☐ YES	☐ NO	☑ N/A
10.2[4]	POC bag-on bag: Manufacturer				
	Model No.				
	Serial No.				
	Date of Manufacture				
10.2[5]	POC ID No			N	
10.2[7][B]/10.2[6]	POC Item Description			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:	POC			
10.3[9][A]	PCB-contaminated Waste Description	None			
10.3[9][B]	PCB Item ID No.	None			
10.3[10]	Remaining Waste Description	See comments			
10.3[13]/10.4[10]/ 10.5[4]/10.6[8]	Daughter Drum % Full (%)	85%			
10.5[3]/10.6[2]	Description Waste Added During Processing	bag-out stabs			

KHy 1.14

ATTACHMENT 1
Page 4 of 4

4.1[6][B] Parent Waste Container No.: 90155

Comments: stainless steel lid, cardboard, plastic, nitrate salts, kitty litter Bolts from POC.

11.1[1] Performed By: Eddie Rios / Eddie Rios 162577 10-3-12
Waste Handling Tech (print) Signature Z # Date

11.1[7] Reviewed By: Jose Jerez / [signature] 221452 10-4-12 0841
SOS or designee (print) Signature Z # Date/Time

UET Working Copy Date: 10-2-12 W

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-962
Manufacture Date: 8-11

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	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: Michael Romero Michael Romero 100723 / 10-2-12
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: Michael Romero Michael Romero 100723 / 10-2-12
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 Jose Jerez 221452 10-4-12
Supervisor or designee (print) Signature Z # Date

Working Copy
Date: 10-3-12

ATTACHMENT 5
Page 1 of 1

WCRRF OVERPACK DRUM CLOSURE DATA SHEET

7.[19] Overpack Drum Unique Identifier No.: 92159 10-9-24-14

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 / ±6% ccw

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

Performed By: Clyde Mullins (Waste Handling Technician (print)) (Signature) 240096 (Z#) 10/3/12 (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): 323.8 lb

Comments: N/A

8.1[1] Performed By: Eddie Rios (Waste Handling Technician (print)) (Signature) 187822 (Z#) 10-3-12 (Date)

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) 22148 (Z#) 10-4-12 (Date)

Working Copy

Date: 10-2-12

9

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

Drum ID#: 92158

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 #: 229225
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: BOF
Model #: GCMG-1.5-2.5 SPU
Serial #: [illegible] 63666
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 #: [illegible]
Serial #: [illegible]-761
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:	10-18-12	Cal Expiration Date:	6-11-13
Range (ft-lbs or in-lbs):	40-200	Range (ft-lbs or in-lbs):	16-80
Tolerance:	±3% or ±6%	Tolerance:	±6% or ±6%

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

[x] Yes [ ] No

Print Name: Eddie Rios Signature: [signature] Z#: [illegible]

5. Weigh Drum Assembly

RECORD weight information

Tare wight (lbs) 76.4
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: Eddie Rios Operator Sign: [signature] Z#: 188822 Date: 10-2-12

Verifier Print: Clyta Mullins Verifier Sign: [signature] Z#: 240092 Date: 10/3/12

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

DRUM ID#: 92158

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 #: 040729

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:

✓/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.): 239.8

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: Clyde Mullins Date: 10/3/12

Verifier Print/Sign: Steven Mondesir Date: 10-5-12

Steven Mondesir 10-3-12

WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Production Control

Container ID: 90755 Container Type: POC Gross Weight (lbs): 364
Liner Seal #: None Filter Prefix: None Filter Serial #: EL-507; EL-573
RK Waste Stream: LA-MHD01.001 Certified RTR BDR: No BDR
TWSR Comments: PARENT #8825639 WTD-12STD-755
Total PE-Ci Activity: 5.04E-01 Equivalent Combustible PE-Ci: 1.89E-01 AM-241 PE-Ci: 4.28E-02
Total Fissile Gram Equivalents: 5.6 Total Surface Dose Rate (mrem/hr): 1
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 WasteLoc 770 from previous repack campaign. A minimum of 1:2 volumes of nitrate salts/zeolite must be mixed with the volume of nitrate salts.
Performed By: Susan Ramsey (Production Control (Print)) Signature: Susan B. 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 - POC
Net Wt: 54 1/2. Parent drum (SEDs attached) was part of not WCRR nitrate salt repack campaign using WasteLoc 770. The resulting daughter POC is being repacked to adjust admixture/nitrate salt ratio. Nitrate salts carry waste codes for chromium (D007) lead (D008), and mercury (D009). No hazardous chemicals present
May require RWP for <100 mrem/hr
Performed By: Valerie Rhodes (WDP Engineering (Print)) Signature: Valerie Rhodes Z Number: 127609 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:
Performed By: Gilbert Martinez (TRU Remediation Operations (Print)) Signature: [illegible] Z Number: 149275 Date: 9.26.12

HS Review - [illegible] CSP Contains; Lead, Chromium, Hg.
No concerns. 9/26/12
JJ - 221452 - 9-26-12 - Ensure kitty litter is bagged in

Discardable Waste Log Sheet

DrumID: 010866

Item#	ItemID	Net (kg)	Matrix	M Code	NM	MT	Auth	Remarks
1	IXFS-660 FI	12.73	NITRATE SALTS		0	52	5/11	
2	IXFS-659 FB	16.28	NITRATE SALTS		3.28	52	5/11	
3	IXFS-661 FD	0.68	NITRATE SALTS		1	72	1/1	
4	IXFS-662 FI	2.27	NITRATE SALTS		0.98	54	5/11	
5	IXFS-664 FD		NITRATE SALTS		2.29	52	5/11	#4&#5 NET WT COMBINED
6	IXFS 646 FI	11.14	NITRATE SALTS		8.8	52	5/11	
7	IXFS-665 OX25	30.69	NITRATE SALTS		11.92	52	5/11	
8	IXFS-666 FA	7.27	NITRATE SALTS		3.04	52	5/11	
9	IXFS-667 FI	11.36	NITRATE SALTS		3.21	52	5/11	
10	IXFS-669 FB	12.27	NITRATE SALTS		7.36	52	5/11	
		104.69 kg						

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])	90755					
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: 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 : 90755.D
Acq On : 21 Sep 2012 1:55 pm (#1); 21-Sep-12, 13:54:32 (#2)
Operator : NW
Sample :
Misc : LFL POC THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 21 14:15:58 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	Lev(Min)
Internal Standards						
3) Fluorobenzene	3.542	96	6557633	201.25	ppmv	0.00
15) Chlorobenzene-d5	5.871	117	5824104	177.00	ppmv	0.00

Target Compounds	Qvalue

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

10-3-12
0600 Assuming WCR operations center - Tolleman
0615 Morning stand down to address issues.
0652 All issues regarding procedural compliance, etc. have been addressed. SOS performing the pre-job for today.
0711 Beginning outside rounds.
0714 Inside rounds complete.
0742 Outside rounds complete.
0743 Rounds reviewed by SOS.
0754 Mode change complete. We are now in operations.
0803 RCT's performing a CAM check. An audible alarm will sou
0819 Bagging on 90820.
0823 Permission granted to lower vehicle access gates to perform radiological survey for the shipment to Area G.
0831 Bag on complete.
0902 Bagging off 90820, bagging on 90966.
0903 Dave Rebel received an OKay from the SOM to seq the furnace.
0920 Vehicle access gates restored. Transportainers secured.
0928 Bag on complete.
0929 Initiating a drum movement from 50-69 to a transportainer
0934 Drum movement out of facility complete.
1013 Bagging off 90966, bagging on 90760.
1035 Bag on complete.
1058 Bagging off 90760, bagging on 90822
1109 Initiating a drum movement from transportainer to 50-69.
1133 Drum movement into facility complete.
1146 Late entry - 1118, bag on complete (SC)
1150 Bagging off 90822, bagging on 90755.
1217 Bag off complete.
1352 Bagging off 90755, bagging on 90806.
1412 Bag on complete.
1436 Beginning outside rounds.
1450 Bagging off 90806, bagging on 90759.
1505 Outside rounds complete.
1506 Initiating a drum movement from transportainer to 50-69
1507 Bag on complete.
1517 Drum movement into facility complete.
1518 Late entry - at 1515, began inside rounds (SC)
1527 Bagging off 90759.
1550 Bag off complete.
1553 Initiating a drum movement from 50-69 to a transportain
1600 Inside rounds complete.
1601 Drum movement out of facility complete.
1607 Rounds reviewed by SOS.
Continued on next page - Tolleman

continued from previous page

1613 Mode change complete - We are now in Warm Standby.

1630 End of day operations secure - Moreno

No further entries this page

10/5/12

0600 Assumed SOM position.
0615 Attended pre job brief conducted by SOS. Conduct of Ops briefing given by OM and ES Field OM to all WCRR personnel. Covered Procedure compliance, complacency in operations, management expectations.
0715 Pre job brief completed - rounds and RP-1 RMI's are commencing.
0754 Completed Mode Change: WCRR Yard / Blds 50-69 from Warm/Warm to Operations/Operations.
0827 Released W.O # 445656-01 50-54(p) Wet Auto Sprinkler Sys.
1000 Engineering / MSS onsite to walkdown furnace replacement in Bldg 50-84.
1015 Characterization team onsite to gamma spec LLW containers. RP-1 supervision stated he cannot support due to reduced staffing. Talked w/ characterization and scheduling and rescheduled for Wed 10/10/12.
1130 Inventory Control identified that w/ tomorrows shipment (incoming) space will be tight in the transportainers. To correct problem rescheduled tomorrows incoming to Tues 10/9/12. Will have sufficient inventory on hand to process.
1400 MSS proposed working 10/13/12 (Saturday) to perform light relamping inside 50-69. Issue is chemistry area in Room 102 has 1 light out and another dim. Would like to replace these ASAP but electricians need a full day to perform. No OCO's available for that day.
1530 Discussed lighting issue w/ OM and ~~SOS~~ 10/13/12 SOM (Gen) and since current run of SP 72 drums are 55 gal DM's (no decanting required) that maint can probably be put off until 10/26/12.
1545 Request from result of ALARA meeting was to touch up paint on floor in 50-69. Have OM permission to secure processing early tomorrow to perform.
1613 Completed Mode Change: WCRR Yard / Bldg 50-69 from Operations/Operations to Warm/Warm.
1630 Secured SOM position

No further entries this page

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10-3-12 WCRR SOS Log Book

0600 Assuming SOS position for the day Jim J
0615 Compliance Stand Down - Discussing Procedure Compl
and expectations of personnel performing job functio
1 shipment out today. Processing Drums.
0705 Pre-Job brief Complete.
0743 Inside and outside rounds signed off.
0754 MODE Change Complete 50-69 and Yard are in Operations
0819 Bagging on first drum for the day
0823 Permission granted to lower access gates to perfo
radiological surveys on outgoing shipment
0831 Bag on Complete
0902 Bagging on second drum for the day
0920 Outgoing shipment completed
0928 Bag on Complete
1013 Bagging on third drum for the day.
1035 Bag on Complete
1058 Bagging off third drum, Baging on fourth drum
1118 Bag on Complete
1150 Bagging off fourth drum, Bagging on fifth drum
1217 Bag on Complete
1352 Bagging off fifth drum, Bagging on sixth
1412 Bag on Complete
1450 Bagging off sixth drum, Bagging on seventh.
1507 Bag on Complete
1527 Bagging off seventh drum. Last Drum for the day.
1607 Rounds signed off.
1613 Mode Change Complete 50-69 and Yard are in WARM
1630 Securing SOS position for the day. Jim J

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:	92158
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.: 109.0 kg Tare Wt.: 33.4 kg Net Wt.: 75.6 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:	85 %

CCP Radiography Data Sheet

Waste Container ID: 92158

Section 3: Container Inventory and Comments (Detailed descriptions)

IM: Hardware, metal lid

AM:

OM:

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):	22.0
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):	39.6
Soils (S):	
Total WMP Weight:	75.6

CCP Radiography Data Sheet

Waste Container ID: 92158

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	1/23/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	92158	Count Sequence Number:	14914
Operator:	DCLTD231\Operator		
Assay Start:	1/28/2013 10:41:43 AM		
Description 1:	2LANDA1086		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Debris S5000		
Container Type:	55 gal Drum		
Weight:	Net: 75.6 kg	Net:	75.6 kg
Container:	Volume: 208.0 l	Full:	85.0 %
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:	14914	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:	92158	Analysis Date:	1/28/2013

Net Weight	75600.0 g		
Pu mass	4.49E+000	+-	5.84E-001 g
TRU Alpha Activity	1.04E+000	+-	3.67E-001 Ci
TRU Activity Concentration	1.38E+004	+-	4.85E+003 nCi/g
Pu-239 Equivalent Activity	1.04E+000	+-	3.67E-001 Ci
Pu-239 FGE	4.19E+000	+-	5.81E-001 g
Decay heat	3.40E-002	+-	1.23E-002 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	1.53E-007
U233	<LLD	<LLD	0.00E+000	1.95E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	6.12E-007
NP237	1.47E-002	1.05E-005	1.48E-006	4.89E-007
PU238	1.26E-003	2.18E-002	1.02E-002	7.61E-004
U238	<LLD	<LLD	0.00E+000	4.19E-006
PU239	4.18E+000	2.63E-001	3.66E-002	9.17E-003
PU240	3.01E-001	6.91E-002	1.38E-002	2.41E-003
AM241	1.98E-001	6.88E-001	3.65E-001	1.79E-002
PU241	2.26E-003	2.35E-001	1.49E-001	8.22E-003
PU242	7.20E-003	2.86E-005	5.08E-006	0.00E+000
AM243	6.53E-005	1.32E-005	1.96E-006	2.34E-006

Errors quoted at 1.000 sigma

Operator: [signature] Date: 1/31/13

ITR: [signature] Date: 2-1-13

Automated Independent Technical Review

Count Sequence Number: 14914 Batch Number: 2LANDA1086
Counter ID: HENC #2
Container ID: 92158
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.	Ok
Cosmic Ray Rejection Analysis complete with warnings. - The CRR High-Z mass Mass Variance is negative, High-Z mass Uncertainty set to zero so analysis could continue.	Ok
Section 3 - Data Combiner Analysis Override enabled; Gamma data specified as input. Results taken from Quantitative Gamma data. Results comparison test passed.	Results taken from quantitative gamma data.
Section 4 - MGA Analysis	Ok
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: 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: **92158**

BDR Number: **LA13FG2008**

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

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\130201c\
Data File : 92158.D
Acq On : 1 Feb 2013 12:54 pm (#1); 01-Feb-13, 12:54:14 (#2)
Operator : NW
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Feb 01 13:03:27 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	3.555	96	5285550	201.25	ppmv	-0.01
15) Chlorobenzene-d5	5.894	117	4795396	177.00	ppmv	0.00

Target Compounds	Qvalue

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

Working Copy
Date: 10-2-12 w

ATTACHMENT 1
Page 1 of 4

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: 90756

6.2[4] Date Processed: 10-2-12

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: D008, D007, 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: 7-13-13

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:
BC 10-3-12 ~~☐ YES~~ ☑ NO ☐ N/A

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

Performed By: Brandon Chavez
Waste Handling Tech (print) Signature

124780 10-2-12
Z # Date

ATTACHMENT 1
Page 2 of 4

4.1[6][B]	Parent Waste Container No.:	90156
5.[18]	Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable:	364.4 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)	364.4 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:	

NA

EWMO-FOD (print) Signature Date

ATTACHMENT 1

Page 3 of 4

4.1[6][B] Parent Waste Container No.: 90756

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	92136 JJ 10-3-12			
10.1[4]	Daughter Drum Filter No.	~~AM 884~~ AM 884		N	
10.1[4]	Daughter Drum Bag Filter No.	WO-1775			
10.1[4]	Daughter Drum Purchase Order No.	416265		A	
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		
10.2[14]	POC Assembly Gross Weight (lb)				
10.2[15]	POC Rad. Survey Results (mrem/hr)			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 (%)				
10.5[3]/10.6[2]	Description Waste Added During Processing	Plastic white boxes			

ATTACHMENT 1
Page 4 of 4

4.1[6][B] Parent Waste Container No.: 90756

Comments: Plastic, cardboard, SCHD

11.1[1] Performed By: Brandon Chavez / [signature] 120476 10-2-12
Waste Handling Tech (print) Signature Z # Date

11.1[7] Reviewed By: Jose Perez / [signature] 221452 10-3-12 1200
SOS or designee (print) Signature Z # Date/Time

Working Copy
Date: 10-2-12

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-956
Manufacture Date: 8/11

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 and +/- 0% CCW	+/- 3% CW and +/- 6% CCW

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

Performed By: Brandon Chavez / [signature] 128088 10-2-12
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:

8.1[1] Performed By: Eddie Rios / [signature] 162822 10-2-12
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 10-5-12
Supervisor or designee (print) Signature Z # Date

Working Copy
Date: 10-2-12

WET

ATTACHMENT 5
Page 1 of 1

WCRRF OVERPACK DRUM CLOSURE DATA SHEET

7.[19] Overpack Drum Unique Identifier No.: 92138

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 & ±6% ccw

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

Performed By: Brandon Chavez / [signature] [illegible] 10-2-12
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: 7-13-13

7.[36][D] 85-gal overpack drum gross weight (lb): 322.2 lb

Comments: N/C

8.1[1] Performed By: Brandon Chavez / [signature] [illegible] 10-2-12
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] 22452 10-3-12
Supervisor or designee (print) Signature Z# Date

Working Copy

Date: 9-19-12

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

Drum ID#: 92134

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 #: 0239225
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 spve
Serial #: WO-1785
Date of Manufacture: 7/11

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
- [ ] 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 #: 019125
Serial #: AM-334
Date of Manufacture: 1-12

RECORD torque wrench information:

Filter torque wrench:
M&TE ID #: 020614
Cal Expiration Date: 10-19-12
Range (ft-lbs or in-lbs): 40-200
Tolerance: +/- 4% cw / + 6% ccw

Jam Nut / Bung torque wrench:
M&TE ID #: 021151
Cal Expiration Date: 6/11/2013
Range (ft-lbs or in-lbs): 16-80
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: Eddie Ros Signature: [signature] Z#: [illegible]

5. Weigh Drum Assembly

RECORD weight information

Tare wight (lbs) 76.4
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: Eddie Ros Operator Sign: [signature] Z#: 187822 Date: 9-26-12

Verifier Print: Brandon Chavez Verifier Sign: [signature] Z#: 204742 Date: 10-2-12

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

DRUM ID#: 92136

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.) 221.0

Scale ID#: 019066

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: 10-2-12

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

WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Production Control

Container ID: 90756 Container Type: POC Gross Weight (lbs): 360

Container Seal #: None Filter Prefix: None Filter Serial #: EL-510; EL-552

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

TWSR Comments: PARENT #S825639 WTS-12STD-781

Total PE-Ci Activity: 5.04E-01 Equivalent Combustible PE-Ci: 1.89E-01 AM-241 PE-Ci: 4.28E-02

Total Fissile Gram Equivalents: 5.6 Total Surface Dose Rate (mrem/hr): [illegible]

EPA Code(s): D008 D007 D009 RR 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: ☐ VB ☐ 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 Loc 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 / Susan Ramsey / 100681 / 9/24/12
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: 50 lbs. Parent drum (SEDs attached) was part of LWPP nitrate salt campaign using Waste Loc 770. This resulting daughter POC is being repacked to adjust the admixture nitrate salts ratio. Nitrate salts carry waste codes for chromium (D007), lead (D008), and mercury (D009). No hazardous chemicals present.

May require RWP for <100 mrem/hr

Performed By: Valerie Rhodes / Valerie Rhodes / [illegible] / 9/25/12
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:

Processing Determination: ☑ Accept ☐ Reject

TRU Remediation Operations Comments: Ensure Kitty litter is bagged up

Performed By: Gilbert Martinez / [illegible] / 149235 / 9-26-12
TRU Remediation Operations (Print) Signature Z Number Date

IHS Review - [illegible] CSP contains Chromium and lead.
9/26/12

Document No: EP-DIV-AP-0107

JJ - 221452 - 9-26-12

Discardable Waste Log Sheet

DrumID: 010866

Item#	ItemID	Net (kg)	Matrix	M Code	NM	MT	Auth	Remarks
1	IXFS-660 FI	12.73	NITRATE SALTS		0	52	5/11	
2	IXFS-659 FB	16.28	NITRATE SALTS		3.28	52	5/11	
3	IXFS-661 FD	0.68	NITRATE SALTS		1	72	1/1	
4	IXFS-662 FI	2.27	NITRATE SALTS		0.98	54	5/11	
5	IXFS-664 FD		NITRATE SALTS		2.29	52	5/11	#4&#5 NET WT COMBINED
6	IXFS 646 FI	11.14	NITRATE SALTS		8.8	52	5/11	
7	IXFS-665 OX25	30.69	NITRATE SALTS		11.92	52	5/11	
8	IXFS-666 FA	7.27	NITRATE SALTS		3.04	52	5/11	
9	IXFS-667 FI	11.36	NITRATE SALTS		3.21	52	5/11	
10	IXFS-669 FB	12.27	NITRATE SALTS		7.36	52	5/11	
		104.69 kg						

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])	90756					
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 N/A	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT
WIPP-Approved Filtered Vent (5.[2])	☑ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT
Total CCP VOC value (< 7,000 ppm) (5.[4])	0 ppm	ppm	ppm	ppm	ppm	ppm
Hydrogen Reading (< 64,000 ppm) (5.[5])	0 ppm	ppm	ppm	ppm	ppm	ppm
Methane Reading (< 16,000 ppm) (5.[5])	0 ppm	ppm	ppm	ppm	ppm	ppm

5.[7] Certified CCP Technician:

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

Reviewed By: Sara Aragon (CCP (Print)) 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 : 90756.D
Acq On : 21 Sep 2012 3:14 pm (#1); 21-Sep-12, 15:13:42 (#2)
Operator : NW
Sample :
Misc : LFL POC THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 21 15:23:07 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	3.633	96	6791731	201.25	ppmv	0.09
15) Chlorobenzene-d5	5.946	117	6125715	177.00	ppmv	0.07

Target Compounds	Qvalue

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

PROJECT NAME

10-2-12

0545 Assuming WCRR operations center. TColeman
0550 Beginning outside rounds.
0615 Probe being conducted by 505.
0640 Beginning inside rounds.
0650 Outside rounds complete.
0705 Inside rounds complete.
0706 Rounds reviewed by 506.
0720 Initiating a drum movement from 50-69 to a transportainer.
0721 Mode change complete. We are now in operational.
0732 Movement out of facility complete.
0738 Bagging on 90855.
0754 Bag on complete.
0814 Bagging off 90855, bagging on 90811.
0830 Bag off complete.
0853 Bagging off 90811, bagging on 90859.
0910 Bag on complete.
0936 Being relieved by OCD. Clarissa Velarde. TColeman.
0937 Assuming WCRR Operations Center - Clarke.
0939 Starting movement into 50-69.
0955 Completed movement into 50-69.
0958 Bagging off 90859 and POC, bagging on 90756.
1000 Being relieved by OCD Terri Coleman - Clarke.
1001 Assuming WCRR operations center. TColeman.
1033 Bag on complete.
1041 Initiating a drum movement from 50-69 to a transportainer
1105 Drum movement out of facility complete.
1110 Bagging off, bagging on 90843
1130 Bag on complete.
1153 Bagging off 90843 and 1 POC, bagging on 90870.
1216 Bag on complete.
1226 Permission granted to lower the vehicle access gates to begin receipt of drums from Area 6.
1309 Bagging off 90870, bagging on 90810.
1326 Bag on complete.
1400 Initiating a drum movement from 50-69 to a transportainer.
1404 Bagging off 90810, bagging on 90875
1405 Late entry at 1320, vehicle access gates restored. Transportainer secured. (SC)
1406 Drum movement out of the TC 10-2-12 facility complete.
1432 Initiating a drum movement from transportainer to 50-69.
1433 Bag off complete. Starting outside rounds.
1442 Move into facility complete.
1453 Outside rounds complete.
1511 Bagging off 90875 and 1 POC. TC 10-2-12
continued on next page. TColeman

SIGNATURE DATE 20
READ AND UNDERSTOOD DATE 20

continued from previous page. SCOleman

1550 Bag of complete. Beginning inside rounds.

1616 Inside rounds complete.

1622 Rounds reviewed by SOS.

1624 Mode change complete. We are now in warm stand

1630 End of day. Operations secure - SColeman

No further entries this page

10/2/12

0600 ~~Relieved SOM [illegible]~~ 10/2/12 Assumed SOM position.

0615 Attended pre job brief conducted by SOS. Discussed yesterday's processing of SP-72 salt drums. Workers added 1.5/1 ratio of Kitty litter to waste and saw no significant decrease in dose rate => repacked into new POC's. Workers briefed to exit/entry requirements to WCRR yard.

0721 Completed Mode Change: WCRR Yard / Bldg 50-69 from Warm / Warm to Operations / Operations.

0730 (Late Entry 0635) Per LANL IH and ES IH VOC monitoring of transportainer no longer required. Cancelled Standing Order WCRR-2012-0012 and briefed all personnel.

0735 Notified by Work Control that Characterization (Gamma Spec) to be energized for tomorrow.

0736 Informed by Inventory Control that no outgoing shipment will take place today.

0738 RP-1 supervisor reported that yesterday's contamination on drum slide had decayed away overnight - verifying radon contamination.

1030 WO # 427964-01 Standing / Expedited WO released to Cut holes in walls in Bldg 50-84 to investigate Rodent infestation.

1200 On Solution Package conference call w/ prod control / engineering / LTP management. Discussed increase in production w/ SP 72 drums and need to keep shipments on schedule. Require SEDS/CFC's to be increased.

1255 Notified by MSS supervisor that no evidence of rodents in walls or ceiling of 50-84. Walkdown to scope new furnace install will ~~occur~~ occur 10/2/12 tomorrow.

1545 Notified by OM that WCRR needs to be in a standdown tomorrow morning until Con Ops Brief is given on Procedure Compliance. Notified OCO's and SOS and RP-1 supervisor.

1624 Completed Mode Change: WCRR yard / Bldg 50-69 from Operations / Operations to Warm / Warm.

1630 Secured SOM position.

10-2-12

No further entries this page

10/2 12

10-2-12 WCRR SOS Log Book

0600 Assuming SOS position for the day. [illegible]

0615 Starting Pre-Job brief. Discussed Barriers and Postings. Ensure that all entries and exit into the WCRRF yard are performed through the operations center. Continuing to process nitrate salt waste drums. One shipment in bound

0640 Concluded Pre-Job Brief.

0706 Signed off on inside and outside rounds.

0721 Mode Change Complete 50-69 and yard are now in Ops Mode.

0738 Starting to bag on first drum for the day

0750 Bag on Complete.

0814 Bagging off first drum and bagging on second drum.

0830 Bag off and Bag on complete.

0853 Bagging off second drum, Bagging on third drum

0910 Bag on Complete

1000 Bagging off third drum, Bagging on fourth drum.

1033 Bag on Complete

1041 Initiating Drum movement from 50-69 to Transportainer

1105 Drum movement complete out of facility

1110 Bagging off fourth drum, Bagging on fifth drum

1130 Bag on Complete

1153 Bagging ~~on~~ off fifth drum, Baggin on sixth drum
10-2-12

1216 Bag on Complete

1226 Initiating drum movement from Transport vehicle to Transportainers

1309 Bagging off sixth drum, Bagging on seventh

1326 Bag on Complete

1400 Drum movement from 50-69 to Transport Vehicle

1404 Bagging off seventh drum, Bagging on eight

1406 Drum movement out of 50-69 Complete.

1550 Bag off of last drum complete

1622 Signed off on rounds

1624 MODE Change Complete. WARM in 50-69 and yard

1630 Securing SOS 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-RTR2-13-0003
Examination Date:	1/9/2013
Waste Container ID:	92136
Video/Audio Recorded Media Number:	LA-RTR2-13-0003 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 12
NCR(s) associated with the container? (e.g., Prohibited Items)	~~[X]~~ No [X] Yes ms 1.30.13 ms 1.30.13 ms 1.30.13 ms 1.30.13 NCR No.: ~~N/A~~ NCR-LANL-0188-13 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.: 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:	85 %

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0003
Examination Date:	1/9/2013
Waste Container ID:	92136
Video/Audio Recorded Media Number:	LA-RTR2-13-0003 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.: 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:	85 %

Superseded

28A

CCP Radiography Data Sheet

Waste Container ID: 92136

Section 3. Container Inventory and Comments

IM: Pipe component lid, metal hardware

AM:

OM: Scrap lead

OI:

C: Fiberboard liner sleeve, coveralls, fiberboard packaging material

R:

XPM: Plastic bags, 90 mil rigid liner lid

OR: ~~Vermiculite,~~ ms 1.30.13

IN: Vermiculite ms 1.30.13

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):	0.5
Other Inorganic Materials (OI)	
Cellulosics (C):	10.0
Rubber (R):	
Plastics (waste materials) (XPM):	5.0
Organic Matrix (OR):	~~33.6~~ ms 1.30.13
Inorganic Matrix (IN):	33.6 ms 1.30.13
Soils (S):	
Total WMP Weight:	67.1

CCP Radiography Data Sheet

Waste Container ID: 92136

Section 3: Container Inventory and Comments (Detailed descriptions)

IM: Pipe component lid, metal hardware

AM:

OM: Scrap lead

OI:

C: Fiberboard liner sleeve, coveralls, fiberboard packaging material

R:

XPM: Plastic bags, 90 mil rigid liner lid

OR: Vermiculite

IN:

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):	0.5
Other Inorganic Materials (OI)	
Cellulosics (C):	10.0
Rubber (R):	
Plastics (waste materials) (XPM):	5.0
Organic Matrix (OR):	33.6
Inorganic Matrix (IN):	
Soils (S):	
Total WMP Weight:	67.1

TS 2/6/13

Superseded

29A

TS 2/6/13

CCP Radiography Data Sheet

Waste Container ID: 92136

Section 5 RTR Summary	
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~~ NCR-LANL-0198-13

ms 1.30.13 ms 1.30.13

RTR Operator:

Michael Simmons		1/9/2013
Print Name	Signature	Date

1.30.13

CCP Radiography Data Sheet

Waste Container ID: 92136

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	[signature]	1/9/2013
Print Name	Signature	Date

Superseded 2/6/13

30A 2/6/13

NDA 2000 Assay Report

Item Information

Item ID:	92136	Count Sequence Number:	21825
Operator:	D3PW2DK1\operator		
Assay Start:	1/11/2013 9:49:00 AM		
Description 1:	1LANDA1696		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 67.1 kg	Net:	67.1 kg
Container:	Volume: 208.0 l	Full:	85.0 %
Density:	0.380 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:	21825	Batch Number:	1LANDA1696
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:	92136	Analysis Date:	1/11/2013

Net Weight	67100.0 g		
Pu mass	4.43E+000	+-	6.13E-001 g
TRU Alpha Activity	9.29E-001	+-	8.79E-002 Ci
TRU Activity Concentration	1.39E+004	+-	1.31E+003 nCi/g
Pu-239 Equivalent Activity	9.43E-001	+-	8.79E-002 Ci
Pu-239 FGE	4.14E+000	+-	5.69E-001 g
Decay heat	3.03E-002	+-	2.90E-003 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	1.54E-002	1.10E-005	1.47E-006	8.48E-007
PU238	1.68E-003	2.91E-002	4.03E-003	1.30E-004
PU239	4.11E+000	2.59E-001	3.58E-002	1.15E-003
PU240	3.04E-001	7.00E-002	9.68E-003	3.11E-004
AM241	1.65E-001	5.72E-001	7.96E-002	1.91E-002
PU241	8.17E-003	8.49E-001	1.18E-001	3.78E-003
PU242	6.84E-003	2.71E-005	3.75E-006	0.00E+000
SR90	1.91E-009	2.64E-007	1.62E-007	0.00E+000
CS137	3.01E-009	2.64E-007	1.62E-007	2.07E-007
U233	<LLD	<LLD	0.00E+000	1.75E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	7.85E-007
U238	<LLD	<LLD	0.00E+000	6.34E-006
AM243	1.35E-004	2.74E-005	3.73E-006	2.32E-006

Errors quoted at 1.000 sigma

Operator: _____ Date: 1-21-13

ITR: _____ Date: 1/21/13

Automated Independent Technical Review

Count Sequence Number: 21825 Batch Number: 1LANDA1696
Counter ID: MCS HENC #1
Container ID: 92136
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 1/11/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis No Add-a-Source warnings.	Ok
Section 2 - Passive Neutron Analysis Analysis Status: No errors.	Ok
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. FRAM results applied. FRAM results attached.
Section 5 - Gamma Analysis Analysis Status: No errors.	Ok
Miscellaneous	No additional nuclides contributing to 95% of the radiological hazard identified.

Expert Review by: Sherie Chambers Date: 1-15-13

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **92136**

BDR Number: **LA13FG8003**

Sampling Date: **1/24/2013**

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\130124c\
Data File : 92136.D
Acq On : 24 Jan 2013 3:28 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: Jan 24 15:56:20 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	2074225	206.00 ppm	0.00
15) Chlorobenzene-d5	5.936	117	1854676	179.50 ppm	0.00

Target Compounds Qvalue

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

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ATTACHMENT 1
Page 1 of 4

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: 20757

6.2[4] Date Processed: 1-9-13

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

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

4.1[6][B] Parent Waste Container RCRA Designations: D008, D007, 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.: 019265
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: Eddie Rios [signature] 187802 1-9-13
Waste Handling Tech (print) Signature Z # Date

ATTACHMENT 1
Page 2 of 4

4.1[6][B] Parent Waste Container No.: 90757

5.[18] Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable: 3720 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) 3720 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
NA			

ATTACHMENT 1
Page 3 of 4

4.1[6][B] Parent Waste Container No.: 90757

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	92540			
10.1[4]	Daughter Drum Filter No.	AM-1028			
10.1[4]	Daughter Drum Bag Filter No.	L-4392			
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)				
10.3[3][A]	Approx. Containerized Liquid Vol./Units				
10.3[5][A]	Free Liquid Volume/Units	none			
10.3[7][A]	Opaque/Non-penetrable Item Description:	See Comments			
10.3[9][A]	PCB-contaminated Waste Description	none			
10.3[9][B]	PCB Item ID No.	none			
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	see comments			

N/A

ATTACHMENT 1
Page 4 of 4

4.1[6][B] Parent Waste Container No.: 90757

Comments: POC with absorbed salts added kitty litter, placed into 55gallon

11.1[1] Performed By: [illegible] [illegible] 18322 1-9-13
Waste Handling Tech (print) Signature Z# Date

11.1[7] Reviewed By: Joe Jerez / [illegible] 22452 / 1-14-13 1326
SOS or designee (print) Signature Z# Date/Time

Working Copy
Date: 1-7-13

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-230
Manufacture Date: 9/11

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

	Filtered Vent	2 in. Bung
M&TE No.:	040694	038367
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] / 123770 / 1-7-13
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] / 123770 / 1-7-13
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: Jose Jerez / [signature] / 221452 / 1-14-13
Supervisor or designee (print) Signature Z # Date

UET

Working Copy
Date: 1-9-13

ATTACHMENT 5
Page 1 of 1

WCRRF OVERPACK DRUM CLOSURE DATA SHEET

7.[19] Overpack Drum Unique Identifier No.: 92541

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%rdg / +-6%rdg

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

Performed By: Eddie Rios / [signature] 18832 1-9-13
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): 327.0 lb

Comments: N/A

8.1[1] Performed By: Eddie Rios / [signature] 18832 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: Jose Jorez / [signature] 22452 / 1-14-13
Supervisor or designee (print) Signature Z # Date

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

Drum ID#: 92540

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
- [ ] Place 2" duct tape on vertical seam on interior of drum

RECORD drum information:
Purchase Request #: 416184
Lot #: 0229224
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-1.5-25PVC
Serial #: L-4392
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 #: 019DS
Serial #: AM-1008
Date of Manufacture: 1/12

RECORD torque wrench information:

Filter torque wrench:		Jam Nut / Bung torque wrench:	
M&TE ID #:	040694	M&TE ID #:	021131
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 ±6% CCW	Tolerance:	±3% CW ±6% CCW

Torque wrenches listed above are within the acceptable ranges as displayed on the calibration certificate.
[x] Yes [ ] No
Print Name: BRIAN GALLEGOS Signature: B. Gallegos Z#: 267129

5. Weigh Drum Assembly

RECORD weight information
Tare wtght (lbs) 76.0
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: BRIAN GALLEGOS Operator Sign: B. Gallegos Z#: 267129 Date: 12-20-12
Verifier Print: Eddie Rios Verifier Sign: Eddie Rios Z#: 187822 Date: 1-9-13

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

DRUM ID#: 92540

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 +-2% 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.): 238.2

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: [signature] Date 1-9-13

Verifier Print/Sign: [signature] Date: 1-14-13

12

WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Production Control

Container ID: 90757 Container Type: POC Gross Weight (lbs): 373

er Seal #: None Filter Prefix: None Filter Serial #: EL-515; EL-551

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

TWSR Comments: PARENT #S825639 WTS-12STD-780

Total PE-Ci Activity: 5.04E-01 Equivalent Combustible PE-Ci: 1.89E-01 AM-241 PE-Ci: 4.28E-02

Total Fissile Gram Equivalents: 5.6 Total Surface Dose Rate (mrem/hr): 0

EPA Code(s): D008 D007 D009 WR 10/3/12

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 volume of kitty litter/zeolite must be mixed with the volume of nitrate salts.

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

Net Wt: 63 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 fo[redacted] and mercury. No chemicals present. May require RWP for < 100 mrem/hr

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

TRU Remediation Operations

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

Other Specific Safety Concerns: Use Hexamicron glove when processing waste. Do not push 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 Perez / TRU Remediation Operations (Print) Signature Jose Perez / 221452 / Z Number / 10-15-12 / Date

LL Z# 249750 10/19/12

HS REVIEW: KS 206362 10.4.12

Discardable Waste Log Sheet

DrumID: 010866

Item#	ItemID	Net (kg)	Matrix	M Code	NM	MT	Auth	Remarks
1	IXFS-660 FI	12.73	NITRATE SALTS		0	52	5/11	
2	IXFS-659 FB	16.28	NITRATE SALTS		3.28	52	5/11	
3	IXFS-661 FD	0.68	NITRATE SALTS		1	72	1/1	
4	IXFS-662 FI	2.27	NITRATE SALTS		0.98	54	5/11	
5	IXFS-664 FD		NITRATE SALTS		2.29	52	5/11	#4&#5 NET WT COMBINED
6	IXFS 646 FI	11.14	NITRATE SALTS		8.8	52	5/11	
7	IXFS-665 OX25	30.69	NITRATE SALTS		11.92	52	5/11	
8	IXFS-666 FA	7.27	NITRATE SALTS		3.04	52	5/11	
9	IXFS-667 FI	11.36	NITRATE SALTS		3.21	52	5/11	
10	IXFS-669 FB	12.27	NITRATE SALTS		7.36	52	5/11	
		104.69 kg						

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])	90757					
Container type sampled (e.g., 55-gal, 85-gal, 110-gal, or SWB) (5.[1])	PCC					
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

N/A

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 PCC.

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 : 90757.D
Acq On : 5 Oct 2012 1:32 pm (#1); 5 Oct 2012 1:31 pm (#2)
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 13:44:12 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	3.263	96	2409028	206.00 ppm	0.00
15) Chlorobenzene-d5	5.936	117	2139406	179.50 ppm	0.00

Target Compounds	Qvalue

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

Vocgas.m Fri Oct 05 13:44:25 2012

1-9-13

0555 Assuming WCRR operations center - Coleman

0601 Beginning outside rounds.

0612 Pre-job being conducted by SOS. Discussed spotte always being in line of sight for the forklift opera

0625 Beginning inside rounds.

0658 Item #61 on the rounds is OOS. POD in place, continui rounds. Pre-job concluded.

0700 Inside rounds completed.

0721 Both rounds reviewed by SOS.

0722 Late entry - At 0713, outside rounds completed. (sc)

0726 Mode change complete. We are now in operation WCRR yard and 5069.

0751 Initiating a drum movement from 5069 to a transporta

0754 Bagging on drum # 813212.

0805 Bag on complete.

0825 Movement out of facility completed. Initiating drum movement from transportainer to 5069.

0840 Drum movement into facility complete.

0915 Bagging off drum # 581321-2, bagging on 583141

0931 Operator #30 was inside 5069, came out, has (L) eye irritation. SCE sending operator to ~~contact~~ urgent care for precautionary measures. sc 1-9-13.

0936 Operator 30, ES JH, ~~and an EET~~ leaving for ~~OCH~~ urgent om and ES OM notified.

0945 Initiating a drum movement from transportain to transport vehicle for a shipment to Area G. Permission has been granted to lower the vehic access gates.

0953 Bag on completed. PPE check.

1027 Notified by ES JH that individual will not taken to urgent care. ES JH spoke with work who states since it's not work related and he currently using eyedrops for the irritation. care will call back to follow up in a co 4 hours.

Continued on next page - Coleman

1-9-13 Continued from previous page. [illegible]
1123 Bagging off drum #5834419, bagging on 90757. PPE check S
1152 Bag on complete. Contamination reported on an operator
(L) ~~high density~~ protective glove during overpacking an empty.
1204 Per RCT lead, the contamination was within the RWP limi
200 DPM alpha. The glove was changed. The RCTS performe
large area smears which were good. A survey was taken
on the slide for overpacking and results were 1000 DPM.
The slide will be bagged up and another slide used for
operations.
1224 LAS and direct smears on the floor in overpacking area
were NDA.
1417 Initiating a drum movement from the transfer vehicle to
the transportainer. Permission granted to lower the vehicle
access gates.
1433 Bagging off drum 90757, bagging on 5816363. PPE check Sat.
1457 Bag on complete.
1500 Beginning outside rounds.
1514 PPE check Sat.
1541 Outside rounds complete.
1622 Bagging off drum #5816363. Items contained in this
drum are leading between 1 and 2 REM. They are
anticipating possibly up to 12 POC'S. Operator
will be bagging off 1 daughter and 3 POC'S tonight and
leaving the parent bagged on overnight pending FOD
approval.
1625 Notified by OM that the FOD has granted permission
to leave the parent drum (5816363) bagged on overnight
Operators continuing with bag off.
1632 PPE check is SAT.
1646 Gate entry - 1600, vehicle access gates restored. Shipment
from Area G accepted. Transportainers secured (JC).
1717 Bag off of 1 Daughter and 3 POC'S completed. Everything is
in a safe configuration. Will resume bag off of drum
#5816363 tomorrow morning.
1728 Beginning inside rounds.
Continued on next page. [illegible]

1-9-13 Continued from previous page - JCollman
1739 Item #61 is OOS. PODS in place. Continuing rounds.
1751 Inside rounds completed. Both rounds have been reviewed by SDS.
1755 Mode change completed. We are now in warm standby in LCKRF yard and SDL9.
1-9-13 1830 End of day. OCO position secured. JCollman

No further entries this page.

1/9/13

0700 Reviewed shift turnover from previous shift and assumed the WCRR SOM position. (Genevieve Schwartz)

0615 Attended pre-job briefing conducted by SDS. Discussed importance of forklift spotter and roles and responsibilities. Shortage on respirators are still an issue. Only three operators have respirators to perform bagouts. SDS briefed to the importance of taking frequent breaks as needed. Due to the shortage of respirators RP-1 stayed late last night. To ensure operators/RCTs dont exceed their hours in a 48 hr. period. Operations will clear by 1800 hrs.

0700 Performed daily TA54 SOM POD call in. Status WCRR and DRS SOS covered activities for Dome 33. Safety topic covered being aware of surroundings. A snake was discovered in Dome 33.

0724 Mode change complete. WCRR YARD/SOUTH from WARM/WARM to OPERATIONS/OPERATIONS.

0930 Notified by SDS J. Ruiz that an operator came out of the process area complaining of a irritated eye. ~~The SDS will be writting individual to dec med.~~ 1/9/13 The individual will be taken to occupational medicine by Energy Solutions IH or other supervisor not on the watch bill.

1020 After reviewing EP-WCRR-RM-EOP-0309 Injured Person and discussing with Energy Solutions and OM person didn't receive injury at work. EOP was not entered and individual will not be going to occupational medicine but rather to urgent care for EXF. LO. IH evaluation.

1030 Notified by Energy Solutions IH and SDS that individual will not be taken to urgent care after speaking to work care and obtaining further guidance. Work care will keep in contact with IH and individual to follow up with condition.

1115 Electrician came by to scope out areas requiring portable lighting. Will be delivery two portable lights this afternoon.

1155 Notified by WCRR SOS that it was reported to the operation center that an individual has contamination on PPE glove. RP-1 is investigating and further information will be provided to the SOM and SOS.

1200 Call in daily status with OM and project manager. SOM to follow up with J. Vigil on lead windows.

1230 Notified by OCO that contamination levels are within RWP limits. Leather PPE glove 800 dpm alpha and the plastic slide used to re-root empty 85 gallon drum 1,000 dpm. The plastic slide will be bagged, dropped and replaced with new one.

1400 Notified by SDS and OCO that drum #4 has items that are missing bolt torque 1-2 Rem. The drum

SIGNATURE DATE
READ AND UNDERSTOOD DATE

1/9/13

Trail sued to the DOH into daughters and CPS. The operation
Cole estimating 12 daughters. Due to the time restraints operation
will work until 1730 to allow RPI to perform at the
end of the day. Dump to be done by 1800 hrs.
Sim will snug to obtain TOP approval to leave
patient down, bagged on 40, continue with op 1/10/13.
1025 Sim obtained TOP approval see section to leave
patient down, bagged on. Placing all waste in a
DOH configuration.
1755 Final check complete WRAPAREN 152-109 from OPERATIONS
OPERATIONS to WARM/WARM.
Securing the Sim position. [illegible]

[illegible] 1/9/13

1-4-13 WCRR SOS Log Book

0600 Assuming SOS position for the day. [illegible]

0610 Starting Pre-Job brief. Briefed crew on using the E-Brake on the forklift and lowering your load when having to stop forklift movements. Also discussed the use of spotters when doing forklift movements ensuring that they are wearing proper PPE and have line of sight with the forklift operation. If the forklift operator does not see his spotter he needs to stop the operation, put the load in a safe configuration and e-brake on the forklift until the spotter is in place. Monthly RWP briefing for processing was given by the RCT. Emphasized to the group that today is day 3 of 12 hour shift. Ensure that they take their time. Still have 3 Operators with respirators that can perform Bag on and Bag off. Short on Personnel as well. New personnel going through training. Some situation with RCT's. Will not be working through lunch.

0650 Pre-Job Complete.

0721 Signed off on Inside and Outside Rounds

0726 Mode Change Complete. In Ops mode both WCRR Yard and 50-69

0754 Bagging on first drum for the day.

0815 Bagging off first drum, bagging on second

0831 Operator reporting irritation in his left eye. Operator was inside of 50-69 processing waste. Made notifications to the SOM [illegible] and Ops Manager for Energy Solutions and will be sending him to Occupational Medicine

1027 After further clarifications operator with eye irritation will not be taken Occ Med. I'll speak with work comp who states that since it's not work related, ~~Work Comp~~ Work Comp will call back within a couple of hours to follow up with ~~him~~ him. [illegible] 1-4-13

1123 Bagging off second drum, Bagging on the third.

1156 Operator reporting contamination on Operator Protective glove on the left hand

1204 Contamination was within the RWP limits.

Continued on next page

1-9-13 UXR SOS by Book

Continued from previous page - Contamination of the glove was 200 dpm, glove was replaced with new one. 1000 dpm was found on the slide. The slide is being bagged up and will be counted later to verify it's not radon LAS on the floor where Overpacking occurs was 100. Contamination occurred while overpacking the empty 1 gallon drum into an empty 55 gallon.

1220 Operators and RCT's headed out for lunch. Unable to work through lunch due to not having enough operators and RCT's to rotate through.

1433 Bagging off third drum. Bagging on fourth drum.

1622 Operator reporting that items in fourth drum ID#: 581636 are reading between 1 and 2 REM. Operations are anticipating that waste material will need to be packaged into 12 RCC's. Operations will be bagging off 1 daughter and 3 RCC's tonight. Ops Manager will request permission from the FOD to leave the drum on overnight and finish processing in the morning. Material is in cans, the cans are pushed completely through and the cemented material is breaking up also.

1625 Notified by OM that per telecon the FOD has given approval for the present drum to remain bagged on overnight.

1717 Bagging off 1 daughter and 3 RCC's. Everything is in safe configuration. Will finalize drum tomorrow.

1751 Signed off on cards.

1755 Mode Change - UXR Vent and SO-69 in UFRM.

1-9-13 1805 Securing SOS position for the day.

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:	92540
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.: 108.0 kg Tare Wt.: 33.4 kg Net Wt.: 74.6 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: 92540

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):	6.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	42.6
Soils (S):	
Total WMP Weight:	74.6

CCP Radiography Data Sheet

Waste Container ID: 92540

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:	92540	Count Sequence Number:	22257
Operator:	D3PW2DK1\operator		
Assay Start:	3/12/2013 2:07:37 PM		
Description 1:	1LANDA1729		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 74.6 kg	Net:	74.6 kg
Container:	Volume: 208.0 l	Full:	75.0 %
Density:	0.480 kg /l		

System Configuration

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

Errors quoted at 1.000 sigma

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number:	22257	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:	92540	Analysis Date:	3/12/2013

Net Weight	74600.0 g			
Pu mass	5.98E+000	+-	1.02E+000	g
TRU Alpha Activity	2.17E+000	+-	9.18E-001	Ci
TRU Activity Concentration	2.90E+004	+-	1.23E+004	nCi/g
Pu-239 Equivalent Activity	2.18E+000	+-	9.18E-001	Ci
Pu-239 FGE	5.64E+000	+-	9.55E-001	g
Decay heat	7.14E-002	+-	3.07E-002	W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	3.57E-002	2.55E-005	3.82E-006	1.48E-006
PU238	5.49E-004	9.50E-003	1.62E-003	3.43E-005
PU239	5.60E+000	3.52E-001	6.00E-002	1.27E-003
PU240	3.66E-001	8.42E-002	1.44E-002	3.05E-004
AM241	4.95E-001	1.72E+000	9.16E-001	3.52E-002
PU241	7.43E-003	7.73E-001	1.32E-001	2.79E-003
PU242	1.20E-003	4.75E-006	8.10E-007	0.00E+000
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	3.83E-007
U233	<LLD	<LLD	0.00E+000	3.03E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	9.22E-007
U238	<LLD	<LLD	0.00E+000	9.10E-006
AM243	3.76E-004	7.60E-005	1.16E-005	4.11E-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: 22257 Batch Number: 1LANDA1729
Counter ID: MCS HENC #1
Container ID: 92540
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. No Warnings Reported.	Ok
Section 3 - Data Combiner Analysis Override enabled; Passive Neutron Pu and Gamma U data specified as input. Pu results taken from Passive Neutron data, U from Quantitative Gamma data. Results comparison test passed.	Passive Neutron Pu and Gamma U data specified as input.
Section 4 - MGA Analysis Results are marked as invalid.	MGA analysis failed. AK isotopics applied. The AK information utilized was provided by Steve Schafer, AKE, and consists of data from CCP-AK-LANL-006, AK Source Document M237. MT-52,54.
Section 5 - Gamma Analysis Analysis Status: No errors.	Ok
Miscellaneous	No additional nuclides contributing to 95% of the radiological hazard identified.

Expert Review by: Sheri Chamber Date: 3-13-13

Waste Container ID: **92540**

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 : 92540.D
Acq On : 15 Mar 2013 12:55 pm (#1); 15-Mar-13, 12:55:09 (#2)
Operator : SA
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 15 13:03:40 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	3.509	96	3869927	201.25 ppmv	-0.06
15) Chlorobenzene-d5	5.848	117	3313505	177.00 ppmv	-0.05

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.: 90758

6.2[4] Date Processed: 1-11-13

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

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

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

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

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

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

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

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

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

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

Performed By: BRIAN GALLEGOS / B. L. Gallegos / 2661129 / 1-11-13
Waste Handling Tech (print) Signature Z# Date

ATTACHMENT 1
Page 2 of 4

4.1[6][B]	Parent Waste Container No.: 90758	
5.[18]	Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable:	373.0 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)	373 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.: 90788

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	92557			
10.1[4]	Daughter Drum Filter No.	JL-1376		N	
10.1[4]	Daughter Drum Bag Filter No.	L-4221		A	
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)		N		
10.2[15]	POC Rad. Survey Results (mrem/hr)				
10.3[3][A]	Approx. Containerized Liquid Vol./Units			A	
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	STUB OUT BAGS			
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		A	

ATTACHMENT 1
Page 4 of 4

4.1[6][B] Parent Waste Container No.: 90758

Comments: POC LIDS, CARD BOARD, PLASTIC, SALTS, KITTY LITTER,

11.1[1] Performed By: BRIAN GALLEGOS / [signature] 267128 1-11-13
Waste Handling Tech (print) Signature Z # Date

11.1[7] Reviewed By: [signature] / [signature] 145235 1-11-13 0830
SOS or designee (print) Signature Z # Date/Time

Working Copy
Date: 11-28-12

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-300
- 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 and +/- 6% ccw	+/- 3% cw and +/- 6% ccw

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

Performed By: Gerald Espinoza / [signature] [illegible] 11/28/12
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: Brian Gallegos / [signature] 1267129 1-11-13
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: G Mh / [signature] 149035 1-13-13
Supervisor or designee (print) Signature Z# Date

Working Copy
Date: 1-11-13 CW

ATTACHMENT 5
Page 1 of 1

WCRRF OVERPACK DRUM CLOSURE DATA SHEET

7.[19] Overpack Drum Unique Identifier No.: 92558

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] 2671129 1-11-13
Waste Handling Technician (print) Signature Z# Date

7.[28] Overpack drum closure ring torque value: 30 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): 323.4 lb

Comments: N/C

8.1[1] Performed By: BRIAN GALLEGOS / [signature] 2671129 1-11-13
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: GMh / [signature] 14235 1-13-13
Supervisor or designee (print) Signature Z# Date

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

Drum ID#: 92557

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 #: ACDVC1.5-25DVC
Serial #: L-4221
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: Aircfil
Model #: 019 DS
Serial #: JL-1380
Date of Manufacture: 10/11

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):	40-80
Tolerance:	±4%cw ±0%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#: 182723

5. Weigh Drum Assembly

RECORD weight information

Tare wight (lbs): 760
File ID #: 019865

- [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#: 182723 Date: 11-7-12

Verifier Print: BRIAN GALLEGOS Verifier Sign: [signature] Z#: 267129 Date: 1-11-13

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

DRUM ID#: 92557

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): 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: 1-11-13

Verifier Print/Sign: [illegible] Date: 1-11-13

WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

12

Production Control

Container ID: 90758 Container Type: POC Gross Weight (lbs): 373
Container Seal #: None Filter Prefix: None Filter Serial #: EL-52; EL-7
Waste Stream: LA-MHD01.001 Certified RTR BDR: No BDR
TWSR Comments: PARENT #S825639 WTS-12STD-778
Total PE-Ci Activity: 5.04E-01 Equivalent Combustible PE-Ci: 1.89E-01 AM-241 PE-Ci: 4.28E-02
Total Fissile Gram Equivalents: 5.6 Total Surface Dose Rate (mrem/hr): 1
EPA Code(s): D008 D007 D009 JR 10/3/12
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 volume of kitty litter/zeolite must be mixed with 1.0 volume of nitrate salts.
Performed By: Susan Ramsey (Production Control (Print)) Signature: Susan G. 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 – POC
Net Wt: 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], lead, and mercury. No chemicals present. May require RWP for < 100 mrem/hr

Performed By: Valerie Rhodes (WDP Engineering (Print)) Signature: Valerie Rhodes Z Number: 112609 Date: 10/5/12

TRU Remediation Operations

☑ Waste Container Information Evaluated ☐ Less Than 170 lbs ☐ RTR Video Available
Other Specific Safety Concerns: Do not press or push on waste. Use proper PPE when processing waste. Utilize hexarmor 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 Jorez (TRU Remediation Operations (Print)) Signature: Jose Jorez Z Number: 221452 Date: 10-11-12

JR Z#249750 10/19/12

HS Review: MS 286362 10.4.12

Discardable Waste Log Sheet

DrumID: 010866

Item#	ItemID	Net (kg)	Matrix	M Code	NM	MT	Auth	Remarks
1	IXFS-660 FI	12.73	NITRATE SALTS		0	52	5/11	
2	IXFS-659 FB	16.28	NITRATE SALTS		3.28	52	5/11	
3	IXFS-661 FD	0.68	NITRATE SALTS		1	72	1/1	
4	IXFS-662 FI	2.27	NITRATE SALTS		0.98	54	5/11	
5	IXFS-664 FD		NITRATE SALTS		2.29	52	5/11	#4&#5 NET WT COMBINED
6	IXFS 646 FI	11.14	NITRATE SALTS		8.8	52	5/11	
7	IXFS-665 OX25	30.69	NITRATE SALTS		11.92	52	5/11	
8	IXFS-666 FA	7.27	NITRATE SALTS		3.04	52	5/11	
9	IXFS-667 FI	11.36	NITRATE SALTS		3.21	52	5/11	
10	IXFS-669 FB	12.27	NITRATE SALTS		7.36	52	5/11	
		104.69 kg						

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])	90758					
Container type sampled (e.g., 55-gal, 85-gal, 110-gal, or SWB) (5.[1])	POC					
Filtered Vent Type (5.[1])	190S					
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 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)

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\121005c\
Data File : 90758.D
Acq On : 5 Oct 2012 3:22 pm (#1); 5 Oct 2012 3:21 pm (#2)
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 15:29:39 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	2294184	206.00 ppm	0.00
15) Chlorobenzene-d5	5.936	117	2058950	179.50 ppm	0.00

Target Compounds	Qvalue

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

Vocgas.m Fri Oct 05 15:29:46 2012

1-11-13
0600 Assuming WCRRF operations center - Orlando.
0615 SOS performing project briefing
0745 Starting inside rounds.
0752 Starting outside rounds.
0814 Completed outside rounds.
0819 Item #61 is OOS, POD in place OK to continue.
0825 Completed inside rounds.
0838 Inside and outside rounds signed off by SOS.
0850 Mode change performed TH50-69 and WCRRF in operations
1012 Starting movement out of 50-69 to transport vehicle
1124 Bagging on 90809
1136 Bag on complete
1137 PPE check is out
1238 bagging off 90809, bagging on 90753
1239 PPE check is set.
1234 Notified by WCRRF SOM that boiler ~~[illegible]~~ 01-11-13 has alarm notifying ~~[illegible]~~ 01-11-13 CSE
1240 Notified by CSE Boiler house is being worked and to keep eye on 50-69 temperature. CSE will keep us posted
1252 bag on, bag off is complete PPE check is set
1[illegible] Starting movement to transport vehicle
1312 permission granted to move vehicle across gates.
1328 per CSE 2nd igniter on boiler 2 is malfunctioning SOM working on getting maintenance work package initiated
1401 movement to transport vehicle is complete
1404 Vehicle access gates have been restored.
1417 Starting inside rounds
1421 Mode change being performed TH50-69 and WCRRF and RLA in warm standby.
1426 maintenance performing one job on WO# 00455797 01 TS & Repair boiler
1438 Item 61 is OOS, POD in place OK to continue with rounds
Continued on next page - Orlando.

72563

Inst Propr - 90823

1411-13 Continued from previous page (Orlando)
1501 Maintenance and electricians entering WCC yard to perform work on boiler.
1530 ~~Outside~~ 1411-13 Inside rounds signed off by SCE
1601 Maintenance work on boiler is complete pull valve and check, Boiler is break up and running.
1617 Moore change performed TASU 49 and WCRCF yard in operations
1620 Starting outside rounds PPE Check is set
1644 Outside rounds complete
1703 bagging off TASU PPE Check is set.
1731 bag off is complete
1742 Moore change has if performed TASU 49 and WCRCF yard are in warm standby
1411-13 ~~1415~~ 1830 End of day WCRCF operations center secure

1411-13

1411 Turner entered this room

1/4/13

0700 Assumed the WCPR SCM position. Operator Manager
0715 Attended pre-job briefing conducted by SCS. Second crew
coming on for the week, discussed all safety concerns
from the week prior for the week. Safety topic
for today was Winds, be careful when performing
outside work, follow all guidelines and instructions
for suspending outside activities.
0800 Performed walk down with Allen THOMSON. Status work. Safety
topic - high winds.
0740 Energy Solutions manager meeting with crew. Rounds or
SCCH inspections should begin.
0750 Operators are beginning daily rounds.
0850 Shift change complete. WCRF YARD 150 ppm from
WAM/WAM to OPERATIONS/OPERATIONS
1045 SM checked in with operations on status of movements
out of facility and drums processed. Drum movement
out was successfully completed. Operators are performing
equipment maintenance per PM recommendations.
Changing out tape on pots inside glovebox area
performing decontamination efforts.
1119 Left area at WCRF to inspect the drums staged
for shipping. The shipment will not take place until
after lunch hour.
1135 Departed on first drum of the day.
1230 Notified by ops that THOMSON engine drum;
Drum #2 status is OFF when it should be ON
1240 Met with SM called CSE Pitts and he advised
not to touch any valves or things we are walking
at on the ground through drums. He recommended we
monitor temperature for heavy temperature which stay
at low F.
1245 Met SM and temperature from inside is 1 degree
higher than 2nd
1305 Received another page that drum #2 status is OFF when
it should be on.
1320 Met SM and CSE Pitts on status of drum #2. CSE
is going to bring drum back up he will stay on premises
to call on update.
1328 CSE updated SM and all that after several attempts
trying bring up he was not successfully CSE stated
that drum sensors on drum #2 are faulty. Maintenance
will have to be conducted.
1330 Departed (M)
1332 Notified Maintenance manager working on getting crews
to site is already on place.

Best Available Copy

4/1/13 continued

1300 Notified by maintenance manager that crafts are available and will be in soon.
1400 Con't onward work on the plan of the day for WO#455797-01
1420 Mod change complete. WERR YARD/50-69 from OPERATIONS OPERATIONS to WARM/WARM
1430 Released WO#455797-01 and all work package under WARM/WARM conditions verified showing 50-69 @ 62°F. No RCOs required at this time. Attached SA-120. Training conducted by MSS supervisor. Mod condition to Part II of IWD to remove RWP for grid-maintenance work. MSS supervisor will obtain a copy of IWD from RPT for work package. RWP was verified to all workers.
1455 Maintenance crew ready to begin work on cooler #2
1545 Spoke to MSS supervisor and the stator (rotor) was removed and reconditioned yesterday morning. The crew MSS is attempting to re-start and shut down unsuccessful. MSS is back working on rotor (inside stator)
1700 CM crew secured and all secured power manual
1700 MSS came on and notified CM that cooler #2 is operational. The pilot valve was stuck-close and it didn't remove. Dr. MSS said the rotor.
1610 Meeting on the cooler #2 operation. Cleaning out work packages with MSS and CSE
1610 Work packages reviewed and signed off by MSS CSE, and CM.
1615 Imperative mode 50/69 63°F.
1617 Mod change complete WERR YARD/50-69 from WARM/WARM to OPERATIONS/OPERATIONS.
1742 Mod change complete WERR YARD/50-69 from OPERATIONS OPERATIONS to WARM/WARM. Operator taking control of the unit 50-69.
1830 Leaving the shift position. [signature]

No further entries this page

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[signature] 1/11

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1.11.13 WCRK SOS LOG Book

0600 Assuming SOS Position [signature]

0610 Conducted shift brief reviewed RWP's And went over Fork lift brake. Also reviewed All briefing needed with personal arriving from G.

0725 shift brief concluded.

0838 Reviewed inside and outside Rounds

~~0850~~ 0850 Mode Change Complete WCRKF in operations

0851 [illegible] and [illegible] were not performed due to [illegible] shortage unable to perform [illegible] [illegible]

Per [illegible]

[illegible]

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1.12.13 WCRF SOS LOG book

0600 Assuming SOS position [illegible]

0610 Conducted shift brief discussed O&M weather issues

0643 Concluded shift brief

0645 Lining issue with crane labeling system

0647 Sump working issue need to get fixed [illegible]

0745 Reviewed inside and outside rounds

0750 Unable to process due to crane being down

0830 Crane system has now expanded [illegible] crossing over to [illegible] facility

0833 Make change complete WCRF in operations

0910 Bagging on first drum 90805

0918 PPE check

1012 PPE check

1019 Bagging off and bagging on 90812

1044 PPE check

1047 Bagging off and bagging on 90823

1334 PPE check

1433 Bagging off and bagging on 90819 PPE check

1446 Bagging off and bagging on 90817

1625 Inside and outside rounds performed

1630 Bagging off [illegible]

[illegible]

[illegible]

Continued on next page

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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-RTR2-13-0040
Examination Date:	3/8/2013
Waste Container ID:	92557
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.: 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:	65 %

CCP Radiography Data Sheet

Waste Container ID: 92557

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):	6.2
Rubber (R):	
Plastics (waste materials) (XPM):	7.4
Organic Matrix (OR):	
Inorganic Matrix (IN):	51.0
Soils (S):	
Total WMP Weight:	82.6

CCP Radiography Data Sheet

Waste Container ID: 92557

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:	92557	Count Sequence Number:	22256
Operator:	D3PW2DK1\operator		
Assay Start:	3/12/2013 1:24:41 PM		
Description 1:	1LANDA1729		
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:	65.0 %
Density:	0.610 kg /l		

System Configuration

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

Errors quoted at 1.000 sigma

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number: 22256
Assay Instrument: MCS HENC #1
Analysis Method: CCP-TP-063 v 14
Item ID: 92557

Batch Number: 1LANDA1729
Location: LANL TA-54
Software Version: NDA 2000 V.4.0
Analysis Date: 3/12/2013

Net Weight	82600.0 g		
Pu mass	1.37E+001	+-	2.56E+000 g
TRU Alpha Activity	3.77E+000	+-	1.49E+000 Ci
TRU Activity Concentration	4.56E+004	+-	1.80E+004 nCi/g
Pu-239 Equivalent Activity	3.80E+000	+-	1.49E+000 Ci
Pu-239 FGE	1.29E+001	+-	2.40E+000 g
Decay heat	1.23E-001	+-	4.96E-002 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	5.69E-002	4.06E-005	6.97E-006	2.25E-006
PU238	1.26E-003	2.17E-002	4.07E-003	3.35E-005
PU239	1.28E+001	8.07E-001	1.51E-001	1.24E-003
PU240	8.39E-001	1.93E-001	3.61E-002	2.97E-004
AM241	7.90E-001	2.74E+000	1.48E+000	5.52E-002
PU241	1.70E-002	1.77E+000	3.31E-001	2.72E-003
PU242	2.74E-003	1.09E-005	2.03E-006	0.00E+000
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	5.98E-007
U233	<LLD	<LLD	0.00E+000	4.59E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	1.39E-006
U238	<LLD	<LLD	0.00E+000	1.42E-005
AM243	3.35E-004	6.77E-005	1.19E-005	6.22E-006

Errors quoted at 1.000 sigma

Operator: _____ Date: 3-15-13

ITR: _____ Date: 3/18/13

Automated Independent Technical Review

Count Sequence Number: 22256 Batch Number: 1LANDA1729
Counter ID: MCS HENC #1
Container ID: 92557
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; Passive Neutron Pu and Gamma U data specified as input. Pu results taken from Passive Neutron data, U from Quantitative Gamma data. Results comparison test passed.	Passive Neutron Pu and Gamma U data specified as input.
Section 4 - MGA Analysis Results are marked as invalid.	MGA analysis failed. AK isotopics applied. The AK information utilized was provided by Steve Schafer, AKE, and consists of data from CCP-AK-LANL-006, AK Source Document M237. MT-52,54.
Section 5 - Gamma Analysis Analysis Status: No errors.	Ok
Miscellaneous	No additional nuclides contributing to 95% of the radiological hazard identified.

Expert Review by: Sheri Chamberlin Date: 3-13-13

Waste Container ID: **92557**

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 : 92557.D
Acq On : 15 Mar 2013 12:44 pm (#1); 15-Mar-13, 12:44:07 (#2)
Operator : SA
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 15 12:52:52 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	3.532	96	4163775	201.25	ppmv	-0.04
15) Chlorobenzene-d5	5.868	117	3563990	177.00	ppmv	-0.03

Target Compounds	Qvalue

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

Working Copy
Date: 10-3-12

ATTACHMENT 1
Page 1 of 4

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: ~~90806~~ 90759 dd 10-4-12

6.2[4] Date Processed: 10-3-12

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: D002, 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: Eddie Rios [signature] 18822 10-3-12
Waste Handling Tech (print) Signature Z # Date

ATTACHMENT 1
Page 2 of 4

4.1[6][B] Parent Waste Container No.: ~~90606~~ 90759 [illegible] 9-24-14

5.[18] Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable: 311 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) 311 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:

NA

EWMO-FOD (print) Signature Z # Date

ATTACHMENT 1
Page 3 of 4

4.1[6][B] Parent Waste Container No.: ~~90600~~ 90759 UC 1-24-14

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	92162			
10.1[4]	Daughter Drum Filter No.	A21-767			
10.1[4]	Daughter Drum Bag Filter No.	C-3663			
10.1[4]	Daughter Drum Purchase Order No.	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		N		
10.2[7][B]/10.2[6]	POC Item Description			N	
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	none			
10.3[5][A]	Free Liquid Volume/Units	none			
10.3[7][A]	Opaque/Non-penetrable Item Description:	POC			
10.3[9][A]	PCB-contaminated Waste Description		N	N	
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 (%)				
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.: 90759

Comments: Kitty litter, lid to POC, 12 Bolts to POC, absorbent, Plastic,

11.1[1] Performed By: [illegible] / [illegible] 18[illegible] 10-3-12
Waste Handling Tech (print) Signature Z# Date

11.1[7] Reviewed By: Jose Jerez / [illegible] 221452 10-4-12 0825
SOS or designee (print) Signature Z# Date/Time

Working Copy
Date: 10-2-12

ATTACHMENT 2
Page 1 of 1

WCRRF OVERPACK DRUM ASSEMBLY PREPARATION DATA SHEET

5.[3] Overpack drum information:

Purchase Order No.: 413454
Lot No.: 211426
Manufacture Date: 2010

5.[8] Overpack filtered vent information:

Manufacturer: Nucfil
Model No.: 013
Serial No.: HL-728
Manufacture Date: 8-11

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

	Filtered Vent	2 in. Bung
M&TE No.:	020614	021151
Cal. Expiration Date:	10-15-12	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: Michael Romero [signature] 182723 10-2-12
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: Michael Romero [signature] 182723 10-2-12
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] 221482 10-4-12
Supervisor or designee (print) Signature Z # Date

Working Copy
Date: 10-3-12

ATTACHMENT 5
Page 1 of 1

WCRRF OVERPACK DRUM CLOSURE DATA SHEET

7.[19] Overpack Drum Unique Identifier No.: 92163

7.[25] Overpack drum closure ring torque wrench information:
M&TE No.: 040329
Cal. Expiration Date: 3-15-13
Range in ft-lb: 16-90
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: Eddie Rios, Eddie Rios 18828 10-3-12
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: 09065
Platform scale calibration expiration date: 7-31-13

7.[36][D] 85-gal overpack drum gross weight (lb): 322.6 lb

Comments: N/A

8.1[1] Performed By: Eddie Rios, Eddie Rios 18828 10-3-12
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, Jose Jerez 221452 10-4-12
Supervisor or designee (print) Signature Z# Date

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

Drum ID#: 92162

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 #: 46265
Lot #: 0221225
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: BAP
Model #: LEPVC 1-5-2.5 SPVC
Serial #: 6-3663
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 #: 0490S
Serial #: AM1-767
Date of Manufacture: 11/12

RECORD torque wrench information:

Filter torque wrench:
M&TE ID #: 020619
Cal Expiration Date: 3-15-13
Range (ft-lbs or in-lbs): 40-200
Tolerance: ±-[illegible]

Jam Nut / Bung torque wrench:
M&TE ID #: 021151
Cal Expiration Date: 6-11-13
Range (ft-lbs or in-lbs): [illegible]-80
Tolerance: ±-[illegible]

Torque wrenches listed above are within the acceptable ranges as displayed on the calibration certificate.
[x] Yes [ ] No
Print Name: [illegible] Signature: [illegible] ZR: 187822

5. Weigh Drum Assembly

RECORD weight information
Tare wtight (lbs) 75.6
File ID #: 0490S

- [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: [illegible] ZR: 187822 Date: 10-2-12
Verifier Print: Gilbert Martinez Verifier Sign: [illegible] ZR: 149235 Date: 10-3-12

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

DRUM ID#: 92162

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:

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.) 238.6

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: 10-3-12

Verifier Print/Sign: [illegible] Date: 10-3-12

WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

7

Production Control

Container ID: 90759 Container Type: POC Gross Weight (lbs): 378

Liner Seal #: None Filter Prefix: None Filter Serial #: EL-519; EL-564

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

TWSR Comments: PARENT #S825639 WTS-12STD-784

Total PE-Ci Activity: 5.04E-01 Equivalent Combustible PE-Ci: 1.89E-01 AM-241 PE-Ci: 4.28E-02

Total Fissile Gram Equivalents: 5.6 Total Surface Dose Rate (mrem/hr): 1

EPA Code(s): D008 D007 D009 VL 9/27/12

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 Wastelock 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 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 – POC
Net Wt: 63lb Parent drum (SEDS attached) was part of WCRR nitrate salt repack campaign using Wastelock 770. This resulting daughter drum is being repacked to adjust admixture/nitrate salt ratio. Nitrate salts carry waste codes for chromium, lead, & mercury. No hazardous chemicals present.

Magnequine RWP for <100 mrem/hr

Performed By: Valerie Rhodes (WDP Engineering (Print)) Signature: Valerie Rhodes Z Number: 112609 Date: 9/27/12

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 kitty litter to mix in with waste per procedure

Performed By: Gilbert Martinez (TRU Remediation Operations (Print)) Signature: [signature] Z Number: 149235 Date: 10-1-12

IHS Review. [illegible] CSP Centrum chromium, lead & Hg 9-28-12.

Document No: EP-DIV-AP-0107

JJ 221452 10-1-12

Discardable Waste Log Sheet

DrumID: 010866

Item#	ItemID	Net (kg)	Matrix	M Code	NM	MT	Auth	Remarks
1	IXFS-660 FI	12.73	NITRATE SALTS		0	52	5/11	
2	IXFS-659 FB	16.28	NITRATE SALTS		3.28	52	5/11	
3	IXFS-661 FD	0.68	NITRATE SALTS		1	72	1/1	
4	IXFS-662 FI	2.27	NITRATE SALTS		0.98	54	5/11	
5	IXFS-664 FD		NITRATE SALTS		2.29	52	5/11	#4&#5 NET WT COMBINED
6	IXFS 646 FI	11.14	NITRATE SALTS		8.8	52	5/11	
7	IXFS-665 OX25	30.69	NITRATE SALTS		11.92	52	5/11	
8	IXFS-666 FA	7.27	NITRATE SALTS		3.04	52	5/11	
9	IXFS-667 FI	11.36	NITRATE SALTS		3.21	52	5/11	
10	IXFS-669 FB	12.27	NITRATE SALTS		7.36	52	5/11	
		104.69 kg						

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])	90759					
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 N	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT
WIPP-Approved Filtered Vent (5.[2])	☑ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT N	☐ 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: 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)

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\120921c\
Data File : 90759.D
Acq On : 21 Sep 2012 1:26 pm
Operator : SA
Sample :
InstName : Unit 8
Misc : LFL POC THROUGH FILTER
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 21 13:34:31 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	2683216	206.00 ppm	0.00
15) Chlorobenzene-d5	5.936	117	2349094	179.50 ppm	0.00

Target Compounds	Qvalue

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

Vocgas.m Fri Sep 21 14:21:54 2012

10-31-2
0600 Assuming WCR operations center - Wileman
0615 Morning stand down to address issues.
0652 All issues regarding procedural compliance, etc. have been addressed. SOS performing the pre-job for today.
0711 Beginning outside rounds.
0714 Inside rounds complete.
0742 Outside rounds complete.
0743 Rounds reviewed by SOS.
0754 Mode change complete. We are now in operations.
0803 RCT's performing a CAM check. An audible alarm will sou
0819 Bagging off 90820.
0823 Permission granted to lower vehicle access gates to perfor radiological survey for the shipment to Area G.
0831 Bag on complete.
0902 Bagging off 90820, bagging on 90966.
0903 Daryl Royal received an OKay from the SOM to seal the furnace.
0920 Vehicle access gates restored. Transportainers secured.
0928 Bag on complete.
0929 Initiating a drum movement from 5069 to a transportainer
0934 Drum movement out of facility complete.
1013 Bagging off 90966, bagging on 90760.
1035 Bag on complete.
1058 Bagging off 90760, bagging on 90822.
1109 Initiating a drum movement from transportainer to 5069.
1133 Drum movement into facility complete.
1146 Late entry - 1118, bag on complete. (JC)
1150 Bagging off 90822, bagging on 90755.
1217 Bag off complete.
1352 Bagging off 90755, bagging on 90806.
1412 Bag on complete.
1436 Beginning outside rounds.
1450 Bagging off 90806, bagging on 90759.
1505 Outside rounds complete.
1506 Initiating a drum movement from transportainer to 5069
1507 Bag on complete.
1517 Drum movement into facility complete.
1518 Late entry - at 1515, began inside rounds. (JC)
1527 Bagging off 90759.
1530 Bag off complete.
1553 Initiating a drum movement from 5069 to a transportai
1600 Inside rounds complete.
1601 Drum movement out of facility complete.
1607 Rounds reviewed by SOS.
Continued on next page Wileman

SIGNATURE DATE
READ AND UNDERSTOOD DATE

continued from previous page

1613 Mode change complete - We are now in Warm Standby.

1636 End of day - Operations secure - [illegible]

No further entries this page

SIGNATURE DATE

READ AND UNDERSTOOD DATE

0600 Assumed SOM position.

0615 Attended pre job brief conducted by SOS. Conduct of ops brief given by OM and ES Field OM to all WCRR personnel. Covered procedure compliance, complacency in operations, management expectations

0715 Pre job brief completed - rounds and RP-1 RMI's are commencing.

0754 Completed Mode Change: WCRR Yard / Bldg 50-69 from Warm/Warm to Operations/Operations.

0827 Released W.O # 445656-01 50-54(n) Wet Auto Sprinkler Sys.

1000 Engineering / MSS onsite to walkdown furnace replacement in Bldg 50-84.

1015 Characterization team onsite to gamma spec LLW containers. RP-1 supervision stated he cannot support due to reduced staffing. Talked w/ characterization and scheduling and rescheduled for Wed 10/10/12.

1130 Inventory Control identified that w/ tomorrows shipment (incoming) space will be tight in the transportainers. To correct problem rescheduled tomorrows incoming to Tues 10/9/12. Will have sufficient inventory on hand to process.

1400 MSS proposed working 10/13/12 (Saturday) to perform light relamping inside 50-69. Issue is decreasing area in Room 102 has 1 light out and another dim. Would like to replace these ASAP but electricians need a full day to perform. No OCO's available for that day.

1530 Discussed lighting issue w/ OM and ~~SOS and~~ 10/13/12 SOM (Gen) and since current run of SP 72 drums are 55 gal DM's (no denesting required) that maint. can probably be put off until 10/26/12.

1545 Request from result of ALARA meeting was to touch up paint on floor in 50-69. Have OM permission to secure processing early tomorrow to perform.

1613 Completed Mode Change: WCRR Yard / Bldg 50-69 from Operations/Operations to Warm/Warm.

10/2/12 1630 Secured SOM position

No further entries this page

10/3 12

10-3-12 WCRR 505 Log Book

0600 Assuming 505 position for the day Jim J
0615 Compliance Stand Down. Discussing Procedure Compl
and expectations of personnel performing job function
1 shipment out today. Processing Drums.
0705 Pre-Job brief Complete.
0743 Inside and outside rounds signed off.
0754 MODE Change Complete 50-69 and Yard are in
Operations
0819 Bagging on first drum for the day
0823 Permission granted to lower access gates to perfor
radiological surveys on outgoing shipment
0831 Bag on Complete
0902 Bagging on second drum for the day
0920 Outgoing shipment completed
0928 Bag on Complete
1013 Bagging on third drum for the day
1035 Bag on Complete
1058 Bagging off third drum, Bagging on fourth drum
1118 Bag on Complete
1150 Bagging off fourth drum, Bagging on fifth drum
1217 Bag on Complete
1352 Bagging off fifth drum, Bagging on sixth
1412 Bag on Complete
1450 Bagging off sixth drum, Bagging on seventh.
1507 Bag on Complete
1527 Bagging off seventh drum. Last Drum for the day.
1607 Rounds signed off.
1613 Mode Change Complete 50-69 and Yard are in WARM
1630 Securing 505 position for the day. Jim J

No Further Entries on this Page.

CCP Radiography Data Sheet

5825639

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0007
Examination Date:	1/17/2013
Waste Container ID:	92162
Video/Audio Recorded Media Number:	LA-RTR2-13-0007 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 12
NCR(s) associated with the container? (e.g., Prohibited Items)	[ ] No [X] Yes NCR No.: NCR-LANL-0028-13 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.: 108.0 kg Tare Wt.: 33.4 kg Net Wt.: 74.6 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: 92162

Section 3: Container Inventory and Comments (Detailed descriptions)

IM: Metal hardware, metal lid

AM:

OM: Scrap lead

OI:

C: Fiberboard insert sleeve, fiberboard material

R:

XPM: Plastic bags, liner lid

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP): Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	10.0
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	10.0
Other Inorganic Materials (OI)	
Cellulosics (C):	10.0
Rubber (R):	
Plastics (waste materials) (XPM):	5.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	39.6
Soils (S):	
Total WMP Weight:	74.6

CCP Radiography Data Sheet

Waste Container ID: 92162

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: NCR-LANL-0028-13	

RTR Operator:

Eric Lyles / Michael Simmons		1/17/2013
Print Name	Signature	Date

Discardable Waste Log Sheet

DrumID: 010866

Item#	ItemID	Net (kg)	Matrix	M Code	NM	MT	Auth	Remarks
1	IXFS-660 FI	12.73	NITRATE SALTS		0	52	5/11	
2	IXFS-659 FB	16.28	NITRATE SALTS		3.28	52	5/11	
3	IXFS-661 FD	0.68	NITRATE SALTS		1	72	1/1	
4	IXFS-662 FI	2.27	NITRATE SALTS		0.98	54	5/11	
5	IXFS-664 FD		NITRATE SALTS		2.29	52	5/11	#4&#5 NET WT COMBINED
6	IXFS 646 FI	11.14	NITRATE SALTS		8.8	52	5/11	
7	IXFS-665 OX25	30.69	NITRATE SALTS		11.92	52	5/11	
8	IXFS-666 FA	7.27	NITRATE SALTS		3.04	52	5/11	
9	IXFS-667 FI	11.36	NITRATE SALTS		3.21	52	5/11	
10	IXFS-669 FB	12.27	NITRATE SALTS		7.36	52	5/11	
		104.69 kg						

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

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

Item ID:            92162              Count Sequence Number:  23535
Operator:           D3PW2DK1\operator
Assay Start:        9/5/2013   11:05:45 AM
Description 1:      1LANDA1836
Description 2:      N/A
Location:           LANL TA-54
Comment:            AK-6
Matrix Type:        Homo Sol. S3000
Container Type:     55 gallon drum
Weight:             Net:        74.6   kg        Net:    74.6 kg
Container:          Volume:    208.0   l        Full:    80.0 %
Density:                         0.450 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: 23535
Assay Instrument: MCS HENC #1
Analysis Method: CCP-TP-063 v 15
Item ID: 92162

Batch Number: 1LANDA1836
Location: LANL TA-54
Software Version: NDA 2000 V.4.0
Analysis Date: 9/5/2013

Net Weight	74600.0 g		
Pu mass	3.35E+001	+-	4.09E+000 g
TRU Alpha Activity	6.26E+000	+-	4.75E-001 Ci
TRU Activity Concentration	8.39E+004	+-	6.36E+003 nCi/g
Pu-239 Equivalent Activity	6.47E+000	+-	4.75E-001 Ci
Pu-239 FGE	3.04E+001	+-	3.67E+000 g
Decay heat	2.03E-001	+-	1.55E-002 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	4.91E-002	3.46E-005	4.98E-006	1.93E-006
PU238	1.95E-002	3.33E-001	4.06E-002	1.22E-004
PU239	3.00E+001	1.86E+000	2.27E-001	6.82E-004
PU240	3.30E+000	7.48E-001	9.13E-002	2.74E-004
AM241	9.66E-001	3.31E+000	4.04E-001	1.21E-003
PU241	1.22E-001	1.25E+001	1.53E+000	4.59E-003
PU242	5.40E-002	2.13E-004	2.60E-005	0.00E+000
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	4.35E-007
U233	<LLD	<LLD	0.00E+000	3.85E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	1.06E-006
U238	<LLD	<LLD	0.00E+000	1.20E-005
AM243	1.23E-004	2.46E-005	3.77E-006	4.83E-006

Errors quoted at 1.000 sigma

Operator: _____ Date: 9-9-13

ITR: _____ Date: 9.19.13

Automated Independent Technical Review

Count Sequence Number: 23535 Batch Number: 1LANDA1836
Counter ID: MCS HENC #1
Container ID: 92162
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 9/5/2013

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
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	
Expert review is recommended; the following validity tests failed:	MGA valid.
Pu239 weight percent is outside limits [92.5, 95.0].	Pu239 percent consistent with AK. Mix of MT-52,54.

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **92162**

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	64.97	
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	10.79	
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 : 92162.D
Acq On : 9 Sep 2013 10:32 am (#1); 09-Sep-13, 10:31:32 (#2)
Operator : RJ
Sample :
Misc : 55 Gallon drum through filter. (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 09 11:02:32 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	3.555	96	5002151	205.75	ppmv	0.04
15) Chlorobenzene-d5	5.858	117	3775901	177.50	ppmv	0.00
Target Compounds						Qvalue
4) Methanol	0.880	31	25967	64.97	ppmv	100
17) Toluene	4.824	92	145824	10.79	ppmv	98

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

ATTACHMENT 1
Page 1 of 4

Working Copy
Date: 10-3-12

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: 90760

6.2[4] Date Processed: 10/3/12

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

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: Clayton Miller, CA 240091 10/3/12
Waste Handling Tech (print) Signature Z# Date

ATTACHMENT 1
Page 2 of 4

4.1[6][B] Parent Waste Container No.: 90760

5.[18] Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable: 386.2 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) 386.2 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:

Jose Jerez — [signature] — 221452 — 10-3-12
EWMO-FOD (print) — Signature — Date

ATTACHMENT 1
Page 3 of 4

4.1[6][B] Parent Waste Container No.: 90760

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	92154			
10.1[4]	Daughter Drum Filter No.	AM-763			
10.1[4]	Daughter Drum Bag Filter No.	L-3653		N/A	
10.1[4]	Daughter Drum Purchase Order No.	410265			
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)				
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:			N/A	
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 (%)	90%			
10.5[3]/10.6[2]	Description Waste Added During Processing	bag-out stubs			

ATTACHMENT 1
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4.1[6][B] Parent Waste Container No.: 90760

Comments: stainless steel lid, cardboard, plastic, nitrate salts, kitty litter

11.1[1] Performed By: Clayte Mullins / CM 240091 10/3/12
Waste Handling Tech (print) Signature Z # Date

11.1[7] Reviewed By: Joe Perez / [signature] 221452 10-3-12 1440
SOS or designee (print) Signature Z # Date Time

Working Copy
Date: 10-2-12 W

ATTACHMENT 2
Page 1 of 1

WCRRF OVERPACK DRUM ASSEMBLY PREPARATION DATA SHEET

5.[3] Overpack drum information:

Purchase Order No.: 413554
Lot No.: 211426
Manufacture Date: 2010

5.[8] Overpack filtered vent information:

Manufacturer: NUCFI
Model No.: 213
Serial No.: HL-966
Manufacture Date: 8/11

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	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: Michael Romero Michael Romero 10-2-12
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: Michael Romero Michael Romero 10-2-12
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 Jose Perez 221452 10-3-12
Supervisor or designee (print) Signature Z# Date

Working Copy
Date: 10-3-12 ja

ATTACHMENT 5
Page 1 of 1

WCRRF OVERPACK DRUM CLOSURE DATA SHEET

7.[19] Overpack Drum Unique Identifier No.: 92155

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 / ±6% ccw

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

Performed By: Clayton Mullins, CH — 240092 10/3/12
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: Clayton Mullins, CH — 240092 10/3/12
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, Jose Jerez — 221452 10-3-12
Supervisor or designee (print) Signature — Z# Date

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

Drum ID#: 92154

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 #: 4116265
Lot #: 229225
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: BAP
Model #: 6CPVC 1.5-2 SPVC
Serial #: L-3653
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: Nutril
Model #: 019 D5
Serial #: Am-763
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:	10-14-12	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 ZS: 192723

5. Weigh Drum Assembly

RECORD weight information

Tare weight (lbs) 76.0
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: Michael Romero Operator Sign: Michael Romero ZS: 192723 Date: 10-2-12

Verifier Print: Clyde Mullins Verifier Sign: [signature] ZS: 240012 Date: 10/3/12

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

DRUM ID#: ~~6442~~ 92154 cm 10-3-12

1. LID INSTALLATION

NOTE: Install lid per manufacturer's instructions

✓ Mount lid with fiker 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:

Gross Weight(lbs): 233.0

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: Chris Mellin [signature] Date: 10/3/12

Verifier Print/Sign: Brandon Cabral [signature] Date: 10-3-12

WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Production Control

Container ID: 90760 Container Type: POC Gross Weight (lbs): 378

Container Seal #: None Filter Prefix: None Filter Serial #: EL-518; EL-574

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

TWSR Comments: PARENT #S825639 WTS-12STD-785

Total PE-Ci Activity: 5.04E-01 Equivalent Combustible PE-Ci: 1.89E-01 AM-241 PE-Ci: 4.28E-02

Total Fissile Gram Equivalents: 5.6 Total Surface Dose Rate (mrem/hr): 1

EPA Code(s): D008 D007 D009 VK 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 Loc 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 L. Ramsey / 100681 / Z Number / Date: 9/5/12

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: 1000 lb. Parent drum (SEDs attached) was part of UXRR nitrate salt repack campaign using Waste Loc 770. This resulting daughter POC is being repacked to adjust admixture/nitrate salt ratios. Nitrate salts carry waste codes for chromium (D007), lead (D008), and mercury (D009). No haz chemicals present.

May require RWP for <100 mrem/hr

Performed By: Valerie Rhodes / WDP Engineering (Print) / Valerie Rhodes / Signature / 112167 / Z Number / 9/25/12 / 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: Ensure kitty litter is bagged in

Performed By: Gilbert McLinn / TRU Remediation Operations (Print) / Signature / 149235 / Z Number / 9.26.12 / Date

HS Review. [illegible] CSP, Contains Hg, lead, chromium 9/26/12

Document No: EP-DIV-AP-0107

JJ - 221452 - 9-26-12

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])	90760					
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])	Ø ppm	ppm	ppm	ppm	ppm	ppm
Hydrogen Reading (< 64,000 ppm) (5.[5])	Ø ppm	ppm	ppm	ppm	ppm	ppm
Methane Reading (< 16,000 ppm) (5.[5])	Ø 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 : 90760.D
Acq On : 21 Sep 2012 12:56 pm (#1); 21-Sep-12, 12:56:16 (#2)
Operator : NW
Sample :
Misc : LFL POC THROUGH FILTER NucFil-019DS (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 21 13:04:48 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	3.542	96	6906393	201.25 ppmv	0.00
15) Chlorobenzene-d5	5.868	117	6112136	177.00 ppmv	0.00

Target Compounds	Qvalue

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

vocgas.m Tue Sep 25 07:55:47 2012

10-3-12
0600 Assuming WRR operations center - Tolleman
0615 Morning stand down to address issues.
0652 All issues regarding procedural compliance, etc. have been addressed. SOS performing the pre-job for today.
0711 Beginning outside rounds.
0714 Inside rounds complete.
0742 Outside rounds complete.
0743 Rounds reviewed by SOS.
0754 Mode change complete. We are now in operations.
0803 RCT's performing a CAM check. An audible alarm will sou
0819 Bagging on 90820.
0823 Permission granted to lower vehicle access gates to perfor radiological survey for the shipment to Area G.
0831 Bag on complete.
0902 Bagging off 90820, bagging on 90966.
0903 Daniel Reybal received an OKay from the SOM to seq the furnace.
0920 Vehicle access gates restored. Transportainers secured.
0928 Bag on complete.
0929 Initiating a drum movement from 50-69 to a transportainer
0934 Drum movement out of facility complete.
1013 Bagging off 90966, bagging on 90760.
1035 Bag on complete.
1058 Bagging off 90760, bagging on 90822
1109 Initiating a drum movement from transportainer to 50-69.
1133 Drum movement into facility complete.
1146 Late entry - 1118, bag on complete. (SC)
1150 Bagging off 90822, bagging on 90755.
1217 Bag off complete.
1352 Bagging off 90755, bagging on 90806.
1412 Bag on complete.
1436 Beginning outside rounds.
1450 Bagging off 90806, bagging on 90759.
1505 Outside rounds complete.
1506 Initiating a drum movement from transportainer to 50-69
1507 Bag on complete.
1517 Drum movement into facility complete.
1518 Late entry - at 1515, began inside rounds. (SC)
1527 Bagging off 90759.
1550 Bag off complete.
1553 Initiating a drum movement from 50-69 to a transportai
1600 Inside rounds complete.
1601 Drum movement out of facility complete.
1607 Rounds reviewed by SOS.
Continued on next page Tolleman

SIGNATURE DATE
READ AND UNDERSTOOD DATE

(continued from previous page)

11:13 Mode change complete - We are now in Warm Standby.

11:30 End of day. Operations secure - Howeker

No further entries this page

SIGNATURE

READ AND UNDERSTOOD

DATE

DATE

0600 Assumed SOM position.
0615 Attended pre job brief conducted by SOS. Conduct of Ops brief given by OM and ES Field OM to all WCRR personnel. Covered Procedure compliance, complacency in operations, management expectations.
0715 Pre job brief completed - rounds and RP-1 RMI's are commencing.
0754 Completed Mode Change: WCRR Yard / Bldg 50-69 from Warm/Warm to Operations/Operations.
0827 Released W.O # 445656-01 50-54(n) Wet Auto Sprinkler Sys.
1000 Engineering / MSS onsite to walkdown furnace replacement in Bldg 50-84.
1015 Characterization team onsite to gamma spec LLW containers. RP-1 supervision stated he cannot support due to reduced staffing. Talked w/ Characterization and scheduling and rescheduled for Wed 10/10/12.
1130 Inventory Control identified that w/ tomorrows shipment (incoming) space will be tight in the transportainers. To correct problem rescheduled tomorrows incoming to Tues 10/9/12. Will have sufficient inventory on hand to process.
1400 MSS proposed working 10/13/12 (Saturday) to perform light relamping inside 50-69. Issue is chemistry area in Room 102 has 1 light out and another dim. Would like to replace these ASAP but electricians need a full day to perform. No OCO's available for that day.
1530 Discussed lighting issue w/ OM and ~~SOS and~~ 10/12 SOM (Gen) and since current run of SP 72 drums are 55 gal DM's (no dewatering required) that maint. can probably be put off until 10/26/12.
1545 Request from result of ALARA meeting was to touch up paint on floor in 50-69. Have OM permission to secure processing early tomorrow to perform.
1613 Completed Mode Change: WCRR Yard / Bldg 50-69 from Operations/Operations to Warm/Warm
10/3/12 1630 Secured SOM position

No further entries this page

10/3 12

10-3-12 WCRR SOS Log Book

0600 Assuming SOS position for the day. Jim J
0615 Compliance Stand Down. Discussing Procedure Compl
and expectations of personnel performing job functio
1 shipment out today. Processing Drums.
0705 Pre-Job brief Complete.
0743 Inside and outside rounds signed off.
0754 MODE Change Complete 50-69 and Yard are in
Operations
0819 Bagging on first drum for the day
0823 Permission granted to lower access gates to perfor
radiological surveys on outgoing shipment
0831 Bag on Complete
0902 Bagging on second drum for the day
0920 Outgoing shipment completed
0928 Bag on Complete
1013 Bagging on third drum for the day
1035 Bag on Complete
1058 Bagging off third drum, Baging on fourth drum
1118 Bag on Complete
1150 Bagging off fourth drum, Bagging on fifth drum
1217 Bag on Complete
1352 Bagging off fifth drum, Bagging on sixth
1412 Bag on Complete
1450 Bagging off sixth drum, Bagging on seventh.
1507 Bag on Complete
1527 Bagging off seventh drum. Last Drum for the day.
1607 Rounds signed off.
1613 Mode Change Complete 50-69 and Yard are in WARM
1630 Securing SOS position for the day. Jim J

No Further Entries on this Page.

CCP Radiography Data Sheet

5825639

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0011
Examination Date:	1/24/2013
Waste Container ID:	92154
Video/Audio Recorded Media Number:	LA-RTR2-13-0011 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.: 105.5 kg Tare Wt.: 33.4 kg Net Wt.: 72.1 kg
Rigid Liner and Liner Vent Description:	Liner: [X] No [ ] Yes Lid: [X] No [ ] Yes Type: [ ] 30-mil [ ] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [ ] Yes [X] N/A Punctured: [X] No [ ] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [ ] No [X] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 2 layers
Volume Utilization Percentage:	95 %

CCP Radiography Data Sheet

Waste Container ID: 92154

Section 3: Container Inventory and Comments (Detailed descriptions)

IM: Hardware, metal lid

AM:

OM:

OI:

C: Fiberboard insert sleeve, fiberboard packing material

R:

XPM: 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 (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):	6.0
Rubber (R):	
Plastics (waste materials) (XPM):	5.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	49.1
Soils (S):	
Total WMP Weight:	72.1

CCP Radiography Data Sheet

Waste Container ID: 92154

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]	1/24/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	92154	Count Sequence Number:	21907
Operator:	D3PW2DK1\operator		
Assay Start:	1/25/2013 2:10:55 PM		
Description 1:	1LANDA1701		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6, Not Precision		
Matrix Type:	Debris S5000		
Container Type:	55 gallon drum		
Weight:	Net: 72.1 kg	Net:	72.1 kg
Container:	Volume: 208.0 l	Full:	95.0 %
Density:	0.370 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:	21907	Batch Number:	1LANDA1701
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:	92154	Analysis Date:	1/25/2013

Net Weight	72100.0 g		
Pu mass	3.29E+001	+-	4.91E+000 g
TRU Alpha Activity	4.57E+000	+-	4.14E-001 Ci
TRU Activity Concentration	6.34E+004	+-	5.74E+003 nCi/g
Pu-239 Equivalent Activity	4.64E+000	+-	4.14E-001 Ci
Pu-239 FGE	3.06E+001	+-	4.54E+000 g
Decay heat	1.47E-001	+-	1.33E-002 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	3.08E-002	2.20E-005	2.87E-006	1.53E-006
PU238	1.08E-002	1.87E-001	2.79E-002	9.94E-005
PU239	3.05E+001	1.92E+000	2.86E-001	1.02E-003
PU240	2.37E+000	5.46E-001	8.13E-002	2.90E-004
AM241	5.54E-001	1.92E+000	2.87E-001	1.02E-003
PU241	4.26E-002	4.42E+000	6.59E-001	2.35E-003
PU242	2.12E-002	8.40E-005	1.25E-005	0.00E+000
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	3.27E-007
U233	<LLD	<LLD	0.00E+000	3.11E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	8.61E-007
U238	<LLD	<LLD	0.00E+000	7.94E-006
AM243	8.98E-005	1.81E-005	2.56E-006	3.76E-006

Errors quoted at 1.000 sigma

Operator: [signature] Date: 1-30-13

ITR: [signature] Date: 2/1/13

Automated Independent Technical Review

Count Sequence Number: 21907
Batch Number: 1LANDA1701
Counter ID: MCS HENC #1
Container ID: 92154
Waste Matrix Code: Debris S5000
Count Type:
Sequence Type:
Assay Date: 1/25/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis No Add-a-Source warnings.	Ok
Section 2 - Passive Neutron Analysis Analysis Status: No errors. Ones Rate Analysis complete with warnings. - Error calculating the Ones Rate Pu-240 Effective MDA.	Ok Not data affecting.
Section 3 - Data Combiner Analysis Override enabled; 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	Ok
Section 5 - Gamma Analysis Analysis Status: No errors.	Ok
Miscellaneous	No additional nuclides contributing to 95% of the radiological hazard identified.

Expert Review by: Sherri Chambers Date: 1-29-13

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **92154**

BDR Number: **LA13FG2008**

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

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	149.00	
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\130201c\
Data File : 92154.D
Acq On : 1 Feb 2013 11:10 am (#1); 01-Feb-13, 11:09:19 (#2)
Operator : NW
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Feb 01 11:17:47 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	4911860	201.25	ppmv	0.04
15) Chlorobenzene-d5	5.930	117	4447206	177.00	ppmv	0.03
Target Compounds						Qvalue
1) Hydrogen	1.617	GC1	1059	149.00	ppmv	100

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

32

S832141

S832141

Container 767404

File Options Reports Help

S832141

767404	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

S832141

- S832141
  - 93588
  - 93591 - empty
  - 93590
  - 93589

4-29-13

ATTACHMENT 1
Page 1 of 4

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: BG 4-30-13 ~~S832244~~ S832141

6.2[4] Date Processed: 4-29-13

4.1[6][B] Processing Activity (EP-DIV-AP-0107): BG 5-1-13
☐ > 190 mrem/hr ☐ PID ☒ Split ☑ Repack

4.1[6][B] Prohibited Items: BG 5-1-13
☐ 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 ☐ 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 4-29-13
Waste Handling Tech (print) Signature Z # Date

ATTACHMENT 1
Page 2 of 4

4.1[6][B] Parent Waste Container No.: BG 4-29-13 ~~5822874~~ 5832141 ~~5832241~~ - BG 4-30-13

5.[18] Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable: 428.8 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) 428.8 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.: ~~S832244~~ S832141 -BG 4-30-13

	Daughter Drums	93588 UR 9-24-14	93589 UR 9-24-14		
10.1[4]/10.2[4]	Daughter Drum No.	~~93584~~	~~93585~~		
10.1[4]	Daughter Drum Filter No.	LM-49	LM-46		
10.1[4]	Daughter Drum Bag Filter No.	L-66656	L-66650		
10.1[4]	Daughter Drum Purchase Order No.	501011	501186		
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.	6CPK15 25RK			
	Serial No.	L-65996			
	Date of Manufacture	01-13			
10.2[5]	POC ID No	~~93586~~ 93590 UR 9-24-14			
10.2[7][B]/10.2[6]	POC Item Description	SLUDGE, PLASTIC	N A		
10.2[13]	POC Assembly closed per Manufacturer's instructions. (Initial and Z#)	BG 267129			
10.2[14]	POC Assembly Gross Weight (lb) 4-29-13 BG	~~93~~ 375.6			
10.2[15]	POC Rad. Survey Results (mrem/hr)	1000			
10.3[3][A]	Approx. Containerized Liquid Vol./Units	N A			
10.3[5][A]	Free Liquid Volume/Units	2 GALLONS	1 LITER		
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 (%)	40%	80%		
10.5[3]/10.6[2]	Description Waste Added During Processing	BAG OUT STUBS, KITTY LITTER	BAG OUT STUBS, KITTY LITTER		

ATTACHMENT 1
Page 4 of 4

4.1[6][B] Parent Waste Container No.: BG4-30-13 ~~S832141~~ S832141

Comments: ROOM TRASH, PLASTICS, KITTY LITTER, SALTS, NEUTRALIZER, LEAD SHIELDING, SLUDGE.

11.1[1] Performed By: BRIAN GALLEGOS, [signature] 267129 4-29-13
Waste Handling Tech (print) Signature Z # Date

11.1[7] Reviewed By: JOSE JEREZ, [signature] 221452, 5-1-13 0758
SOS or designee (print) Signature Z # Date/Time

ATTACHMENT 2
Page 1 of 1

4-25-13 m

~~WCRRF~~ OVERPACK DRUM ASSEMBLY PREPARATION DATA SHEET

5.[3] Overpack drum information:

Purchase Order No.: 414996
Lot No.: 219285
Manufacture Date: 2011

5.[8] Overpack filtered vent information:

Manufacturer: NUCFIL
Model No.: 013
Serial No.: EL-307
Manufacture Date: 05/11

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

	Filtered Vent	2 in. Bung
M&TE No.:	040694	038369
Cal. Expiration Date:	9-26-13	12-18-13
Tolerance:	+/-4% cw and +/-6% ccw	+/-3% cw and +/-6% ccw

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

Performed By: Kevin Belusczak / Kevin Belusczak / 1238194 / 04/25/13
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: Kevin Belusczak / Kevin Belusczak / 1238194 / 04/25/13
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: Jose Jerez / [signature] / 1221452 / 5-1-13
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.: ~~93587~~ 93591 UR 9-24-14

7.[25] 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.[26] Torque wrench listed above is within the acceptable ranges as displayed on the calibration certificate. ☑ Yes ☐ No

Performed By: BRIAN GALLEGOS / Bri Gallegos / 2671229 4-29-13
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): 1720 lb

Comments: N/C

8.1[1] Performed By: BRIAN GALLEGOS / Bri Gallegos / 2671229 4-29-13
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: Jose Jerez / Jose Jerez / 2214521 5-1-13
Supervisor or designee (print) Signature Z # Date

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

Drum ID#: ~~93584~~ 93588 LR 9-24-14

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 #: 0233413
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-15-2 SPVC
Serial #: C-6656
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 #: LM-49
Date of Manufacture: 12-12

RECORD torque wrench information:

Filter torque wrench:		Jam Nut / Bung torque wrench:	
M&TE ID #:	040694	M&TE ID #:	028369
Cal Expiration Date:	9-26-13	Cal Expiration Date:	12-18-13
Range (ft-lbs or in-lbs):	40-200	Range (ft-lbs or in-lbs):	10-80
Tolerance:	+/-4% CW +/-6% CW	Tolerance:	+/-3% CW +/-6% CW

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

[x] Yes [ ] No

Print Name: Gerald Espinosa Signature: [signature] Z#: 231720

5. Weigh Drum Assembly

RECORD weight information

Tare wight (lbs) 75.2
File ID #: 019063

- [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: 4/25/13

Verifier Print: BRIAN GALLEGOS Verifier Sign: [signature] Z#: 267129 Date: 4-29-13

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

DRUM ID#: ~~93584~~ 93588 VR 9.24.14

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: 9-11-2013

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.): 166.0

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: BRIAN GALLEGOS Date: 4-29-13

Verifier Print/Sign: Gerald Espinoza Date: 4-29-13

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

Drum ID#: ~~93585~~ 93589 9-24-14

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 #: 501186
Lot #: 0234763
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 #: 6cPVC-1.5-2SPVC
Serial #: L-6650
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 #: LM-46
Date of Manufacture: 12-12

RECORD torque wrench information:

Filter torque wrench:		Jam Nut / Bung torque wrench:	
M&TE ID #:	040694	M&TE ID #:	038369
Cal Expiration Date:	9-26-13	Cal Expiration Date:	12-18-13
Range (ft-lbs or in-lbs):	40-200	Range (ft-lbs or in-lbs):	10-80
Tolerance:	±4%cw ±6%ccw	Tolerance:	±3%cw ±6%ccw

Torque wrenches listed above are within the acceptable ranges as displayed on the calibration certificate.
[x] Yes [ ] No
Print Name: Justin Lofer Signature: [signature] Z#: 266436

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: Justin Lofer Operator Sign: [signature] Z#: 266436 Date: 4-26-13
Verifier Print: BRIAN GALLEGOS Verifier Sign: [signature] Z#: 260712-9 Date: 4-29-13

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

DRUM ID#: ~~93585~~ 93589 LR 9-24-14

1. LID INSTALLATION

NOTE: Install lid per manufacturer's instructions

✓ Mount lid with filter directly over drum seam.

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

✓ Engage bolt and nut and torque per manufactures instructions.

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

✓ Tighten jam nut.

Record torque wrench information:

MT&E #: 038373

Cal expiration date: 9-11-13

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

— Tolerance ±3% cw ±6% ccw

2. DRUM LABELING

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

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

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

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

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

RCRA Label:

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

OR

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

NOTE: Check only one of the above two boxes.

3. WEIGH DRUM ASSEMBLY

Record weight information:

Gross Weight(lbs.) 416.0

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: B. Dalley Date 4-29-13

Verifier Print/Sign: Kevin Belosak ~~Kevin Belosak~~ Date: 4-29-13

4-29-13 L

ATTACHMENT 3
Page 1 of 1

WCRRF PARENT 55-GAL DRUM PREPARATION DATA SHEET

6.3[21] Prepared Parent 55-Gal Drum Number: BG 4-30-13 ~~5832244~~ 5832141

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: 7-31-13

6.3[18] Prepared parent 55-gal drum weight (lb): BG 4-29-13 ~~458.8~~ 428.8

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: Brian Gallegos B. Gallegos 267129 4-29-13
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

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

8.1[8][D] Approved by: _____
SOS/SOM or designee (print) Signature Z # Date Time

72
NC
6.10.12

WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Production Control

Container ID: S832141 Container Type: 85-GAL Gross Weight (lbs): 438
Inner Seal #: 009435 Filter Prefix: LAVC Filter Serial #: 02577; AL-521
AK Waste Stream: LA-MHD01.001 Certified RTR BDR: No BDR
TWSR Comments: LEACHED SOLIDS. GOING FROM 55 GAL. DRUM TO 85 GAL DRUM AND FILTER IS AL-521 PER JUAN 11/22/2011.
Total PE-Ci Activity: 3.06E+00 Equivalent Combustible PE-Ci: 1.15E+00 AM-241 PE-Ci: 3.13E-01
Total Fissile Gram Equivalents: 31.4 Total Surface Dose Rate (mrem/hr): 10
EPA Code(s): None
NCR RTR/NDA Comment: None
RTR Pre-Screen Date: 5/29/2007 Comment: Liquids, Impenetrable Obj, Liquid Location: 25"
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 PA codes D001, D002, and D007 are on the label. A minimum of 1.2 v lumps of kitty litter/zeolite must be mixed with 10 L mL of nitrate salts.

Performed By: R. W. Jones (Production Control (Print)) Signature: [signature] Z Number: 117434 Date: 12.8.11

WDP Engineering

WILLIAM S. RAMSEY Signature: [signature] Z Number: 00681 Date: 1/28/1

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: 358, Five items ranging from 35lb to 109lb
Drums w/ nitrate salts may contain undocumented liquids
May require RWP for >100 and <1000 mrem/hr @ 30 cm
Drum may have lead liner

Performed By: Valerie Rhodes (WDP Engineering (Print)) Signature: [signature] Z Number: 112604 Date: 12/15/11

TRU Remediation Operations

☑ Waste Container Information Evaluated ☐ Less Than 170 lbs ☐ RTR Video Available
Other Specific Safety Concerns: Do not [illegible] as waste with [illegible]. Use hexamucon gloves during processing of waste
Processing Determination: ☑ Accept ☐ Reject
TRU Remediation Operations Comments: Use proper ratio of kitty litter to waste in accordance with this procedure
Performed By: Jose Jerez (TRU Remediation Operations (Print)) Signature: [signature] Z Number: 221452 Date: 1/8/12

ROBIN SHUT 1282 272995 1-14-13
HS Review. Johny Amalland CSP, No HT concerns 12/4/12

Noncertified TRU Waste Drum Item Information

DrumID: 009435

Item No	ItemID	Process Status	Net Wt (kg)	Matrix	Meas Code	SNM (g)	MT	Auth (Pg/Ln)	Comments
1	IXFS-617-F1		16.820	NITRATE SALTS		0.82	42	13/11	
2	IXFS-618-F1		49.550	NITRATE SALTS		18.13	52	5/11	
3	IXFS-619-F1		44.990	NITRATE SALTS		2.42	52	5/11	
4	IX6200X18		15.910	NITRATE SALTS		12.8	52	5/11	
5	IXFS-621-F1		25.220	NITRATE SALTS		9.75	52	5/11	

Noncertified Waste Drum Material Summary

Gross Wt (kg): 198.5

Material Type	SNM (grams)	Items Net Wt (kg)
42	0.82	16.82
52	43.1	135.67
Totals	43.92	152.49

ATTACHMENT 1
Page 1 of 1

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

5.[1] Sample Date: 7.18.12

Container No. (5.[1])	91704	S802723	S832141			
Filtered Vent Type (5.[1])	19DS	13	13			
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	.92 ppm	2.08 ppm	ppm	ppm	ppm
Hydrogen Reading (< 64,000 ppm) (5.[5])	1658.66 ppm	0 ppm	480.78 ppm	ppm	ppm	ppm
Methane Reading (< 16,000 ppm) (5.[5])	0 ppm	0 ppm	0 ppm	ppm	ppm	ppm

5.[7] Certified CCP Technician:

Performed By: Erik Loechell (CCP (Print)) 234183 (Z #)

Reviewed By: Nathan Webb (CCP (Print)) 2388606 (Z #)

Comments:
91704-POC
S802723 - 85 gallon drum
S832141 - 85 gallon drum

6.1[2][A] ($) 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: Julie Gallegos (Waste Handling Operator (print)) Julie Gallegos (Signature) 176905 (Z #) 7.19.12 (Date)

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\120718c\
Data File : S832141.D
Acq On : 18 Jul 2012 5:01 pm
Operator : SA
Sample : 7.19.12
InstName : Unit 8
Misc 85 ~~55~~ GALLON LFL THROUGH FILTER. 13 FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 18 17:09:41 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	2340173	207.75 ppm	0.00
15) Chlorobenzene-d5	5.936	117	1985800	178.00 ppm	0.00
Target Compounds					Qvalue
1) Hydrogen	5.302	GC1	120297m	480.78 ppm	
12) Benzene	2.880	78	12220	2.08 ppm	# 93

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

Vocgas.m Wed Jul 18 17:10:00 2012

4-29-13

0550 Assuming WCRR operations center. JColeman
0615 Pre-job being conducted by SOS.
0625 Beginning outside rounds.
0633 Item #3 is unsat. FSR in place, okay to proceed.
0635 Pre-job concluded.
0640 Beginning inside rounds.
0645 Outside rounds complete.
0656 Item #63 is OOS. POD in place, okay to proceed.
0723 Both rounds reviewed by SOS.
0724 Late entry at 0702, inside rounds complete. JC
0740 Mode change complete. We are now in operations in WCRRF yard and 50-69.
0745 Beginning to de-nest, then will bag on S822876.
0755 Notified by operator that upon opening the 85 lid to drum # S822876, they found that the ring was to degraded to be able to denest it and they immediately placed the lid back on. SOS notified. They will be bagging on drum #S832241 instead. SOS notifying SOM. JC 4-29-13
0819 Bag on complete
1010 Bagging off 1 daughter, bagging on another daughter.
1020 Bag off complete. PPE checks Sat.
1039 Operators notifying ops center that they are pausing work due to possible hose breach. It appears to be seaping liquid on the R-hand of station 8.
1056 RCTs have taken smears and report no contamination. Resuming operations.
1223 Operators out for lunch break.
1227 Late entry at 1240 initiated a drum movement from transportainer to 50-69. At 1050 drum movement complete JC
1331 Resuming operations.
1424 Beginning inside rounds.
1445 Item #63 is OOS, okay to proceed.
1453 Inside rounds complete.
1521 Bagging off 1 daughter, bagging on a POC.
1535 Bag off complete. PPE check is Sat.

Continued on next page - JColeman

4-29-13 Continued from previous page. JColeman
1547 Beginning outside rounds.
1553 Item #3 is unsat, okay to proceed.
1559 Outside rounds complete.
1622 ~~Bag off complete.~~ JC Bagging off. 4-29-13
1650 Bag off complete.
1705 Initiating a drum movement from 50-69 to a transportainer.
1725 Drum movement out of 50-69 complete. All inventory has been removed from 50-69.
1726 Both rounds reviewed by SOS.
1731 Mode change complete. We are now in COLD in 50-69 and warm standby in WCRRF yard.
1750 Late entry at 1410, completed the annual fire suppression checklist except for signatures needed from the other crew on Wednesday JC
4-29-13 1830 End of day. OCD position secured - JColeman
JK

No further entries this page.

PROJECT NAME 4/29/13 NOTEBOOK NO.

0600 Reviewed Shift Turnover Checklist and assumed WCRR SOM position.

0615 Attended pre job brief conducted by SOS. Discussed drum lift maintenance/adjustments conducted Saturday, processing 7213 drums - RP-1 had concerns over drum dose rates on bottom of drums after processing - will try and obtain dose rates to ensure < 190 mrem/hr or go to limit of 50mrem/hr while mixing in WCG and close under lid. Plastic sheeting laid down on denesting area floor due to painter areas wearing.

0625 Cancelling today's shipment to Area G w/ OSPET input/concurrence notified OM.

0700 Called into daily TA-54 SOM shift brief.

0740 Completed Mode Change: WCRR Yard / Bldg 50-69 from Warm / Warm to Operations / Operations

0819 Completed first bag on.

0825 Late Entry 0755 - Notified by OCO that drum # S822876 was noted to be deteriorated on lid and lid sing while attempting to denest. Closed drum back up and going on to next (S832241)

1039 Operations being paused due to inspection of Station #8 (R)-hand glove - possibly seeping liquid.

1056 RP-1 reported no contamination on #8 (R)-hand glove

1100 Met w/ QA rep regarding set screws coming loose from NUCFil 190s filters. It is a plug covering the sampling septum. Contacted CSE R. Griffs and he indicated that even w/ plug missing the filter membrane seals the inner contents from escaping. If set screw is loose corrective action is to tighten w/ allen wrench until small oring gasket compresses.

1200 Called into daily PM status meeting.

1300 Attending maintenance improvement meeting conducted by PM. Actions for SOM to improve maint. activies are - Obtain work packages the day before and clear up any issues identified.

1610 Obtained work Orders for maintenance PM's working tomorrow. Extended both Part 2 form out 60 days and placed new RWP's into packages

1650 All bag offs complete.

1730 Completed Mode Change: WCRR Yard / Bldg 50-69 from Operations / Operations to Warm / Cold.

1830 Secured SOM position.

4-29-13

No further entries this page

SIGNATURE DATE 4/29 20 13
READ AND UNDERSTOOD DATE 20

WCRR SOS LOG BOOK

11/29/1
0600 Assuming SOS Position [illegible] M.S.
0605 Conducted shift brief Discussed Plastic on Floor.
0635 shift brief concluded.
0723 Reviewed Inside And outside Rounds.
0740 Mode Change Complete WCRRF In operations.
0745 Operators will begin demashing Process And bag on of Drum # 38 22876
0755 Notified by Inside Personal that drum Above was coroded le bad to denest.
0811 Bag on Complete
1010 Bagging off Idaughter. Bagg in on Another Daughter
1020 Bags off Complete
1021 Notified operators Inside And out to shake Gloves prior to Pulling on Also to check for staples.
1034 Operators notified that they are pausing work due to Finding liquid In a glove
1056 fcf's taking Smears And no contamination found ok to Resume operations
1[illegible]5 operators breaking for lunch
1357 resuming operation
1521 Bagging off Daughter bagging on PoC
1535 Bag of complete
1622 Bagging off
1630 Bag off complete
1726 Reviewed Inside And outside Rounds
1731 Mode Change Complete WCRRF In Cold SO 69 Vered In warm
1830 Securing Sos Position End of shift. [illegible]
119

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-RTR2-13-0067
Examination Date:	5/6/2013
Waste Container ID:	93588
Video/Audio Recorded Media Number:	LA-RTR2-13-0067 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.: 75.5 kg Tare Wt.: 33.4 kg Net Wt.: 42.1 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: 93588

Section 3: Container Inventory and Comments	(Detailed descriptions)
IM:	
AM:	
OM:	
OI:	
C:	
R:	Leaded rubber glove
XPM:	Plastic bags, plastic lid
OR:	
IN:	Homogeneous solids
S:	

Section 4: Packaging Material and Waste Material Parameters	
Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP):Plastic Liner Bag .	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	2.5
Plastics (waste materials) (XPM):	6.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	33.6
Soils (S):	
Total WMP Weight:	42.1

CCP Radiography Data Sheet

Waste Container ID: 93588

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]	5/6/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	93588	Count Sequence Number:	22744
Operator:	D3PW2DK1\operator		
Assay Start:	5/8/2013 11:55:11 AM		
Description 1:	1LANDA1767		
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: 42.1 kg	Net:	42.1 kg
Container:	Volume: 208.0 l	Full:	30.0 %
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:	22744	Batch Number:	1LANDA1767
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:	93588	Analysis Date:	5/8/2013

Net Weight	42100.0 g		
Pu mass	5.55E-001	+- 3.45E-001	g
TRU Alpha Activity	1.40E+000	+- 2.52E-001	Ci
TRU Activity Concentration	3.32E+004	+- 5.99E+003	nCi/g
Pu-239 Equivalent Activity	1.40E+000	+- 2.52E-001	Ci
Pu-239 FGE	5.22E-001	+- 3.18E-001	g
Decay heat	4.66E-002	+- 8.43E-003	W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	1.76E-002	1.26E-005	2.33E-006	1.32E-006
PU238	1.02E-004	1.76E-003	1.10E-003	4.66E-005
PU239	5.12E-001	3.22E-002	2.00E-002	8.51E-004
PU240	3.34E-002	7.67E-003	4.77E-003	2.03E-004
AM241	3.90E-001	1.36E+000	2.51E-001	2.96E-002
PU241	7.51E-004	7.81E-002	4.86E-002	2.06E-003
PU242	9.40E-003	3.73E-005	2.32E-005	0.00E+000
SR90	4.06E-009	5.61E-007	3.43E-007	0.00E+000
CS137	6.40E-009	5.61E-007	3.43E-007	3.96E-007
U233	<LLD	<LLD	0.00E+000	2.63E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	7.79E-007
U238	<LLD	<LLD	0.00E+000	9.39E-006
AM243	4.31E-005	8.71E-006	1.84E-006	3.32E-006

Errors quoted at 1.000 sigma

Operator: _____ Date: 5-15-13

ITR: _____ Date: 5-15-13

020 Ag 5

Automated Independent Technical Review

Count Sequence Number: 22744 Batch Number: 1LANDA1767
Counter ID: MCS HENC #1
Container ID: 93588
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 5/8/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis No Add-a-Source warnings.	Ok
Section 2 - Passive Neutron Analysis Analysis Status: No errors. No Warnings Reported.	Ok
Section 3 - Data Combiner Analysis Override enabled; Passive Neutron Pu and Gamma U data specified as input. Pu results taken from Passive Neutron data, U from Quantitative Gamma data. Results comparison test passed.	Passive Neutron Pu and Gamma U data specified as input.
Section 4 - MGA Analysis Results are marked as invalid.	MGA analysis failed. AK isotopics applied. The AK information utilized was provided by Steve Schafer, AKE, and consists of data from CCP-AK-LANL-006, AK Source Document M237. MT-52,42.
Section 5 - Gamma Analysis Analysis Status: No errors.	Ok
Miscellaneous	No additional nuclides contributing to 95% of the radiological hazard identified.

Expert Review by: Sheri Chamberlin Date: 5-9-13

021 AG 5-9-13

Attachment 4 – Flammable Gas Analysis Form

5832141

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

Waste Container ID: **93588**

BDR Number: **LA13FG2054**

Sampling Date: **5/13/2013**

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\130513C\
Data File : 93588.D
Acq On : 13 May 2013 10:37 am (#1); 13-May-13, 10:36:53 (#2)
Operator : ~~RO~~ 5-13-13 EL
Sample : EL
Misc : 55 Gallon Drum through Filter (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 13 10:45:47 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	3.525	96	4194203	201.25 ppmv	-0.04
15) Chlorobenzene-d5	5.865	117	3559485	177.00 ppmv	-0.04

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-RTR2-13-0067
Examination Date:	5/6/2013
Waste Container ID:	93589
Video/Audio Recorded Media Number:	LA-RTR2-13-0067 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.: 188.5 kg Tare Wt.: 33.4 kg Net Wt.: 155.1 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: 93589

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):	8.0
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	4.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	143.1
Soils (S):	
Total WMP Weight:	155.1

CCP Radiography Data Sheet

Waste Container ID: 93589

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		5/6/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	93589	Count Sequence Number:	22740
Operator:	D3PW2DK1\operator		
Assay Start:	5/8/2013 9:06:50 AM		
Description 1:	1LANDA1767		
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: 155.0 kg	Net:	155.0 kg
Container:	Volume: 208.0 l	Full:	75.0 %
Density:	0.990 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:	22740	Batch Number:	1LANDA1767
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:	93589	Analysis Date:	5/8/2013

Net Weight	155000.0 g			
Pu mass	4.24E+001	+-	7.88E+000	g
TRU Alpha Activity	1.32E+001	+-	5.63E+000	Ci
TRU Activity Concentration	8.53E+004	+-	3.63E+004	nCi/g
Pu-239 Equivalent Activity	1.33E+001	+-	5.63E+000	Ci
Pu-239 FGE	3.93E+001	+-	7.26E+000	g
Decay heat	4.34E-001	+-	1.88E-001	W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	1.75E-001	1.25E-004	2.83E-005	4.82E-006
PU238	7.78E-003	1.35E-001	2.50E-002	4.70E-005
PU239	3.91E+001	2.46E+000	4.57E-001	8.58E-004
PU240	2.55E+000	5.86E-001	1.09E-001	2.05E-004
AM241	2.89E+000	1.00E+001	5.61E+000	9.85E-002
PU241	5.74E-002	5.96E+000	1.11E+000	2.08E-003
PU242	7.18E-001	2.85E-003	5.29E-004	0.00E+000
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	1.28E-006
U233	<LLD	<LLD	0.00E+000	9.49E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	2.71E-006
U238	<LLD	<LLD	0.00E+000	3.88E-005

Errors quoted at 1.000 sigma

Operator: _____ Date: 5-15-13

ITR: _____ Date: 5-15-13

Automated Independent Technical Review

Count Sequence Number: 22740 Batch Number: 1LANDA1767
Counter ID: MCS HENC #1
Container ID: 93589
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 5/8/2013

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

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: 5-9-13

Attachment 4 – Flammable Gas Analysis Form

5832141

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

Waste Container ID: **93589**

BDR Number: **LA13FG2054**

Sampling Date: **5/13/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	332.47	
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\130513C\
Data File : 93589.D
Acq On : 13 May 2013 11:46 am (#1); 13-May-13, 11:45:30 (#2)
Operator : ~~RJ~~ 5-13-13 EL
Sample : EL
Misc : 55 Gallon Drum through Filter (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 13 11:54:20 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	3.552	96	4150172	201.25 ppmv	-0.02
15) Chlorobenzene-d5	5.884	117	3577799	177.00 ppmv	-0.02
Target Compounds					Qvalue
1) Hydrogen	1.613	GC1	2363m	332.47 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-RTR2-13-0067
Examination Date:	5/6/2013
Waste Container ID:	93590
Video/Audio Recorded Media Number:	LA-RTR2-13-0067 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.: 170.0 kg Tare Wt.: 145.1 kg Net Wt.: 24.9 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 2 layers
Volume Utilization Percentage:	55 %

CCP Radiography Data Sheet

Waste Container ID: 93590

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):	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):	0.2
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	2.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	22.7
Soils (S):	
Total WMP Weight:	24.9

CCP Radiography Data Sheet

Waste Container ID: 93590

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		5/6/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	93590	Count Sequence Number:	22783
Operator:	D3PW2DK1\operator		
Assay Start:	5/15/2013 9:17:59 AM		
Description 1:	1LANDA1771		
Description 2:	POC, 170.0		
Location:	LANL TA-54		
Comment:	AK-6, (MT-42), Not Precision		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 24.9 kg	Net:	24.9 kg
Container:	Volume: 208.0 l	Full:	95.0 %
Density:	0.720 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:	22783	Batch Number:	1LANDA1771
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:	93590	Analysis Date:	5/15/2013

Net Weight	24900.0 g		
Pu mass	4.24E+000	+-	1.28E+000 g
TRU Alpha Activity	3.71E+000	+-	2.34E+000 Ci
TRU Activity Concentration	1.49E+005	+-	9.39E+004 nCi/g
Pu-239 Equivalent Activity	3.72E+000	+-	2.34E+000 Ci
Pu-239 FGE	3.95E+000	+-	1.18E+000 g
Decay heat	1.23E-001	+-	7.81E-002 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	5.08E-002	3.63E-005	6.86E-006	2.22E-006
PU238	8.96E-004	1.55E-002	4.67E-003	5.49E-005
PU239	3.91E+000	2.46E-001	7.41E-002	8.71E-004
PU240	2.55E-001	5.86E-002	1.76E-002	2.07E-004
AM241	9.76E-001	3.39E+000	2.34E+000	1.48E-001
PU241	5.73E-003	5.96E-001	1.80E-001	2.11E-003
PU242	7.23E-002	2.87E-004	8.64E-005	0.00E+000
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	6.24E-007
U233	<LLD	<LLD	0.00E+000	4.26E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	1.29E-006
U238	<LLD	<LLD	0.00E+000	1.25E-005

Errors quoted at 1.000 sigma

Operator: _____ Date: 5-17-13

ITR: _____ Date: 5-17-13

Automated Independent Technical Review

Count Sequence Number: 22783 Batch Number: 1LANDA1771
Counter ID: MCS HENC #1
Container ID: 93590
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 5/15/2013

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-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 Chandler Date: 5-16-13

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **93590**

BDR Number: **LA13FG8032**

Sampling Date: **5/22/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	1151.66	
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	6.11	
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\130522C\
Data File : 93590.D
Acq On : 22 May 2013 3:43 pm
Operator : RJ
Sample :
InstName : Unit 8
Misc : POC through filter (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 22 15:51:11 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	3.256	96	2217674	206.00 ppm	0.00
15) Chlorobenzene-d5	5.939	117	2021756	179.50 ppm	0.00
Target Compounds					Qvalue
1) Hydrogen	5.272	GC1	284555	1151.66 ppm	100
17) Toluene	4.779	92	28527	6.11 ppm	99

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

S832156

S832156

Container Pr 758845

File Options Reports Help

S832156

758845	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

S832156

- S832156
  - 90839 - EMPTY
  - 90838
    - 92348 - EMPTY
    - 92347
  - 90837
    - 92576
    - 92577 - EMPTY
  - 90836
    - 92571 - EMPTY
    - 92570
  - 90835
    - SB02011

2-1-12W

ATTACHMENT 1
Page 1 of 3

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: S832156

6.2[4] Date Processed: 2-1-12

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

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: B FORDHAM / B Fordham 235635 / 2-1-12
Waste Handling Tech (print) Signature / # Date

5.[16] Prepared Parent Drum Weight (lb): 400.0 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.: S832156

6.2[5][B]/ 6.2[6] Total Parent Drum Weight (lb) 400.0 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.	90835			
10.1[4]	Daughter Drum Filter No.	CL-1349	N	N	N
10.1[4]	Daughter Drum Bag Filter No.	WO 1349	A	A	A
10.1[4]	Daughter Drum Purchase Order No.	414942			
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	
	Model No.	3pvc/5-2spvc	3pvc/5-2spvc	3pvc/5-2spvc	
	Serial No.	W01629	W01338	W01614	
	Date of Manufacture	6/11	6/11	6/11	N
10.2[5]	POC ID No	90836	90837	90838	
10.2[7][B]/10.2[6]	POC Item Description	PLASTIC SALTS LIQUIDS ABSORBED	PLASTIC SALTS LIQUIDS ABSORBED	PLASTIC SALTS LIQUIDS ABSORBED	A
10.2[7][D]/10.2[8][D]	Bag-out Bag Filter No.	N/A	N/A	N/A	
10.2[13]	POC Assembly closed per Manufacturer's instructions. (Initial and /#)	B.F. 235635	B.F. 235635	B.F. 235635	
10.2[14]	POC Assembly Gross Weight (lb)	320.2	320.2	360.4	
10.2[15]	POC Rad. Survey Results (mrem/hr)	1501	501	250.5	
10.3[3][A]	Approx. Containerized Liquid Vol./Units	N/A	N/A	N/A	
10.3[7][A]	Opaque/Non-penetrable Item Description:	LEAD SHIELDING	N A	N A	
10.3[5][A]	Free Liquid Volume/Units	1 GAL	1 GAL	1 GAL	
10.3[9][A]	PCB-contaminated Waste Description	N A	N A	N A	N
10.3[9][B]	PCB Item ID No.				
10.3[10]	Remaining Waste Description	SEE COMMENTS	N	N	
10.3[13]/10.4[12]/ 10.5[5]	Daughter Drum % Full (%)	75%	A	A	A
10.5[4]	Description Waste Added During Processing	PLASTIC	PLASTIC	PLASTIC	

ATTACHMENT 1
Page 3 of 3

4.1[6][B] Parent Waste Container No.: S832156

Comments: LEAD SHIELDING, PLASTIC, SALTS, LIQUIDS ABSORBED

N

A

11.1[1] Performed By: B FORDHAM B Fordham 235635 2-1-12
Waste Handling Tech (print) Signature Date

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

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

85-Gallon Overpack ID Number 90839

RECORD Drum Filter information: NUCFIL-013	
Filter ID Number: FJ-487	
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	9/12/12	Cal Expiration Date	9-18-12
Tolerance +/- 3% cw +/- 6% ccw		Tolerance +/- 3% cw +/- 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	ID#	Date
L M Montaño	L M Montaño	LMM	1085042	11/26/12
B Fordham	B Fordham	BF	1235835	12-1-12

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

Drum ID#: 90835

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 #: 3CPVC1.5-25PVC
Serial #: WO-1349
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 #: 019 DS
Serial #: CL-1349
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:	8-2-12
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: Michael Romero Signature: Michael Romero Z#: 182723

5. Weigh Drum Assembly

RECORD weight information

Tare wight (lbs) 74.6 lbs
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: Brian Fordham Verifier Sign: Brian Fordham Z#: 235635 Date: 2-1-12

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

DRUM ID#: 90835

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:

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) 232.4

Scale ID#: 019265

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

4. FINALIZE DOCUMENTATION

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

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

✓ Complete TWSR.

Operator Print/Sign: B. Fredrickson B. Fredrickson Date 2-1-12

Verifier Print/Sign: Shawn Mandragon Shawn Mandragon Date: 2-1-12

SP 1

WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Production Control

Container ID: S832156 Container Type: 55-GAL Gross Weight (lbs): 405

Inner Seal #: 012005 Filter Prefix: LAVC Filter Serial #: 06044

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

TWSR Comments: LEACHED SOLIDS MST 12 RM 434

Total PE-Ci Activity: 1.63E-00 Equivalent Combustible PE-Ci: 6.11E-01 AM-241 PE-Ci: 1.70E-01

Total Fissile Gram Equivalents: 16.6 Total Surface Dose Rate (mrem/hr): 2

EPA Code(s): None

NCR RTR/NDA Comment: None

RTR Pre-Screen Date: 4/26/2007 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: 11/8/11

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: 395 lb. ~~Three items (two are [illegible] lb each, 1 is 185 lb)~~ we 11/12/11. Four items; three items are less than 35 lb each and heaviest item is 172 lb.

May require RWP for >100 and 4,000 mrem/hr at 30 cm.

Performed By: Valerie Rhodes (WDP Engineering (Print)) Signature: Valerie Rhodes Z Number: 112607 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:

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

Noncertified TRU Waste Drum Item Information

DrumID: 012005

Item No	ItemID	Process Status	Net Wt (kg)	Matrix	Meas Code	SNM (g)	MT	AUID (Pg/Ln)		Comments
1	IXFS-693FD		7.300	NITRATE SALTS		0.48	42	13/11	3468	
2	IXFS-696FB		11.360	NITRATE SALTS		6.48	52	6/11	3468	
3	IXFS-697FA		78.180	NITRATE SALTS		11.11	52	6/11	3468	
4	IXFS-698FC		14.550	NITRATE SALTS		0.	52	6/11	3468	

Noncertified Waste Drum Material Summary

Gross Wt (kg): 183.8

Material Type	SNM (grams)	Items Net Wt (kg)
42	0.48	7.30
52	17.59	104.09
Totals	18.07	111.39

ATTACHMENT 1
Page 1 of 2

HYDROGEN/VOC SAMPLING USING GAS CHROMATOGRAPHY DATA SHEET

5.[1] Sample Date: 5/25/11

5.[7] Certified CCP Technician:

CCP (Print)	Signature	Z #	Date
Erik Loechell	Erik Loechell	234183	11-14-11
	/	/	/

Container No. (5.[1]):	S832040	S832156	S832163
Container Type (SWB, 110/85/55-gal) (5.[1]):	55gal	55gal	55gal
Current Filtered Vent No. (5.[1]):	13	72	72
New Filtered Vent No.: (5.[8][A]):	13	72	72
WIPP-Approved Filtered Vent (5.[8][B]):	☑ SAT ☐ UNSAT	☑ SAT ☐ UNSAT	☑ SAT ☐ UNSAT
VOC	Value (ppm) (5.[10])		
Benzene			
Chlorobenzene			
Cyclohexane			
1,1-Dichloroethane			
1,2-Dichloroethane			
1,1-Dichloroethene			
cis-1,2-Dichloroethene			
Ethylbenzene			
Ethylether			
Toluene			
1,2,4-Trimethylbenzene			
1,3,5-Trimethylbenzene			
m,p-Xylene			
o-Xylene			
Acetone			
1-Butanol			
2-Butanol			

ATTACHMENT 1
Page 2 of 2

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

Container Number (5.[1])	S832040	S832156	S832163
Hydrogen Reading (ppm) (5.[10]):	Ø ppm	104.81 ppm	Ø ppm
Methane Reading (ppm) (5.[10]):	Ø ppm	Ø ppm	Ø ppm
Total VOC Reading (ppm) (5.[11]):	Ø ppm	Ø ppm	Ø ppm
Filtered Type (5.[9][F][c]/5.[9][G][a]):	13	72	72
WIPP Approved (SAT/UNSAT) (5.[9][F][c]/5.[9][G][a]):	SAT	SAT	SAT
Torque Wrench M&TE/ID Number (5.[9][F][a]/5.[9][G][a])	033157	N/A	N/A
Torque Wrench Calibration Due Date (5.[9][F][a]/5.[9][G][a]):	2/10/12	N/A	N/A
Torque Wrench Tolerance (5.[9][F][a]/5.[9][G][a])	± 4%	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 (5.[9][F][a]/5.[9][G][d]) *	10-4 lbs.	N/A	N/A

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

Comments: N/C

8.[4] Performed By: Alina Herrera (Waste Handling Operator (print)) Signature Date

8.[5] ☐ Deficiencies identified and [illegible] PCR or SR system

☑ No deficiencies

8.[6] (S) WIPP waste container [illegible] SAT / UNSAT

InstName : Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\110525c\
Data File : S832156.D
Acq On : 25 May 2011 9:19 am (#1); 25-May-11, 09:18:31 (#2)
Operator : MS
Sample :
Misc : 55 GALLON LFL DRUM FROM UNDER DRUM LID (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 25 09:27:39 2011
Quant Method : C:\msdchem\1\METHODS\vocgas.m
Quant Title : Flammable Gas Analysis
QLast Update : Wed May 11 11:33:12 2011
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
3) Fluorobenzene	3.707	96	4707355	203.25 ppmv	0.03
15) Chlorobenzene-d5	6.017	117	3846020	177.25 ppmv	0.02
Target Compounds					Qvalue
1) Hydrogen	1.636	GC1	809m	104.81 ppmv	

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

vocgas.m Wed May 25 09:27:48 2011

2-1-12

0000 assuming DCRRF Operations center - Velarde
0001 starting inside and outside rounds.
0002 Operator reports cam alarming inside 50-69. Rm 102
0006 RCTs entering 50-69 to assess situation
0007 entering ALP-0407 Rev 4 SOS and SOM has been notified.
0019 Outside rounds have been completed.
0024 notified utilities to find out if there was a possible outage over night.
0029 notified by utilities lab did have an electrical disturbance at 1829 which opened up S3.
0038 SOM has notified DOE.
0039 RCTs entering to monitor cam's.
0704 [illegible] RCT [illegible] alarming on [illegible] RCT performing [illegible] and investigating cam
0759 RCT returning ops center all smears and cam are good. Waiting on Christine Burlock to release building
0801 RCTs initiating a RPD.
0853 [illegible] into [illegible] Terrell [illegible] [illegible]
0855 RCT's releasing building it is okay to enter facility.
0915 Starting inside rounds
0931 [illegible] to proceed
0940 [illegible]
1000 [illegible]
1010 Per SME IH Clay Trujillo, SOM has authorized him to climb ladder in 50-69 to inspect damaged ladder
1011 Starting monthly valve alignment
1030 Mode change performed we are now in Operations.
1157 SME IH [illegible] in 50-69
1100 [illegible] 1640 [illegible] in [illegible]
1155 [illegible] 1176 [illegible] in [illegible]
1155 [illegible] walking [illegible] Station 7, Term 38 [illegible] RCTs performing [illegible] checks. RCTs will notify ops center if [illegible] SOS and SOM has been notified. Masel's have been performed on lock as precaution.
1330 No contamination found. RPD being generated. Contacted glove vendor need to perform glove check
Continuing on new log book.
Velarde

2-1-12 Continuing from previous log book check
3321233 entering ERDCER-RM-ACP 0210 as a precautio
contamination was on techs PPE glove. 1200 d
1446 starting inside rounds.
1500 item #160 on rounds is OOS. Per CSE documenta
OK to proceed.
1510 Starting movement out of 50-109
1515 Starting bag off of 5832156.
1521 Inside rounds completed
1523 movement out of 50-109 completed
1540 starting outside rounds
1554 mode change being performed we are no
in Warm mode
1555 Starting glove change on left hand station #7.
1605 inside and outside rounds signed off by SOS
1616 completed glove change
1625 end of day ICEFF [illegible]

[illegible] further entries this page

2-1-12

0610 Reviewed shift turnover from previous shift and assumed the WCRR SOM position. (Graveline / Calhoun)
0612 Late entry 0607 notified by Operation Center that operator performing inside rounds made a CAM alarm upon entry to 50-E9. RCTs were notified and ARP 0407 was entered by Operation Center operator. RCTs are entering area to access situation. (Graveline)
0624 Operation Center contacted utilities about a possible power surge. At 0629 utilities confirmed that the lab did have an electrical disturbance at 1829 on 1-31-12 which opened breakers.
0628 SOM sent a message to DOE regarding CAM alarm.
0634 Late entry 0620 notified OM K Sanchez (acting).
0640 Listened to morning call in. Ref SOS inside all facilities maintain good housekeeping.
0730 Reviewed all procedures pertaining to TSR page change and signed off all used and signs.
0735 SOM spoke to RP-1 lead and it looks like CAM alarm was due to an electrical disturbance that occurred on 1-31-12 at 1829. The CAM that alarmed was a portable CAM. From the information the RCTs have the CAM alarmed around this time. The RCTs are currently counting the smears. As soon as they obtain more information they will let the operation center know.
0745 SOM called the FOD with an update. Per FOD once RCTs confirm no contamination and release the building back to OPERATIONS. OPERATIONS is given permission by FOD to resume with normal functions as long as the ventilation is operating normal and rounds are performed satisfactory.
0759 Per RP-1 Supervisor no contamination detected. Per evaluation it is suspected that portable CAM alarmed right around electrical disturbance that occurred on 1-31-12 at 1829. RP-1 Supervisor is waiting on Christine Bullock to come do the final evaluation and to release building back to OPERATIONS.
0855 RCTs released building back to operations. Operations will be conducting morning rounds.
0910 SOM released JWO#0042-1855-01 Daily/Weekly Rounds.
1010 Per SME Eloy Trujillo (IH) OM authorized Chum to climb outside ladder to inspect the damage.
1021 Mode change computer WCRRF and 50-E9 from WARM mode to OPERATIONS mode.
1027 SME Eloy Trujillo (IH) reported to Operation Center and OM that the crack was placed back into Steve. The work

17

was low hazard an IWD was not required. The rail was just placed back into the sleeve. Pat SMT Chris Triplett la
up operable. The caution tag and deficiency tag will rem
1230 Notified by the Operation Center operator
that while operator #38 was checking himself dur
glove box operations he alarmed the hand detector. An
RCT was called to perform a check. Upon checking
the individual contamination was detected on the inner glove
PPE outer glove approximately (200 dpm) limits with
RWP. RCTs are performing additional smears and sure
of glove box and labels. Individual was given a
hand wipe as a precautionary. Hand smear results pend
1332 RPT Supervisor reported to Operation Center that no
contamination was detected or found in any of the hand
and smears. As a precautionary measure the RCTs a
going to call the Chilton Station #7 left hand a
failed glove and an RPO is going to be initiated.
Operation Center entered AOP-0210. The on FOD and
NOE was noteject. CM will follow up with sending a
hunt notification.
1345 Operations were instructed to place inertion in a safe
configuration before placing the facility in WARM
mode and changing but the left hand glove on
Station #7.
1554 Mode change complete WARM YARD and SOTEQ from OPERATION
to WARM mode.
1700 End of shift. Relinquish the watch. [signature]

No further Entries

[signature]

WERR SOS Log-Book

2-1-12
0600 Reviewed SOS TURNOVER ASSUMING SOS POSTION
0625 Pre-Job being conducted
0640 Pre-Job concluded
0645 LATE ENTRY ~~AT 0607~~ 0607 notified that a CAM was Alarming. LATE ENTRY 0629 Utilities notified that the LAB'S HAD AN Electrical Disturbance
0856 RCT'S Cleared Building 69
1010 Reviewed Rounds
1011 PER SME (Eloy Trujillo IH) ~~OH~~ OM Allowed SME to climb ladder to inspect damaged ladder
1021 MODE CHANG COMPLETE FROM
1225 Notified by Inside personal Contamination found on ~~Glove~~ operators Glove will notify of further finding. (Operators PIE)
1332 No Contamination was detected but for precautionary measures an RPO will be made. Nasals are also being performed on the individual also for precautionary measures.
1346 FOD was notified
1356 LATE ENTRY 1333 AOP 210 was entered as a precautionary measure.
1554 MODE CHANGE COMPLETE FROM OPERATIONS TO WARM IN BUILDING 69 & Yard
1555 Starting Glove Change Station 7 Left HAND
1605 Reviewed Rounds
1616 Glove CHANGE COMPLETE
1630 Securing WERR SOS Position

GMO
2/10/12

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-RTR2-12-0123
Examination Date:	10/25/2012
Waste Container ID:	90835
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)	[ ] No [X] Yes NCR No.: NCR-LANL-1671-12 (TSH 10-26-12) 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.: 105.5 kg Tare Wt.: 33.4 kg Net Wt.: 72.1 kg
Rigid Liner and Liner Vent Description:	Liner: [X] No [ ] Yes Lid: [X] No [ ] Yes Type: [ ] 30-mil [ ] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [ ] Yes [X] N/A Punctured: [X] No [ ] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [ ] No [X] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 2 layers
Volume Utilization Percentage:	50 %

CCP Radiography Data Sheet

Waste Container ID: 90835

Section 3: Container Inventory and Comments	(Detailed descriptions)
IM:	
AM:	
OM:	Scrap lead
OI:	
C:	
R:	
XPM:	Plastic lid, plastic bags
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):	50.0
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	4.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	18.1
Soils (S):	
Total WMP Weight:	72.1

CCP Radiography Data Sheet

Waste Container ID: 90835

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:NCR-LANL1671-12	

RTR Operator:		
	Thad Hasselstrom	10-26-12
Thad Hasselstrom	Thad Hasselstrom	10/25/2012
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	90835	Count Sequence Number:	15748
Operator:	DCLTD231\Operator		
Assay Start:	5/10/2013 10:30:58 AM		
Description 1:	2LANDA1156		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6, MT-42		
Matrix Type:	Debris S5000		
Container Type:	55 gal Drum		
Weight:	Net: 72.1 kg	Net:	72.1 kg
Container:	Volume: 208.0 l	Full:	45.0 %
Density:	0.770 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:	15748	Batch Number:	2LANDA1156
Assay Instrument:	HENC #2	Location:	LANL TA-54
Analysis Method:	CCP-TP-063 v 14	Software Version:	NDA 2000 V.4.0
Item ID:	90835	Analysis Date:	5/10/2013

Net Weight	72100.0 g		
Pu mass	1.33E+001	+-	1.74E+000 g
TRU Alpha Activity	3.51E+000	+-	1.37E+000 Ci
TRU Activity Concentration	4.87E+004	+-	1.90E+004 nCi/g
Pu-239 Equivalent Activity	3.55E+000	+-	1.37E+000 Ci
Pu-239 FGE	1.30E+001	+-	1.60E+000 g
Decay heat	1.15E-001	+-	4.58E-002 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	3.61E-002	2.58E-005	5.05E-006	1.08E-006
PU238	3.55E-003	6.13E-002	7.99E-003	6.20E-005
PU239	1.22E+001	7.66E-001	9.98E-002	7.75E-004
PU240	8.01E-001	1.84E-001	2.40E-002	1.86E-004
AM241	7.21E-001	2.50E+000	1.37E+000	3.34E-002
PU241	1.96E-002	2.04E+000	2.65E-001	2.06E-003
PU242	3.20E-001	1.27E-003	1.66E-004	0.00E+000
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	4.18E-007
U233	<LLD	<LLD	0.00E+000	4.10E-003
U234	1.63E-002	1.03E-004	2.90E-005	0.00E+000
U235	1.16E+000	2.55E-006	7.17E-007	1.70E-006
U238	<LLD	<LLD	0.00E+000	3.17E-005
AM243	7.30E-004	1.47E-004	2.90E-005	6.27E-006

Errors quoted at 1.000 sigma

Operator: Don R. [illegible] Date: 5-15-13

ITR: [illegible] Date: 5-15-13

Automated Independent Technical Review

Count Sequence Number: 15748 Batch Number: 2LANDA1156
Counter ID: HENC #2
Container ID: 90835
Waste Matrix Code: Debris S5000 Count Type:
Sequence Type: Assay Date: 5/10/2013

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
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	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.	
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 Chambers Date: 5-14-13

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **90835**

BDR Number: **LA13FG2055**

Sampling Date: **5/14/2013**

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	51.57	
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\130514c\
Data File : 90835.D
Acq On : 14 May 2013 2:38 pm (#1); 14-May-13, 14:37:26 (#2)
Operator : SA
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 14 15:36:19 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	3.552	96	4051183	201.25	ppmv	-0.02
15) Chlorobenzene-d5	5.884	117	3465725	177.00	ppmv	-0.02
Target Compounds						Qvalue
4) Methanol	0.834	31	21100	51.57	ppmv	100

(#) = 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.: 90836

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.: 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 1-13-13
Waste Handling Tech (print) Signature Z# Date

ATTACHMENT 1
Page 2 of 4

4.1[6][B] Parent Waste Container No.: 90836

5.[18] Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable: 395.4 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) 395.0 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.: 90834

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	92570			
10.1[4]	Daughter Drum Filter No.	JL-1244	N		
10.1[4]	Daughter Drum Bag Filter No.	L-3159		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#)				
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 (%)	90%	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.: 96836

Comments: POC LIDS, CARDBOARD, PLASTIC, SALTS, KITTY LITTER

11.1[1] Performed By: BRIAN GALLEGOS [signature] 1267128 1-13-13
Waste Handling Tech (print) Signature Z# Date

11.1[7] Reviewed By: G Mk [signature] 149935 1-13-13 1310
SOS or designee (print) Signature Z# Date/Time

Working 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: NDCFIL
Model No.: 013
Serial No.: I1-78
Manufacture Date: 9/11

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

	Filtered Vent	2 in. Bung
M&TE No.:	040694	038367
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] 237120 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] 237120 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: G Mt [signature] 148351 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.: 92871

7.[25] Overpack drum closure ring torque wrench information:
M&TE No.: 621181
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: 6-11-13

7.[36][D] 85-gal overpack drum gross weight (lb): 326.6 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: G Mk / [signature] 14925 1-13-13
Supervisor or designee (print) Signature Z# Date

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

Drum ID#: 92570

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: 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 #: LCPVC 1-5-2 SPVC
Serial #: L-3259
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: NUKEM
Model #: CIPDS
Serial #: 97-1244
Date of Manufacture: 10-11

RECORD torque wrench information:

Filter torque wrench:		Jam Nut / Bung torque wrench:	
M&TE ID #:	040694	M&TE ID #:	033307
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:	±4% cw+ccw	Tolerance:	±3% 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#: 237120

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 Chance Operator Sign: [signature] Z#: 201742 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#: 92510

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): 110-80

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): 271.4

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 1-13-13

Verifier Print/Sign: [illegible] Date: 1-13-13

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WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Production Control

Container ID: 90836 Container Type: POC Gross Weight (lbs): 390

Container Seal #: None Filter Prefix: None Filter Serial #: EL-524; EL-555

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

TWSR Comments: PARENT #S832156 WTS-12STD-763

Total PE-Ci Activity: 4.07E-01 Equivalent Combustible PE-Ci: 1.53E-01 AM-241 PE-Ci: 4.25E-02

Total Fissile Gram Equivalents: 4.1 Total Surface Dose Rate (mrem/hr): 0

EPA Code(s): D008 D007 D009 WR 10/3/12

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

Nitrate salts mixed with Waste Lock 770® from previous repack campaign. A minimum 1/2 volume of extra nitrate salts must be mixed with 1/2 volume of nitrate salts

Performed By: Susan Ramsey (Production Control (Print)) Signature: Susan 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: 80 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 mrem/hr

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 Hexarmour gloves when processing waste. Use tools to remote handle waste. Do not push 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: Jose Jerez Z Number: 221452 Date: 10-9-12

OK Z# 249750 10/17/12

HS REVIEW: RB 206362 10.9.12

Noncertified TRU Waste Drum Item Information

DrumID: 012005

Item No	ItemID	Process Status	Net Wt (kg)	Matrix	Meas Code	SNM (g)	MT	Auth (Pg/Ln)		Comments
1	IXFS-695FD		7.300	NITRATE SALTS		0.48	42	13/11	G468	
2	IXFS-696FE		11.360	NITRATE SALTS		6.48	52	6/11	G468	
3	IXFS-697FA		78.180	NITRATE SALTS		11.11	52	6/11	G468	
4	IXFS-698FC		14.550	NITRATE SALTS		0.	52	6/11	G468	

Noncertified Waste Drum Material Summary

Gross Wt (kg): 183.8

Material Type	SNM (grams)	Items Net Wt (kg)
42	0.48	7.30
52	17.59	104.09
Totals	18.07	111.39

ATTACHMENT 1
Page 1 of 1

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

5.[1] Sample Date: 10·3·12

Container No. (5.[1])	90836					
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])	Ø ppm	ppm	ppm	ppm	ppm	ppm
Hydrogen Reading (< 64,000 ppm) (5.[5])	Ø ppm	ppm	ppm	ppm	ppm	ppm
Methane Reading (< 16,000 ppm) (5.[5])	Ø 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: ~~Done~~ CM 10·4·12 Per attached email, container was verified as a 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: Colleen Martinez (Waste Handling Operator (print)) Colleen Martinez (Signature) 190298 (Z #) 10·4·12 (Date)

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\121003c\
Data File : 90836.D
Acq On : 3 Oct 2012 1:19 pm (#1); 3 Oct 2012 1:18 pm (#2)
Operator : SA
Sample :
InstName : Unit 8
Misc : 55 GALLON LFL DRUM THROUGH FILTER-19DS FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Oct 03 13:26:53 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	2257465	206.00 ppm	0.00
15) Chlorobenzene-d5	5.936	117	2005797	179.50 ppm	0.00

Target Compounds	Qvalue

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

Vocgas.m Wed Oct 03 13:27:06 2012

1-13-13
0600 Assuming WCRRF operations center overlands
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 SC 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
0753 mode change performed TASD-69 and WCRRF now in operations.
0800 Notified by RCT in truck bay that lights ~~in the~~ 1-13 is 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
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 outer door was opened for movement out of SC 69 condition was ~~temporary~~ 1-13 temporary and would not affected operability of UPS. SOM with OPS manag maintenance performed TOO that system was operable and no IOOS were required to be entered.
0839 bagging on 90836
0856 ~~0850~~ 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 90351, PPE check is sat
1117 bag off is complete.
1147 notified by inventory that Oracle system is down. Operations coming out for lunch. SOM has contacted support.

— continued on next page - overload

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 notified 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 hear back from CSE

0830 Per CSE ok to proceed. low temp was the reason for Flashing light

0834 bagging on First down of day 90836

0850 PPE Check

0946 PPE Check

0949 bagging off and bagging on 90849

1055 bagging off 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 Set

1737 bagging off last down 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:	92570
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.: 123.0 kg Tare Wt.: 33.4 kg Net Wt.: 89.6 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: 92570

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):	6.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	57.6
Soils (S):	
Total WMP Weight:	89.6

CCP Radiography Data Sheet

Waste Container ID: 92570

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:	92570	Count Sequence Number:	22251
Operator:	D3PW2DK1\operator		
Assay Start:	3/12/2013 9:26:39 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: 89.6 kg	Net:	89.6 kg
Container:	Volume: 208.0 l	Full:	65.0 %
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:	22251	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:	92570	Analysis Date:	3/12/2013

Net Weight	89600.0 g		
Pu mass	7.75E+000	+-	1.27E+000 g
TRU Alpha Activity	2.91E+000	+-	4.30E-001 Ci
TRU Activity Concentration	3.25E+004	+-	4.80E+003 nCi/g
Pu-239 Equivalent Activity	2.93E+000	+-	4.30E-001 Ci
Pu-239 FGE	7.13E+000	+-	1.26E+000 g
Decay heat	9.60E-002	+-	1.43E-002 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
SR90	9.31E-009	1.29E-006	5.56E-007	0.00E+000
CS137	1.47E-008	1.29E-006	5.56E-007	4.81E-007
U233	<LLD	<LLD	0.00E+000	4.42E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	1.37E-006
NP237	4.69E-002	3.35E-005	6.02E-006	2.05E-006
PU238	2.06E-003	3.57E-002	8.13E-003	1.67E-003
U238	<LLD	<LLD	0.00E+000	1.21E-005
PU239	7.08E+000	4.45E-001	7.95E-002	2.09E-002
PU240	4.66E-001	1.07E-001	2.44E-002	5.02E-003
AM241	6.69E-001	2.32E+000	4.22E-001	5.42E-002
PU241	1.15E-002	1.19E+000	2.71E-001	5.59E-002
PU242	1.86E-001	7.39E-004	1.68E-004	0.00E+000
AM243	8.80E-004	1.78E-004	3.22E-005	6.23E-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: 22251 Batch Number: 1LANDA1729
Counter ID: MCS HENC #1
Container ID: 92570
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. No Warnings Reported.	Ok
Section 3 - Data Combiner Analysis Override enabled; Gamma data specified as input. Results taken from Quantitative Gamma data. Results comparison test passed.	Results taken from quantitative gamma data.
Section 4 - MGA Analysis Results are marked as invalid.	MGA analysis failed. AK isotopics applied. The AK information utilized was provided by Steve Schafer, AKE, and consists of data from CCP-AK-LANL-006, AK Source Document M237. MT-52,42.
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: 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: **92570**

BDR Number: **LA13FG2026**

Sampling Date: **3/15/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	100.88	
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 : 92570.D
Acq On : 15 Mar 2013 1:18 pm (#1); 15-Mar-13, 13:18:01 (#2)
Operator : SA
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 15 13:27:15 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	3.519	96	3795540	201.25	ppmv	-0.05
15) Chlorobenzene-d5	5.865	117	3276705	177.00	ppmv	-0.04
Target Compounds						Qvalue
1) Hydrogen	1.603	GC1	717m	100.88	ppmv	

(#) = 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.: 90837

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: BRIAN GALLEGOS / B. Gallegos / 216129 / 1-13-13
Waste Handling Tech (print) Signature Z # Date

ATTACHMENT 1
Page 2 of 4

4.1[6][B] Parent Waste Container No.: ~~78031~~ 90837 UR 9-24-14

5.[18] Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable: 380.6 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) 380.6 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:

N/A / /

EWMO-FOD (print) Signature Z # Date

ATTACHMENT 1
Page 3 of 4

4.1[6][B] Parent Waste Container No.: 90837

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	92576			
10.1[4]	Daughter Drum Filter No.	JL-1237		A	
10.1[4]	Daughter Drum Bag Filter No.	L-3714	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)				
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.			A	
10.3[10]	Remaining Waste Description	BAG OUT STUBS	N		
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	SEE COMMENTS			

ATTACHMENT 1
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4.1[6][B] Parent Waste Container No.: 90837

Comments: POC LIDS, CARD BOARD, ROOM TRASH, SALTS, PLASTICS, KITTY LITTER

11.1[1] Performed By: BRIAN GALLEGOS / Bri Dorsey 1267128 1-13-13
Waste Handling Tech (print) Signature Z# Date

11.1[7] Reviewed By: G Martin / G Martin 1192205 1-16-13 0844
SOS or designee (print) Signature Z# Date/Time

Working Copy
Date: 1-9-13 JC

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-87
Manufacture Date: 9/11

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

	Filtered Vent	2 in. Bung
M&TE No.:	0401094	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] 237120 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] 237120 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: G Machin / [signature] 149935 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.: 92577

7.[25] Overpack drum closure ring torque wrench information:
M&TE No.: 021151
Cal. Expiration Date: 4-11-13
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 / Bri Bossey 267129 1-13-13
Waste Handling Technician (print) Signature Z# Date

7.[28] Overpack drum closure ring torque value: 40 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: BRIAN GALLEGOS / Bri Bossey 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: G Martinez / [signature] 14825 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#: 92576

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: BCP
Model #: ECPE-1.5 2-SPIC
Serial #: L-3714
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 #: 0808
Serial #: JL-1237
Date of Manufacture: 10-11

RECORD torque wrench information:

Filter torque wrench:
M&TE ID #: 040894
Cal Expiration Date: 9/26/13
Range (ft-lbs or in-lbs): 40-200
Tolerance: ±4% cw/±8% ccw

Jam Nut / Bung torque wrench:
M&TE ID #: 1-10 ~~0386~~ 038367
Cal Expiration Date: 3/14/13
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: Clayton Mullins Signature: [signature] Z#: 240092

5. Weigh Drum Assembly

RECORD weight information

Tare wight (lbs) 76.2
File ID #: 0190105

- [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#: 204742 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#: 92576

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.): 255.8

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: B. Dailey Date: 1-13-13

Verifier Print/Sign: [illegible] Date: 1-15-13

WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Production Control

Container ID: 90837 Container Type: POC Gross Weight (lbs): 375

Container Seal #: None Filter Prefix: None Filter Serial #: EL-249; EL-8

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

TWSR Comments: PARENT #5832156 WTS-12STD-769

Total PE-Ci Activity: 4.07E-01 Equivalent Combustible PE-Ci: 1.53E-01 AM-241 PE-Ci: 4.25E-02

Total Fissile Gram Equivalents: 4.1 Total Surface Dose Rate (mrem/hr): 0

EPA Code(s): D008 D007 D009 WE 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 Wastelock 770® from previous repack campaign. A minimum of 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 B. 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: 65lb 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] lead, and mercury. No chemicals present. May require RWP for < 100 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 proper PPE and Tools to processing waste inside of the glove box. Do not push or press on waste items

Processing Determination: ✓ Accept ☐ Reject

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

Performed By: Jose Perez (TRU Remediation Operations (Print)) Signature: Jose Perez Z Number: 221452 Date: 10-4-12

Lab Z# 249750 10/9/12

IHS Review: RO 206762 10.10.12

NonCertified TRU Waste Drum Item Information

DrumID: 013008

Item No	ItemID	Process Status	Net Wt (kg)	Matrix	Mass Code	SNM (g)	MT	Auth (Pg/Cm)		Comments
1	IXFS-692FD		7.300	NITRATE SALTS		0.48	42	13/11	G468	
2	IXFS-696FB		11.360	NITRATE SALTS		6.48	52	8/11	G468	
3	IXFS-687FA		78.180	NITRATE SALTS		11.11	52	6/11	G468	
4	IXFS-688FC		14.550	NITRATE SALTS		0.	82	6/11	G468	

NonCertified Waste Drum Material Summary

Gross Wt (kg): 183.8

Material Type	SNM (grams)	Items Net Wt (kg)
42	0.48	7.30
52	17.59	104.09
Totals	18.07	111.39

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])	90837					
Container type sampled (e.g., 55-gal, 85-gal, 110-gal, or SWB) (5.[1])	PIX					
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)), 238566 (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 : 90837.D
Acq On : 28 Sep 2012 11:31 am
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 14:58:16 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	2498418	206.00	ppm	0.00
15) Chlorobenzene-d5	5.936	117	2197796	179.50	ppm	0.00

Target Compounds	Qvalue

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

Vocgas.m Fri Sep 28 14:58:32 2012

1-13-13
0600 Assuming WCRRF Operations center ~~overlands~~
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 5C 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.
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 notice/alarm Power.
0811 SOS has checked UPS and its stating system normal
0812 Will be on a pause waiting 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 5C 69 condition was ~~temporary~~ 1-13-13 temporary and would not ~~of~~ affected operability of UPS. SOM with OPS manag Conference performed TOO that system was operable and no IOOS were required to be entered.
0839 bagging on 90836
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 coming out for lunch. SOM has contacted support.
— continued on next page — cwsloach

1-13-13 Continued from previous page - Ireland

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.

1443 movement complete out of 50-69.

1457 bagging off 90837, bagging on 90852 PPE che is out

1519 bag on, bag off complete

1524 Starting inside rounds, PPE Check is out

1546 item #61 is OOS, PAD in place, OK to proceed.

1550 ~~Det~~ 1-13-13 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~~ 1-13-13 movement complete to transportation.

1800 Mode change performed WCRFF yard and TA50 in warm standby.

1830 end of day WCRFF operations center secure

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 ho

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 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 notified 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 hear back from CSE

0830 Spoke CSE ok to proceed. low temp was the reason for Flashing light

0834 bagging on First door of day 90836

0850 PPE Check

0946 PPE Check

0949 bagging off and bagging on 90849

1055 bagging off 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 door 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:	92576
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.: 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:	75 %

CCP Radiography Data Sheet

Waste Container ID: 92576

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):	8.0
Rubber (R):	
Plastics (waste materials) (XPM):	6.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	52.6
Soils (S):	
Total WMP Weight:	82.6

CCP Radiography Data Sheet

Waste Container ID: 92576

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:	92576	Count Sequence Number:	22252
Operator:	D3PW2DK1\operator		
Assay Start:	3/12/2013 10:10:33 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: 82.6 kg	Net:	82.6 kg
Container:	Volume: 208.0 l	Full:	75.0 %
Density:	0.530 kg /l		

System Configuration

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

Errors quoted at 1.000 sigma

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number:	22252	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:	92576	Analysis Date:	3/12/2013

Net Weight	82600.0 g		
Pu mass	2.45E+000	+-	1.02E+000 g
TRU Alpha Activity	5.32E+000	+-	2.14E+000 Ci
TRU Activity Concentration	6.44E+004	+-	2.59E+004 nCi/g
Pu-239 Equivalent Activity	5.32E+000	+-	2.14E+000 Ci
Pu-239 FGE	2.28E+000	+-	9.34E-001 g
Decay heat	1.77E-001	+-	7.14E-002 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	9.98E-002	7.13E-005	1.13E-005	3.29E-006
PU238	6.54E-004	1.13E-002	4.71E-003	5.93E-005
PU239	2.24E+000	1.41E-001	5.88E-002	7.40E-004
PU240	1.47E-001	3.39E-002	1.41E-002	1.78E-004
AM241	1.48E+000	5.13E+000	2.14E+000	2.69E-002
PU241	3.63E-003	3.78E-001	1.57E-001	1.98E-003
PU242	5.92E-002	2.35E-004	9.79E-005	0.00E+000
SR90	1.42E-008	1.96E-006	1.04E-006	0.00E+000
CS137	2.23E-008	1.96E-006	1.04E-006	8.34E-007
U233	<LLD	<LLD	0.00E+000	6.86E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	2.06E-006
U238	<LLD	<LLD	0.00E+000	1.59E-005
AM243	2.00E-003	4.03E-004	6.45E-005	9.92E-006

Errors quoted at 1.000 sigma

Operator: [signature] Date: 3-15-13

ITR: Jim Barton Date: 3/18/13

Automated Independent Technical Review

Count Sequence Number: 22252 Batch Number: 1LANDA1729
Counter ID: MCS HENC #1
Container ID: 92576
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; 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.	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. MCA Deadtime greater than the upper limit of 50.0%. Spectrum Validity Check engine has suggested data review.	Ok MCA deadtime= 50.01% No spectral distortion observed. Spectrum valid.

Comments	Disposition
Miscellaneous	No additional nuclides contributing to 95% of the radiological hazard identified. Am-241 from direct gamma used.

Expert Review by: Sheri Chamberlain 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: **92576**

BDR Number: **LA13FG2026**

Sampling Date: **3/15/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	1952.19	
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 : 92576.D
Acq On : 15 Mar 2013 11:00 am (#1); 15-Mar-13, 10:59:25 (#2)
Operator : SA
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 15 12:34:26 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	3.519	96	4377985	201.25	ppmv	-0.05
15) Chlorobenzene-d5	5.861	117	3719423	177.00	ppmv	-0.04
Target Compounds						Qvalue
1) Hydrogen	1.527	GC1	13875m	1952.19	ppmv	

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

20

Working Copy
Date: 11/8/12 cn

ATTACHMENT 1
Page 1 of 4

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: 90838

6.2[4] Date Processed: 11/8/12

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, D008

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

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

4.3[4][B] Platform Scale: Equipment No.: 019065
Cal. Due Date: 3/15/13

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: Michael Romero Michael Romero 182723 11-8-12
Waste Handling Tech (print) Signature Z# Date

ATTACHMENT 1
Page 2 of 4

4.1[6][B]	Parent Waste Container No.:	~~90840~~ 90838 UR 9-24-14
5.[18]	Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable:	368.6 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)	368.6 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:	

DWMO FOD (print)	Signature	Z #	Date

ATTACHMENT 1
Page 3 of 4

4.1[6][B] Parent Waste Container No.: ~~90810~~ 90838 UR 9.24.14

	Daughter Drums 1/8/12				
10.1[4]/10.2[4]	Daughter Drum No. 92347	~~[illegible]~~ 50			
10.1[4]	Daughter Drum Filter No.	SL-1378			
10.1[4]	Daughter Drum Bag Filter No.	L-3751			
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 7.0)				
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		N/A		
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 (%)	90%			
10.5[3]/10.6[2]	Description Waste Added During Processing	Stub out 58			

ATTACHMENT 1
Page 4 of 4

4.1[6][B] Parent Waste Container No.: ~~90868~~ 90838 VR 9.24.14

Comments: plastic, salts Kitty Litter

11 1[1] Performed By: Michael Romero Michael Romero 1182723 11-8-12
Waste Handling Tech (print) Signature Z # Date

11 1[7] Reviewed By: Jose Jerez Jose Jerez 1224521 11-9 12 0845
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.: 413954
Lot No.: 211426
Manufacture Date: 10

5.[8] Overpack filtered vent information:

Manufacturer: Nucfil
Model No.: 013
Serial No.: IL-274
Manufacture Date: 9-11

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

	Filtered Vent	2 in. Bung
M&TE No.:	046694	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: Michael Romero Michael Romero 182723 11-7-12
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: Michael Romero Michael Romero 182723 11-7-12
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] 221402 11-10-12
Supervisor or designee (print) Signature Z# Date

Working Copy
Date: 11/8/12

ATTACHMENT 5
Page 1 of 1

WCRRF OVERPACK DRUM CLOSURE DATA SHEET

7.[19] Overpack Drum Unique Identifier No.: 92348

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 +/- 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] 182723 11-8-12
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): ~~447.2~~ 320.4 lb
MR 11-8-12

Comments: N/C

8.1[1] Performed By: Michael Romero [signature] 182723 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: Jose Jerez [signature] 224521 11-10-12
Supervisor or designee (print) Signature Z # Date

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

Drum ID#: 92747

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 #: 219224
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 #: Acpvc 1.5-25pvc
Serial #: L-3751
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 #: 029 109
Serial #: JL-1378
Date of Manufacture: 10/11

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 ±6% ccw	Tolerance:	±3% cw ±6% accw

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

[x] Yes [ ] No

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

5. Weigh Drum Assembly

RECORD weight information

Tare wight (lbs) 76.1
File ID #: 01906 5

- [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] ZB: 182723 Date: 11-7-12

Verifier Print: Michael Romero Verifier Sign: [signature] ZB: 182723 Date: 11-8-12

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

DRUM ID#: 92347

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's 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 #: 040327

Cal expiration date: 3-15-13

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

Tolerance: ± 3% ✓ ± 6% ✓

2. WEIGH DRUM ASSEMBLY

Record weight information:

Gross Weight (lbs.): 278.2

Scale ID#: 010065

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

3. 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.

4. FINALIZE DOCUMENTATION

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

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

✓ Complete TWSR.

Operator Print/Sign: [illegible] Date: 11-07-12

Verifier Print/Sign: [illegible] Date: 11-8-12

WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Production Control

Container ID: 90838 Container Type: POC Gross Weight (lbs): 369

Tape Seal #: None Filter Prefix: None Filter Serial #: EL-260; EL-74

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

TWSR Comments: PARENT #S832156 WTS-12STD-800

Total PE-Ci Activity: 4.07E-01 Equivalent Combustible PE-Ci: 1.53E-01 AM-241 PE-Ci: 4.25E-02

Total Fissile Gram Equivalents: 4.1 Total Surface Dose Rate (mrem/hr): 1

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: ☐ VR ☐ 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 packed with Waste Inc 770® from previous repack campaign. Ammonium Nitrate and Sodium Nitrate must be mixed with 10 volume % nitrate salts.

Performed By: Susan Ramsey (Production Control (Print)) Signature: [signature] Z Number: (10068) 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: 594 Parent drum (SEDS attached) was part of WCRR nitrate salt repack campaign using Waste Inc 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 mrem/hr

Performed By: Valerie Rhodes (WDP Engineering (Print)) Signature: [signature] 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 Kevlar gloves when processing waste in the glovebox. Do not push or press on waste. Use proper tools for the job.

Processing Determination: ☑ Accept ☐ Reject

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

Performed By: Jose Jerez (TRU Remediation Operations (Print)) Signature: [signature] Z Number: 122412 Date: 10-4-12

24249750 10/9/12

HS Review [signature] CSP, Contains Chromium, lead + Hg

10-3-12

Nonconforming Waste Drum Item Information

Drum ID: [illegible]

Item No	Identif	Process Status	Net Wt (kg)	Material	Waste Code	RAD (g)	RT	Acth (Bq/kg)	Comments
1	[illegible]		7.[illegible]	[illegible]		0.[illegible]	[illegible]	[illegible]/11	[illegible]
2	[illegible]		11.[illegible]	[illegible]		0.[illegible]	[illegible]	[illegible]/11	[illegible]
3	[illegible]77A		78.[illegible]	[illegible]		11.11	[illegible]	[illegible]/11	[illegible]
4	[illegible]47C		14.[illegible]	[illegible]		0.	[illegible]	[illegible]/11	[illegible]

Nonconforming Waste Drum Material Summary

Gross Wt (kg): 183.8

Material Type	RAD (grams)	Gross Net Wt (kg)
[illegible]	0.[illegible]	7.[illegible]
[illegible]	17.[illegible]	104.[illegible]
Totals	[illegible]	[illegible]

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])	90838					
Container type sampled (e.g., 55-gal, 85-gal, 110-gal, or SWB) (5.[1])	PDC					
Filtered Vent Type (5.[1])	190S					
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 / 238566
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 : 90838.D
Acq On : 28 Sep 2012 2:28 pm (#1); 28 Sep 2012 2:27 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 14:39:31 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	2462608	206.00	ppm	0.00
15) Chlorobenzene-d5	5.936	117	2179048	179.50	ppm	0.00

Target Compounds	Qvalue

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

Vocgas.m Fri Sep 28 14:39:55 2012

11-8-12

PROJECT NAME _____ NOTEBOOK NO. _____

0700 Assuming WCRRF Operations center - Cole Daub.
0701 Started outside rounds, stack sampling being performed.
0638 performing shift turnover with Terri Coleman - Cole Daub.
0639 Assuming WCRR operations center. Coleman Duell have Clayton Mullins in training under my direction. (JC)
0650 Assuming WCRR Operations Center training under Terri Coleman
0651 Late entry at 0605 stack sampling was completed. (CM)
0651 Late entry at 0610 Outside Rounds completed. (CM)
0651 Late entry at 0642 Inside Rounds completed. (CM)
0651 Late entry at 0645 both rounds reviewed by SOS. (CM)
0702 Mode change performed TA-50-69 and WCRRF yard in Operations.
0722 Starting movement out of 50-69.
0737 Completed movement ~~out of~~ (CM 11-8-12) out of 50-69.
0738 Starting shipment out of WCRRF. Permission granted to low vehicle access gate.
0741 bagging on 90869.
0755 bag on complete.
0831 baggin off 90869 and bagging on 90867.
0900 Shipment complete, vehicle access gate restored, and transport closed and latched.
0902 bag on complete.
0951 bagging off 90867 and bagging on 90876
1014 Starting movement into 50-69.
1021 bag on complete.
1034 Movement into 50-69 complete.
1108 Starting movement out of 50-69.
1115 Movement out of 50-69 complete.
1121 Bagging (11-8-12) off 90876 and bagging on 90868.
1158 Bag on complete.
1220 Bagging off 90868 and bagging on 90838.
1240 Bag on complete.
1321 Bagging off 90838 and bagging on 90878.
1340 Bag on complete.
1408 Bagging off 90878 and bagging on 90937.
1410 Starting movement out of 50-69
1425 Movement out of 50-69 complete.
1425 Bag on complete.
1430 Starting Outside Rounds.
1454 Completed Outside Rounds.
1459 Late entry at 1415 Started (CM 11-8-12) Inside Rounds. (CM)
1504 Late entry at 1440 Completed Inside Rounds. (CM)
1505 Bagging off 90937.
1510 Both rounds reviewed by SOS.

SIGNATURE continued on next page. (CM) DATE _____ 20 __

READ AND UNDERSTOOD _____ DATE _____ 20 __

PROJECT NAME 11-8-12 NOTEBOOK NO.

0600 Assumed the WCRR SOM position. Genevieve E. Mer[illegible]
0615 Attended pre-job briefing conducted by SOS. Discussed "HUHA" concerns brought up on 11-7-12 with operators. Discussed upcoming maintenance. Discussed SP#57 and going into SP#72.
0702 Mode change complete: WCRR YARD | 50-69 from WARM | WARM to OPERATIONS | OPERATIONS.
0741 Just drum of the day logged on.
0742 Walked down OC steps last of 50-84 with OM and Energy Solutions JH. Caution tape was placed around problem area.
0800 SOM working with operations of de-inventory of WCRR footprint.
1035 Team meeting on drum disposition project. Discussed WCRR / DVS work being performed. Discussed upcoming maintenance. Deficiencies identified for DVS.
1200 WCRRF | DVS DDP Daily Call in to discuss goals, work being performed and any issues encountered.
1335 Notified by RP-1 that two waste coordinators were inside the LLW storage area without requesting RCT support. RP-1 verified that at least one of the individuals had FERPER training, therefore it is not an RPO. RP-1 will brief operations on 11-13-12 on the importance of ensuring other support groups have proper training before entering rad areas. SOM and SSW will also follow up on how other support groups such as laundry folks are following procedure when entering LLW area.
1440 SOM followed up with CSE on USQ Evaluation of WEF 12-008. CSE will call SOM when evaluation is complete.
1545 Inventory Control completed TWSR's for TRU drums requiring transfer to area 9 to support WCRR YARD standby.
1548 WCRR processed 10 paint drums producing 7 daughters.
1550 Mode change complete: WCRR YARD | 50-69 from OPERATIONS | OPERATIONS to WARM | COLD.
1630 Securing the SOM position. Genevieve E. Mer[illegible]

No further entries this page.

SIGNATURE Genevieve E. Mer[illegible] DATE 11-8 20 12
READ AND UNDERSTOOD _____ DATE _____ 20 ___

11-8-12 WCRK SOS LOG BOOK

0600 Assuming SOS Posidion [illegible]

0615 Conducted shift brid.

0638 Concluded Shift brief

0645 Reviewed Inside And outside Rounds

0702 Made Change Complete WCRF In operations

1510 ~~Made Cha~~ (Cm 11-9-12) Reviewed Inside And outside Rounds

1550 Made Change Complete WCRR Yard In warm 50-65 In Cold.

11-8-12 1630 End of shift Securing SOS 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-RTR2-13-0040
Examination Date:	3/8/2013
Waste Container ID:	92347
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.: 103.5 kg Tare Wt.: 33.4 kg Net Wt.: 70.1 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:	55 %

CCP Radiography Data Sheet

Waste Container ID: 92347

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
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):	4.3
Organic Matrix (OR):	
Inorganic Matrix (IN):	41.8
Soils (S):	
Total WMP Weight:	70.1

CCP Radiography Data Sheet

Waste Container ID: 92347

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:	92347	Count Sequence Number:	22254
Operator:	D3PW2DK1\operator		
Assay Start:	3/12/2013 11:49:34 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: 70.1 kg	Net:	70.1 kg
Container:	Volume: 208.0 l	Full:	55.0 %
Density:	0.610 kg /l		

System Configuration

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

Errors quoted at 1.000 sigma

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number: 22254
Assay Instrument: MCS HENC #1
Analysis Method: CCP-TP-063 v 14
Item ID: 92347

Batch Number: 1LANDA1729
Location: LANL TA-54
Software Version: NDA 2000 V.4.0
Analysis Date: 3/12/2013

Net Weight	70100.0 g		
Pu mass	4.52E+000	+-	7.08E-001 g
TRU Alpha Activity	2.15E+000	+-	9.74E-001 Ci
TRU Activity Concentration	3.07E+004	+-	1.39E+004 nCi/g
Pu-239 Equivalent Activity	2.16E+000	+-	9.74E-001 Ci
Pu-239 FGE	4.17E+000	+-	7.05E-001 g
Decay heat	7.10E-002	+-	3.25E-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	4.32E-007
U233	<LLD	<LLD	0.00E+000	3.42E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	1.04E-006
NP237	3.92E-002	2.80E-005	4.78E-006	9.26E-007
PU238	1.20E-003	2.08E-002	4.62E-003	1.35E-003
U238	<LLD	<LLD	0.00E+000	1.03E-005
PU239	4.13E+000	2.60E-001	4.43E-002	1.68E-002
PU240	2.72E-001	6.25E-002	1.38E-002	4.04E-003
AM241	5.20E-001	1.81E+000	9.73E-001	3.98E-002
PU241	6.70E-003	6.96E-001	1.54E-001	4.50E-002
PU242	1.09E-001	4.31E-004	9.55E-005	0.00E+000
AM243	6.71E-004	1.36E-004	2.35E-005	4.84E-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: 22254 Batch Number: 1LANDA1729
Counter ID: MCS HENC #1
Container ID: 92347
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.	Ok
Cosmic Ray Rejection Analysis complete with warnings. - The CRR High-Z mass Mass Variance is negative, High-Z mass Uncertainty set to zero so analysis could continue.	Ok
Section 3 - Data Combiner Analysis Override enabled; Gamma data specified as input. Results taken from Quantitative Gamma data. Results comparison test passed.	Results taken from quantitative gamma data.
Section 4 - MGA Analysis Results are marked as invalid.	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: 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: **92347**

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 : 92347.D
Acq On : 15 Mar 2013 10:48 am (#1); 15-Mar-13, 10:48:00 (#2)
Operator : SA
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 15 10:57:21 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	3.597	96	5134060	201.25 ppmv	0.03
15) Chlorobenzene-d5	5.920	117	4343552	177.00 ppmv	0.02

Target Compounds	Qvalue

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

S832241

S832241

Container Pr 761285

File Options Reports Help

S832241

761285	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

S832241

- S832241
  - 93602
  - 93601
  - 93604 – EMPTY
  - 93603

Working Copy
Date: 5-1-13

ATTACHMENT 1
Page 1 of 4

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: S832241

6.2[4] Date Processed: 05-01-13

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

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.: 019066
Cal. Due Date: 07-31-13

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

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

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

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

Performed By: James Sandoval [signature] 116662 / 05-01-13
Waste Handling Tech (print) / Signature Z # Date

ATTACHMENT 1
Page 2 of 4

4.1[6][B] Parent Waste Container No.: S832241

5.[18] Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable: 390.6 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) 390.6 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:

N/A

EWMO-FOD (print) Signature Z # Date

ATTACHMENT 1
Page 3 of 4

4.1[6][B] Parent Waste Container No.: 5832241

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	93601	93603	N	A
10.1[4]	Daughter Drum Filter No.	LM-51	KL-347		
10.1[4]	Daughter Drum Bag Filter No.	L-6593	L-6589		
10.1[4]	Daughter Drum Purchase Order No.	501186	501186		
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	B.O.P		N	A
	Model No.	6CPVC15 25PK			
	Serial No.	L-6636			
	Date of Manufacture	1-13			
10.2[5]	POC ID No	93602 9.24.14			
10.2[7][B]/10.2[6]	POC Item Description	Salt Plastic Kitty Litter			
10.2[13]	POC Assembly closed per Manufacturer's instructions. (Initial and Z#)	SB 166662			
10.2[14]	POC Assembly Gross Weight (lb)	389.2			
10.2[15]	POC Rad. Survey Results (mrem/hr)	1050.0			
10.3[3][A]	Approx. Containerized Liquid Vol./Units	N/A			
10.3[5][A]	Free Liquid Volume/Units	1 liter			
10.3[7][A]	Opaque/Non-penetrable Item Description:	N/A			
10.3[9][A]	PCB-contaminated Waste Description			N	A
10.3[9][B]	PCB Item ID No.				
10.3[10]	Remaining Waste Description	See Comments	See Comments		
10.3[13]/10.4[10]/10.5[4]/10.6[10]	Daughter Drum % Full (%)	100%	100%	N	A
10.5[3]/10.6[2]	Description Waste Added During Processing	Plastic	Plastic		

ATTACHMENT 1
Page 4 of 4

4.1[6][B] Parent Waste Container No.: SB32241

Comments: Plastic, lead, Salts, 2 Gal Of Acid, Acid Neutraizer Added, Kitty Litter

11.1[1] Performed By: James Sa[illegible] / 1116662 / 05-01-13
Waste Handling Tech (print) Signature Z# Date

11.1[7] Reviewed By: Jose Jerez / 1221452 / 5-2-13 0904
SOS or designee (print) Signature Z# Date/Time

Working Copy
Date: 5-1-13a)

ATTACHMENT 2
Page 1 of 1

WCRRF OVERPACK DRUM ASSEMBLY PREPARATION DATA SHEET

5.[3] Overpack drum information:
Purchase Order No.: 414113
Lot No.: 218078
Manufacture Date: 2011

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

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

Overpack filtered vent information:
Manufacturer: Nucfil
Model No.: 013
Serial No.: AL-173
Manufacture Date: 1-11

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

5. [11] Performed By: N/A
Waste Handling Technician (print) Signature Z# Date

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

5. [18] 2-in. bung plug torque value: N/A ft-lb

Comments: Torque Valves Performed In TA54-Area G

8.1[1] Performed By: James Sandoval
Waste Handling Technician (print) Signature Z# Date 1114621 05-01-13

8.1[6] Reviewed By: Jose Jerez
Supervisor or designee (print) Signature Z# Date 221452 5-2-13

Working Copy
Date: 5-1-13

ATTACHMENT 5
Page 1 of 1

WCRRF OVERPACK DRUM CLOSURE DATA SHEET

7.[18] Overpack Drum Unique Identifier No.: 93604

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

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

Performed By: James Sanchez [signature] 1116621 05-07-13
Waste Handling Technician (print) Signature Z# Date

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

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

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

7.[35][D] 85-gal overpack drum gross weight (lb): 175.6 lb

Comments: N/C

8.1[1] Performed By: James Sanchez [signature] 1116621 05-07-13
Waste Handling Technician (print) Signature Z# Date

8.1[7] Reviewed By: Jose Jerez [signature] R14521 5-2-13
Supervisor or designee (print) Signature Z# Date

RZB

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

Drum ID#: 93603

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 #: 501186
Lot #: 02347-63
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 #: 66PVC-15-2 3PVC
Serial #: L-6589
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 filer 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-747
Date of Manufacture: 11/11

RECORD torque wrench information:

Filter torque wrench:		Jam Nut / Bung torque wrench:	
M&TE ID #:	0406094	M&TE ID #:	038369
Cal Expiration Date:	9-26-13	Cal Expiration Date:	12-18-13
Range (ft-lbs or in-lbs):	40-200	Range (ft-lbs or in-lbs):	10-80
Tolerance:	+-4% cal +-6% ccw	Tolerance:	+-3% cal +-6% ccw

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

[x] Yes [ ] No

Print Name: Frederico Arbulata Signature: [signature] Z#: 228826

5. Weigh Drum Assembly

RECORD weight information

Tare witght (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: Frederico Arbulata Operator Sign: [signature] Z#: 228826 Date: 4-18-13

Verifier Print: Jason Sechel Verifier Sign: [signature] Z#: 114688 Date: 05-01-13

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

DRUM ID#: 93603 9-24-14

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 #: 038573

Cal expiration date: 09-11-15

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): 314.0

Scale ID#: 819085

☑ 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: 05-01-13

Verifier Print/Sign: [illegible] Date: 5-1-13

2A

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

Drum ID#: 93607

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 #: 501186
Lot #: 02347603
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 #: TacPVC-1.5-2-SPVC
Serial #: L-6590
Date of Manufacture: 1-13

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

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

4. Install Lid/Drum Filter

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

RECORD drum filter information:

Manufacturer: NUCFIL
Model #: 019DS
Serial #: LM-31
Date of Manufacture: 12/12

RECORD torque wrench information:

Filter torque wrench:		Jam Nut / Bung torque wrench:	
M&TE ID #:	040694	M&TE ID #:	038369
Cal Expiration Date:	9-26-13	Cal Expiration Date:	12-18-13
Range (ft-lbs or in-lbs):	40 200	Range (ft-lbs or in-lbs):	10-80
Tolerance:	±4% cw ±16% ccw	Tolerance:	±3% cw ±6% ccw

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

☑ Yes ☐ No

Print Name: Federico Ashlock Signature: [signature] Z#: 228826

5. Weigh Drum Assembly

RECORD weight information

Tare wtght (lbs) 760
File ID #: 019065

☑ Write the tare weight on drum using permanent marker

6. Label Drum Assembly

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

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

Operator Print: Federico Ashlock Operator Sign: [signature] Z#: 228826 Date: 4-18-13

Verifier Print: James Sa[illegible] Verifier Sign: [signature] Z#: 116662 Date: 05-01-13

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

DRUM ID#: ~~93601~~ 93601 UP 9.24.14

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: 07-11-13

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

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

2. DRUM LABELING

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

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

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

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

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

RCRA Label:

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

OR

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

NOTE: Check only one of the above two boxes.

3. WEIGH DRUM ASSEMBLY

Record weight information:

Gross Weight(lbs): 225.0

Scale ID#: 019065

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

4. FINALIZE DOCUMENTATION

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

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

☑ Complete TWSR.

Operator Print/Sign: [illegible] Date: 05-01-13

Verifier Print/Sign: Justin Gomez Date: 5-1-13

Working Copy
Date: 5-1-13

ATTACHMENT 3
Page 1 of 1

WCRRF PARENT 55-GAL DRUM PREPARATION DATA SHEET

6.3[21] Prepared Parent 55-Gal Drum Number: S832241

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

6.3[16] Platform scale serial number: 019065
Platform scale calibration expiration date: 07-31-13

6.3[18] Prepared parent 55-gal drum weight (lb): 390.6

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

Comments: N/C

8.1[1] Performed By: James Sulak [signature] 1166621 05-01-13
Waste Handling Technician (print) Signature Z # Date

8.1[7] Reviewed By: Jose Jerez [signature] 221457 5-1-13
Supervisor or designee (print) Signature Z # Date

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

8.1[8][D] Approved by: Jose Jerez [signature] 221452 5-2-13 0900
SOS/SOM or designee (print) Signature Z # Date Time

SP72

WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Production Control

Container ID: S832241 Container Type: 85-GAL Gross Weight (lbs): 553

Inner Seal #: 012066 Filter Prefix: LAVC Filter Serial #: CK-153

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

TWSR Comments: LEACHED SOLIDS MST 12 NITRATE SALTS RM 434. CHANGED FROM 55 GALLON TO 85 GALLON DRUM AND FILTER # TO CK-153 PER RICK MARTINEZ 03/29/2011

Total PE-Ci Activity: 6.61E+00 Equivalent Combustible PE-Ci: 2.48E+00 AM-241 PE-Ci: 8.38E-01

Total Fissile Gram Equivalents: 60.6 Total Surface Dose Rate (mrem/hr): 2

EPA Code(s): None

NCR RTR/NDA Comment: None

RTR Pre-Screen Date: 7/12/2007 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: Ensure EPA Codes D007, D008, and D009 a on the label. A minimum of 1.2 volumes of Kitty litter/zeolite must be mixed with 1.0 volume of w salts.

Performed By: R. W. Jones (Production Control (Print)) Signature: John R. Ring Z Number: 117434 Date: 12/12/12

WDP Engineering

SUSAN S. RAMSEY 100681

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

Processing Determination: ☐ Accept ☐ Reject

WDP Engineering Comments:

SEE ATTACHED SADS

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

TRU Remediation Operations

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

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

Processing Determination: ☑ Accept ☐ Reject

TRU Remediation Operations Comments: Use proper 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: 2-5-13

ROBIN SHUE 282 272995 271975

RGRIFFIS @

IHS Review: RS 206362 12/17/12 NOTES: D007 = Chromium D008 = lead

ATTACHMENT 1

WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Production Control

Container ID: S832241 Container Type: 55-GAL Gross Weight (lbs): 471
Inner Seal #: 012066 Filter Prefix: LAVC Filter Serial #: 02379
AK Waste Stream: LA-MHD01.001 Certified RTR BDR: No BDR
TWSR Comments: LEACHED SOLIDS MST 12 NITRATE SALTS RM 434
Total PE-Ci Activity: 5.70 Equivalent Combustible PE-Ci: 2.17 AM-241 PE-Ci: No data
Total Fissile Gram Equivalents: 60.8 Total Surface Dose Rate (mrem/hr): 2
EPA Code(s): None
NCR RTR/NDA Comment: None
Pre-Screen RTR Comment: Impenetrable Obj.
Certified RTR Comment: None
Prohibited Items: ☐ Sealed > 4 Liters ☐ Liquid ☐ Pressurized Container ☑ Impenetrable Item ☐ Other
Estimated 30-cm Dose Rate (mrem/hr): ☐ <100 ☐ >100 and <1,000 ☑ >1,000 and <10,000 ☐ >10,000
Remediation Determination: ☑ Green ☐ Yellow RJ 7.19.10 ☑ VE PID ☐ Split Repack
TRUCON Code: LA125M Production Control Comments:

Performed By: R.W. Jones — Production Control (Print) — Signature — 117434 Z Number — 12-10-09 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 NO HAZARDOUS CHEMICALS INDICATED

Performed By: Robert L Gripes — WDP Engineering (Print) — Signature — 130356 Z Number — 12-14-09 Date

TRU Operations

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

Processing Determination: ☑ Accept Reject
TRU Operations Comments:

Performed By: Genevieve Fernandez — TRU Operations (Print) — Signature — 1107744 Z Number — 12-22-09 Date

Production Control

TRU Transfer Number: Date: 1-26-10

HAS CRACKED RNO POL LAYER

Noncertified TRU Waste Drum Item Information

DrumID: 012066

Item No	ItemID	Process Status	Net Wt (kg)	Matrix	Meas Code	SNM (g)	MT	Auth (Pg/Ln)	Comments
1	IXFS-698-FA		16.820	NITRATE SALTS		2.85	52	6/11	G468
2	IXFS-679-FA		5.000	NITRATE SALTS		7.41	53	6/11	G468
3	IXFS-700OXFA		24.320	NITRATE SALTS		30.81	52	6/11	G468
4	IXFS-701FA		8.860	NITRATE SALTS		9.97	54	6/11	G468
5	IXFS-702FC		12.950	NITRATE SALTS		6.85	54	6/11	G468
6	IXFS-703-F1		5.450	NITRATE SALTS		0.37	53	6/11	G468
7	IXFS-704FA		32.730	NITRATE SALTS		7.2	52	6/11	G468
8	IXFS-709-FA		5.230	NITRATE SALTS		0.69	42	14/11	G468

Noncertified Waste Drum Material Summary

Gross Wt (kg): 213.7

Material Type	SNM (grams)	Items Net Wt (kg)
42	0.69	5.23
52	40.86	73.87
53	7.78	10.45
54	16.82	21.81
Totals	66.15	111.36

Attachment 1: LEL/VOC Sample Record

Torque Wrench Information (If Used)				☒ N/A
Serial/ID Number:		Cal. Due Date:	Torque Wrench Cal. Within Due Date (initials):	

	Container Number:	S832241							
	Container Type (SWB, 110-Gal, 85-Gal, or 55-Gal):	55 GAL.							
LEL Sample Information	LEL Reading (%)	N/A							
	($) Initial to Verify one of the following MultiRAE Reading (If Applicable): • <10% LEL with no justification • 10% to 18% with justification	N/A							
	($) Initial to Verify < 8,000 ppm Hydrogen CCP Mass Spec Reading (If Applicable)	[illegible]				N/A			
	Initial to Verify < 10,600 ppm Methane CCP Mass Spec Reading (If Applicable)	[illegible]							
VOC Sample Information	VOC Reading (ppm)	11.79							
	($) Initial to Verify < 2,000 ppm MultiRAE Reading (If Applicable)	N/A							
	($) Initial to Verify < 7,000 ppm CCP Mass Spec Reading (If Applicable)	[illegible]							
	Filter Type:	72							
	WIPP Approved (SAT/UNSAT):	SAT							
	Filter Torque Value:*	N/A							

*No torque value required for 072/073 filters – Write 'N/A' as applicable

Justification for a range of 10% to 18% of the LEL using a MultiRAE Plus Monitor: _____

The SOS or SOM shall review Attachment 1 to this procedure and ensure that they have been satisfactorily completed.

Signature [signature] Date 1-5-10 Time 1400

InstName : Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\091105c\
Data File : S832241.D
Acq On : 5 Nov 2009 2:20 pm (#1); 05-Nov-09, 14:17:39 (#2)
Operator : SCH
Sample :
Misc : 55 GALLON LFL DRUM FROM UNDER DRUM LID (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Nov 05 14:32:19 2009
Quant Method : C:\msdchem\1\METHODS\vocgas.m
Quant Title : Flammable Gas Analysis
QLast Update : Tue Aug 25 13:16:42 2009
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
3) Fluorobenzene	7.318	96	4073290	210.00	ppmv	-0.03
15) Chlorobenzene-d5	11.255	117	3187487	183.75	ppmv	-0.05
Target Compounds						Qvalue
1) Hydrogen	3.401	GC1	2736	349.89	ppmv	100
4) Methanol	3.168	31	16809	11.79	ppmv	100

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

vocgas.m Thu Dec 17 08:57:04 2009

Attachment 1: LEL/VOC Sample Record

Torque Wrench Information (If Used)				☑ N/A
Serial/ID Number:		Cal. Due Date:	Torque Wrench Cal. Within Due Date (initials):	

	Container Number:	S832941							
	Container Type (SWB, 110-Gal, 85-Gal, or 55-Gal):	55 GAL.							
LEL Sample Information	LEL Reading (%)	N/A							
	($) Initial to Verify one of the following MultiRAE Reading (If Applicable): • < 10% LEL with no justification • 10% to 18% with justification	N/A							
	($) Initial to Verify < 8,000 ppm Hydrogen CCP Mass Spec Reading (If Applicable)	NU				NA			
	Initial to Verify < 10,600 ppm Methane CCP Mass Spec Reading (If Applicable)	NU							
VOC Sample Information	VOC Reading (ppm)	11.79							
	($) Initial to Verify < 2,000 ppm MultiRAE Reading (If Applicable)	N/A							
	($) Initial to Verify < 7,000 ppm CCP Mass Spec Reading (If Applicable)	NU							
	Filter Type:	72							
	WIPP Approved (SAT/UNSAT):	SAT							
	Filter Torque Value:*	N/A							

*No torque value required for 072/073 filters -- Write 'N/A' as applicable

Justification for a range of 10% to 18% of the LEL using a MultiRAE Plus Monitor: _____

The SOS or SOM shall review Attachment 1 to this procedure and ensure that they have been satisfactorily completed.

Signature [signature] Date 11-12-09 Time 0800

InstName : Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\091105c\
Data File : S832241.D
Acq On : 5 Nov 2009 2:20 pm (#1); 05-Nov-09, 14:17:39 (#2)
Operator : SCH
Sample :
Misc : 55 GALLON LFL DRUM FROM UNDER DRUM LID (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Nov 05 14:32:19 2009
Quant Method : C:\msdchem\1\METHODS\vocgas.m
Quant Title : Flammable Gas Analysis
QLast Update : Tue Aug 25 13:16:42 2009
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
3) Fluorobenzene	7.318	96	4073290	210.00	ppmv	-0.03
15) Chlorobenzene-d5	11.255	117	3187487	183.75	ppmv	-0.05
Target Compounds						Qvalue
1) Hydrogen	3.401	GC1	2736	349.89	ppmv	100
4) Methanol	3.168	31	16809	11.79	ppmv	100

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

vocgas.m Thu Nov 05 14:32:40 2009

ATTACHMENT 1
Page 1 of 2

WCRRF WASTE CONTAINER TRAVELER

Waste Container No.: 3832241
Green

1. Waste Container Information (EP-WCRR-WO-DOP-0202)

1.1 Degraded Loss of Integrity Drum ☐ YES ☑ NO

1.2 Overpack Configuration ☐ 85-gal ☐ SWB ☑ N A

1.3 Remediation Activity ☑ VE ☐ >190 mrem ☐ PDI ☐ Split ☐ Repack

1.4 Plutonium Equivalent Curies (PE-Ci) N/A PE-Ci

1.5 Equivalent Combustible Waste (PE-Ci) N/A PE-Ci

2. Removing Degraded/Loss of Integrity Drums from Overpacks and Prepare (EP-WCRR-WO-DOP-0236)

2.1 **DESIGNATE** Hoisting & Rigging PIC: _____ _____
Print Name Z#

2.2 **CONDUCT** pre-job brief of critical lift plan (Attach Concurrence Sheet)) ☐ SAT ☐ UNSAT

2.3 **ENSURE** TA-50-69 is in Operation Mode. ☐ SAT ☐ UNSAT

2.4 **REMOVE** 85-gallon overpack container from SWB (ordinary lift).

2.5 **REMOVE** 55-gallon drum from 85-Gallon Overpack (critical lift). ☐ SAT ☐ UNSAT

2.6 **PREPARE** 55-gallon drum (critical lift). ☐ SAT ☐ UNSAT

2.7 **VERIFY** that the weekly scale calibration verification has been performed. ☐ SAT ☐ UNSAT

2.8 **WEIGH** prepared 55-gallon drum: Record Scale Serial #: _____

Scale Cal. Due Date: ____ / ____ / ____ Scale w/in Cal. Freq.: ☐ SAT ☐ UNSAT

Weigh drum & Record: _____ lbs. Verify weight < 624 lbs.: ☐ SAT ☐ UNSAT

Performed By: _____ _____ ____ / ____ / ____
Operator (Signature) Z# Date

3. Parent Drum Preparation (EP-WCRR-WO-DOP-0223)

3.1 **ENSURE** TA-50-69 is in Operation Mode. ☐ SAT ☐ UNSAT

3.2 **PREPARE** parent 55-gallon drum.

3.3 **VERIFY** that the weekly scale calibration verification has been performed. ☐ SAT ☐ UNSAT

3.4 **WEIGH** prepared 55-gallon drum Record Scale Serial #: _____

Scale Cal. Due Date: ____ / ____ / ____ Scale w/in Cal. Freq.: ☐ SAT ☐ UNSAT

Weigh drum & Record: _____ lbs. Verify weight < 624 lbs.: ☐ SAT ☐ UNSAT

Performed By: _____ _____ ____ / ____ / ____
Operator (Signature) Z# Date

5-1-13

0600 Assuming WCRRF operations center, Chelsade
0615 Pre job being conducted by SOS
0617 Starting outside rounds
0620 Starting inside rounds.
0624 Item #3 is unsat, FSR in place ok to proceed.
0644 Item #43 is OOS, POD in place ok to proceed
0648 Inside and outside rounds ~~at~~ 5713 complete.
0717 Rounds have been signed off by SOS
0735 mode change performed TASO-69 and WCRRF yard now in operations
0830 Bagging on S 855126 after denesting is complete
0905 Denesting complete, S855126 complete bag on
1028 Bagging off 1 daughter.
1033 Starting movement out of SC-69
1046 Bag on, Bag off complete.
1120 movement complete out of SC-69.
1211 Bagging off 1 daughter 1 POC
1238 Bag off of 1 daughter 1 POC complete
1441 Bagging off S855126, Bagging on S832241
1443 Denesting S832241 then will be bagging on
1521 Completed bag on and denesting.
1525 Starting outside rounds
1530 Item #3 is unsat, FSR in place ok to proceed
1546 Completed outside rounds
1550 Starting inside rounds.
1615 Item 43 is OOS, POD in place ok to proceed.
1618 Inside rounds complete.
1624 Bagging off 1 daughter.
1640 Bag off, Bag on complete.
1800 Starting bag off of S832241
1824 Completed bag off of S832241
1835 mode change performed TASO-69 and WCRRF yard in vacuum.
1850 Starting movement out of SC-69.
1903 Completed movement out of SC-69.

Continued on next page - Chelsade

5-1-13 Continued from previous page ~~Carole~~
1905 Completed movement out of 50-69
1910 mode change performed 50-69 in cold and WCRRF in warm standby.
5-1-13 1915 End of day WCRRF operations after decline CWC

No further entries this page.

WCRRF SOS LOGBOOK

5/1/13 0600 Assuming SOS position for the day for J-ey

0615 Pre-Job brief being given by the PEC. Discussed operators ensuring that verification is made when calling out Parent drum numbers it to inventory control. Having two way communication. Discussed incident of wrong Parent number being processed and events that led up to it. Critique being held today to discuss and investigate further. Also discussed respirator incident that happened at TA-54, stressed to operators to ensure their respirators are working properly and inspect filters and cracks around the mouth piece. Also discussed operators shaking out their leather gloves prior to use to ensure any objects or items that may have been dropped in are cleared out prior to putting them on.

0635 Starting Monthly RWP Brief, Pre job Concluded.

0700 RWP Brief Complete.

0717 Reviewed and signed inside and outside rounds.

0735 Mode Change Complete, WCRR yard and SD-69 are in Operations

0830 Starting to D-Vest 1 Parent from 85 gallon overpack and Bag on

0905 D-Vesting and Bag on Complete.

1000 Operators describing that parent drum that is currently bagged on had aproximately 5 gallons of liquids in it. pH showing acidic

1300 Operators breaking for lunch

1400 Operators returning from lunch

1443 Bagging off first drum D-Vesting and bagging on second Parent

1520 D-Vesting and Bag on Complete

1723 Reviewed and signed inside and outside rounds.

1834 Inventory Control unable to print labels for the daughter drums that were generated. Inventory Control and a Couple of operators staying late so that waste Containers Can be moved out to go to COID

tonight so that maintenance can start their work package on FE-002 first thing in the morning.

1835 Mode Change Complete. WLRR yard and 50-69 are in WARM

~~1900 Securing SOS position for the day. Jan Jay~~ JJ 5-1-13

1905 ~~1910~~ JJ 5-1-13 Computer system operational, labels are being printed so that daughters can be moved out

1905 ~~1915~~ JJ 5-1-13 Movement out of the facility complete.

1910 Mode Change Complete WLRR Facility in CAID, JJ 5- ~~50-69~~ Yard is in WARM

1915 Securing SOS position for the day. Jan Jay

No further entries on this page

169 PROJECT NAME 5/1/13 NOTE BOOK NO.

0600 Reviewed the previous shift turnover and assumed the WCRR SDM position. Continue Standing
0615 Attended the pre job briefing conducted by the SOS. Discussed immediate corrective actions with SSW performing independant verification. Discussed independant verification and prep to surveillances.
0640 Call in with the JOD.
0700 Call into daily TA54 SDM shift brief.
0730 Notified by operations that FE002 is making a louder noise than constant. SDM will communicate with CSE and OM.
0735 Made change complete WCRR YARD/ 5C-69 from WORKM/WARM to OPERATIONS/OPERATIONS.
0736 Late entry 0730 - Spoke with CSE and he concluded that alarms need to be changed at discretion of OM and operations. OM requested SDM to follow through with MSS operations may continue processing.
0750 SDM spoke to MSS manager a corrective work package is in place and to obtain signatures. Can perform work on 5/2/13. OM notified.
0825 Reviewed and Signed off on RCRTs for the week of 4/22/13
0900 Attended the critique for processing the incorrect drum into 5C-69 at TA4E. Corrective Actions: 1) Shift order explaining expectations of instructions for moving waste containers between the transportainers and building TA2-69. 2) Procedure clarification on expectations. Immediate actions taken upon discovery. 1) All waste container numbers were corrected in the MARS/Oracle Spreadsheets 2) SSW independantly verify all transfers
1115 SDM wrote up Standing Order WCRR-SH-13-002. OM approved.
1200 Daily call in with the PM and OM to status WCRR and DVS.
1310 Released WO#458894-01 50-54(m) Wet Auto Sprinkler System.
1400 Spoke to MSS Supervisor and planner on FE002 maintenance. They will go verify work package and part availability and will call SDM back with status of work schedule.
1500 SDM going to TA4E to review work packages.
1630 SDM returned back from reviewing work packages. Work package for FE002 USQ didn't have mode applicability. Laurent Garcia USQ program was notified and changes were made. Work package is ready to work on 5/2/13. MSS personnel will be available first thing tomorrow morning 0900 hrs.
1735 Notified by Inventory Control that Re-pack database and Oracle

SIGNATURE DATE
READ AND UNDERSTOOD DATE

5-1-13 continued

5-1-13 Aren't allowing creation of daughter drums or POCs for drum ~~#5832241~~ #5832241. C. Fernandez from WCATS has been notified and is working issue.

1750 C. Fernandez notified Inventory Control that issue needs to be solved by another WCATS employee. Employee has been notified.

1800 OM notified. Authorized a few people to stay late to accomodate movements out and to place facility in COLD standby.

1820 Processing complete on drum #5832241. Waiting on WCATS personnel.

1835 Mode change complete. WCRR YARD/5069 from OPERATIONS/OPERATIONS to WARM/WARM.

1840 SOM notified SOS to send personnel home and leave only enough personnel to perform movement. RP-1 supervisor notified as well.

1840 WCATS C. Fernandez called issue on database has been corrected. Inventory Control verified and labels were printed and database updated.

1845 Late entry 1737 notified by SOS that containment pallets are on-site and have been placed in transportainer.

1905 Movements complete. WCRR processed 2 parents resulting in 4 parents and 2 POCs.

1910 Mode change complete. WCRR YARD/5069 from WARM/WARM to WARM/COLD to support maintenance 05-02-13.

1915 Leaving the SOM position. [signature]

5-1-13

No further entries this page.

[signature]

5-1-13

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0067
Examination Date:	5/6/2013
Waste Container ID:	93601
Video/Audio Recorded Media Number:	LA-RTR2-13-0067 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.: 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:	70 %

CCP Radiography Data Sheet

Waste Container ID: 93601

Section 3: Container Inventory and Comments (Detailed descriptions)

IM:

AM:

OM: Scrap lead

OI:

C:

R:

XPM: Plastic bags, plastic lid

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP):Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	0.5
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	5.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	77.1
Soils (S):	
Total WMP Weight:	82.6

CCP Radiography Data Sheet

Waste Container ID: 93601

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]	5/6/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	93601	Count Sequence Number:	22747
Operator:	D3PW2DK1\operator		
Assay Start:	5/8/2013 2:01:23 PM		
Description 1:	1LANDA1767		
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: 82.6 kg	Net:	82.6 kg
Container:	Volume: 208.0 l	Full:	70.0 %
Density:	0.570 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

029
CJ 6/9/14

Automated Independent Technical Review

Count Sequence Number: 22747 Batch Number: 1LANDA1767
Counter ID: MCS HENC #1
Container ID: 93601
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 5/8/2013

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

031
CS 6/9/12

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number:	22747	Batch Number:	1LANDA1767
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:	93601	Analysis Date:	5/8/2013

Net Weight	82600.0 g		
Pu mass	1.15E+001	+-	2.11E+000 g
TRU Alpha Activity	6.38E+000	+-	1.01E+000 Ci
TRU Activity Concentration	7.72E+004	+-	1.23E+004 nCi/g
Pu-239 Equivalent Activity	6.45E+000	+-	1.01E+000 Ci
Pu-239 FGE	1.15E+001	+-	1.94E+000 g
Decay heat	2.10E-001	+-	3.37E-002 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	1.13E-001	8.07E-005	1.33E-005	3.75E-006
PU238	3.33E-003	5.69E-002	1.05E-002	6.52E-005
PU239	1.04E+001	6.47E-001	1.19E-001	7.41E-004
PU240	8.83E-001	2.00E-001	3.68E-002	2.30E-004
AM241	1.60E+000	5.48E+000	1.01E+000	6.27E-003
PU241	3.57E-002	3.67E+000	6.75E-001	4.21E-003
PU242	1.49E-001	5.87E-004	1.08E-004	0.00E+000
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	9.07E-007
U233	<LLD	<LLD	0.00E+000	8.71E-003
U234	2.00E-002	1.24E-004	4.45E-005	0.00E+000
U235	1.43E+000	3.08E-006	1.10E-006	2.68E-006
U238	<LLD	<LLD	0.00E+000	2.72E-005
AM243	3.61E-003	7.23E-004	1.20E-004	1.21E-005

Errors quoted at 1.000 sigma

Operator: _____ Date: 6·5·14

ITR: _____ Date: 6·6·14

030
CS 6/9/11

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-52,54, 53,42.
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. Marah Date: 6/3/14

032
CB 6/9/12

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **93601**

BDR Number: **LA13FG2055**

Sampling Date: **5/14/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	314.60	
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\130514c\
Data File : 93601.D
Acq On : 14 May 2013 2:03 pm (#1); 14-May-13, 14:03:03 (#2)
Operator : SA
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 14 15:31:49 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	3.561	96	4259478	201.25 ppmv	0.00
15) Chlorobenzene-d5	5.900	117	3729244	177.00 ppmv	0.00
Target Compounds					Qvalue
1) Hydrogen	1.613	GC1	2236m	314.60 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-RTR2-13-0067
Examination Date:	5/6/2013
Waste Container ID:	93602
Video/Audio Recorded Media Number:	LA-RTR2-13-0067 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.: 177.0 kg Tare Wt.: 145.1 kg Net Wt.: 31.9 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 2 layers
Volume Utilization Percentage:	95 %

CCP Radiography Data Sheet

Waste Container ID: 93602

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):	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):	0.2
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	2.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	29.7
Soils (S):	
Total WMP Weight:	31.9

CCP Radiography Data Sheet

Waste Container ID: 93602

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		5/6/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	93602	Count Sequence Number:	22743
Operator:	D3PW2DK1\operator		
Assay Start:	5/8/2013 11:13:12 AM		
Description 1:	1LANDA1767		
Description 2:	POC - Gross Wt. = 177.0 Kg		
Location:	LANL TA-54		
Comment:	AK-6, MT-42 MIX		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 31.9 kg	Net:	31.9 kg
Container:	Volume: 208.0 l	Full:	95.0 %
Density:	0.756 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

J16
CS 6/9/14
CS 6/9/14

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number:	22743	Batch Number:	1LANDA1767
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:	93602	Analysis Date:	5/8/2013

Net Weight	31900.0 g		
Pu mass	2.79E+001	+-	4.56E+000 g
TRU Alpha Activity	8.56E+000	+-	3.47E+000 Ci
TRU Activity Concentration	2.68E+005	+-	1.09E+005 nCi/g
Pu-239 Equivalent Activity	8.73E+000	+-	3.47E+000 Ci
Pu-239 FGE	2.56E+001	+-	4.14E+000 g
Decay heat	2.81E-001	+-	1.16E-001 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	9.78E-002	6.99E-005	1.35E-005	3.39E-006
PU238	8.06E-003	1.39E-001	2.28E-002	6.59E-005
PU239	2.53E+001	1.59E+000	2.60E-001	7.52E-004
PU240	2.14E+000	4.92E-001	8.04E-002	2.32E-004
AM241	1.83E+000	6.34E+000	3.46E+000	7.71E-002
PU241	8.65E-002	8.99E+000	1.47E+000	4.25E-003
PU242	3.60E-001	1.43E-003	2.34E-004	0.00E+000
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	8.45E-007
U233	<LLD	<LLD	0.00E+000	7.16E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	2.16E-006
U238	<LLD	<LLD	0.00E+000	1.82E-005
AM243	1.32E-003	2.67E-004	5.24E-005	1.00E-005

Errors quoted at 1.000 sigma

Operator: D. R. [illegible] Date: 5-15-13

ITR: [illegible] Date: 5-15-13

Automated Independent Technical Review

Count Sequence Number: 22743 Batch Number: 1LANDA1767
Counter ID: MCS HENC #1
Container ID: 93602
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 5/8/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis No Add-a-Source warnings.	Ok
Section 2 - Passive Neutron Analysis Analysis Status: No errors. Ones Rate Analysis complete with warnings. - Error calculating the Ones Rate Pu-240 Effective MDA.	Ok Not data affecting.
Section 3 - Data Combiner Analysis Override enabled; Passive Neutron Pu and Gamma U data specified as input. Pu results taken from Passive Neutron data, U from Quantitative Gamma data. Results comparison test passed.	Passive Neutron Pu and Gamma U data specified as input.
Section 4 - MGA Analysis Results are marked as invalid.	MGA analysis failed. AK isotopics applied. The AK information utilized was provided by Steve Schafer, AKE, and consists of data from CCP-AK-LANL-006, AK Source Document M237. MT-52,54, 53,42.
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: 5-9-13.

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **93602**

BDR Number: **LA13FG8032**

Sampling Date: **5/22/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	1493.20	
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	4.89	
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\130522C\
Data File : 93602.D
Acq On : 22 May 2013 3:11 pm (#1); 22 May 2013 3:10 pm (#2)
Operator : RJ
Sample :
InstName : Unit 8
Misc : POC through filter (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 22 15:20:31 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	2343359	206.00	ppm	0.00
15) Chlorobenzene-d5	5.940	117	2054900	179.50	ppm	0.00
Target Compounds						Qvalue
1) Hydrogen	5.236	GC1	368943m	1493.20	ppm	
17) Toluene	4.773	92	23223	4.89	ppm	98

(#) = 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-RTR2-13-0067
Examination Date:	5/6/2013
Waste Container ID:	93603
Video/Audio Recorded Media Number:	LA-RTR2-13-0067 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.: 143.0 kg Tare Wt.: 33.4 kg Net Wt.: 109.6 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:	85 %

CCP Radiography Data Sheet

Waste Container ID: 93603

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):	10.0
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	5.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	94.6
Soils (S):	
Total WMP Weight:	109.6

CCP Radiography Data Sheet

Waste Container ID: 93603

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		5/6/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	93603	Count Sequence Number:	22741
Operator:	D3PW2DK1\operator		
Assay Start:	5/8/2013 9:48:52 AM		
Description 1:	1LANDA1767		
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: 110.0 kg	Net:	110.0 kg
Container:	Volume: 208.0 l	Full:	85.0 %
Density:	0.620 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: 22741
Assay Instrument: MCS HENC #1
Analysis Method: CCP-TP-063 v 14
Item ID: 93603

Batch Number: 1LANDA1767
Location: LANL TA-54
Software Version: NDA 2000 V.4.0
Analysis Date: 5/8/2013

Net Weight	110000.0 g		
Pu mass	5.83E+001	+-	1.00E+001 g
TRU Alpha Activity	1.17E+001	+-	3.83E+000 Ci
TRU Activity Concentration	1.06E+005	+-	3.48E+004 nCi/g
Pu-239 Equivalent Activity	1.20E+001	+-	3.83E+000 Ci
Pu-239 FGE	5.34E+001	+-	9.07E+000 g
Decay heat	3.80E-001	+-	1.28E-001 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	1.09E-001	7.81E-005	1.35E-005	3.36E-006
PU238	1.69E-002	2.92E-001	5.00E-002	6.59E-005
PU239	5.29E+001	3.32E+000	5.71E-001	7.52E-004
PU240	4.47E+000	1.03E+000	1.76E-001	2.32E-004
AM241	2.02E+000	7.01E+000	3.78E+000	6.91E-002
PU241	1.81E-001	1.88E+001	3.23E+000	4.25E-003
PU242	7.53E-001	2.99E-003	5.13E-004	0.00E+000
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	9.08E-007
U233	<LLD	<LLD	0.00E+000	7.31E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	1.98E-006
U238	<LLD	<LLD	0.00E+000	2.09E-005
AM243	1.83E-003	3.69E-004	6.45E-005	9.80E-006

Errors quoted at 1.000 sigma

Operator: D. R. [illegible] Date: 5-15-13

ITR: [illegible] Date: 5-15-13

Automated Independent Technical Review

Count Sequence Number: 22741 Batch Number: 1LANDA1767
Counter ID: MCS HENC #1
Container ID: 93603
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 5/8/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis No Add-a-Source warnings.	Ok
Section 2 - Passive Neutron Analysis Analysis Status: No errors.	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-52,54, 53,42.
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: 5-9-13

012

Waste Container ID: **93603**

BDR Number: **LA13FG2055**

Sampling Date: **5/14/2013**

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\130514c\
Data File : 93603.D
Acq On : 14 May 2013 2:15 pm (#1); 14-May-13, 14:14:47 (#2)
Operator : SA
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 14 15:33:24 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	3.574	96	4231258	201.25 ppmv	0.00
15) Chlorobenzene-d5	5.904	117	3655175	177.00 ppmv	0.00

Target Compounds	Qvalue

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

S832340

S832340

Container P 752359

File Options Reports Help

S832340

752359	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

S832340
- S832340
  - 90713
    - 92464 -EMPTY
    - 92463
  - 90712
  - 90714 -EMPTY

UET
Working Copy
Date: 1-4-12

ATTACHMENT 1
Page 1 of 3

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: 5832340

6.2[4] Date Processed: 1/4/12

4.1[6][B] Processing Activity (EP-DIV-AP-0107):
N/A ☐ > 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] 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: Clayton Mullins / [signature] / 240092 / 1/4/12
Waste Handling Tech (print) Signature Z # Date

5.[16] Prepared Parent Drum Weight (lb): 215.6 lb

6.2[5][A] Parent Drum Lead Blanket Weight (lb): 80.0 lb

ATTACHMENT 1
Page 2 of 3

4.1[6][B] Parent Waste Container No.: 5832340

6.2[5][B]/ 6.2[6] Total Parent Drum Weight (lb) 295.6 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.	90712			
10.1[4]	Daughter Drum Filter No.	CL-1166		N/A	
10.1[4]	Daughter Drum Bag Filter No.	WO 1101			
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			
	Model No.	WO 1446			
	Serial No.	3 CPV 1.5-2.5PK			
	Date of Manufacture	6/11			
10.2[5]	POC ID No	90713			
10.2[7][B]/10.2[6]	POC Item Description	plastic, salts, absorbant			
10.2[7][D]/10.2[8][D]	Bag-out Bag Filter No.	WO 1446			
10.2[13]	POC Assembly closed per Manufacturer's instructions. (Initial and Z#)	CM 240092			
10.2[14]	POC Assembly Gross Weight (lb)	338.6			
10.2[15]	POC Rad. Survey Results (mrem/hr)	151			
10.3[3][A]	Approx. Containerized Liquid Vol./Units	N/A			
10.3[7][A]	Opaque/Non-penetrable Item Description:	lead shielding		N/A	
10.3[5][A]	Free Liquid Volume/Units	3-4 gal.			
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 (%)	85%			
10.5[4]	Description Waste Added During Processing	dust pan, brooms, hex-arms, bag-out stalks			

ATTACHMENT 1
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4.1[6][B] Parent Waste Container No.: 5832340

Comments: 30 gal., plastic, salts

11.1[1] Performed By: Clayton Mullins [signature] 1241092, 1/4/12
Waste Handling Tech (print) Signature Z # Date

11.1[7] Reviewed By: Gilbert Martin [signature] 1149235, 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 90714

RECORD Drum Filter information:	NuCFil 013
Filter ID Number:	FJ-419
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	9/12/12	Cal Expiration Date	9/18/12
			±3% cw
Tolerance +/- 3% cw	+/- 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	5/2/12
	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 N/A

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	Z#	Date
Timmy Romero	[signature]	TR	234253	12-20-11
Clayton Mullins	[signature]	CM	249092	1/4/12

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

Drum ID#: ~~90711~~ 90712 9-24-14

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 #: 914992
Lot #: 21-304
Date of Manufacture: 3/11

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: BCI
Model #: 3 CPP 13 3 3 PCC
Serial #: [illegible]
Date of Manufacture: 3/11

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 #: 0191B
Serial #: [illegible]
Date of Manufacture: 3/11

RECORD torque wrench information:

Filter torque wrench:		Jam Nut / Bung torque wrench:	
M&TE ID #:	046695	M&TE ID #:	032122
Cal Expiration Date:	9-12-13	Cal Expiration Date:	9-18-13
Range (ft-lbs or in-lbs):	40-200	Range (ft-lbs or in-lbs):	20-80
Tolerance:	+/-3% of rdg +/-6% of fsv	Tolerance:	+/-3% of rdg +/-6% of fsv

Torque wrenches listed above are within the acceptable ranges as displayed on the calibration certificate.
[x] Yes [ ] No
Print Name: Alonzo Guerrero Signature [signature] Z#: 238782

5. Weigh Drum Assembly

RECORD weight information
Tare witght (lbs) 75.6155
File ID #: 019055

- [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#: 240092 Date: 11/12/11
Verifier Print: Steven Marlowgan Verifier Sign: [signature] Z#: 104741 Date: 01-04-12

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

DRUM ID#: ~~90711~~ 90712 UR 9-24-14

1. LID INSTALLATION	3. WEIGH DRUM ASSEMBLY
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 #: C32122 Cal expiration date: 9/18/12 Range/ Value (ft-lbs): 20-80 / 60 -- Tolerance ±3% cw / ±6% ccw	Record weight information: Gross Weight(lbs) 127.8 Scale ID#: 019065 ✓ Using a permanent marker, write the gross weight on the drum lid.
2. DRUM LABELING	**4. FINALIZE DOCUMENTATION**
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 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.	✓ 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 Walters Date 9/4/12

Verifier Print/Sign: [illegible] Date: 9-4-12

3P 1

WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Production Control

Container ID: S832340 Container Type: 55-GAL Gross Weight (lbs): 214
Inner Seal #: 012394 Filter Prefix: LAVC Filter Serial #: 02105
AK Waste Stream: LA-MHD01.001 Certified RTR BDR: No BDR
TWSR Comments: LEACHED SOLIDS MST 12 RM 434
Total PE-Ci Activity: 1.42E+00 Equivalent Combustible PE-Ci: 5.33E-01 AM-241 PE-Ci: 1.15E-01
Total Fissile Gram Equivalents: 15.7 Total Surface Dose Rate (mrem/hr): 1
EPA Code(s): None
NCR RTR/NDA Comment: None
RTR Pre-Screen Date: 5/5/2007 Comment: Sealed Ctr > 4L, 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:

Performed By: R. W. Jones / R. W. Jones / 117434 / 1-18-11
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: Leached solids – nitrate salts
Net Wt: 154 lb. One item weighing 48 lb.
May require RWP for > 100 and <1,000 mrem/hr at 30 cm

Performed By: Valerie Rhodes / Valerie Rhodes / 112607 / 11/12/10
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 ~~[illegible]~~ accept per Ops manager.

Performed By: Vanessa Valencia / [illegible] / 1231079 / 18-1-11
TRU Remediation Operations (Print) Signature Z Number Date

Noncertified TRU Waste Drum Item Information

DrumID: 012394

Item No	ItemID	Process Status	Net Wt (kg)	Matrix	Meas Code	SNM (g)	MT	Auth (Pg/Ln)		Comments
1	IXFS-714FA	EV	21.590	NITRATE SALTS		16.67	52	6/11	G468	

Noncertified Waste Drum Material Summary

Gross Wt (kg): 97.2

Material Type	SNM (grams)	Items Net Wt (kg)
52	33.34	43.18
	0.	0.00
Totals	33.34	43.18

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]):	5846647	5832340	5832302
Container Type (SWB, 110/85/55-gal) (7.[1]):	55gal	55gal	55gal
Current Filter Vent No. (7.[1]):	1905	72	72
New Filter Vent No. (7.[8][A]):	1905	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			56.68
1-Butanol			
Methanol			232.32
Methyl ethyl ketone			
Methyl isobutyl ketone			
Total CCP VOC value (ppm) (7.[11]):	Ø	Ø	289.00

ATTACHMENT 1
Page 2 of 2

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

Container Number (7.[1]):	S8416047	S8338340	S8352302
Hydrogen Reading (ppm) (7.[10]):	Ø ppm	Ø ppm	1252.14 ppm
Methane Reading (ppm) (7.[10]):	Ø ppm	Ø ppm	Ø ppm
Total VOC Reading (ppm) (7.[11]):	Ø ppm	Ø ppm	289.00 ppm
Filter Type (7.[9][F][c]/7.[9][G][a]):	19DS	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]):	038371	N/A	N/A
Torque Wrench Calibration Due Date (7.[9][F][a]/7.[9][G][a]):	5/6/11	N/A	N/A
Torque Wrench Tolerance (7.[9][F][a]/7.[9][G][a]):	± 3%	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]) *	10 ft/lbs.	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 / 1/25/11
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

InstName : Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\110120c\
Data File : S832340.D
Acq On : 20 Jan 2011 2:49 pm (#1); 20-Jan-11, 14:48:32 (#2)
Operator : GR
Sample :
Misc : 55 GAL LFL DRUM FROM UNDER DRUM LID (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jan 20 14:57:46 2011
Quant Method : C:\msdchem\1\METHODS\vocgas.m
Quant Title : Flammable Gas Analysis
QLast Update : Mon Jan 10 10:28:07 2011
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
3) Fluorobenzene	3.648	96	8694213	205.50 ppmv	0.02
15) Chlorobenzene-d5	5.978	117	7119519	182.75 ppmv	0.02

Target Compounds Qvalue

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

vocgas.m Thu Jan 20 14:58:06 2011

0540 Assuming WCRR operations center. - JCDeemar
0545 Beginning Outside rounds.
0615 Pre-job being conducted by SOS.
0645 O.C 1-4-12 Inside rounds being performed.
0655 Item #61 on the rounds is unsat, reading 0.0. Per CSE, we are okay to proceed.
0710 Operators entering 50-69 to begin operations. Drum # 5832155 is already bagged on and ready to process.
0714 Rounds reviewed by SOS.
0720 Mode change complete. We are now in operations.
0740 Initiating a drum move from 50-69 to a transportainer.
0803 Drum movement out of facility complete.
0838 Permission granted to lower vehicle access gates to begin loading transfer vehicle for shipment to Area G.
0915 Vehicle access gates have been restored. Transfer vehicle loaded. Initiating a drum movement from transportainer to 50-69.
0924 Late entry - At 0845, the SOM and SOS discussed with the ops. manager and the FOD the concern associated with suspending the Ventilation calibration procedure (EP-WCRR-VS-DOP-0313) performed on 12-22-11. Per the FOD, no TSR violation has occured by the surveillance being suspended due to an inadequate procedure. No action taken that would invalidate the current calibration. (JC)
0925 Drum movement into facility complete.
0940 Late entry - At 0825, the operators notified the SOS that the contents of the drum (5832155) are frozen (JC)
0941 Per the SOM who has entered the facility, she states 2/3 of the drum has been processed, but because the last bit is still frozen, the operators will re-load the drum with its contents and bag it off.
1010 Notified by Inventory control + SOS that the 2 drums we just moved into the facility are not to be processed and will be shipped back to area G. (5825812 5832314)
1024 Bagging off drum # 5832155 (not processed) bagging on drum # 5832340.
1030 bagoff and bagon complete.
1052 Notified by SOM inside facility that they have encountered a sealed 30 gallon container which is inside a polyliner which is hard to get out. They will notify us when they are able to breach it.
1119 30 gallon container has been breached. Beginning 30 minute wait time.
Continued on next page. - JCDeemar

SIGNATURE DATE 20
READ AND UNDERSTOOD DATE 20

PROJECT NAME 1.4.12 NOTEBOOK NO.

0600 Received shift turnover from previous shift and assumed the WCRR SOM position. [illegible]
0620 Attended pre-ops briefing conducted by shift operations supervisor. Discussed new campaign with solids and liquids. Discussed DOE tour that will be held at WCRR today between 1300 hrs. to 1630 hrs.
0720 Mode change complete WCRR YARD and 50-69 from WARM to OPERATIONS mode.
0805 SOM going into 50-69 to perform BBS observation.
0820 ~~Was~~ 1.4.12 Notified Shift Operations Manager that WCRR might have a potential violation due to the channel calibration ~~might be~~ function test not being reperformed due to procedure discrepancies and WCRR going into OPERATIONS on 1.3.12. (SR. 4.3.1.1 and 4.3.2.1e)
0845 Notified the FOD of possible violation. Per discussion with the FOD and the Operations Manager no TSR violation. Values were manipulated but procedure was suspended.
0940 SOM entered facility to observe operators working on salt drum. Reported by operators that drum #1 (S832155) contents frozen. SOM verified and bottom 1/3 of drum is frozen. Instructed SDS to instruct operators to button up parent drum and reject drum due to frozen contents.
1010 Notified Inventory Control not to process drums S825812 and S832340. They will be shipped back to Area 9 for further assay.
1052 Observed operators open drum # S832340. When (55) gallon drum lid was removed operators encountered a positively sealed 30 gallon drum inside a poly liner. Operators were able to remove 30 gallon sealed drum from poly liner and began 30 minute wait time at 1119 hrs.
1149 30 minute wait time elapsed. Contents inside drum is frozen. Operators will break for lunch and allow
1400 contents to melt inside WCG in a bucket stub. Operations Manager gave permission to bag on a chisel
1555 to allow breaking pieces of ice in WCG waste packages. Operators completed drums.
1615 Mode change complete WCRR YARD and 50-69 from OPERATIONS
1635 to WARM mode. Securing the watch. No further Entries

SIGNATURE [signature] DATE 1.4 20 12
READ AND UNDERSTOOD DATE 20

PROJECT NAME WCRR SOS LOG BOOK NOTEBOOK NO.

1-4-12 0600 REVIEWED SOS TURNOVER AND ASSUMING WCRR SOS POSITION. Anthony Vogel

0615 STARTING PRE-SOB

0714 REVIEWED ROUNDS

0720 MODE CHANGE COMPLETE

0845 MYSELF, SOM, OM, and FOD Discussed the concern associated with suspending the ventilation calibration procedure CEP-WCRR-VS-DOP-0313 performed on 12-22-11. PER THE FOD, NO TSR Violation has occured by the surveillance being suspended due to an inadequate procedure. No action taken that would invalidate the current calibration.

0900 LATE ENTRY 0815 NOTIFIED BY RIC INSIDE THAT HALF THE DRUM WAS FROZEN.

0915 NOTIFIED BY SOM TO HAVE OPERATORS BAG-OFF DRUM AND LET IT THAW OUT A COUPLE OF DAYS

1610 REVIEWED ROUNDS

1615 MODE CHANGE COMPLETE

1630 SECURING WCRR SOS POSITION. Anthony Vogel

AV 2/10/12

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:	90712
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.: 103.5 kg Tare Wt.: 33.4 kg Net Wt.: 70.1 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 3 layers
Volume Utilization Percentage:	95 %

CCP Radiography Data Sheet

Waste Container ID: 90712

Section 3: Container Inventory and Comments (Detailed descriptions)

IM: Closure ring, open 30 GAL drum, hardware, utility knives, drum lid

AM:

OM: Scrap lead

OI:

C: Wood brush, tape roll

R: Rubber gloves

XPM: Plastic bags

OR:

IN: Absorbent, 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):	10.0
Other Inorganic Materials (OI)	
Cellulosics (C):	1.0
Rubber (R):	2.0
Plastics (waste materials) (XPM):	4.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	33.1
Soils (S):	
Total WMP Weight:	70.1

CCP Radiography Data Sheet

Waste Container ID: 90712

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

RTR Operator:

Thad Hasselstrom	Thad Hasselstrom	10/25/2012
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	90712	Count Sequence Number:	21481
Operator:	D3PW2DK1\operator		
Assay Start:	10/26/2012 10:15:46 AM		
Description 1:	1LANDA1662		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6, Not Precision		
Matrix Type:	Debris S5000		
Container Type:	55 gallon drum		
Weight:	Net: 70.1 kg	Net:	70.1 kg
Container:	Volume: 208.0 l	Full:	95.0 %
Density:	0.360 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:	21481	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:	90712	Analysis Date:	10/26/2012

Net Weight	70100.0 g		
Pu mass	8.55E+000	+-	1.77E+000 g
TRU Alpha Activity	2.31E+000	+-	2.43E-001 Ci
TRU Activity Concentration	3.29E+004	+-	3.47E+003 nCi/g
Pu-239 Equivalent Activity	2.33E+000	+-	2.43E-001 Ci
Pu-239 FGE	8.07E+000	+-	1.66E+000 g
Decay heat	7.56E-002	+-	8.01E-003 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	2.96E-002	2.12E-005	2.72E-006	1.17E-006
PU238	7.87E-004	1.36E-002	2.82E-003	3.44E-005
PU239	8.02E+000	5.05E-001	1.04E-001	1.27E-003
PU240	5.13E-001	1.18E-001	2.44E-002	2.97E-004
AM241	4.81E-001	1.67E+000	2.18E-001	2.44E-002
PU241	1.03E-002	1.07E+000	2.22E-001	2.70E-003
PU242	1.71E-003	6.79E-006	1.40E-006	0.00E+000
SR90	5.08E-009	7.01E-007	3.37E-007	0.00E+000
CS137	7.99E-009	7.01E-007	3.37E-007	3.28E-007
U233	<LLD	<LLD	0.00E+000	2.40E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	6.96E-007
U238	<LLD	<LLD	0.00E+000	7.44E-006
AM243	5.52E-004	1.11E-004	1.46E-005	3.42E-006

Errors quoted at 1.000 sigma

Operator: _____ Date: 10-30-12

ITR: Benny Bowen Date: 10/31/12

Automated Independent Technical Review

Count Sequence Number: 21481 Batch Number: 1LANDA1662
Counter ID: MCS HENC #1
Container ID: 90712
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 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
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	MGA analysis failed. AK isotopics applied. The AK information utilized was provided by Steve Schafer, AKE, and consists of data from CCP-AK-LANL-006, AK Source Document M237. MT-52.
Results are marked as invalid.	
Section 5 - Gamma Analysis	
Analysis Status: No errors.	Ok

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

Expert Review by: Sherri 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: **90712**

BDR Number: **LA12FG12048**

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

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	82.86	
74-82-8	Methane	9.63	U
67-56-1	Methanol	34.02	
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	3.58	
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 : 90712.D
Acq On : 31 Oct 2012 2:00 pm (#1); 31 Oct 2012 1:59 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 14:08:54 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	5940886	204.00	ppmv	0.00
15) Chlorobenzene-d5	6.636	117	6291452	179.25	ppmv	0.00
Target Compounds						Qvalue
1) Hydrogen	1.923	GC1	23403	82.86	ppmv	100
4) Methanol	0.827	31	23551m	34.02	ppmv	
17) Toluene	5.577	92	83703	3.58	ppmv	90

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

51

ATTACHMENT 1
Page 1 of 4

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: 3013

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

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: Michael Romero [signature] 188724 12/12/12
Waste Handling Tech (print) Signature Z # Date

~~Working Copy~~ NET
Date: 12-12-12 CH

ATTACHMENT 1
Page 2 of 4

4.1[6][B]	Parent Waste Container No.:	[illegible]
5.[18]	Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable:	344.8 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)	344.8 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:

A. Baumer	[signature]	[illegible]	12/12/12
EWMO-FOD (print)	Signature	Z #	Date

ATTACHMENT 1
Page 3 of 4

4.1[6][B] Parent Waste Container No.: 90713

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	92463			
10.1[4]	Daughter Drum Filter No.	Am-1045		N	
10.1[4]	Daughter Drum Bag Filter No.	L-4360		A	
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.	N			
	Serial No.				
	Date of Manufacture	A			
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	
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:	A			
10.3[9][A]	PCB-contaminated Waste Description	N			
10.3[9][B]	PCB Item ID No.	A			
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	Stub ass			

ATTACHMENT 1
Page 4 of 4

4.1[6][B] Parent Waste Container No.: 90713

Comments: Plastic, metal lid, bolts, Salts, Kitty litter, glass,

11.1[1] Performed By: Michael Romero Michael Rom 1182723 / 12/10/12
Waste Handling Tech (print) Signature Z # Date

11.1[7] Reviewed By: Gilbert Martinez [signature] 1149235 / 12/7/12 0940
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.: 413954
Lot No.: 211426
Manufacture Date: 2010

5.[8] Overpack filtered vent information

Manufacturer: NUCFIL
Model No.: ~~6e-IL-299~~ 013
Serial No.: IL 299
Manufacture Date: 9-11

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

	Filtered Vent	2 in. Bung
M&TE No.:	040094	021161
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: Gerald Esparza [signature] 182202 11/28/12
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/a

8.1[1] Performed By: Michael Romero [signature] 182703 11/28/12
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] [signature] 142255 12-17-12
Supervisor or designee (print) Signature Z # Date

Worksheet
Date: 12-12-12

ATTACHMENT 5
Page 1 of 1

WCRRF OVERPACK DRUM CLOSURE DATA SHEET

7.[19] Overpack Drum Unique Identifier No.: 92464

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] 1027231 12/12/12
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: 019265
Platform scale calibration expiration date: 7-31-13

7.[36][D] 85-gal overpack drum gross weight (lb): 323.6 lb

Comments: n/c

8.1[1] Performed By: Michael Romero [signature] 1027231 12/12/12
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] 1019851 12-17-12
Supervisor or designee (print) Signature Z # Date

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

Drum ID#: 92463

1. Drum/Lid Assembly

- [ ] Remove and discard ½" bung from lid
- [ ] Remove Lid
- [ ] 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 #: [illegible]
Date of Manufacture: [illegible]

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: [illegible]
Model #: [illegible]
Serial #: [illegible]
Date of Manufacture: [illegible]

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

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

4. Install Lid/Drum Filter

- [x] 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 ½" 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: [illegible]
Model #: [illegible]
Serial #: [illegible]
Date of Manufacture: [illegible]

RECORD torque wrench information.

Filter torque wrench:
M&TE ID #: [illegible]
Cal Expiration Date: [illegible]
Range (ft-lbs or in-lbs): [illegible]
Tolerance: [illegible]

Jam Nut / Bung torque wrench:
M&TE ID #: [illegible]
Cal Expiration Date: [illegible]
Range (ft-lbs or in-lbs): [illegible]
Tolerance: [illegible]

Torque wrenches listed above are within the acceptable range specified on the calibration certificate.
[x] Yes [ ] No
Print Name: [illegible] Signature [illegible] ZII: [illegible]

5. Weigh Drum Assembly

RECORD weight information
Tare weight (lbs) 76.0
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: [illegible] Operator Sign: [illegible] ZII: [illegible] Date: 12-7-12

Verifier Print: Michael Romero Verifier Sign: [illegible] ZII: 192723 Date: 12/12/12

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

DRUM ID#: 92463

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 manufacturers 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: 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): 212.2

Scale ID#: 016065

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

4. FINALIZE DOCUMENTATION

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

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

✓ Complete TWSR.

Operator Print/Sign: B. Forsham Date 12/13/12

Verifier Print/Sign: [illegible] Date: 12/13/12

WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

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Production Control

Container ID: 90713 Container Type: POC Gross Weight (lbs): 339

Liner Seal #: None Filter Prefix: None Filter Serial #: EL-552; EL-559

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

TWSR Comments: PARENT #S832340 WTS-12STD-758

Total PE-Ci Activity: 7.10E-01 Equivalent Combustible PE-Ci: 2.66E-01 AM-241 PE-Ci: 5.77E-02

Total Fissile Gram Equivalents: 7.8 Total Surface Dose Rate (mrem/hr): 1

EPA Code(s): D008 D007 D009 VE 10/5/12

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: TBD Production Control Comments: Need to add EPA Codes D007 D008 & D009

Nitrate salts mixed with Vermiculite 770 from previous repack campaign. A minimum of 1.2 volume of Vermiculite must be added to the no volume of nitrate salts.

Performed By: Susan Ramsey (100081) 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 – POC

Net Wt: 29 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 inventory shows homogeneous solid material and plastic bags/horsetails

Performed By: Valerie Rhodes 112609 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 proper PPE when processing waste. Do not push or press on waste with waste. Utilize hexamor 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 122452 10-15-12

TRU Remediation Operations (Print) Signature Z Number Date

OK Z# 249750 10/19/12

INK REVIEW: RS 206362 10/4/12

Noncertified TRU Waste Drum Item Information

DrumID: 012394

Item No	ItemID	Process Status	Net Wt (kg)	Matrix	Meas Code	SNM (g)	NT	Auth (Pg/Ln)		Comments
1	IHPE-7149A	EV	21.590	NITRATE SALTS		16.67	52	6/11	G468	

Noncertified Waste Drum Material Summary

Gross Wt (kg): 97.2

Material Type	SNM (grams)	Items Net Wt (kg)
52	33.34	43.18
	0.	0.00
Totals	33.34	43.18

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:	90713
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: 154.0 kg. Tare Wt: 145.1 kg. Net Wt: 8.9 kg.
Rigid Liner and Liner Vent Description: (e.g., "90 mil liner – NO Lid" or "NO Liner")	90mil Liner - Vented
Number of Layers of Confinement:	Appears to be 2 layers
Volume Utilization Percentage:	95 %

Attachment 2 – CCP Radiography Data Sheet (Continued)

Page 2 of 3

Waste Container ID: 90713

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):	1.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	7.9
Soils (S):	
Total WMP Weight:	8.9

L1

Attachment 2 – CCP Radiography Data Sheet (Continued)

Waste Container ID: 90713

	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?	☐	☑

Standard Pipe Overpack Container (P.O.C.)

Comments:

NCR-LANL-0285-12: Greater than 50% Homogeneous Solid material PO 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])	90713					
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 (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)

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\121005c\
Data File : 90713.D
Acq On : 5 Oct 2012 2:05 pm (#1); 5 Oct 2012 2:04 pm (#2)
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 14:12:58 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	2362729	206.00 ppm	0.00
15) Chlorobenzene-d5	5.936	117	2124691	179.50 ppm	0.00

Target Compounds	Qvalue

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

Vocgas.m Fri Oct 05 14:13:10 2012

PROJECT NAME _____ NOTEBOOK NO. _____

12-12-12

0550 Assuming WCRR operations center - JColeman
0610 Beginning outside rounds. Beginning inside rounds.
0615 Pre-job being conducted by SOS.
0624 Item #e1 (PDI-012) OOS. POD in place per CSE.
0640 Outside rounds complete.
0652 Inside rounds complete.
0713 Both rounds reviewed by the SOS.
0725 Operators initiating a drum movement to stage drums.
0735 Mode change complete. We are now in operations.
0755 Initiating a drum movement from 50-69 to a transportainer.
0809 Bagging on drum #90318. PPE check is set.
0816 Permission granted to lower the vehicle access gates to load the transfer vehicle for a shipment to Area G. The movement act of the facility complete.
0903 Vehicle access gates lowered. Transfer vehicle loaded. Transportainers closed and latched.
0905 Bagging off 90318, bagging on 90713.
0924 Roll entry at 0824, the bag on was complete. (c)
0926 Bag on complete.
0938 Tech 20 notified ops center that the large window on station 2 is broken. Notified SOS, SOM, entering procedure EP-WCRR-AOP-0210 (Loss of glovebox integrity) Personnel instructed to suspend operations.
0939 The WCG static pressure reading -0.60, which is within normal range. Operators following RCT instruction.
0940 Trying to notify CSE.
0943 Contacted Engineering manager.
0945 Operators have donned respirators ~~are~~ JC 12-12-12 and are ~~taping~~ JC 12-12-12 taping the broken window.
0947 Per lead RCT, nasals will be taken.
0949 Notified OM and CSE.
0950 All non-essential personnel have exited the facility.
1000 OM notifying FOD and Project manager.
1002 ESOM notified.
1007 SOM left a message with DOE. All personnel have exited the facility.
1213 Notified by lead RCT that an operator on the forklift was moving an LB99 and swing around and knocked over an 85 ~~empty~~ drum. Entering EP-WCRR-RM-AOP-0203 (Unanticipated loss of waste container integrity. SOS notified. An RCT immediately performed a large area smear and found ~~a~~ JC 12-12-12 no contamination. All personnel instructed to go to a safe zone 90 ft. away. Personnel inside 50-116 instructed to stay inside.

Continued on next page - JColeman

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

PROJECT NAME NOTEBOOK NO.

12-12-12 Continued from previous page. - J Coleman
1217 Notified SOM, SOM notifying OM.
1220 JH notified. No noticeable breech on the 85 L waste container.
1228 Late entry - at 1155, RCTs received nasal smear results. All nasals NDA. (JC)
1233 Instruction from SOM - RCTs to take extra smears around the drum.
1315 RCTs state the smears on the 85 gallon drum are NDA. Exiting procedure ~~EP-WCRR-RM~~ JC 12-12-12 EP-WCRR-RM-ADP-0203. RCTs still want to conduct a few smears survey under the drum when it is upright-ted.
1325 Entering safety pause per OM. All personnel meeting in 1416.
1340 Smears taken under the tipped drum all NDA.
1405 Per OM, waiting on a procedure change to procedure #EP-WCRR-WO-DOP-1101 (WCRR WCG Maintenance Procedure). Pause suspended.
1452 Beginning inside rounds.
1458 Operator JD states the lid is back on the drum currently bagged onto the WCG when the window was broken. Everything is in a safe configuration.
1504 Item #1d (PDI-012) on the rounds is unsat. POD in place. Beginning outside rounds.
1517 Inside rounds complete.
1528 Outside rounds complete.
1535 Per ES OM, no more forklift operations for today.
1602 Mode change complete. We are now in ~~opera~~ JC 12-12-12 warm standby.
1603 Late entry at 1537, both rounds reviewed by SDS. (JC) 12-13-12
1625 Received FOD approval to leave drum #90713 bagged onto the WCG overnight (procedure # EP-WCRR-WO-DOP-0233, signature from FOD).
12-12-12 1630 End of day. OCO position secured. - J Coleman

No further entries this page.

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

PROJECT NAME _____ NOTEBOOK NO. _____

0550 Assuming WCRF operations center. -Coleman
0551 Late entry for yesterday at 1603, edited procedure EP-WCRF-RM-AOP-0210. (9c)
0555 Air quality personnel arrived to perform weekly stack monitoring.
0601 Weekly stack monitoring complete.
0615 Pre-job being conducted by SOS.
0700 Pre-job completed.
0705 Beginning outside rounds.
0730 Outside rounds completed.
0800 A critique is being held in TA-50-196 regarding the 2 incidents at WCRF yesterday. (broken window and tipped drum).
0925 Pre-job being conducted by SOS for replacing the broken window
0945 Pre-job ended. Operators are not able to work to the procedure as written.
1012 The painter has barricaded half of the stairs on the front steps to 50-84 to finish painting.
1251 Shift turnover brief with Clarissa Velarde -Coleman
1252 Assuming WCRF Operations center -CVelarde
1311 Operators and RCTs entering TA50-69 to start working on window replacement on station 2 large window
1326 Operators notifying operations center they will be prepping area for station 8 left hand glove change then will start glove change.
1338 Starting glove change station 8 left hand.
1350 glove change complete station 8 left hand
1413 Operators have completed window prep for window change out, Operators starting window change and will be removing tape.
1439 WCA differential pressure reading at -0.61
1443 Painters have completed work on stairs in front TA50
1448 HVA-001 low flow alarm
1450 mezer alarm acknowledged.
1452 WCA is dropping reading ~0.52
1455 Alarms encountered WCA High, FE-002 low, HVA-001 Low, 2 each.
1457 Operators notifying operations center window is back on station 2.
1500 Window replacement is ~~back~~ 1-13-12 complete
1504 RCT notifying operations center of contamination in area we are within RWP limits. RCTs will give us more information when they can
1515 Operations notifying operations center they are waiting on RCT smears to repost then they will shut down ventilation.

Continued on next page CVelarde

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

PROJECT NAME _____ NOTEBOOK NO. _____

12-13-12 Continued from previous page - Cellardi.
1527 Lead RPT notifying OPS center contamination has been cleaned and they are performing peat job Omeara.
1540 Performing shift turnover with OPD - Terri Coleman - C Vella
1541 Assuming WCRR operations center - TColeman
1555 Beginning outside rounds.
1600 Respirators has been taken off.
1615 Entering LCO'S 3.3.1 and 3.3.2 (3.0 General) to shut down ventilation because we are in warm standby. DOE notified by SOS.
1631 Ventilation is shut down.
1632 Muzer alarm acknowledged.
1633 Restarting Ventilation.
1635 Ventilation is up and running. All readings normal. Beginning inside rounds.
1636 Exiting LCO'S 3.3.1 and 3.3.2 and (3.0 General) ~~All operational limits have been met.~~ JC 12-13-12
1645 Item #61 (PDT-012) OOS. POD in place. Item 19 unsat, SOS, CSE notified
1646 Late entry - at 1640 - outside rounds complete.
1655 Inside rounds completed. Both reviewed by SOS.
1713 PRE Check sat.
1717 The lead window was replaced on station 2 from station 5.
1720 Initiating a drum movement from ~~to~~ JC 12-13-12 50-69 to a transportainer.
1725 Late entry - at 1515 we entered a Grace period for the rounds due to the window change out and not being able to perform rounds inside. SOM, OM notified. The grace period ends at 2115. JC SR 4.0.2 Entering
1726 Late entry - at 1655 we exited the grace period.
1730 Mode change complete. We are now in operations mode.
1754 PRE CHECK SAT.
1800 Bagging off 90713.
JC 12-13-12 1815 Beginning inside rounds
1823 ~~1823~~ Bag off complete.
1835 JC 12-13-12 ~~1825~~ Drum movement out of facility complete. All inventory has been removed.
1835 Late entry - at 1830 mode changed to warm. JC
1840 Mode change complete. We are now in cold in 50-69 and warm in the WCRRF yard.
1851 Inside rounds complete.
1858 Inside rounds reviewed by SOS.
12-13-12 1900 End of day. OCO position secured. - TColeman
No further entries this page.

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

PROJECT NAME 12/12/12 NOTEBOOK NO.

0600 Assumed WCRR SOM position.
0615 Attended pre job brief conducted by SOS. Discussed yesterdays contamination event - G. Fernandez stressed to Operators/PIC's that if something is not correct ie loose hose/tool to stop and re-evaluate. Safety Share was driving/texting.
0700 Called into TA-54 SOM Daily brief to status WCRR work
0735 Completed Mode Change: WCRR Yard/Bldg 50-69 from Warm/Warm to Operations/Operations.
0824 1st Bag on completed.
0938 Notified by OCO that large window on Station 2 was broken during processing operations. Entered EP-WCRR-AOP-0210 Loss of Glovebox integrity.
0945 Verified WCG Static pressure is <-0.1 in wc => Not in LCO condition - actual reading -0.6 in wc which is normal reading. CAM readings are normal, no evidence of contamination. All personnel left in 50-69 in respirators and taping window.
0949 OM and CSE notified.
1007 Left message with DOE w/ status of WCG. All personnel have exited 50-69.
1110 Conducting pre job meeting for WCG window changeout. Actions items from meeting are to change RWP - has old procedure referenced. Procedure change - various changes as scribing gasket. Removal/Installation of Lead Glass Outer window etc, Nasal Smear Results and enter Warm Mode in 50-69 (minimum). All items to complete change are on site w/ exception of lead window.
1210 RP-1, SOS, CSE, SOM and SME's marked up procedure and CSE delivering to Procedure Writers.
1217 Notified by OCO that while loading/moving LLW for outgoing shipment that a drum was knocked over off of a pallet onto ground. Entered into EP-WCRR-RM-AOP-0203 and established a 90 ft barrier w/ ops/RP-1 personnel. No visible breach was identified and initial survey results on LAS showed no contamination. Forklift operator getting dig tested w/ ES manager.
1315 Detailed survey of drum/surrounding area reported as NDA. Notified DOE of event. Exited EP-WCRR-RM-AOP-0203
1325 OM called safety pause to have all personnel discuss todays events.
1405 Suspended safety pause - actions to move forward are to perform inspection on forklift prior to using, make sure you have enough room to work.
1458 Drum on WCG placed in Safe configuration - lid back on drum
1602 Completed Mode Change: WCRR Yard/Bldg 50-69 from Operations/Operations to Warm/Warm.
1615 Have FOD approval to leave drum on WCG overnight.
1700 Reviewed and concurred w/ changes to EP-WCRR-WO-DOP-1101
1300 Secured SOM position.

SIGNATURE DATE 12/12 20 12
READ AND UNDERSTOOD DATE 20

0710 PROJECT NAME 12/13/12 NOTEBOOK NO.

0710 Assumed the WCRR SOM position after conducting a turnover from the off-going SOM.
0930 Attended pre job briefing for Waste Characterization Glovebox window. Upon review of the procedure clarifications among the personnel arose regarding the window disassembly and removal of the pipe screen. Discussion with the procedure writer, prepping the area would include the pipe screen. The step is validly written to prep the inner window but doesn't go into detail on prepping area. Upon discussing with OM, RP-1, SSO, SOS it was decided that ES, SOS and management along with operators and RP-1 would discuss prep and decide if the procedure needs to be changed or not. Be it steps are adequate to proceed. Determination will be made by ES, SOS, ES manager, operators and RP-1. In parallel SOM and OM discussed with procedure writer that procedure might need to be changed.
1130 Operators, SOS, ES manager, RP-1 all agreed that step was adequate to proceed as written. OM agreed with pathforward and prep being adequate to proceed. SOM, SSO attended pre job briefing. All personnel understood their roles and responsibilities. The pre job brief was discussed in detail. Scenarios were discussed of what could go wrong. In addition, all operators understood stop work authority and felt comfortable with the way the procedure is written.
1315 OCO notified that operators are entering bldg 50-69 to prep area and bag on supplies and window change.
1434 RWP was changed to allow the use of Water glove box, lead window requirements to the stations that are only being used. SOM signed off on revision to RWP.
1500 Notified by OCO that window was successfully changed out. RP-1 performing smears and surveys. The post job will be conducted.
1505 Late entry at 1500 SOM attended daily call in with project manager and OM. Discussed the pre job briefing that was conducted with ES, SOS, manager, operator, RP-1.
1515 Due to change out of window rounds haven't been performed. OM notified. Centurions grace period 4.0.2. Grace period expires at 2115 per 25% extension.

SIGNATURE DATE 20
READ AND UNDERSTOOD DATE 20

PROJECT NAME 12.13.12 NOTEBOOK NO.

1520 Notified by OCD that small area of contamination was detected. Limits are within RWP limits. Decon efforts are being conducted.
1600 Window change out complete. Ventilation will need to be shut down and restarted.
1615 Entering LCOs 3.3.1 and 3.3.2 (3.0 general) to shut down ventilation due to facility being in WARM.
1633 Restarting ventilation.
1635 Ventilation is up and running. All readings are reading normal. Beginning inside rounds.
1636 Exiting LCOs 3.3.1 3.3.2 and 3.0 general.
Required SR are being performed.
1717 The head window was replaced on station #2 from station #5 per RWP.
1718 Rate entry 1655 rounds complete exited grace period. SR 4.0.2.
1730 Mode change complete. WCRF YARD 150-69 from WARM/WARM to OPERATIONS/OPERATIONS.
1800 Notified by OCD that drum pinged on was been processed, bagging off.
1801 Rate entry DOE notified of LCO entry at 1615 and exit at 1636 left message for off going FR on cell phone. Left message left at 1755.
1823 Bag off complete.
1830 Mode change complete. WCRF YARD 150-69 from OPERATIONS/OPERATIONS to WARM/WARM.
1840 Mode change complete. WCRF YARD 150-69 from WARM/WARM to WARM/COLD.
1851 Second rounds for inside complete. SOS to review.
1859 Rounds reviewed by SOS.
1900 Securing the SOM position.

1-3-13

No further entries this page

SIGNATURE DATE 12.13 2012
READ AND UNDERSTOOD DATE 20

12-12-12 WCRR SOS LOG Book

0600 Assuming SOS Position [illegible] M.G

0615 Started shift brief with over use of high dexterity Gloves also discussed about pulling out Gloves and installing downhour on 55 at the end of day. Also ensuring shovels are closed and in appropriate Containers

0647 Shift brief concluded.

0713 Reviewed Inside And outside Rounds

0735 Mode change Complete WCRR DM operations.

0809 bagging on 1st drum # 90715 PPE Check set

0905 Bag on Complete Bagged on 90713

0938 Operators Inside notified of broken window stated 2 large window Notified SOM entering EP-WCRR-AOP-0216 personal Instructed to Pause work

0939 well State. Pressure reading -0.60 which in normal

0945 Operators donned respirator taping broken window

0947 for RCT masals will be taken on Individuals Inside

0949 Notified OM And CSE

1002 notified OM ES

1213 Notified by lead RCT that operator on forklift was moving LB-59 that bumped A 55 Gallon drum Containing low level wash, Entering EP-WCRR-RM-AOP-0203 RCT's performed large area smears no contamination All personal instructed to go to safe zone 90 Ft Away Personal Inside 5C-196 Instructed to stay Inside

1217 Notified SOM, ~~SOM notified~~ GM 12-12-12

1220 No rideable breach

1225 lake entry At 1155 Received masal's all NDA GM

1235 Instructed by SOM for RCTs to perform extra Surveys

1315 RCTs state smears on 55 Gallon drum are not Entry Procedure EP WCRR-AOP-0203

1375 Entering Safety Pause Per OM

1405 RCT on waiting on Procedure change to procedure EP-WCRR-WO-DOP-1101 WCRRF WCG Maintenance

1410 Did Inspection on forklift Per SOM and myself ok to use fork lift to load LLW on truck

1458 LB on Drum was replaced on facility

Continued on Next Page

1504 Item #61 (PDI-12) unsat

1535 Per ES OM No further fork lift operations for today

1537 Reviewed Inside And outside Rounds

1602 WCRRF In warm Stand by

12-12-12 1630 end of shift securing SOS Position [illegible]

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No further entries on this page

12-13-12 WCRR SOS LOG Book

0600 Assuming SOS Position [illegible]

0615 Conducted shift brief went over incidents that occured on 12-12-12 ES OM had A talk with operators on staging Focused Also talked About window change And appointed Individules to Perform work waiting on Procedure change to move Forward with change out of window.

0705 Concluded shift breef.

0801 Started gritique on droped drum And broken window discussed All Action take at time of events with operators.

0854 gritique Completed.

0950 Met with OM, SOM, SSW, And RP.1 Supervision on procedure Changes All were Comfortable with the changes operators mentioned Removal And Instalation on fire screen the Procedure writer was contacted and clarified that the fire screen was part of the window assembly.

1045 Concluded meeting

1050 Met with operators And RCTs to make sure that they were Comfortable with Above Issue both were good with proceeding with window change. Also Reviewed RWP.

1130 Concluded brief with operators they will Get all supplies ready to enter facility And Change out window. Also will take a lunch break.

1250 Operators And RCTs entering Facility to start the prep prosses of the window change. 12-13-12 [illegible]

1341 Operators starting Glove & Change

1350 Glove Change Complete Station 8 Left hand.

1416 Operators finished prep work For window change And stating to remove lead window

1457 Operators notified window is back In place

1500 Window Replacement Complete

1504 RCTs notified on Contamination Found below RWP limits

1515 Operators notified they are waiting on smear's so they Can depush. Entered Grace period on Rounds. not Able to perform due to window change. Grace Period Is Allowed by SR 4.0.2

Continued on Next Page

1527	lead RCT notified Contamination has been Cleaned UP And Performing Post Job smears.
1615	Entering LCO 3.3.1 And 3.3.2 And 3.0 to Shut down Ventilation Facility Is In warm stanby And LCO must be entered.
1631	Ventilation Shut down
1633	Ventilation Start up comencing
1635	Ventilation Is up And running all readings are normal
1636 1632	Exiting LCOs 3.3.1 And 3.3.2 And 3.0 All operational limits have been met. SR Requirements still need to be Performed.
1655	Reviewed Inside And outside Rounds Grace Period Exited.
1713	PPE Check ok
1717	lead window Has been replaced.
1730	Mode Change Complete
1754	PPE Check ok
1800	Bagging off drum that was on WCG
1810	late entry Boiler unsat ITEM 19 on Rounds contacted CSE ok to proceed 1645 GM 12-12-12
1823	bagout complete
1830	Mode Change Complete WCRF IN warm
1840	Mode Change Complete WCRR Yard In warm 50-69 IN Cold
1858	Reviewed Inside And outside Rounds
12-13-12 1900	end of shift securing SOS Position
119	

no further entries on the Page.

CCP Radiography Data Sheet

S832340

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:	92463
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.: 96.0 kg Tare Wt.: 33.4 kg Net Wt.: 62.6 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: 92463

Section 3: Container Inventory and Comments	(Detailed descriptions)
IM:	Scrap metal, hardware, metal lid
AM:	
OM:	
OI:	
C:	Fiberboard packing material, fiberboard insert sleeve
R:	Leaded rubber glove
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):	18.0
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	
Other Inorganic Materials (OI)	
Cellulosics (C):	10.0
Rubber (R):	2.5
Plastics (waste materials) (XPM):	5.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	27.1
Soils (S):	
Total WMP Weight:	62.6

CCP Radiography Data Sheet

Waste Container ID: 92463

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		1/28/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	92463	Count Sequence Number:	14940
Operator:	DCLTD231\Operator		
Assay Start:	1/30/2013 12:56:14 PM		
Description 1:	2LANDA1088		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Debris S5000		
Container Type:	55 gal Drum		
Weight:	Net: 62.6 kg	Net:	62.6 kg
Container:	Volume: 208.0 l	Full:	90.0 %
Density:	0.330 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

Automated Independent Technical Review

Count Sequence Number: 14940 Batch Number: 2LANDA1088
Counter ID: HENC #2
Container ID: 92463
Waste Matrix Code: Debris S5000 Count Type:
Sequence Type: Assay Date: 1/30/2013

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
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

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

Expert Review by: Sherri Chambers Date: 1-31-13

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number: 14940
Assay Instrument: HENC #2
Analysis Method: CCP-TP-063 v 14
Item ID: 92463

Batch Number: 2LANDA1088
Location: LANL TA-54
Software Version: NDA 2000 V.4.0
Analysis Date: 1/30/2013

Net Weight	62600.0 g	
Pu mass	2.83E+000 +-	4.16E-001 g
TRU Alpha Activity	6.79E-001 +-	2.47E-001 Ci
TRU Activity Concentration	1.08E+004 +-	3.95E+003 nCi/g
Pu-239 Equivalent Activity	6.86E-001 +-	2.47E-001 Ci
Pu-239 FGE	2.79E+000 +-	3.91E-001 g
Decay heat	2.22E-002 +-	8.26E-003 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	1.05E-002	7.50E-006	9.18E-007	3.55E-007
PU238	2.60E-004	4.50E-003	6.61E-004	3.68E-005
PU239	2.66E+000	1.67E-001	2.45E-002	1.37E-003
PU240	1.70E-001	3.90E-002	5.74E-003	3.19E-004
AM241	1.35E-001	4.69E-001	2.46E-001	1.34E-002
PU241	3.37E-003	3.50E-001	5.15E-002	2.87E-003
PU242	5.67E-004	2.25E-006	3.30E-007	0.00E+000
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	1.31E-007
U233	<LLD	<LLD	0.00E+000	1.49E-003
U234	2.53E-003	1.60E-005	3.74E-006	0.00E+000
U235	1.81E-001	3.96E-007	9.25E-008	3.93E-007
U238	<LLD	<LLD	0.00E+000	5.55E-006
AM243	1.62E-004	3.28E-005	4.09E-006	2.20E-006

Errors quoted at 1.000 sigma

Operator: _____ Date: 2-1-2013

ITR: _____ Date: 2-1-13

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **92463**

BDR Number: **LA13FG2012**

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

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	2180.68	
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\130207c\
Data File : 92463.D
Acq On : 7 Feb 2013 2:43 pm (#1); 07-Feb-13, 14:42:53 (#2)
Operator : NW
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Feb 07 14:52:33 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	3.597	96	4516646	201.25	ppmv	0.03
15) Chlorobenzene-d5	5.920	117	4017625	177.00	ppmv	0.02
Target Compounds						Qvalue
1) Hydrogen	1.530	GC1	15499m	2180.68	ppmv	

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

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S833409

S833409

Containe 747019

File Options Reports Help

S833409

747019	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

S833409

- S833409
  - LA00000068606 - WIPP
  - LA00000068584 - LANL
    - LASB50019
  - LA00000068637 - WIPP
  - LA00000068622 - EMPTY

Working Copy
Date: 11-6-13

ATTACHMENT 1
Page 1 of 4

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: S 833409

6.2[4] Date Processed: 11-7-13

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

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

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

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

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

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

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

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

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

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

Performed By: Melinda Stewart / Melinda Stewart 1277269 11-7-13
Waste Handling Tech (print) Signature Z# Date

ATTACHMENT 1
Page 2 of 4

4.1[6][B] Parent Waste Container No.: 5833409

5.[18] Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable: 396.8 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) 396.0 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.: S833409

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	686060	686037	N	
10.1[4]	Daughter Drum Filter No.	LM-320	LM-873		
10.1[4]	Daughter Drum Bag Filter No.	L-6761	L-6791	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		BOP		
	Model No.		6CPK 15-2 SNC		
	Serial No.		L-6769		
	Date of Manufacture		1-13		
10.2[5]	POC ID No		685847		
10.2[7][B]/10.2[6]	POC Item Description	N A	Nitrate Salts		
10.2[13]	POC Assembly closed per Manufacturer's instructions. (Initial and Z#)		BG 267129		
10.2[14]	POC Assembly Gross Weight (lb)		361.2	N	
10.2[15]	POC Rad. Survey Results (mrem/hr)		1100 MR		
10.3[3][A]	Approx. Containerized Liquid Vol./Units		N A		
10.3[5][A]	Free Liquid Volume/Units	5 GALLONS	1 GALLON		A
10.3[7][A]	Opaque/Non-penetrable Item Description:	N A	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 (%)	10%	100%		
10.5[3]/10.6[2]	Description Waste Added During Processing	KITTY LITTER, STUB OUTS	KITTY LITTER, STUB OUTS		

ATTACHMENT 1
Page 4 of 4

4.1[6][B] Parent Waste Container No.: ~~68600~~ S833409 LR 9-24-14

Comments: ROOM TRASH, PLASTICS, NITRATE SALTS, KITTY LITTER, POLY LINER LID, LEAD SHIELDING

11.1[1] Performed By: BRIAN GALLEGOS / [signature] 267329 11-07-13
Waste Handling Tech (print) Signature Z# Date

11.1[8] Reviewed By: [signature] / [signature] 14923 11/12 1130
SOS or designee (print) Signature Z# Date/Time

ATTACHMENT 2
Page 1 of 1

Working Copy
Date: 11/12/13 HS

WCRRF OVERPACK DRUM ASSEMBLY PREPARATION DATA SHEET

5.[3] Overpack drum information:
Purchase Order No.: 501012
Lot No.: 02333945
Manufacture Date: 2012

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:

PREPARED AT TA-54

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: N/C

8.1[1] Performed By: BRIAN GALLEGOS / Bri Gallegos / 267129 / 11-07-13
Waste Handling Technician (print) Signature Z # Date

8.1[6] Reviewed By: [illegible] / [illegible] / 14928 / 11/13/13
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 5
Page 1 of 1

Working Copy
Date: 11/7/13 HS

WCRRF OVERPACK DRUM CLOSURE DATA SHEET

7.[17] Overpack Drum Unique Identifier No.: 68622

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: BRIAN GALLEGOS / Bri Gallegos / 267129 11-07-13
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): 167.2 lb

Comments: N/C

8.1[1] Performed By: BRIAN GALLEGOS / Bri Gallegos / 267129 11-07-13
Waste Handling Technician (print) Signature Z# Date

8.1[7] Reviewed By: GMK / [signature] / 149251 11/12/13
Supervisor or designee (print) Signature Z# Date

Working Copy
Date: 10-31-13

ATTACHMENT 1
Page 1 of 2

WCRRF DRUM PREPARATION DATA SHEET

5.[34][E] Drum ID No.: 686606

5.[3] Drum information:
Purchase Order No.: 501578
Lot No.: 0240119
Manufacture Date: 13

5.[17] Drum Liner Bag/Filter Assembly:
Manufacturer: BOP
Model No.: Lecpvcl. 5-2 spvc
Serial No.: L-67161
Manufacture Date: 1-13

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

	Filtered Vent	2 in. Bung
M&TE No.:	1002116	036245
Cal. Expiration Date:	12.18.13	8.3.13
Range in ft-lb:	40-200 in.lb	16.80
Tolerance:	±4% cw ±6% ccw	±3% cw ±6% ccw

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

Performed By: GERALD ESPINOZA [signature] 1237720 10/31/13
Operator (print) Signature Z # Date

5.[23] Filtered vent information:
Manufacturer: NUCFIL
Model No.: 019DS
Serial No.: LM-320
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: 0190665

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.: 68606

Comments: N/C

5.[35] Performed By: GERARDO ESPINOZA / [signature] [illegible] 10/31/13
Operator (print) Signature Z # Date

7.1[4] Reviewed By: [signature] / [signature] 1495 11/1/13
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 2
Page 1 of 2

WCRRF DRUM CLOSURE DATA SHEET

6.[3] Drum ID No.: 68606

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

M&TE No.: 038369
Cal. Expiration Date: 12-18-13
Range in ft-lb: 14-80
Tolerance: ±3% cw ±6% ccw

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

Performed By: BRIAN GALLEGOS / Br Gallegos / 1261129 / 11-07-13
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 ft-lb:		
Tolerance:		

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

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

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

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

ATTACHMENT 2
Page 2 of 2

6.[3] Drum ID No.: 68606

6.[26] Scale File ID number: 019065

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

6.[28] Drum gross weight: 144.4 lbs

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

Comments: N/C

6.[32] Performed By: BRIAN GALLEGOS / [signature] / 267129 / 11-07-13
Operator (print) Signature Z # Date

7.1[4] Reviewed By: [signature] / [signature] / [illegible] / 11/13/13
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 1
Page 1 of 2

11-7-13

WCRRF DRUM PREPARATION DATA SHEET

5.[34][E] Drum ID No.: 68637

5.[3] Drum information:
Purchase Order No.: 501578
Lot No.: 0240119
Manufacture Date: 13

5.[17] Drum Liner Bag/Filter Assembly:
Manufacturer: BOP
Model No.: 6cpvc1.52spvc
Serial No.: L-6791
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 in ft-lb:	40-200	10-80
Tolerance:	±4%cw ±6%occw	±3%cw ±6%occw

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

Performed By: Brandon Chavez (Operator (print)) / (Signature) 804742 (Z #) 11-7-13 (Date)

5.[23] Filtered vent information:
Manufacturer: NUCFI
Model No.: 019DS
Serial No.: LM-873
Manufacture Date: 12-13

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: BC 11-7-13 02965 019085

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.: 68637

Comments: N/C

5.[35] Performed By: Brandon Chavez / [signature] 804742 / 11-7-13
Operator (print) Signature Z # Date

7.1[4] Reviewed By: [signature] / [signature] 142755 11/12/13
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 2
Page 1 of 2

WCRRF DRUM CLOSURE DATA SHEET

6.[3] Drum ID No.: 68637

6.[9] 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

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

Performed By: BRIAN GALLEGOS / B. Gallegos / 261128 / 11-07-13
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 ft-lb:		
Tolerance:		

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

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

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

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

ATTACHMENT 2
Page 2 of 2

6.[3] Drum ID No.: 68637

6.[26] Scale File ID number: 019005

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

6.[28] Drum gross weight: 428.6 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: Brian Gallegos / [signature] / 126712A 11-07-13
Operator (print) Signature Z # Date

7.1[4] Reviewed By: Gilbert Martinez / [signature] / 14323 11/12/13
Supervisor or designee (print) Signature Z # Date

Inspected SP 72

LTP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Planning and Technical Solutions 85 11-5-138

Container ID: S833409 Container Type: STEEL DRUM (55 GAL) Gross Weight (lbs): 485.1
Total PE-Ci Activity: 6.18E+00 Equivalent Combustible PE-Ci: 2.32E+00
Total Fissile Gram Equivalents: 6.44E+01 Total Surface Dose Rate (mrem/hr): 2
EPA Code(s): D007; D008; D009
Waste Description: Nitrate salts

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

RTR pre-screen indicates ~ 5.5 gallons of free liquid.

Potential Safety Risks: Nitrate salt drums often contain free liquids and are packaged in individual plastic bags. Net weight is ~212 lbs. and generator data shows 10 items of nitrate salts with weights ranging from ~3 – 52 lbs.

Performed By: Susan Ramsey (LTP-PTS (Print)) | Signature | 100681 (Z#) | 7/30/13 (Date)

IHS Representative

Potential IHS Safety Risks: May contain lead, mercury, chromium 5.5 gal free liquids

Performed By: Johnny Smalley (IHS Representative (Print)) | Signature | 241659 (Z#) | 7-31-13 (Date)

LTP Engineering

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

Engineering Comments: NA

Performed By: Valerie Rhodes (LTP Engineering (Print)) | Signature | 112609 (Z#) | 8/5/13 (Date)

TRU Remediation Operations

Potential Safety Risks: Use Proper PPE And Kitty Litter Ratio

Performed By: G Mk (TRU Operations (Print)) | Signature | 149335 (Z#) | 8/12/13 (Date)

Operations Manager or designee

Processing Determination: ☒ Accept ☐ Reject

OM or designee Comments: Do not push or press on waste with hands. Use heavy duty gloves during processing. Use tools when possible to handle waste.

Approved By: Jose Perez (OM or designee (Print)) | Signature | 121452 (Z#) | 8-13-13 (Date)

Discardable Waste Log Sheet

DrumID: 014492

Item#	ItemID	Net (kg)	Matrix	M Code	NM	MT	Auth	Remarks
1	IXFS 780FA	23.41	NITRATE SALTS		5.68	53	6/11	
2	IXFS-781-FA	5.23	NITRATE SALTS		3.95	52	6/11	
3	IXFS-786FDA	1.36	NITRATE SALTS		0.13	53	6/11	
4	IXFS-785-FA	19.09	NITRATE SALTS		2.23	52	6/11	
5	I-787-OX37	14.55	NITRATE SALTS		28.37	52	6/11	
6	IXFS-789-FA	8.18	NITRATE SALTS		3.13	52	6/11	
7	IXFS-790-FA	0.05	NITRATE SALTS		5.72	51	6/11	
8	IXFS-793-FA	5	NITRATE SALTS		6.99	54	6/11	
9	IXFS-795-OX381	8.86	NITRATE SALTS		4.17	52	6/11	
10	IXFS-797-FA	10.45	NITRATE SALTS		8.44	52	6/11	
		96.18 kg						

ATTACHMENT 1
Page 1 of 1

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

5.[1] Sample Date: 5/21/13

Container No. (5.[1])	S833409					
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 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])	460.93 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 Miles (CCP (Print)), 238844 (Z #)

Comments:

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

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

6.1[3] Performed By: Susan Ramsey (Waste Handling Operator (print)), [signature] (Signature), 110681 (Z #), 5/22/13 (Date)

InstName : Unit 2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\130521c\
Data File : S833409.D
Acq On : 21 May 2013 1:06 pm (#1); 21-May-13, 13:05:22 (#2)
Operator : SA
Sample :
Misc : 55 GAL LFL DRUM THROUGH UNOBSTRUCTED 72 (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 21 13:42:17 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	3.490	96	4169771	201.25	ppmv	-0.08
15) Chlorobenzene-d5	5.842	117	3583408	177.00	ppmv	-0.06
Target Compounds						Qvalue
1) Hydrogen	1.600	GC1	3276m	460.93	ppmv	

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

vocgas.m Tue May 21 13:42:23 2013

11-6-13
1800 Assuming WCRR operations center - JColeman
1820 Pre-job being conducted by SOS.
1842 Pre-job concluded. 2 operators and myself briefing to new ~~RWP~~ JC 11-6-13 JWD# ES-WCRRF-2013-002.0
2015 Bagging off 1 daughter, bagging on another daughter.
2027 Bag off/on complete.
2131 Initiating a drum movement from 50-69 to a transportainer.
2149 Drum movement out of 50-69 complete.
2242 Operators denesting 2 drums.
2320 Denesting complete. Bagging off and bagging on S852895
2343 Bag on/off complete.
11-7-13 0002 Operators out for lunch.
0030 Beginning outside rounds.
~~0050 Item# JC 11-6-13~~
0100 Outside rounds complete.
0220 Beginning inside rounds.
0221 Late entry - at 0119, operators back from lunch JC
0238 Item #63 is OOS, OKay to proceed per CSE documentation.
0239 Inside rounds complete.
0326 Both rounds reviewed by SOS.
0335 Bagging off 1 daughter, bagging on another daughter.
0352 Bag off/on complete.
0520 Bagging off 2 daughters.
0541 Bagging on S833409.
0550 Bag off/on complete.
0556 Air quality personnel arrived to perform weekly stack monitoring
11-7-13 0608 Being relieved by CCO, Howard Smith, JColeman

No further entries this page

11-7-13

0603 ASSUMING WCRR OPERATIONS CENTER H.SMITH
0615 STARTING PRE-JOB BRIEFING
0645 PRE JOB BRIEFING COMPLETED
0762 OPERATORS ENTERING BUILDING TO PROCESS
0820 BAGGING OFF DAUGHTER, BAGGING ON DAUGHTER
0835 BAG OFF COMPLETE
0847 BEGINNING ~~MOVEMENT~~ 11-7-13 HS MOVEMENT OUT OF TA 50-69 TO TRANSPORTAINERS
0912 MOVEMENT INTO TA50-75 FROM TA-50/69 IS COMPLETED
0933 BEGINNING MOVEMENT INTO TA50-69 FROM TRANSPORTAINERS
0944 MOVEMENT INTO TA50-69 IS COMPLETED
1044 BAGGING OFF DAUGHTER, BAGGING OFF POC, BAGGING ON S832499 AND DENESTING
1157 BAG OFF, BAG ON, DENESTING COMPLETED
1459 BAGGING OFF 1 DAUGHTER, BAGGING ON 1 DAUGHTER AND CONTINUING THE PROCESS
1514 BAG OFF COMPLETED
1527 STARTING INSIDE ROUNDS
1530 STARTING OUTSIDE ROUNDS
1532 ITEM #63 INSIDE ROUNDS OOS, PERMISSION TO PROCEED PER CSE DOCUMENTATION
1551 COMPLETED OUTSIDE ROUNDS
1552 NOTIFIED BY INSIDE PIC, LEAD WINDOW BETWEEN STATIONS #1 AND #2 SHOW ONE INCH GAP, AND IS REQUESTING LEAD TAPE
1620 INSIDE AND OUTSIDE ROUNDS REVIEWED BY SOS
1630 BAGGING 1 DAUGHTER AND BAGGING OF PARENT AND INSTALLING PORT COVER
1712 HS ~~1656~~ BAG OFF COMPLETE
1738 11/7/13 BEGINNING MOVEMENT FROM TA50-69 TO TRANSPORTAINERS
1739 BAGGING ON S833481
1752 MOVEMENT OUT OF TA50-69 IS COMPLETE
11-7-13 RELIEVED BY OCD TERI COLEMAN · H SMITH

NO FURTHER ENTRIES ON THIS PAGE H.SMITH

11/6/13 Night Shift

1810 Reviewed shift turnover checklist, approved and posted Night shift Operations watchbill, assumed WCRR SOM position.

1845 Pre job brief was conducted and completed by SOS. Safety topic by IH was use of rigging equipment here @ WCRR. Discussed status of lead window procurement, Roto Grip evaluation by mechanics (OK to use) and repairs required to return to service the Versa Lift. Briefed workers on active shift orders.

2027 Completed bagoff of 1 daughter - continuing to process.

2149 Operators completed movement of 4 drums from 50-67 to transportainers.

2320 Operators completed denesting 2 drums

2343 Completed all ~~p~~ LAG 11/4/13 bagoffs for parent # 5860093 (2 daughters total). Bagged on 5852895

0002 Operators breaking for lunch.

0119 Resuming operations.

0352 Completed bagging off 1 daughter - continuing processing.

0535 Reviewed Roundsheets. No issues.

0545 Reviewed compliance tracking schedule - Status board updated.

0544 Late Entry @ 0541 Operators in process of bagging off 2 more daughters to complete parent 5852895 (3 daughters total). Bagging on drum # 5833409. LAG

0606 Relieved by J. Guadagnoli as WCRR SOM.

No further entries this page LAG

11-7-13 DAYSHIFT

0600 Reviewed the shift turnover checklist and assumed the SOM position [illegible]

0645 Completed attending the pre-job brief conducted by the SOS (Gilbert) Discussion was focused on the prior drums processed. The 1st drum from yesterday was noted to have 7 gallons of water/liquid and the bottom 10 inches of the poly liner was frozen. Operators were required to crack the bottom of the poly liner to remove the frozen sludge. It was noted that the attachment tool with the shovel extension was broken. Another adapter is needing to be procured. RCTs noted that a bag seam split when prepping a drum on the containment pallet the parent drum was re-prepped. Operators were reminded to be cautious. Shift orders in affect were discussed. There are no transfers today.

0710 Completed daily call in with AREA 6 SOM providing POD.

0820 Operators inside report Bag off of daughter and bag on of daughter and continue to process Parent drum 5833409

0835 Bag off is completed.

0839 Initiated with RP-1 supervision obtaining 3 - 8" port covers for the WCG from the MiRA Center.

0851 Operations outside initiate a movement out of 50/69 - 7 drums total

0944 Operations completed movement in of 3 Parents into 50/69.

1015 Discussed with RP-1 the Radiological Waste Container Storage Sign noted along the PGE side along the wall. Upon evaluation, the sign will be removed.

1126 Completed procedure Validation Checklist for AOPs - (new version). Comments were discussed with the procedure writer.

1157 Inside Operations report completion of bag-on, denesting and bagging on Parent 5832449 - completed (Note: 5833409 generated 2 daughters 1 POC).

1215 Completed the daily room phone call with SOM and PM.

1315 Updated posting for Radiological Source Inventory sheet in 50/69 Room 104 located on the RADIOLOGICAL SAFE. A copy of the posting was placed in the Posting Logbook

1459 Operations bag off 1 daughter, bag on another and continue to process.

1550 Operators notified the Operations Center/SOS and indicated they were receiving dose through the lead tape of 1mr/hr and through the crack of 2mr/hr (the crack is noted on the lead glass). Operators were requesting additional lead tape. Operations and RP-1

(Continued on NEXT PAGE)

PROJECT NAME WCRRF SOS Log Book NOTEBOOK NO.

11/6/13

1816 Assuming SOS position. CA
1818 Starting Pre-Job, discussed turnover from day shift as well as ensure that all rigging equipment is certified and that personnel is trained.
1841 Pre-Job complete.
2015 Bagging off 1st daughter, bagging on a 2nd.
2027 Bag off/on complete.
2131 Starting movement out of 50-69.
2149 Movement out complete.
2242 Starting to denest 2 drums.
2320 Denesting complete. Bagging off 2nd daughter, bagging on 5852895.
2343 Bag off/on complete.
0326 Signed off on the rounds.
0335 Bagging off 1st daughter, bagging on a 2nd.
0352 Bag off/on complete.
0520 Bagging off 2nd and 3rd daughter, 5833409.
0550 Bag off/on complete.
114 0610 Turning over SOS position to Gilbert Martinez. CA 11/7/13

No Further Entries on this Page

SIGNATURE DATE 20
READ AND UNDERSTOOD DATE 20

PROJECT NAME WCRR SOS LOG BOOK NOTEBOOK NO.

11/7/13

0600 Assuming SOS Position with the m.f
0615 Conducted shift brief Discussed status of Glove box Alm status at Lead lined windows Status and Alarm Principals.
0645 Shift brief Concluded.
0700 Operators entering 50-69 For Inserting.
0820 Bagging off Daughter bagging on Another.
0833 Bag off/on complete.
0844 Moving out of 50-69 To transportation.
0912 Movement Complete.
0958 Moving into 50-69 from transportation
0944 Move in complete
1044 Bagging off Daughter and Pac Bagging on 5832499 and denesting
1157 Bag off/on and denesting Complete.
1446 Relieved by Clarise Velarde
1447 Assuming WCRRF SOS Position - CVelarde
1459 Bagging off 1 daughter, Bagging on 1 daughter.
1516 Bag in Bag off complete.
1527 Started inside rounds and outside rounds.
1551 Completed outside rounds
1620 Rounds have been signed off.
1630 Bagging off 1 daughter
1712 Bag off completed, waiting to receive lead tape
1741 Bagged on 3833481
1744 Started movement out of 50-69.
1752 Completed movement into 50-69
11-7-13 1806 Relieved by SOS Clayton Mullins - CVelarde
114

No further entries this page

SIGNATURE DATE 20
READ AND UNDERSTOOD DATE 20

CCP Radiography Data Sheet

Waste Container ID: 68584

Section 3: Container Inventory and Comments (Detailed descriptions)

IM:

AM:

OM:

OI:

C:

R:

XPM: Plastic bags

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	Estimated Weight (kg)
Steel (ST):	109.0
Plastics (PP): Rigid Liner/Lid Liner Bag (Inside POC)	8.1
Other: Fiberboard (CP), Liner/Sleeve(Inside POC)	28.0
Total Packaging Weight	145.1
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	2.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	16.9
Soils (S):	
Total WMP Weight:	18.9

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0128
Examination Date:	11/14/2013
Waste Container ID:	68584
Video/Audio Recorded Media Number:	LA-RTR2-13-0128 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.: 145.1 kg Net Wt.: 18.9 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 2 layers
Volume Utilization Percentage:	50 %

CCP Radiography Data Sheet

Waste Container ID: 68584

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	[signature]	11/14/2013
Print Name	Signature	Date

5833409

NDA 2000 Assay Report

Item Information

Item ID:	68584	Count Sequence Number:	16721
Operator:	DCLTD231\Operator		
Assay Start:	11/15/2013 12:53:57 PM		
Description 1:	2LANDA1241		
Description 2:	POC 164.0		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gal Drum		
Weight:	Net: 18.9 kg	Net:	18.9 kg
Container:	Volume: 208.0 l	Full:	95.0 %
Density:	0.690 kg /l		

System Configuration

Counter:	HENC #2
Count Type:	Item Count
Collimator/Geometry Setting:	All Banks on GEO - 0

Errors quoted at 1.000 sigma

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number:	16721	Batch Number:	2LANDA1241
Assay Instrument:	HENC #2	Location:	LANL TA-54
Analysis Method:	CCP-TP-063 v 15	Software Version:	NDA 2000 V.4.0
Item ID:	68584	Analysis Date:	11/15/2013

Net Weight	18900.0 g		
Pu mass	1.65E+001	+-	3.31E+000 g
TRU Alpha Activity	5.22E+000	+-	2.05E+000 Ci
TRU Activity Concentration	2.76E+005	+-	1.09E+005 nCi/g
Pu-239 Equivalent Activity	5.29E+000	+-	2.05E+000 Ci
Pu-239 FGE	1.51E+001	+-	3.24E+000 g
Decay heat	1.71E-001	+-	6.81E-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	4.18E-007
U233	<LLD	<LLD	0.00E+000	4.66E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	1.43E-006
NP237	3.82E-002	2.69E-005	4.94E-006	1.23E-006
PU238	1.26E-002	2.15E-001	1.51E-001	4.57E-003
U238	<LLD	<LLD	0.00E+000	1.07E-005
PU239	1.49E+001	9.26E-001	2.01E-001	1.97E-002
PU240	1.46E+000	3.32E-001	1.48E-001	7.06E-003
AM241	1.09E+000	3.74E+000	2.03E+000	3.45E-002
PU241	4.44E-002	4.57E+000	1.13E+000	9.70E-002
PU242	5.54E-002	2.19E-004	1.14E-004	0.00E+000
AM243	1.78E-004	3.56E-005	6.78E-006	6.37E-006

Errors quoted at 1.000 sigma

Operator: _____ Date: 11-22-13

ITR: _____ Date: 11-22-13

Automated Independent Technical Review

Count Sequence Number: 16721 Batch Number: 2LANDA1241
Counter ID: HENC #2
Container ID: 68584
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 11/15/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis Add-a-Source WARNINGS: Add-a-Source correction factor is less than one.	OK
Section 2 - Passive Neutron Analysis Analysis Status: No errors. 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: 11/22/13

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **68584**

BDR Number: **LA13FG2130**

Sampling Date: **12/18/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	439.14	
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\131218c\
Data File : 68584.D
Acq On : 18 Dec 2013 3:06 pm (#1); 18-Dec-13, 15:05:20 (#2)
Operator : EL
Sample :
Misc : POC Through Filter (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Dec 18 15:13:45 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	3.568	96	3404777	205.75	ppmv	0.05
15) Chlorobenzene-d5	5.868	117	2710564	177.50	ppmv	0.00
Target Compounds						Qvalue
1) Hydrogen	1.619	GC1	3302	439.14	ppmv	100

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

CCP Radiography Data Sheet

5833409

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0128
Examination Date:	11/14/2013
Waste Container ID:	68606
Video/Audio Recorded Media Number:	LA-RTR2-13-0128 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.: 65.5 kg Tare Wt.: 33.4 kg Net Wt.: 32.1 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:	40 %

CCP Radiography Data Sheet

Waste Container ID: 68606

Section 3: Container Inventory and Comments	(Detailed descriptions)
IM:	
AM:	
OM:	
OI:	
C:	
R:	
XPM:	Plastic lid
OR:	
IN:	Homogeneous solids
S:	

Section 4: Packaging Material and Waste Material Parameters	
Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP): Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	2.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	30.1
Soils (S):	
Total WMP Weight:	32.1

CCP Radiography Data Sheet

Waste Container ID: 68606

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		11/14/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	68606	Count Sequence Number:	16723
Operator:	DCLTD231\Operator		
Assay Start:	11/15/2013 2:22:21 PM		
Description 1:	2LANDA1241		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gal Drum		
Weight:	Net: 32.1 kg	Net:	32.1 kg
Container:	Volume: 208.0 l	Full:	40.0 %
Density:	0.390 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:	16723	Batch Number:	2LANDA1241
Assay Instrument:	HENC #2	Location:	LANL TA-54
Analysis Method:	CCP-TP-063 v 15	Software Version:	NDA 2000 V.4.0
Item ID:	68606	Analysis Date:	11/15/2013

Net Weight	32100.0 g		
Pu mass	3.27E-001	+-	5.50E-002 g
TRU Alpha Activity	2.73E-001	+-	1.32E-001 Ci
TRU Activity Concentration	8.50E+003	+-	4.11E+003 nCi/g
Pu-239 Equivalent Activity	2.75E-001	+-	1.32E-001 Ci
Pu-239 FGE	3.09E-001	+-	5.48E-002 g
Decay heat	9.02E-003	+-	4.39E-003 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	1.30E-007
EU152	1.66E-009	2.88E-007	6.04E-008	2.09E-007
U233	<LLD	<LLD	0.00E+000	1.04E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	3.14E-007
NP237	3.27E-003	2.31E-006	3.44E-007	5.09E-007
PU238	4.91E-005	8.39E-004	1.82E-004	1.93E-004
U238	<LLD	<LLD	0.00E+000	4.37E-006
PU239	3.05E-001	1.89E-002	3.40E-003	4.34E-003
PU240	2.13E-002	4.85E-003	1.09E-003	1.11E-003
AM241	7.24E-002	2.48E-001	1.32E-001	8.49E-003
PU241	8.69E-004	8.96E-002	1.97E-002	2.06E-002
PU242	1.45E-004	5.74E-007	1.21E-007	0.00E+000
AM243	3.07E-005	6.13E-006	8.99E-007	1.34E-006

Errors quoted at 1.000 sigma

Operator: _____ Date: 11-22-13

ITR: _____ Date: 11-22-13

Automated Independent Technical Review

Count Sequence Number: 16723 Batch Number: 2LANDA1241
Counter ID: HENC #2
Container ID: 68606
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 11/15/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis Add-a-Source WARNINGS: Add-a-Source correction factor is less than one.	OK
Section 2 - Passive Neutron Analysis Analysis Status: No errors. No Warnings Reported.	OK
Section 3 - Data Combiner Analysis Override enabled; Gamma data specified as input. Results taken from Quantitative Gamma data. Results comparison test passed.	Results taken from quantitative gamma data.
Section 4 - MGA Analysis 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-51,52,53,54.
Section 5 - Gamma Analysis Analysis Status: No errors.	OK
Miscellaneous	No additional nuclides contributing to 95% of the radiological hazard identified.

Expert Review by: Fred F Date: 11/22/13

Waste Container ID: **68606**

BDR Number: **LA13FG2119**

Sampling Date: **11/22/2013**

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\131122c\
Data File : 68606.D
Acq On : 22 Nov 2013 11:56 am (#1); 22-Nov-13, 11:55:52 (#2)
Operator : SA
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Nov 22 12:04:14 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	3.584	96	4558755	205.75 ppmv	0.07
15) Chlorobenzene-d5	5.887	117	3572465	177.50 ppmv	0.03

Target Compounds	Qvalue

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

CCP Radiography Data Sheet

5833409

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0128
Examination Date:	11/14/2013
Waste Container ID:	68637
Video/Audio Recorded Media Number:	LA-RTR2-13-0128 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.: 194.5 kg Tare Wt.: 33.4 kg Net Wt.: 161.1 kg
Rigid Liner and Liner Vent Description:	Liner: [X] No [ ] Yes Lid: [X] No [ ] Yes Type: [ ] 30-mil [ ] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [ ] Yes [X] N/A Punctured: [X] No [ ] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [ ] No [X] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 2 layers
Volume Utilization Percentage:	95 %

CCP Radiography Data Sheet

Waste Container ID: 68637

Section 3: Container Inventory and Comments (Detailed descriptions)

IM:

AM:

OM: Scrap lead

OI:

C: Tape rolls

R:

XPM: Plastic bags

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP): Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	6.0
Other Inorganic Materials (OI)	
Cellulosics (C):	0.2
Rubber (R):	
Plastics (waste materials) (XPM):	4.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	150.9
Soils (S):	
Total WMP Weight:	161.1

CCP Radiography Data Sheet

Waste Container ID: 68637

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		11/14/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	68637	Count Sequence Number:	16720
Operator:	DCLTD231\Operator		
Assay Start:	11/15/2013 12:09:52 PM		
Description 1:	2LANDA1241		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55-gal Drum-		
Weight:	Net: 161.0 kg	Net:	161.0 kg
Container:	Volume: 208.0 l	Full:	95.0 %
Density:	0.820 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:	16720	Batch Number:	2LANDA1241
Assay Instrument:	HENC #2	Location:	LANL TA-54
Analysis Method:	CCP-TP-063 v 15	Software Version:	NDA 2000 V.4.0
Item ID:	68637	Analysis Date:	11/15/2013

Net Weight	161000.0 g			
Pu mass	3.34E+001	+-	7.08E+000	g
TRU Alpha Activity	1.30E+001	+-	5.79E+000	Ci
TRU Activity Concentration	8.08E+004	+-	3.59E+004	nCi/g
Pu-239 Equivalent Activity	1.32E+001	+-	5.79E+000	Ci
Pu-239 FGE	3.15E+001	+-	7.06E+000	g
Decay heat	4.28E-001	+-	1.92E-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	1.25E-006
U233	<LLD	<LLD	0.00E+000	1.03E-002
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	3.42E-006
NP237	1.80E-001	1.27E-004	2.58E-005	2.70E-006
PU238	5.02E-003	8.58E-002	2.20E-002	1.94E-003
U238	<LLD	<LLD	0.00E+000	2.38E-005
PU239	3.11E+001	1.93E+000	4.38E-001	4.37E-002
PU240	2.18E+000	4.95E-001	1.31E-001	1.12E-002
AM241	3.06E+000	1.05E+001	5.77E+000	8.93E-002
PU241	8.89E-002	9.15E+000	2.37E+000	2.07E-001
PU242	1.48E-002	5.86E-005	1.48E-005	0.00E+000
AM243	6.95E-004	1.39E-004	2.87E-005	1.35E-005

Errors quoted at 1.000 sigma

Operator: _____ Date: 11-22-13

ITR: _____ Date: 11-22-13

Automated Independent Technical Review

Count Sequence Number: 16720 Batch Number: 2LANDA1241
Counter ID: HENC #2
Container ID: 68637
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 11/15/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis No Add-a-Source warnings.	OK
Section 2 - Passive Neutron Analysis Analysis Status: No errors. Ones Rate Analysis complete with warnings. - Error calculating the Ones Rate Pu-240 Effective MDA.	OK Not data affecting.
Section 3 - Data Combiner Analysis Override enabled; Gamma data specified as input. Results taken from Quantitative Gamma data. Results comparison test passed.	Results taken from quantitative gamma data.
Section 4 - MGA Analysis Results are marked as invalid.	Isotopic analysis failed. AK isotopics applied. The AK information utilized was provided by Steve Schafer, AKE, and consists of data from CCP-AK-LANL-006, AK Source Document M237. MT-51,52,53,54.
Section 5 - Gamma Analysis Analysis Status: No errors.	OK
Miscellaneous	No additional nuclides contributing to 95% of the radiological hazard identified.

Expert Review by: [signature] Date: 11/22/13

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **68637**

BDR Number: **LA13FG2118**

Sampling Date: **11/21/2013**

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\131121c\
Data File : 68637.D
Acq On : 21 Nov 2013 2:10 pm (#1); 21-Nov-13, 14:09:30 (#2)
Operator : NW
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Nov 21 14:17:49 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	3.545	96	4271041	205.75 ppmv	0.03
15) Chlorobenzene-d5	5.855	117	3332107	177.50 ppmv	0.00

Target Compounds	Qvalue

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

S841239

S841239

Container Pr 747083

File Options Reports Help

S841239

747083	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

S841239

- S841239
  - LA00000069162
    - LASB50066
  - LA00000069180
    - LASB50102
  - LA00000069201 - EMPTY

Working Copy
Date: 1-9-14

ATTACHMENT 1
Page 1 of 4

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: S841239

6.2[4] Date Processed: 1/09/14

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

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

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

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

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

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

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

4.3[6] ($) Stationary Fire Watch has been established: ☑ N/A
(> 300 PE-Ci Equivalent Combustible) N/A
(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: MICHAEL MONTOYA / [signature] / 191352 / 1/09/14
Waste Handling Tech (print) Signature Z # Date

ATTACHMENT 1
Page 2 of 4

4.1[6][B]	Parent Waste Container No.: S841239	
5.[18]	Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable:	436.4 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)	519.4 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.: S841239

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	69162	69180		
10.1[4]	Daughter Drum Filter No.	JL-833	LM-354		N/A
10.1[4]	Daughter Drum Bag Filter No.	L-10084	L-10071		
10.1[4]	Daughter Drum Purchase Order No.	501892	501892		
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	3½ GALLONS	N/A	N/A	N/A
10.3[7][A]	Opaque/Non-penetrable Item Description:	DEGRADED LEAD	Degraded lead		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		
10.3[13]/10.4[10]/ 10.5[4]/10.6[10]	Daughter Drum % Full (%)	100%	80%		N/A
10.5[3]/10.6[2]	Description Waste Added During Processing	KITTY LITTER	Kitty Litter		

ATTACHMENT 1
Page 4 of 4

4.1[6][B] Parent Waste Container No.: 5841239

Comments: NITRATE SALTS, PLASTIC, DEGRADED LEAD, KITTY LITTER

11.1[1] Performed By: Adam Segovia, [signature] 2367021 - 9-14
Waste Handling Tech (print) Signature Z # Date

11.1[8] Reviewed By: Clayton Mullins, CA 1240092, 1/9/14 1753
SOS or designee (print) Signature Z # Date/Time

ATTACHMENT 1
Page 1 of 2

Working Copy

WCRRF DRUM PREPARATION DATA SHEET Date: 1/5/14 HS

5.[34][E] Drum ID No.: 69162

5.[3] Drum information:
Purchase Order No.: 501892
Lot No.: 0244449
Manufacture Date: 2013

5.[17] Drum Liner Bag/Filter Assembly:
Manufacturer: BOP
Model No.: 6CPVC
Serial No.: L-10084
Manufacture Date: 5/13

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

	Filtered Vent	2 in. Bung
M&TE No.:	161310	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: JOE QUINTANA / Joe Q / Z39987 / 1/5/14
Operator (print) Signature Z # Date

5.[23] Filtered vent information:
Manufacturer: NUCFIL
Model No.: 019 DS
Serial No.: JL 833
Manufacture Date: 10/11

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

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

5.[30] Scale File ID number: 019065

ATTACHMENT 1
Page 2 of 2

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

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

5.[34][E] Drum ID No.: 69162

Comments: N/C

5.[35] Performed By: JOE QUINTANA, Joe Q, 239487, 1/5/14
Operator (print) Signature Z # Date

7.1[4] Reviewed By: Clayton Mullins, CM, 240092, 1/9/14
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 2
Page 1 of 2

WCRRF DRUM CLOSURE DATA SHEET

6.[3] Drum ID No.: 69162

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

M&TE No.: 038370
Cal. Expiration Date: 8/02/14
Range: 16-80 ft-lb
Tolerance (+/-): ±30/cw ± 6/ccw

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

Performed By: MICHAEL MONTOYA (Operator (print)) [signature] (Signature) 191352 (Z #) 1/09/14 (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.:	101310	036245
Cal. Expiration Date:	11/12/14	8/05/14
Range:	40-200 in-lb	16-80 ft-lb
Tolerance (+/-):	±4/cw ± 6/ccw	±30/cw ± 6/ccw

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

Performed By: MICHAEL MONTOYA (Operator (print)) [signature] (Signature) 191352 (Z #) 1/09/14 (Date)

6.[17][C] 2 in. bung plug torque value: 30 ft-lb ☐ N/A

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

ATTACHMENT 2
Page 2 of 2

6.[3] Drum ID No.: 69162 ur 9-24-14

6.[26] Scale File ID number: 019065

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

6.[28] Drum gross weight: 338.8 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: MICHAEL MONTOYA / [signature] 191352 1/09/14
Operator (print) Signature Z # Date

7.1[4] Reviewed By: Clayton Mullins / [signature] D40092 1/9/14
Supervisor or designee (print) Signature Z # Date

Working Copy
Date: 1-6-14

ATTACHMENT 1
Page 1 of 2

WCRRF DRUM PREPARATION DATA SHEET

5.[34][E] Drum ID No.: 69180

5.[3] Drum information:
Purchase Order No.: 501892
Lot No.: 0244449
Manufacture Date: 2013

5.[17] Drum Liner Bag/Filter Assembly:
Manufacturer: BOP
Model No.: 6C PVC 1.5-2SPVC
Serial No.: L-10071
Manufacture Date: 5/13

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

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

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

Performed By: RUSSELL SHUMAKER Russell Shumaker 212075 1-6-14
Brandon Chavez / [signature] 207742 / 1-6-14
Operator (print) Signature Z # Date

5.[23] Filtered vent information:
Manufacturer: NUCFIL
Model No.: 019DS
Serial No.: LM-354
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.: 69180

Comments:

5.[35] Performed By: Brandon Chaver / RUSSELL SHOMAKER / 204742 / 2/2073 / 1-6-14 / 1-6-14
Operator (print) Signature Z # Date

7.1[4] Reviewed By: Clayton Mullins / 240092 / 1/9/14
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 2
Page 1 of 2

WCRRF DRUM CLOSURE DATA SHEET

6.[3] Drum ID No.: 69180

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: Adam Segovia / [signature] / 276702 / 1-9-14
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 (+/-):		

N/A

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.: 69180

6.[26] Scale File ID number: 019065

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

6.[28] Drum gross weight: ~~452~~ 337.1 lbs 1-9-14

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

Comments: N/C

6.[32] Performed By: Adam Segovia (Operator (print)) | Signature | 276082 (Z #) | 1-9-14 (Date)

7.1[4] Reviewed By: Clayton Mullins (Supervisor or designee (print)) | Signature | 2400921 (Z #) | 1/9/14 (Date)

ATTACHMENT 3
Page 1 of 1

Working Copy
Date: 1/8/14

WCRRF PARENT 55-GAL DRUM PREPARATION DATA SHEET

6.3[21] Prepared Parent 55-Gal Drum Number: 5841239

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): 452.4

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: Adam Segovia / [signature] 1276204 - 8-14
Waste Handling Technician (print) Signature Z # Date

8.1[7] Reviewed By: Clayton Mullins / [signature] 240096 1/9/14
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] 1221452 11-27-14 1325
SOS/SOM or designee (print) Signature Z # Date Time

1937 S872

LTP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Planning and Technical Solutions

Container ID: S841239 Container Type: 85 GAL DRUM Gross Weight (lbs): 461.5065
Total PE-Ci Activity: 1.01E+01 Equivalent Combustible PE-Ci: 3.80E+00
Total Fissile Gram Equivalents: 1.12E+02 Total Surface Dose Rate (mrem/hr): 2
EPA Code(s): D007; D008; D009
Waste Description: Nitrate salts

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

Drum venting and gas sampling completed on 2/27/13 and Attachment 3 of DOP-1030 is attached. RTR pre-screen indicated liquid and lead liner in the drum.

Potential Safety Risks: Nitrate salt drums often contain free liquids and are packaged in individual plastic bags. Net weight is ~326 lbs. and generator data shows 9 items of nitrate salts with weights ranging from ~8-59 lbs.

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

IHS Representative

Potential IHS Safety Risks: May contain D007, D008 & D009
May contain liquid. Unsure of identification

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

LTP Engineering

Waste container remediation compliant with applicable facility safety basis requirements: ☒ Yes ☐ No
Engineering Comments: NA
Performed By: Valerie Rhodes (LTP Engineering (Print)) | Signature | 112609 (Z#) | 9/30/13 (Date)

TRU Remediation Operations

Potential Safety Risks: Use Proper PPE And Kitty Litter Ratio

Performed By: Gilbert Martinez (TRU Operations (Print)) | Signature | 148235 (Z#) | 12/6/13 (Date)

Operations Manager or designee

Processing Determination: ☒ Accept ☐ Reject
OM or designee Comments: Do not push or press on waste with hands. Use heavyweight gloves during processing of waste.

Approved By: Jose Perez (OM or designee (Print)) | Signature | 221452 (Z#) | 12/6/13 (Date)

Noncertified TRU Waste Drum Item Information

DrumID: 019559

Item No	ItemID	Process Status	Net Wt (kg)	Matrix	Meas Code	SNM (g)	MT	Auth (Pg/Ln)		Comments
1	MX2-31A		3.410	NITRATE SALTS		1.81	52	6/14	G468	
2	OX103-32A		11.590	NITRATE SALTS		8.7	52	6/14	G468	
3	MX3-33A		23.750	NITRATE SALTS		10.58	52	6/14	G468	
4	LR-36A		17.390	NITRATE SALTS		7.7	52	6/14	G468	
5	MX4-34A		8.070	NITRATE SALTS		5.74	52	6/14	G468	
6	OX101-26A		24.550	NITRATE SALTS		42.28	52	6/14	G468	
7	OX102-30A		23.070	NITRATE SALTS		21.82	52	6/14	G468	
8	LR-36NEA		9.430	NITRATE SALTS		1.36	52	6/14	G468	
9	OX104-37A		26.930	NITRATE SALTS		18.76	52	6/14	G468	

Noncertified Waste Drum Material Summary

Gross Wt (kg): 209.3

Material Type	SNM (grams)	Items Net Wt (kg)
52	118.75	148.19
Totals	118.75	148.19

ATTACHMENT 2

Page 1 of 2

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

5.[3] 6.[3] Waste Container Unique Identifier: S84/239

PE-Ci Content: 10.12619383

PE-Ci Equivalent Combustible content: 8.911050573

FGE content: 111.8390252

Weight (lb): 461.5065

Outermost Waste Container configuration:

☑ Vented 85-gal ☐ Unvented 85-gal ☐ Unvented 55-gal

5.[3] 6.[3] Performed By: Chris Vigil [signature] 1163082 2-27-13

LTP-DDP Supervisor designee (Print) Signature / # Date

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

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

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

ATTACHMENT 2
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5 [3], 6 [3] Waste Container Unique Identifier: S841239

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

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

(CS)

- UNVENTED DRUMS are not stacked. (e.g., are in a singular planar array). (SR 4.6.1 and NCS-CSLA-12-0166) ☐ SAT ☐ UNSAT ☑ N/A
- UNVENTED DRUMS containing MAR ≥ 300 PE-Ci are separated from each other by at least 10 ft. (SR 4.6.3) ☐ SAT ☐ UNSAT ☑ N/A
- Distance between the posted perimeter of the UNVENTED WASTE CONTAINER STORAGE AREA and areas where normal operations occur is at least 15 ft [AC 5.6.8(9a)] ☐ SAT ☐ UNSAT ☑ N/A
- Access restrictions for the UNVENTED WASTE CONTAINER STORAGE AREA are in place. (SR 4.6.2) ☐ SAT ☐ UNSAT ☑ N/A

Comments: N/A

5 [19], 6 [28] Performed By: Chris Vigil [signature] 163082 2-27-13
LTP-DDP Supervisor/designee (Print) Signature / # Date

10 [13] Reviewed By: Chris Vigil [signature] 163082 2-27-13
LTP-DDP Supervisor/designee (Print) Signature / # Date

10 [6] Acceptance criteria satisfied ☑ YES ☐ NO

10 [8] Approved By: Chris Vigil [signature] 163082 2-27-13
SO-SO Manager/designee (Print) Signature / # Date

DVS Gas Determination Results Report

Date: 2/27/2013

Waste Container Number: S841239

Batch Number: DVS2130227

Filter Type Installed: 08DS

Number of Filters Installed: 1

Flammable Volatile Organic Compounds (VOCs)

Compound	Concentration (ppmV)	Upper Calibration Range (ppmV)	Exceeds Calibration (Y/N)	Calculated Value (if exceeds calibration)
Methanol	20.17	1591.00	N	N/A
Diethyl Ether	0	503.00	N	N/A
1,1 Dichloroethene	0	402.80	N	N/A
Acetone	5.8	1502.00	N	N/A
1,1-Dichloroethane	0	400.80	N	N/A
Cis 1,2-Dichloroethene	0	400.20	N	N/A
Methyl Ethyl Ketone	0	1503.00	N	N/A
Cyclohexane	0	497.30	N	N/A
Benzene	0	1492.00	N	N/A
1,2-Dichloroethane	0	400.80	N	N/A
N-Butyl Alcohol	0	200.20	N	N/A
Methyl Isobutyl Ketone	0	501.90	N	N/A
Toluene	0	1491.00	N	N/A
Chlorobenzene	0	186.60	N	N/A
Ethylbenzene	0	100.00	N	N/A
m,p-Xylene	0	100.09	N	N/A
o-Xylene	0	100.30	N	N/A
1,3,5-Trimethylbenzene	0	50.64	N	N/A
1,2,4-Trimethylbenzene	0	50.17	N	N/A

Flammable Tentative Identified Compounds (TIC)

Compound	Concentration (ppmV)	CAS Number
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

Total Flammable VOCs	25.97	I.V.R. Intial and Date	JAB 2/27/13

Compound	Concentration		Upper Calibration Range		Exceeds Calibration (Y/N)
Hydrogen	0.321843	%	6.45	%	N
Methane	0.000	ppm	15990.00	ppm	N

Comments:

AN-340

Doug Essele
DVS Operator Print Name

Signature

02-27-13
Date

9-14
0550 Assuming WCRR operation center - JColeman
0605 Beginning outside rounds
0606 Late entry at 0600, air quality personnel arrived to perform weekly stack monitoring. (JC)
0607 Air quality completed weekly stack monitoring.
0615 Pre-job being conducted by SOS.
0620 Beginning inside rounds.
0632 Outside rounds complete.
0633 Item #63 is OOS, okay to proceed per CSE documentation.
0637 Inside rounds complete.
0638 Both rounds reviewed by SOS.
0700 Mode change complete. We are now in operations in WCR yard and 5069.
0704 Permission granted to stage the drums being shipped to Area E
0704 Permission granted to lower the vehicle access gates.
0708 Late entry at 0704 operators entered 5069 to resume operations on drum #68817. (JC)
0[illegible] Electricians arrived to change out a ballast in the RCT's room, WO#00483120-01.
0[illegible] Vehicle access gates restored. Shipment out of WCRRF to Area E complete.
0[illegible] Bagging off 1 daughter, bagging on S841239.
1010 Bag off/on complete.
1011 Initiating a drum movement from transportainer to 50-69
1018 Notified that the urinal upstairs in 50-54 is overflowing. Maintenance was performed on it earlier this morning.
1020 Contacted maintenance manager (Louis Smith). Also contacted custodial to perform mopping.
1030 Drum movement into 5069 complete.
1128 Bagging off 1 daughter, bagging on another daughter.
1143 Bag off/on complete.
234 Operators out for lunch, second team entering 5069 to continue processing drum #S841239.
1325 Tour of 5069 beginning. Group being briefed to the RCT
337 Tour group entering 5069.
Continued on next page - JColeman

69159 69188
68766

1-9-14 Continued from previous page - JColeman

1401 Initiating a drum movement from 50-69 to a transportainer

1402 Late entry at 1352, the tow grip. lifted 50-69 (JC)

1405 Informed by the SOM that the mens restroom upstairs 50-54 has been fixed by maintenance.

1430 Drum movement of JC 1-9-14 out of 50-69 complete.

1437 Beginning outside rounds.

1452 Outside rounds complete. RCRA's have been completed

1508 Denesting 4 drums.

1617 Notified by PIC inside WCRR that 2 operators' booties have come up hot. RCT's investigating.

1640 RCT's have given the operators the all clear to continue with prepping the denested parents.

1641 Bagging off 1 daughter and placing the port cover on, then operators will continue with prepping parents.

1706 Denesting and bag off complete.

1730 Beginning inside rounds.

1743 Item #23 is OOS, Okay to proceed per CSE documentation.

1752 Inside rounds complete.

1804 Both rounds reviewed by SOS.

1810 Mode change complete. We are now in Warm stand by in WCRRF yard and 50-69.

1-9-14 1830 End of day. CCO position secure - JColeman.

No further entries this page.

1-9-14 WCRRF SOM

0558 Reviewed logs and assumed the WCRR SOM position [illegible]

0638 Completed attending the pre-job brief conducted by the SOS (Clayton) The safety message was receptacle lid closure, and fork truck safety when manipulating hi loads, forktruck drivers can drive in a reverse condition. There is one transfer out. -18 containers total for AREA-G. The SOM requested RCRA inspectors to keep an eye on the portable generators. Shift orders in effect were reviewed. The ES/PM discussed initiatives

0646 Reviewed and approved Operator AIDS 50-09-015 R1 (PCM instructions) 50-09-013 R1 (Iodine Model 214 instructions) 50-09-014-R1 (HFM instructions)

0653 Inside temperature of 50/69 is noted at 67°F

0700 Mode Change: 50/69 and spend transition from warm/warm to Operations/Operations

0703 Operators enter 50/69 to initiate processing.

0742 Outside operators begin staging drums/containers for the transfer out.

0810 All staging is completed.

0835 Reviewed work package 483120-1/50-84 Spot Relamp - and approved to replace the ballast in the RCT office.

0858 The transfer out was completed. Observed all personnel with proper PPE

0940 Inside operators initiate bag off of 1 daughter, and bag on Patient S841239 Operators utilized enough Kitty Litter to reduce the dose and not generate additional PCB

1010 Bag off is complete and operations will continue to process

1018 OCD notified the SOM, that 50-54 upstairs bathroom was overflowing maintenance and utilities were contacted for support.

1030 Drum movement into 50/69 completed.

1128 Inside Operations report Bagging off 1 daughter and bagging on another.

1143 Bag off noted complete

1154 Completed walkthru of LLW staging area with RP-1, RP 1 management (G. Schram) and WMC. Discussion focused on securing a LLW - path feed and SWB

1158 Late Entry for 1135, completed walk thru with EWMO coordinator and he requested removal of 1x2 ft asphalt and repatch, an FSR is to be submitted.

1220 Completed daily Noon phone call for status of WCRRF

1234 Operations rotated 1st team out for lunch and the second team is in.

1301 Completed submittal of FSR 116240 to remove asphalt and repatch per EWMO discussion

1400 Completed facility tour with OM and STR, - approximate departure is 1/2 hour

1413 Outside operations initiate movement of 7 drums out of facility to transportainer.

1429 Move out of the facility was completed.

1508 Operations initiate de-nesting 7 drums

(Continued on Next Page)

1-9-14 WCRR SOM (cont)

1617 Notified by OCO that RCT reported 2 operator booties came up hot. More information to follow.

1625 Completed attending the Weekly Production PM/Status meeting.

1700 Operations completed bag off and placed the post covers on the WCG they will initiate prepping the 4 drums for bag on tomorrow per SOS (C Mullens) and PM (Jose). They will also inspect gloves and clean the WCG - sweep floor.

1500 Ensured inside temperature is set at 77°F, setpoint inside temp was at 65°F Room temp

1810 Ensure WCG is in a safe configuration, conducted review of Rounds and RCRA Mode Change: 56/69 and you transition from Operations/Operations to Warm Idle

1817 Secured the SOM position. [illegible]

No further Actions/Entries this page

[illegible]

USWS5100

75 1-9-14 ~~1-8-14~~ CM 1-9-14 PROJECT NAME WCRRF SOS Log Book NOTEBOOK NO.

0600 Assuming SOS position. CA
0615 Starting Pre-Job, discussed watching out for all potential sharps and pinch points. Also discussed forklift safety, with moving large ~~object~~ CM 1-9-14 objects, able to drive backwards if objects are too large.
0640 Pre-Job complete.
0654 Signed off on the rounds.
0700 Mode change complete, WCRRF yard and 50-69 are now in Operations.
0744 Starting shipment out of WCRRF.
0844 Electricians here to change out ballast in RCT office, WO#00483120-01.
0900 Shipment out complete.
0940 Bagging off, bagging on 541239.
1005 Electricians work complete.
1010 Bag off/on complete.
1018 Notified that the mens urinal upstairs inside 50-54 is overflowing, OCO contacting maintenance to correct this minor issue.
1025 Starting movement in to 50-69.
1029 Movement in complete.
1128 Bagging off 1st daughter, bagging on a 2nd.
1142 Bag off/on complete.
1325 Tour of 50-69 onsite, being briefed to RWP, 2011-0018 Tours/Walk-Downs
1337 Tour group entering 50-69.
1352 Tour group exited 50-69.
1401 Starting movement out of 50-69.
1405 Mens urinal upstairs in 50-54 has been fixed by maintenance.
1430 Movement out complete.
1508 Starting to denest 4 drums.
1617 Notified by lead inside that 2 operators booties have come up elevated.
1640 RCT's have given the all clear to continue denesting.
1641 Bagging off 2nd daughter to complete processing
1706 Denesting and bag off complete.
1804 Signed off on the rounds.
1810 Mode change complete, WCRRF yard and 50-69 are now in Warm Standby.
1-9-14 1815 Securing SOS position. CA
MA

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-RTR2-14-0005
Examination Date:	1/15/2014
Waste Container ID:	69162
Video/Audio Recorded Media Number:	LA-RTR2-14-0005 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.: 153.5 kg Tare Wt.: 33.4 kg Net Wt.: 120.1 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:	85 %

CCP Radiography Data Sheet

Waste Container ID: 69162

Section 3: Container Inventory and Comments (Detailed descriptions)

IM: Scrap metal

AM:

OM: Scrap lead

OI:

C: Tape roll

R:

XPM: Plastic bags, liner lid

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP): Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	0.2
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	5.0
Other Inorganic Materials (OI)	
Cellulosics (C):	0.1
Rubber (R):	
Plastics (waste materials) (XPM):	6.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	108.8
Soils (S):	
Total WMP Weight:	120.1

CCP Radiography Data Sheet

Waste Container ID: 69162

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 Hasselt	1/15/2014
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	69162	Count Sequence Number:	1236
Operator:	CLREMO67292\User		
Assay Start:	1/27/2014 2:23:41 PM		
Description 1:	4LANDA0041		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	S3000		
Container Type:	55 Gal Drum		
Weight:	Net: 120.0 kg	Net:	120.0 kg
Container:	Volume: 208.0 l	Full:	85.0 %
Density:	0.680 kg /l		

System Configuration

Counter:	MILCC		
Efficiency Description:	208 Drum Near 1_01_13		
Segments:	Number: 2	Offset:	0
Count Type:	Item Assay		
Collimator/Geometry Setting:	Near - 1		

Errors quoted at 1.000 sigma

********** Radioassay Data Sheet **********

Engine Version: TMU Gamma 1.4

Count Sequence Number: 1236
Assay Instrument: MILCC
Analysis Method: CCP-TP-076 v 0
Item ID: 69162

Batch Number: 4LANDA0041
Location: LANL TA-54
Software Version: NDA 2000 V.4.0
Analysis Date: 1/27/2014

Net Weight	120000.0 g		
Pu mass	3.81E+001	+-	1.13E+001 g
TRU Alpha Activity	7.75E+000	+-	1.80E+000 Ci
TRU Activity Concentration	6.46E+004	+-	1.50E+004 nCi/g
Pu-239 Equivalent Activity	7.85E+000	+-	1.80E+000 Ci
Pu-239 FGE	3.53E+001	+-	1.13E+001 g
Decay heat	2.52E-001	+-	5.92E-002 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NA22	5.67E-011	3.55E-007	1.17E-007	2.44E-007
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	7.81E-007
U233	<LLD	<LLD	0.00E+000	4.88E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	1.11E-006
NP237	9.19E-002	6.48E-005	1.97E-005	1.10E-006
PU238	5.60E-003	9.57E-002	3.70E-002	4.37E-004
U238	9.14E+002	3.07E-004	9.39E-005	4.03E-005
PU239	3.51E+001	2.18E+000	6.98E-001	9.94E-003
PU240	2.89E+000	6.56E-001	2.11E-001	2.99E-003
AM241	1.41E+000	4.83E+000	1.65E+000	1.76E-002
PU241	5.05E-002	5.20E+000	1.69E+000	2.37E-002
PU242	5.40E-002	2.13E-004	7.16E-005	0.00E+000
AM243	2.66E-004	5.33E-005	1.63E-005	5.75E-006

Errors quoted at 1.000 sigma

Operator: Brit Lupton Date: 1-31-14

ITR: [illegible] Date: 2/3/14

Automated Independent Technical Review

Count Sequence Number: 1236
Counter ID: MILCC
Container ID: 69162
Waste Matrix Code: S3000
Sequence Type:

Batch Number: 4LANDA0041
Count Type:
Assay Date: 1/27/2014

Comments	Disposition
Data Combiner Analysis No Multi-Modal Results Combination TMU results available for reporting purposes.	OK
MGA Analysis Note: The measured and declared isotopics are inconsistent.	OK
Gamma Analysis Analysis Status: No errors. Total U mass is greater than the upper limit of 500.0 g.	OK U238 verified by EA on gamma spectrum. Results valid.
Miscellaneous	No additional nuclides contributing to 95% of the radiological hazard identified.

Expert Review by: [signature] Date: 1/31/14

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **69162**

BDR Number: **LA14FG12010**

Sampling Date: **1/22/2014**

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	1.24	U
60-29-7	Ethyl Ether	0.12	U
75-35-4	1,1-Dichloroethylene	0.20	U
67-64-1	Acetone	0.42	U
75-34-3	1,1-Dichloroethane	0.72	U
156-59-2	cis-1,2-Dichloroethene	0.09	U
78-93-3	Methyl ethyl ketone	0.90	U
110-82-7	Cyclohexane	0.59	U
71-43-2	Benzene	0.17	U
107-06-2	1,2-Dichloroethane	0.56	U
71-36-3	1-Butanol	0.38	U
108-10-1	Methyl isobutyl ketone	0.66	U
108-88-3	Toluene	0.93	U
108-90-7	Chlorobenzene	0.67	U
100-41-4	Ethylbenzene	0.59	U
108-38-3/106-42-3	m- and p-Xylene	0.38	U
95-47-6	o-Xylene	0.36	U
108-67-8	1,3,5-Trimethylbenzene	0.65	U
95-63-6	1,2,4-Trimethylbenzene	0.78	U

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

Quantitation Report (QT Reviewed)

InstName : FGA Unit 12

Data Path : C:\msdchem\1\DATA\140122c\
Data File : 69162.D
Acq On : 22 Jan 2014 1:02 pm (#1); 22 Jan 2014 1:01 pm (#2)
Operator : SA
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jan 22 13:10:30 2014
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	9853418	207.75 ppmv	0.00
15) Chlorobenzene-d5	6.636	117	7477071	178.75 ppmv	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-RTR2-14-0005
Examination Date:	1/15/2014
Waste Container ID:	69180
Video/Audio Recorded Media Number:	LA-RTR2-14-0005 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.: 153.0 kg Tare Wt.: 33.4 kg Net Wt.: 119.6 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: 69180

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):	8.0
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	4.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	107.6
Soils (S):	
Total WMP Weight:	119.6

CCP Radiography Data Sheet

Waste Container ID: 69180

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	1/15/2014
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	69180	Count Sequence Number:	1238
Operator:	CLREMO67292\User		
Assay Start:	1/27/2014 4:01:57 PM		
Description 1:	4LANDA0041		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	S3000		
Container Type:	55 Gal Drum		
Weight:	Net: 120.0 kg	Net:	120.0 kg
Container:	Volume: 208.0 l	Full:	70.0 %
Density:	0.820 kg /l		

System Configuration

Counter:	MILCC		
Efficiency Description:	208 Drum Near 1_01_13		
Segments:	Number: 2	Offset:	0
Count Type:	Item Assay		
Collimator/Geometry Setting:	Near - 1		

Errors quoted at 1.000 sigma

********** Radioassay Data Sheet **********

Engine Version: TMU Gamma 1.4

Count Sequence Number: 1238
Assay Instrument: MILCC
Analysis Method: CCP-TP-076 v 0
Item ID: 69180

Batch Number: 4LANDA0041
Location: LANL TA-54
Software Version: NDA 2000 V.4.0
Analysis Date: 1/27/2014

Net Weight	120000.0 g		
Pu mass	1.17E+002	+-	3.89E+001 g
TRU Alpha Activity	2.92E+001	+-	8.14E+000 Ci
TRU Activity Concentration	2.43E+005	+-	6.78E+004 nCi/g
Pu-239 Equivalent Activity	2.96E+001	+-	8.14E+000 Ci
Pu-239 FGE	1.10E+002	+-	3.88E+001 g
Decay heat	9.53E-001	+-	2.69E-001 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NA22	1.48E-010	9.26E-007	3.28E-007	4.12E-007
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	1.93E-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	2.14E-006
NP237	2.80E-001	1.97E-004	6.78E-005	2.45E-006
PU238	1.16E-002	1.98E-001	7.55E-002	5.77E-004
U238	2.30E+003	7.72E-004	2.66E-004	7.91E-005
PU239	1.10E+002	6.80E+000	2.41E+000	1.98E-002
PU240	7.02E+000	1.59E+000	6.07E-001	4.63E-003
AM241	6.00E+000	2.06E+001	7.75E+000	3.27E-002
PU241	2.22E-001	2.29E+001	8.71E+000	6.65E-002
PU242	2.34E-002	9.24E-005	3.52E-005	0.00E+000
CM243	2.03E-006	9.96E-005	3.44E-005	1.47E-005

Errors quoted at 1.000 sigma

Operator: Brittnpth Date: 1-31-14

ITR: Dan Barton Date: 2/3/14

Automated Independent Technical Review

Count Sequence Number: 1238
Counter ID: MILCC
Container ID: 69180
Waste Matrix Code: S3000
Sequence Type:

Batch Number: 4LANDA0041
Count Type:
Assay Date: 1/27/2014

Comments	Disposition
Data Combiner Analysis No Multi-Modal Results Combination TMU results available for reporting purposes.	OK
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.
Gamma Analysis Analysis Status: No errors.	Spectral distortion observed. Results invalid.
Miscellaneous	No additional nuclides contributing to 95% of the radiological hazard identified. Spectral distortion due to high-deadtime has made the gamma analysis invalid. DRUM REJECTED.

Expert Review by: _____ Date: 1/31/14

5841239

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **69180**

BDR Number: **LA14FG12010**

Sampling Date: **1/22/2014**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen *	448.50	
74-82-8	Methane	6.56	U
67-56-1	Methanol	1.24	U
60-29-7	Ethyl Ether	0.12	U
75-35-4	1,1-Dichloroethylene	0.20	U
67-64-1	Acetone	0.42	U
75-34-3	1,1-Dichloroethane	0.72	U
156-59-2	cis-1,2-Dichloroethene	0.09	U
78-93-3	Methyl ethyl ketone	0.90	U
110-82-7	Cyclohexane	0.59	U
71-43-2	Benzene	0.17	U
107-06-2	1,2-Dichloroethane	0.56	U
71-36-3	1-Butanol	0.38	U
108-10-1	Methyl isobutyl ketone	0.66	U
108-88-3	Toluene	0.93	U
108-90-7	Chlorobenzene	0.67	U
100-41-4	Ethylbenzene	0.59	U
108-38-3/106-42-3	m- and p-Xylene	0.38	U
95-47-6	o-Xylene	0.36	U
108-67-8	1,3,5-Trimethylbenzene	0.65	U
95-63-6	1,2,4-Trimethylbenzene	0.78	U

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

Quantitation Report (QT Reviewed)

InstName : FGA Unit 12

Data Path : C:\msdchem\1\DATA\140122c\
Data File : 69180.D
Acq On : 22 Jan 2014 1:14 pm (#1); 22 Jan 2014 1:13 pm (#2)
Operator : SA
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jan 22 13:24:01 2014
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	9578074	207.75 ppmv	0.00
15) Chlorobenzene-d5	6.636	117	7390001	178.75 ppmv	0.00
Target Compounds					Qvalue
1) Hydrogen	1.907	GC1	127936m	448.50 ppmv	

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

S844684

S844684

Containe... 767403

File Options Reports Help

S844684

767403	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

S844684

- S844684
  - W798274
  - LA00000068756
    - LA00000069153 -EMPTY
    - LA00000069077 -WLS
      - LASB50032
    - LA00000069154 -LANL
      - LASB50061
    - LA00000069102 -WLS
      - LASB50048
    - LA00000069073 -LANL
      - LASB50062

Task History

Transfer Details

Transfer Amount	Transfer Unit	Item	Measured Weight	Measured Weig...
100.0	%	LA00000069073	0.0	kg

Working Copy
Date: 12-22-13

ATTACHMENT 1
Page 1 of 4

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: 68756

6.2[4] Date Processed: 12-22-13

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

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

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

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

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

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

Performed By: Adam Segovia / Adam Segovia / 1276708 / 12-22-13
Waste Handling Tech (print) Signature Z # Date

ATTACHMENT 1
Page 2 of 4

4.1[6][B] Parent Waste Container No.: 68756

5.[18] Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable: 454.4 lb

6.2[5][A] Parent Drum Lead Blanket Weight (lb): 83.00 lb

6.2[5][B]/ 6.2[6] Total Parent Drum Weight (lb) 537.4 lb

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

6.2[17][D] Drum lift hinge pin retaining clip replaced. Initials Z# Date

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.: 68756

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	69077	69073	69154	
10.1[4]	Daughter Drum Filter No.	JL-853	JL-871	KL-542	N/A
10.1[4]	Daughter Drum Bag Filter No.	L-11521	L-11512	L-8184	
10.1[4]	Daughter Drum Purchase Order No.	501892	501892	501323	
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.	6cpvc1.52spc			
	Serial No.	L 7012			
	Date of Manufacture	5-13			
10.2[5]	POC ID No	69102			
10.2[7][B]/10.2[6]	POC Item Description	Nitrate salts Kitty litter			N/A
10.2[13]	POC Assembly closed per Manufacturer's instructions. (Initial and Z#)	BC 204742			
10.2[14]	POC Assembly Gross Weight (lb)	348.0			
10.2[15]	POC Rad. Survey Results (mrem/hr)	1000			
10.3[3][A]	Approx. Containerized Liquid Vol./Units	N/A	N/A	N/A	
10.3[5][A]	Free Liquid Volume/Units	6 GALLONS	3 oz	N/A	
10.3[7][A]	Opaque/Non-penetrable Item Description:	lead shielding	Lead	Lead	
10.3[9][A]	PCB-contaminated Waste Description	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 (%)	100%	70%	20%	
10.5[3]/10.6[2]	Description Waste Added During Processing	Kitty Litter (BOP OUT BAG)	Plastic Kitty litter	Plastic Kitty litter	

ATTACHMENT 1
Page 4 of 4

4.1[6][B] Parent Waste Container No.: 68756

Comments: NITRATE SALTS, Degraded lead, kitty litter, hex armour gloves, one poly liner lids, stubout bags, 6 gallons of liquid pH of 4 unable to neutralize with acid Neutralizer, Hex armor

11.1[1] Performed By: Brandon Chavez / [signature] 104742 12-23-13
Waste Handling Tech (print) Signature Z # Date

11.1[8] Reviewed By: Gilbert Martinez [signature] 1145255T 1/16/14 40
SOS or designee (print) Signature Z # Date/Time

ATTACHMENT 2
Page 1 of 1

Working Copy
Date: 12/23/13 HS

WCRRF OVERPACK DRUM ASSEMBLY PREPARATION DATA SHEET

5.[3] Overpack drum information:

Purchase Order No.: 501563
Lot No.: 0238366
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:
Model No.:
Serial No.: N/A
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: N/A / / /
Waste Handling Technician (print) Signature Z # Date

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

5. [18] 2-in. bung plug torque value: N/A in-lb

Comments: prepped at TA-54

8.1[1] Performed By: Brandon Chavez / Z04102 / 12-23-13
Waste Handling Technician (print) Signature Z # Date

8.1[6] Reviewed By: Gilbert Martinez / M72355 / 1/10/14
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 5
Page 1 of 1

WCRRF OVERPACK DRUM CLOSURE DATA SHEET 12/23/13

7.[17] Overpack Drum Unique Identifier No.: 69153

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

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

Performed By: Brandon Chavez / [signature] 204742 / 12-23-13
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): 169.6 lb

Comments: MC

8.1[1] Performed By: Brandon Chavez / [signature] 204742 / 12-23-13
Waste Handling Technician (print) Signature Z # Date

8.1[7] Reviewed By: Gilbert Martinez / [signature] 142351 / 1/10/14
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 1
Page 1 of 2

WCRRF DRUM PREPARATION DATA SHEET 12/18/13

5.[34][E] Drum ID No.: 69073

5.[3] Drum information:
Purchase Order No.: 54892
Lot No.: 0244449
Manufacture Date: 13

5.[17] Drum Liner Bag/Filter Assembly:
Manufacturer: BOP
Model No.: 6C PVC 1.5-2 5 PVC
Serial No.: 1-11512
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: Brian Cedar / [signature] 128754 12/18/13
Operator (print) Signature Z# Date

5.[23] Filtered vent information:
Manufacturer: NUCFil
Model No.: 019DS
Serial No.: JL-871
Manufacture Date: 10/11

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

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

5.[30] Scale File ID number: 019065

ATTACHMENT 1
Page 2 of 2

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

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

5.[34][E] Drum ID No.: 69073

Comments: N/C

5.[35] Performed By: Brian Cordova | [signature] | 287541 | 12/18/13
Operator (print) | Signature | Z # | Date

7.1[4] Reviewed By: Gilbert Martinez | [signature] | 114235 | 1/10/14
Supervisor or designee (print) | Signature | Z # | Date

ATTACHMENT 2
Page 1 of 2

WCRRF DRUM CLOSURE DATA SHEET

6.[3] Drum ID No.: 69673

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: Adam Segovia (Operator (print)) [signature] (Signature) [illegible] (Z #) 11/20/2013 (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 (+/-):		

N/A

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.: 67073

6.[26] Scale File ID number: 019065

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

6.[28] Drum gross weight: 256.4 lbs

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

Comments: n/a

6.[32] Performed By: Brandon Chavez / [signature] 1204702 12-23-13
Operator (print) Signature Z # Date

7.1[4] Reviewed By: Gilbert Martinez / [signature] 1149270 1/14/14
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 1
Page 1 of 2

Working Copy

WCRRF DRUM PREPARATION DATA SHEET Date: 12/18/13 HS

5.[34][E] Drum ID No.: RS 12-18-13 69077

5.[3] Drum information:
Purchase Order No.: 501892
Lot No.: 0744449
Manufacture Date: 13

5.[17] Drum Liner Bag/Filter Assembly:
Manufacturer: BOP
Model No.: 6CPVC-15-2 SPVC
Serial No.: L-11521
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	12.18.13
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: Brian Cordova (Operator (print)) [signature] (Signature) 1282344 (Z #) 12/18/13 (Date)

5.[23] Filtered vent information:
Manufacturer: NUCFIL
Model No.: 019DS
Serial No.: JL-853
Manufacture Date: 10/14

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.: 69077

Comments: N/C

5.[35] Performed By: Brian Cordova [signature] 1293144 12-18-13
Operator (print) Signature Z # Date

7.1[4] Reviewed By: Gilbert Martinez [signature] 1149235 1/16/14
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 2
Page 1 of 2

WCRRF DRUM CLOSURE DATA SHEET

6.[3] Drum ID No.: ~~681~~ AS 69077

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: Adam Segura (Adam Segura) 07/20/2013-22-13
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.: 69077

6.[26] Scale File ID number: 019065

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

6.[28] Drum gross weight: 293.8 lbs

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

Comments: N/A

6.[32] Performed By: Brandon Chavez [signature] 1204782 12-22-13
Operator (print) Signature Z # Date

7.1[4] Reviewed By: [illegible] [signature] 1412351 1/10/14
Supervisor or designee (print) Signature Z # Date

Date: 8-13-13 CW

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

Drum ID#: 69154

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 #: 501323
Lot #: 02327220
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 #: 6CPVC 1-5-23PVC
Serial #: L-8184
Date of Manufacture: 3/13

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

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

4. Install Lid/Drum Filter

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

RECORD drum filter information:

Manufacturer: NUCFIL
Model #: D19DS
Serial #: RL-542
Date of Manufacture: 11/12

RECORD torque wrench information:

Filter torque wrench:		Jam Nut / Bung torque wrench:	
M&TE ID #:	100216	M&TE ID #:	038369
Cal Expiration Date:	12-18-13	Cal Expiration Date:	12-18-13
Range (ft-lbs or in-lbs)	40-200	Range (ft-lbs or in-lbs):	10-80
Tolerance:	±4%CW ±6%CCW	Tolerance:	±3%CW ±6%CCW

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

- [x] Yes
- [ ] No

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

5. Weigh Drum Assembly

RECORD weight information

Tare wtght (lbs) 76
File ID #: 019065

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

6. Label Drum Assembly

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

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

Operator Print: MICHAEL MONTOYA Operator Sign: [signature] Z#: 191352 Date: 8/13/13

Verifier Print: Brandon Chavez Verifier Sign: [signature] Z#: 204772 Date: 12-23-13

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

DRUM ID#: 69154

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 # : 038370

Cal expiration date: 8-2-14

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.): 134.4

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: Brandon Chacez Date 12-23-13

Verifier Print/Sign: Edward Marshall Date: 12-23-13

ATTACHMENT 3
Page 1 of 1

12-22-13

WCRRF PARENT 55-GAL DRUM PREPARATION DATA SHEET S8441684 UR 9-24-14

6.3[21] Prepared Parent 55-Gal Drum Number: ~~S8441683~~ S8441684

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): 454.3

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] 12-22-13
Waste Handling Technician (print) Signature Z # Date

8.1[7] Reviewed By: [illegible] [signature] [illegible]
Supervisor or designee (print) Signature Z # Date

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

8.1[8][D] Approved by: [illegible] [signature] [illegible]
SOS/SOM or designee (print) Signature Z # Date Time

Salvage Drum

NOMINISTRA 72

WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Production Control Container relabeled @ 412 & given new id # in WCATS B. Smyllie 12/21/1

Container ID: S844684 / 085750 Container Type: 85-GAL / Gross Weight (lbs): 435 /

Inner Seal #: 015324 / Filter Prefix: LAVC Filter Serial #: JF-319 /

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

TWSR Comments: LEACHED SOLIDS MST 12 /

Total PE-Ci Activity: 8.77E+00 / Equivalent Combustible PE-Ci: 3.29E+00 / AM-241 PE-Ci: 7.66E-01

Total Fissile Gram Equivalents: 94.8 / Total Surface Dose Rate (mrem/hr): 2 /

EPA Code(s): None

NCR RTR/NDA Comment: None

RTR Pre-Screen Date: 5/21/2010 Comment: 55GAL not vented, liner inside 55GAL not vented, 1.5 cups of liquid Liquid Location: 29" inside 55GAL

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 1.0 volume of nitrate salts.

Performed By: R. W. Jones (Production Control (Print)) Signature: R. W. Jones Z Number: 117434 Date: 1.10.12

SUSAN S. RAMSEY Signature: Susan S. Ramsey Z Number: 100681 Date: 12/18/12

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: Possible Nitrate Salts. Net Wt: 312 lb. No generator data available for review. No RTR BDR available for review. Oracle database indicates drum contents consist of nitrate salts. Nitrate salts from 1984 time-frame were typically uncemented and placed in plastic bags then packaged in 55 gallon drums. Nitrate salts may also contain free-liquids.

May require RWP for >1000 and <10,000 mrem/hr @ 30cm

Performed By: Valerie Rhodes (WDP Engineering (Print)) Signature: Valerie Rhodes Z Number: 112609 Date: 5/3/12

TRU Remediation Operations

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

Other Specific Safety Concerns: USE Proper PPE and Kitty Litter Hard

Processing Determination: ☑ Accept ☐ Reject

TRU Remediation Operations Comments: Do not push or press on waste with hands. Use heavy duty gloves during processing.

Performed By: Gilbert Martinez (TRU Remediation Operations (Print)) Signature: Gilbert Martinez Z Number: 149235 Date: 12/6/12

Jose Jarez Signature: Jose Jarez Z Number: 221472 Date: 12/6/12

IHS review: 2061362 12.19.12

NOTES:
D007 = chromium
D008 = lead

ATTACHMENT 1
Page 1 of 1

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

5.[1] Sample Date: 4/18/13

Container No. (5.[1])	984464					
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])	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: Erik Loechell — CCP (Print) — Z# 234183

Reviewed By: Nathan Wales — CCP (Print) — Z# 238866

Comments:

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

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

6.1[3] Performed By: Susan Ramsey, Susan S Ramsey, 110068, 5/20/13
Waste Handling Operator (print) — Signature — Z# — Date

Quantitation Report (QT Reviewed)

InstName : FGA Unit 12

Data Path : C:\msdchem\1\DATA\130418c\
Data File : S844684.D
Acq On : 18 Apr 2013 3:55 pm
Operator : EL
Sample :
Misc : 55 GAL DRUM FROM FILTER-UN-19DS (Sig #1): (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 18 16:04:09 2013
Quant Method : C:\msdchem\1\METHODS\VOCGAS.M
Quant Title : Flammable Gas Analysis for Transportation Only
QLast Update : Wed Feb 20 11:23:15 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
3) Fluorobenzene	4.057	96	8224588	207.75 ppmv	0.00
15) Chlorobenzene-d5	6.636	117	6717109	178.75 ppmv	0.00

Target Compounds	Qvalue

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

VOCGAS.M Thu Apr 18 16:04:40 2013 UNIT12

12-22-13

0550 Assuming WCRR operations center - JColeman
0615 Pre-job being conducted by SOS.
0623 Current temp inside 50-69 is 67°.
0641 Pre-job concluded. Will need to perform snow removal.
0708 Mode change complete. We are now in operations in WCRRF yard and 50-69.
0710 Beginning outside rounds.
0730 Operators entering 50-69 to begin operations.
0745 Outside rounds complete.
0755 Snow removal personnel ~~arrive~~ JC 12-22-13 arrived to perform snow removal in WCRRF yard.
0800 Beginning inside rounds.
0830 Item #63 is OOS, okay to proceed per CSE documentation
0832 Inside rounds complete.
0839 Both rounds reviewed by SOS.
0850 Bagging on 68758.
0905 Bag on complete.
0931 Operators requested to lower 50-69 thermostat to 68°. Permission granted.
1011 Bagging off 1 daughter, bagging on another daughter.
1032 Bag off/on complete. PPE check is SAT.
1037 Initiating a drum movement from 50-69 to a transportainer
1145 Notified by lead RCT that an RCT was checking under the WCG on the 6+15 inch bag out ports and found contamination. The direct reading was 1000 DPM alpha. RCT's will check for JC 12-22-13 removable, then contain it with tape.

Unexpected Condition

1111 Per lead RCT, RCT's checked and there was no removable contamination and on this check the direct reading was 2000 DPM alpha (direct). Smears were taken and the RCT's will mark area with this reading on the tape.
1118 Drum movement ~~out~~ JC 12-22-13 out of 50-69 complete.
1140 Bagging off 1 daughter, bagging on another daughter.
1155 Bag on/off complete. PPE check is Sat.

Continued on next page - JColeman

12-22-13 Continued from previous page-JCOleman
1207 Operators out for lunch.
1305 Operators back from lunch.
1356 Operators denesting 2 drums.
1410 Beginning outside rounds.
1505 Denesting complete. Bagging off and bagging on ~~68755~~ 68756.
1534 Bag off/on complete. PRE check is Sat.
1543 Beginning inside rounds.
1550 ~~Initiating~~ JC 12-22-13 Initiating a drum movement from 52 to a transportainer.
1557 Drum movement out of 50-69 cancelled. WCATS issue and the TSD spreadsheet does not allow it (to split out emp and daughters on different days.)
1620 Inside rounds complete.
1628 Both rounds reviewed by SOS.
1701 Bagging off 1 daughter, bagging on another daughter.
1724 Bagoff/on complete. PRE check is Sat.
1733 Received permission from OM to leave parent ~~ba~~ JC 12-22 drum bagged on overnight in a safe configuration.
1742 Everything is in a safe configuration.
1750 Mode change complete. We are now in warm stand by in WCRRF yard and 50-69. Current temp. in 50-69 67°. Setpoint 68°.
12-22-13 1800 END of day. OCO position secured. JCOleman
HM

No further entries this page

12-23-13

0550 ASSUMMING WCRR OPS CENTER HSMITH
0614 STARTING OUTSIDE ROUNDS
0615 STARTING INSIDE ROUNDS
0615 STARTING PRE JOB BRIEFING
0638 PRE JOB COMPLETED
0640 ITEM #63 INSIDE ROUNDS ODS. POD IN PLACE
PERMISSION TO PROCEED PER CSE DOCUMENTATION
0644 OUTSIDE ROUNDS COMPLETED
0706 INSIDE AND OUTSIDE ROUNDS SIGNED OFF BY SOS
0730 MODE CHANGE TO OPERATIONS IN TA50-69
AND WCRR YARD
0749 PERMISSION GRANTED TO LOWER ACCESS GATES FOR
SHIPMENT OUT OF WCRR
0855 BAGGING OFF 2 DAUGHTERS, 1 POC BAGGING ON 68755
0906 STARTING MONTHLY VALUE ALIGNMENT
0912 VEHICLE ACCESS GATES RESTORED, TRANSPORTAINED DOORS
SECURED & LATCHED SHIPMENT OUT OF TA50-69
IS COMPLETED
0950 BAGON-BAG OFF COMPLETE
1000 COMPLETED MONTHLY VALUE ALIGNMENT.
1022 STARTING MOVEMENT FROM TA50-69 TO TA50-75
1044 COMPLETED MOVEMENT FROM TA50-69 TO TA50-75
1058 BAG OFF-BAG ON ONE DAUGHTER
1117 BAG ON COMPLETED
1225 BAGGING OFF 1 DAUGHTER, POC, INSTALLING PORT
COVERS, TO COMPLETE PROCESSING
1250 ~~1258~~ 12/23/13 HS BAG OFF COMPLETE
1252 MODE CHANGE TO WARM STANDBY IN WCRR
YARD AND TA50-69.
1256 STARTING HEPA-FILTER CHANGE
1319 HEPA-FILTER CHANGE COMPLETED
1330 OPERATORS OUT FOR LUNCH.
1441 PERMISSION GRANTED TO MOVE WASTE FROM
TA50-69 TO TA50-194
1532 OPERATORS ~~WILL BE~~ WILL BE CHANGING STATIONS
#1 & #4 LEFT HAND GLOVES

CONTINUED ON NEXT PAGE HSMITH

WCRR SOM - 12-22-13

0555 Reviewed conditions and assumed the WCRR-SOM position [illegible]

0600 Called snow removal supervisor Steve Trujillo at 500-5398 - and he will call in support to remove snow ~1 hr.

0611 Completed attending the prejob brief conducted by the SOS (Clayton) he assigned 3 personnel to work inside on the WC6. The safety topic was to watch your step and slip hazards. Discussed snow removal - placement of ice melt in walkways and clearing forktruck to move inside truck bay. Shift orders in effect were discussed, Operations will perform a walkdown when snow is removed.

0706 Made Change, Safety and Yard transfer from ~~Engineering/Operating to~~ Operations/Operations (warm warm) [illegible] 12-22-13
Current temperature inside facility is 67°F

0730 Entered walkway was cleared for rounds also laborer team arrived to remove snow, they utilized a small polaris to remove snow in the parking lot.

0735 Notified by 412 operations (J. Cassel) that at 0652 RCTs were responding to a CAM alarm. Currently the operators and supervisor are in the pre-job brief. The supervisor will notify me when the CAM is cleared

0757 Laborers arrive at 50/64 to remove snow between the facility 50/64 and transportainer they completed removal from the parking lot and walkways.

0801 (Ivan Cassel) supervisor from 412 reports the CAM was cleared for operators to enter 412. RCTs report no contamination detected.

0857 Inside PIC reports bagging on SP-72-68758. (Noted inside PIC - James, did not enter facility until 0730. Also noted that inside rounds were not completed until 0832 hrs. SOS had requested PIC to complete rounds and perform bag on upon entry. Also at 0830 two overtime operators arrived to support inside Op's The SOS provided a pre-job brief and they entered 50/64 to support BAG ON

0905 Inside operations report bag on completed, and request additional supplies.

0930 Inside operator request to turn down heat to 68°F, also noted, upon opening present lid, ~5 gallons of water entered the glovebox - pH - 4-5.

1011 Operators initiate bag off of 1 daughter and bag on another and continue processing.

1032 Inside Operators report bag on completed

1102 Outside Operator initiates drum movement out of 50/64 to the transportainer - 8 total.

1116 Transfer completed to the transportainers.

1130 412 Supervisor reported, upon removing and opening 85 Drum, SB 00723 - (55 gallon), ~~from 85 gallon~~ was noted to be not vented. The drum was removed from SB 10130 [illegible] 12-22-13
The supervisor ~~instructed the~~ discussed with operators to place the 85 drum back on (which is vented) I instructed the supervisor to notify the ARLA & Operations Center.

WCRR SOM - 12-22-13 (cont.)

(cont-) 1130 and upon notification ~~notify~~ follow direction and provide update to WCRR SOM. AH 12-22-13

1140 Inside operations report bagging off daughter and bagging on another daughter and continue working.

1201 412 Supervisor was called to obtain an update - per supervisor's procedure utilized and Operations Center (AREA 6) they followed procedure with 15 ft clearance and lid was secured on the 85 gallon, once sealed, the drum could be moved to a staging storage area (the 85 is vented). - WCRR SOM - will send Email to production control and production inventory AREA 6 - and request drum 5802723 be moved to DOME 33 for evacuated DVS venting, Notification made to OM

1207 Inside Operators exit for lunch break from WCRR.

1305 Operators return from Lunch and enter 50/65 to initiate processing.

1356 Inside Operators report completion of 3rd daughter and prior to bag off will initiate denesting of 2 - SP 72's.

1437 Completed assisting Production Inventory in performing a verification of all Parent containers in transportainers and 50/65 - All TRU drums SAT noted one LLW drum container number W 798343

1449 412 Supervisor reports WCATs will not allow movement of containers from process area to storage area - SOM recommended call waste help off hours line and submit waste help@kent request. Sent Email to OM

1505 Inside Operators report denesting completed and initiate bag on of SP 72 contained ~~68755~~ 68756 and 68755 is also denested AH 12-22-13

1515 Obtained Report from 412 supervisor, that waste help is supporting to resolve.

1533 Inside Operators report bag off and bag on completed 68756 - Parent is ON

1545 Operators report Parent drum was noted with hole ~1" diameter on lid next to bolt. This drum was sleeved and bagged on - precaution taken, no contamination released. Photos were taken, also SP 72 5844253 was opened, re-sealed - photos also taken, drum ring is noted cracked and bent, partially off, but SOS believes it can be denested currently the lid was placed back on 5844253 and 68755 is currently denested.

1701 Inside operations report bagging off 1 daughter and bagging on another and will continue ~~processing~~ with maintenance at glovebox - Parent noted 6 gallons - pH 4-5 AH 12-22-13

1722 Operators complete the bag off of daughter, no liquid present currently 50% full, Kitty litter placed inside Parent ~~closed~~ requested to be left on by SOS. AH 12-22-13

1733 Obtained approval from OM to leave parent drum SP 72 68756

1735 Operators initiate inspection for any free liquids prior to placing lid on drum.

WCRR SOM 12-22-13 (Cont)

1740 Operators initiate glove inspection and housekeeping.

1745 SDS reports the glovebox is in a safe configuration, operation initiate housekeeping in 50/69.

1750 Mode Change 50/69 and YARD transition from Operations/Operations to WARM/WARM

1755 Ensured temp setting noted 72°F current Temp is

1815 Secured the WCRR SOM position [illegible]

No further entries this page

[illegible]

12/23/13 WCRR SOM

0600 Reviewed Shift Turnover Checklist and assumed WCRR SOM position.

0636 Prejob brief conducted by SOS (C. Velarde) concluded. Covered status of operations w/ 1 drum bagged onto WCG (50% complete) and another (52-53) dewatered not ready to process. Facility to be in Cold @ ~~Sat~~ 12/23/13 COB, WCG maintenance including HEPA filter changeout, tool drum changeout, glove inspections etc. House Keeping and preps for winter closure. Monthly valve alignment to be completed. Operators reviewed / signed off active shift orders WCRR-SH-13-003, R2 Manual Drum Movements, WCRR-SH-13-005, R0 Precautions to prevent bag tears.

0705 Completed daily call in to TA-54 SOM and statusing WCRR activities

0720 Notified by ES Prod. Manager that 412 operations will not be occurring due to watch bill issues - 2 called in sick and 2 w/ cuts - not allowing hot work.

0725 Completed reviewing round sheets.

0730 Completed mode change: WCRR Yard and Bldg 50-69 from Warm/Warm to Operations / Operations.

0912 Completed shipment out of 9 drums to TA-54.

0950 Completed all bag offs for parent drum # 68754 (3 daughters, 1 POC total) bagged on drum # 68755.

1045 Completed review of Attachment for completion of Monthly Fire Suppression Supply Valve Alignment Check per EP-WCRR-FP-DOP-0303 R5. Forwarded copy to CSE L. Moore.

1117 Completed bag off of 1 daughter - continuing to process.

1130 Extended IWD-ES-WCRRF-WCG Operations / Horizontal Port Processing 081711-1001 for 1 year to expire 12/31/14

1145 Received update from 412 SOS that operations have occurred w/ operators from 375 ~~obtained~~ 12/23/13 providing support. Drum # 5853836 after dewat. from an SWB was determined to be non vented (inner 55 gal DM) - Ops center was notified and LCO 3.4.1 was entered/exited @ 1142

1250 ~~1258~~ 12/23/13 All bag offs complete for parent # 68755 (2 daughters total) + Horiz. port cover in place.

1252 Mode Change Complete: WCRR Yard / Bldg 50-69 from Operations / Operations to Warm / Warm.

Continued on next page. →

PROJECT NAME WCRRF SOS Log Book

12/22/13

0600 Assuming SOS position CA

0615 Starting Pre-Job, discussed being short handed, inside as well as extra precautions on ladders and while driving during the holidays.

~~0716~~ 12-22-13 Pre Job complete

0768 Mode change complete, WCRRF yard and SC 69 are now in Operations.

0839 Signed off on the rounds.

0950 Bagging on 68758.

0905 Bag on complete.

1011 Bagging off 1st daughter, bagging on a 2nd.

1032 Bag off/on complete.

1037 Starting a movement out of SC-69.

1045 Notified by lead RCT that another RCT was checking under the WCG on the tape are the 6" and 15" bag out ports and he found some contamination. The direct was 1000 DPM Alpha. RCT's will check for removeable, then contain it with tape

unexpected condition

1111 Per lead RCT, no removeable contamination was found, and the direct was actually 2000 DPM Alpha. RCT's took smears and they will mark that reading on the tape that was used to contain the contamination.

1118 Movement out complete.

1140 Bagging off 2nd daughter, bagging on a 3rd.

1155 Bag off/on complete.

1356 Starting to Denest 2 drums, then will be bagging off 3rd daughter and bagging on a new parent.

~~1502~~ 1502 Denesting complete, bagging ~~on~~ 12-22-13 on ~~68755~~ 12-22-13 68756.

1534 ~~1434~~ 12-22-13 Bag off/on complete.

1628 ~~1420~~ Signed off on the rounds.

1701 Bagging off 1st daughter, bagging on a 2nd.

1724 Bag off/on complete.

1733 SOM recieved permission from OM to leave parent, 68756, on WCG overnight.

1750 Mode change complete, WCRRF yard and SC 69 are now in Warm Standby.

12-22-13 1805 Securing SOS position CA

HG

~~Ag~~ 12-22-13

No Further Entries on this Page

PROJECT NAME _____ NOTEBOOK NO. _____

12-23-13

0400 Assuming WCRRF SOS position - Cleland.
0614 Starting inside and outside rounds
0615 Pre job briefing conducted, discussed pre holiday shutdown mode facility.
0638 pre job concluded.
0644 Outside rounds completed.
0706 Rounds have been signed off
0730 Mode change to operations inside TA50-69 and WCRRF yard.
0749 Vehicle access gates have been restored & dropped for landing of transport vehicle
0855 Bagging off 2 daughters and 1 POC, Bagging on 148255
0906 Performing monthly valve alignment.
0912 Vehicle access gates have been restored movement to transport vehicle complete.
0950 Bag on. Bag off complete
1000 monthly valve alignment complete
1022 Starting movement out of 50-69.
1044 Completed movement out of 50-69.
1058 Bagging off 1 daughter bagging on 1 daughter
1119 Bag on, Bag off complete
1225 Bagging off 1 daughter, POC.
1250 Bag off complete.
1252 mode change to warm stand by in WCRRF and TA50-69
1257 Starting Hepa filter changes.
1301 Hepa filter change out complete.
1441 Starting movement out of 50-69
1515 movement out of 50-69 complete.
1529 Starting outside rounds
1535 Starting inside rounds
1545 outside rounds complete
1551 inside rounds complete.
1602 inside and outside rounds signed off.
1609 Glove changes ~~completed~~ 12-23-13 started on station 1 and station 41 left hand.
1639 glove changes complete
1700 mode change performed TA50-69 in cold and WCRRF yard in warm standby.
1720 end of day WCRRF operations SOS secure - Cleland

HA

no further entries 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-RTR2-14-0002
Examination Date:	1/6/2014
Waste Container ID:	69073
Video/Audio Recorded Media Number:	LA-RTR2-14-0002 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.: 116.5 kg Tare Wt.: 33.4 kg Net Wt.: 83.1 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: 69073

Section 3: Container Inventory and Comments (Detailed descriptions)

IM: Scrap metal, hand tool

AM:

OM:

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):	5.0
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	
Other Inorganic Materials (OI)	
Cellulosics (C):	2.0
Rubber (R):	
Plastics (waste materials) (XPM):	4.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	72.1
Soils (S):	
Total WMP Weight:	83.1

CCP Radiography Data Sheet

Waste Container ID: 69073

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: The scan of this drum was performed by in-training operator Eddie Rios under the supervision of qualified operator Aaron Elliott.

RTR Operator:

Aaron Elliott/Eddie Rios		1/6/2014
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	69073	Count Sequence Number:	16868
Operator:	DCLTD231\Operator		
Assay Start:	1/23/2014 3:41:58 PM		
Description 1:	2LANDA1255		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol..S3000		
Container Type:	55 gal Drum		
Weight:	Net: 83.1 kg	Net:	83.1 kg
Container:	Volume: 208.0 l	Full:	75.0 %
Density:	0.530 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:	16868	Batch Number:	2LANDA1255
Assay Instrument:	HENC #2	Location:	LANL TA-54
Analysis Method:	CCP-TP-063 v 15	Software Version:	NDA 2000 V.4.0
Item ID:	69073	Analysis Date:	1/23/2014

Net Weight	83100.0 g			
Pu mass	6.70E+001	+-	1.70E+001	g
TRU Alpha Activity	1.33E+001	+-	5.80E+000	Ci
TRU Activity Concentration	1.60E+005	+-	6.98E+004	nCi/g
Pu-239 Equivalent Activity	1.35E+001	+-	5.80E+000	Ci
Pu-239 FGE	6.31E+001	+-	1.70E+001	g
Decay heat	4.32E-001	+-	1.92E-001	W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
CO60	1.61E-010	1.82E-007	3.56E-008	6.88E-008
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	9.98E-007
U233	<LLD	<LLD	0.00E+000	8.37E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	2.44E-006
NP237	1.46E-001	1.03E-004	1.61E-005	2.01E-006
PU238	6.12E-003	1.05E-001	3.19E-002	9.88E-004
U238	<LLD	<LLD	0.00E+000	1.90E-005
PU239	6.28E+001	3.89E+000	1.05E+000	3.68E-002
PU240	4.17E+000	9.47E-001	2.89E-001	8.95E-003
AM241	2.44E+000	8.36E+000	5.70E+000	6.57E-002
PU241	8.38E-002	8.63E+000	2.63E+000	8.15E-002
PU242	1.34E-002	5.30E-005	1.62E-005	0.00E+000
AM243	1.40E-003	2.81E-004	4.44E-005	1.21E-005

Errors quoted at 1.000 sigma

Operator: Jim Barton Date: 1/27/14

ITR: [illegible] Date: 1-28-14

Automated Independent Technical Review

Count Sequence Number: 16868 Batch Number: 2LANDA1255
Counter ID: HENC #2
Container ID: 69073
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 1/23/2014

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. AK isotopics applied. The AK information utilized was provided by Steve Schafer, AKE, and consists of data from CCP-AK-LANL-006, AK Source Document M237. MT-52,54.
Section 5 - Gamma Analysis Analysis Status: No errors. Spectrum Validity Check engine has suggested data review.	Ok After EA review, spectrum valid.

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

Expert Review by: Sheri Chamberlin Date: 1-27-14

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **69073**

BDR Number: **LA14FG12014**

Sampling Date: **1/29/2014**

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	1.24	U
60-29-7	Ethyl Ether	0.12	U
75-35-4	1,1-Dichloroethylene	0.20	U
67-64-1	Acetone	0.42	U
75-34-3	1,1-Dichloroethane	0.72	U
156-59-2	cis-1,2-Dichloroethene	0.09	U
78-93-3	Methyl ethyl ketone	0.90	U
110-82-7	Cyclohexane	0.59	U
71-43-2	Benzene	0.17	U
107-06-2	1,2-Dichloroethane	0.56	U
71-36-3	1-Butanol	0.38	U
108-10-1	Methyl isobutyl ketone	0.66	U
108-88-3	Toluene	0.93	U
108-90-7	Chlorobenzene	0.67	U
100-41-4	Ethylbenzene	0.59	U
108-38-3/106-42-3	m- and p-Xylene	0.38	U
95-47-6	o-Xylene	0.36	U
108-67-8	1,3,5-Trimethylbenzene	0.65	U
95-63-6	1,2,4-Trimethylbenzene	0.78	U

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

Quantitation Report (QT Reviewed)

InstName : FGA Unit 12

Data Path : C:\MSDCHEM\1\DATA\140129C\
Data File : 69073.D
Acq On : 29 Jan 2014 3:14 pm (#1); 29 Jan 2014 3:13 pm (#2)
Operator : DE
Sample :
Misc : 55 GALLON ~~THROUGH FILTER~~ DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1 1-30-14

Quant Time: Jan 29 15:22:21 2014
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	4.067	96	8828949	207.75	ppmv	0.00
15) Chlorobenzene-d5	6.639	117	7009479	178.75	ppmv	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-RTR2-14-0002
Examination Date:	1/6/2014
Waste Container ID:	69077
Video/Audio Recorded Media Number:	LA-RTR2-14-0002 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.: 133.5 kg Tare Wt.: 33.4 kg Net Wt.: 100.1 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:	85 %

CCP Radiography Data Sheet

Waste Container ID: 69077

Section 3: Container Inventory and Comments (Detailed descriptions)

IM: Scrap metal, hand tool

AM:

OM: Scrap lead

OI:

C: Leather gloves

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):	7.0
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	20.0
Other Inorganic Materials (OI)	
Cellulosics (C):	2.0
Rubber (R):	
Plastics (waste materials) (XPM):	4.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	67.1
Soils (S):	
Total WMP Weight:	100.1

CCP Radiography Data Sheet

Waste Container ID: 69077

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: The scan of this drum was performed by in-training operator Eddie Rios under the supervision of qualified operator Aaron Elliott.

RTR Operator:

Aaron Elliott/Eddie Rios		1/6/2014
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	69077	Count Sequence Number:	16866
Operator:	DCLTD231\Operator		
Assay Start:	1/23/2014 2:15:57 PM		
Description 1:	2LANDA1255		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gal Drum		
Weight:	Net: 100.0 kg	Net:	100.0 kg
Container:	Volume: 208.0 l	Full:	85.0 %
Density:	0.570 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:	16866	Batch Number:	2LANDA1255
Assay Instrument:	HENC #2	Location:	LANL TA-54
Analysis Method:	CCP-TP-063 v 15	Software Version:	NDA 2000 V.4.0
Item ID:	69077	Analysis Date:	1/23/2014

Net Weight	100000.0 g		
Pu mass	8.95E+000	+- 1.59E+000	g
TRU Alpha Activity	1.22E+000	+- 1.39E-001	Ci
TRU Activity Concentration	1.22E+004	+- 1.39E+003	nCi/g
Pu-239 Equivalent Activity	1.25E+000	+- 1.39E-001	Ci
Pu-239 FGE	9.03E+000	+- 1.59E+000	g
Decay heat	3.94E-002	+- 4.47E-003	W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
SR90	2.14E-009	2.96E-007	1.24E-007	0.00E+000
CS137	3.40E-009	2.96E-007	1.24E-007	1.70E-007
U233	<LLD	<LLD	0.00E+000	2.58E-003
U234	1.33E-002	8.25E-005	1.49E-005	0.00E+000
U235	9.48E-001	2.05E-006	3.71E-007	7.43E-007
NP237	2.95E-002	2.08E-005	3.40E-006	6.27E-007
PU238	8.17E-004	1.40E-002	3.30E-003	2.79E-004
U238	<LLD	<LLD	0.00E+000	6.48E-006
PU239	8.38E+000	5.20E-001	9.82E-002	1.04E-002
PU240	5.57E-001	1.26E-001	2.98E-002	2.53E-003
AM241	1.65E-001	5.65E-001	9.38E-002	2.28E-002
PU241	1.12E-002	1.15E+000	2.72E-001	2.30E-002
PU242	1.79E-003	7.08E-006	1.67E-006	0.00E+000
AM243	1.92E-004	3.84E-005	6.33E-006	3.15E-006

Errors quoted at 1.000 sigma

Operator: [signature] Date: 1/27/14

ITR: [signature] Date: 1-28-14

Automated Independent Technical Review

Count Sequence Number: 16866 Batch Number: 2LANDA1255
Counter ID: HENC #2
Container ID: 69077
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 1/23/2014

Comments	Disposition
Section 1 - Add-A-Source Analysis No Add-a-Source warnings.	Ok
Section 2 - Passive Neutron Analysis Analysis Status: No errors. No Warnings Reported.	Ok
Section 3 - Data Combiner Analysis Override enabled; Gamma data specified as input. 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-52,54.
Section 5 - Gamma Analysis Analysis Status: No errors. Spectrum Validity Check engine has suggested data review.	Ok After EA review, spectrum valid.
Miscellaneous	No additional nuclides contributing to 95% of the radiological hazard identified.

Expert Review by: Sheri Chamberlin Date: 1-27-14

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **69077**

BDR Number: **LA14FG2012**

Sampling Date: **1/31/2014**

5844684

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\140131c\
Data File : 69077.D
Acq On : 31 Jan 2014 1:07 pm (#1); 31-Jan-14, 13:06:35 (#2)
Operator : SA
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jan 31 13:15:08 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	3.548	96	3198220	205.75 ppmv	0.03
15) Chlorobenzene-d5	5.858	117	2477544	177.50 ppmv	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-RTR2-14-0003
Examination Date:	1/9/2014
Waste Container ID:	69102
Video/Audio Recorded Media Number:	LA-RTR2-14-0003 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.: 158.0 kg Tare Wt.: 145.1 kg Net Wt.: 12.9 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:	50 %

CCP Radiography Data Sheet

Waste Container ID: 69102

Section 3: Container Inventory and Comments	(Detailed descriptions)
IM:	
AM:	
OM:	
OI:	
C:	
R:	
XPM:	Plastic bag
OR:	
IN:	Homogeneous solids
S:	

Section 4: Packaging Material and Waste Material Parameters	
Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	109.0
Plastics (PP): Rigid Liner/Lid Liner Bag (Inside POC)	8.1
Other: Fiberboard (CP), Liner/Sleeve(Inside POC)	28.0
Total Packaging Weight	145.1
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	2.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	10.9
Soils (S):	
Total WMP Weight:	12.9

CCP Radiography Data Sheet

Waste Container ID: 69102

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		1/9/2014
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	69102	Count Sequence Number:	24107
Operator:	D3PW2DK1\operator		
Assay Start:	1/14/2014 1:52:22 PM		
Description 1:	1LANDA1890		
Description 2:	POC 158.0		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 12.9 kg	Net:	12.9 kg
Container:	Volume: 208.0 l	Full:	95.0 %
Density:	0.659 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: 24107
Assay Instrument: MCS HENC #1
Analysis Method: CCP-TP-063 v 15
Item ID: 69102

Batch Number: 1LANDA1890
Location: LANL TA-54
Software Version: NDA 2000 V.4.0
Analysis Date: 1/14/2014

Net Weight	12900.0 g		
Pu mass	2.19E+001	+-	7.79E+000 g
TRU Alpha Activity	3.75E+000	+-	1.45E+000 Ci
TRU Activity Concentration	2.90E+005	+-	1.12E+005 nCi/g
Pu-239 Equivalent Activity	3.76E+000	+-	1.45E+000 Ci
Pu-239 FGE	2.02E+001	+-	7.75E+000 g
Decay heat	1.21E-001	+-	4.77E-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	4.55E-007
U233	<LLD	<LLD	0.00E+000	4.12E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	1.23E-006
NP237	4.16E-002	2.93E-005	5.26E-006	2.05E-006
PU238	8.75E-003	1.50E-001	1.23E-001	4.12E-003
U238	<LLD	<LLD	0.00E+000	8.66E-006
PU239	2.02E+001	1.25E+000	4.81E-001	3.44E-002
PU240	1.69E+000	3.84E-001	1.67E-001	1.06E-002
AM241	5.72E-001	1.96E+000	1.35E+000	1.08E-001
PU241	1.47E-002	1.51E+000	8.46E-001	4.16E-002
PU242	3.09E-002	1.22E-004	4.96E-005	0.00E+000
CM243	1.38E-006	6.75E-005	1.28E-005	8.33E-006

Errors quoted at 1.000 sigma

Operator: _____ Date: 1·15·14

ITR: _____ Date: 1/20/14

Automated Independent Technical Review

Count Sequence Number: 24107 Batch Number: 1LANDA1890
Counter ID: MCS HENC #1
Container ID: 69102
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 1/14/2014

Comments	Disposition
Section 1 - Add-A-Source Analysis No Add-a-Source warnings.	Ok
Section 2 - Passive Neutron Analysis Analysis Status: No errors.	Ok
Ones Rate Analysis complete with warnings. - Error calculating the Ones Rate Pu-240 Effective MDA.	Not data affecting.
Section 3 - Data Combiner Analysis Override enabled; Gamma data specified as input. Results taken from Quantitative Gamma data. Results comparison test passed.	Results taken from quantitative gamma data.
Section 4 - MGA Analysis Expert review is recommended; the following validity tests failed:	MGA valid.
Fit value (2.57) is greater than allowed (2.50).	After EA review, Fit value acceptable.
Pu239 weight percent is outside limits [92.5, 95.0].	Pu239 percent consistent with AK. Mix of MT-52,54.
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: 1-15-14

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **69102**

BDR Number: **LA14FG2008**

Sampling Date: **1/22/2014**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	184.86	
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\140122c\
Data File : 69102.D
Acq On : 22 Jan 2014 12:46 pm (#1); 22-Jan-14, 12:46:15 (#2)
Operator : NW
Sample :
Misc : POC THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jan 22 12:55:48 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	3.545	96	2904700	205.75 ppmv	0.03
15) Chlorobenzene-d5	5.855	117	2312062	177.50 ppmv	0.00
Target Compounds					Qvalue
1) Hydrogen	1.605	GC1	1390m	184.86 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-RTR2-14-0002
Examination Date:	1/6/2014
Waste Container ID:	69154
Video/Audio Recorded Media Number:	LA-RTR2-14-0002 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.: 61.0 kg Tare Wt.: 33.4 kg Net Wt.: 27.6 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:	25 %

CCP Radiography Data Sheet

Waste Container ID: 69154

Section 3. Container Inventory and Comments	(Detailed descriptions)
IM:	
AM:	
OM:	Scrap lead
OI:	
C:	
R:	
XPM:	Plastic bag
OR:	
IN:	Homogeneous solids
S:	

Section 4: Packaging Material and Waste Material Parameters	
Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP): Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	10.0
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	2.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	15.6
Soils (S):	
Total WMP Weight:	27.6

CCP Radiography Data Sheet

Waste Container ID: 69154

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: The scan of this drum was performed by in-training operator Eddie Rios under the supervision of qualified operator Aaron Elliott.

RTR Operator:

Aaron Elliott/Eddie Rios		1/6/2014
Print Name	Signature	Date

S844608

NDA 2000 Assay Report

Item Information

Item ID:	69154	Count Sequence Number:	16831
Operator:	DCLTD231\Operator		
Assay Start:	1/17/2014 12:07:11 PM		
Description 1:	2LANDA1252		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gal Drum		
Weight:	Net: 27.6 kg	Net:	27.6 kg
Container:	Volume: 208.0 l	Full:	25.0 %
Density:	0.530 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:	16831	Batch Number:	2LANDA1252
Assay Instrument:	HENC #2	Location:	LANL TA-54
Analysis Method:	CCP-TP-063 v 15	Software Version:	NDA 2000 V.4.0
Item ID:	69154	Analysis Date:	1/17/2014

Net Weight	27600.0 g		
Pu mass	1.05E+001	+-	4.39E+000 g
TRU Alpha Activity	1.67E+000	+-	6.73E-001 Ci
TRU Activity Concentration	6.06E+004	+-	2.44E+004 nCi/g
Pu-239 Equivalent Activity	1.70E+000	+-	6.73E-001 Ci
Pu-239 FGE	9.90E+000	+-	4.38E+000 g
Decay heat	5.40E-002	+-	2.21E-002 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	1.53E-007
U233	<LLD	<LLD	0.00E+000	2.10E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	6.09E-007
NP237	1.39E-002	9.78E-006	1.54E-006	4.92E-007
PU238	9.60E-004	1.64E-002	7.65E-003	2.98E-004
U238	<LLD	<LLD	0.00E+000	5.68E-006
PU239	9.85E+000	6.11E-001	2.71E-001	1.11E-002
PU240	6.55E-001	1.49E-001	6.93E-002	2.69E-003
AM241	2.61E-001	8.97E-001	6.12E-001	3.62E-002
PU241	1.32E-002	1.36E+000	6.32E-001	2.46E-002
PU242	2.11E-003	8.33E-006	3.88E-006	0.00E+000
AM243	1.23E-004	2.46E-005	3.97E-006	2.79E-006

Errors quoted at 1.000 sigma

Operator: _____ Date: 1.21.14

ITR: _____ Date: 1.22.14

Automated Independent Technical Review

Count Sequence Number: 16831
Batch Number: 2LANDA1252
Counter ID: HENC #2
Container ID: 69154
Waste Matrix Code: Homo Sol. S3000
Count Type:
Sequence Type:
Assay Date: 1/17/2014

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
Cosmic Ray Rejection Analysis complete with warnings.	
- The CRR High-Z mass Mass Variance is negative, High-Z mass Uncertainty set to zero so analysis could continue.	Ok
Section 3 - Data Combiner Analysis	
Override enabled; Gamma data specified as input.	Results taken from quantitative gamma data.
Results taken from Quantitative Gamma data.	
Results comparison test passed.	
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-52,54.
Results are marked as invalid.	

Comments	Disposition
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, gamma results consistent with neutron.
Miscellaneous	No additional nuclides contributing to 95% of the radiological hazard identified.

Expert Review by: Sheri Chambers Date: 1-21-14

Waste Container ID: **69154**

BDR Number: **LA14FG12009**

Sampling Date: **1/21/2014**

5844684

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	1.24	U
60-29-7	Ethyl Ether	0.12	U
75-35-4	1,1-Dichloroethylene	0.20	U
67-64-1	Acetone	0.42	U
75-34-3	1,1-Dichloroethane	0.72	U
156-59-2	cis-1,2-Dichloroethene	0.09	U
78-93-3	Methyl ethyl ketone	0.90	U
110-82-7	Cyclohexane	0.59	U
71-43-2	Benzene	0.17	U
107-06-2	1,2-Dichloroethane	0.56	U
71-36-3	1-Butanol	0.38	U
108-10-1	Methyl isobutyl ketone	0.66	U
108-88-3	Toluene	0.93	U
108-90-7	Chlorobenzene	0.67	U
100-41-4	Ethylbenzene	0.59	U
108-38-3/106-42-3	m- and p-Xylene	0.38	U
95-47-6	o-Xylene	0.36	U
108-67-8	1,3,5-Trimethylbenzene	0.65	U
95-63-6	1,2,4-Trimethylbenzene	0.78	U

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

Quantitation Report (QT Reviewed)

InstName : FGA Unit 12

Data Path : C:\msdchem\1\DATA\140121C\
Data File : 69154.D
Acq On : 21 Jan 2014 2:29 pm (#1); 21 Jan 2014 2:28 pm (#2)
Operator : RJ
Sample :
Misc : 55 Gallon drum through filter. (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jan 21 14:38:13 2014
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	8279404	207.75 ppmv	0.00
15) Chlorobenzene-d5	6.639	117	6597307	178.75 ppmv	0.00

Target Compounds Qvalue

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