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NMED
Hazardous Waste Bureau

Los Alamos
NATIONAL LABORATORY
EST 1943

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

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

Date: SEP 22 2014
Symbol: ENV-DO-14-0254
LAUR: 14-26877
Locates Action No.: Not Applicable

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

Dear Mr. Kieling:

Subject: Transmittal of Remediation and Repackaging Documentation for Nitrate Salt-Bearing Waste Containers – Package 12

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 twelfth 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 twelve (12) 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/lm

Enclosures: (1) Remediation and Repacking Documentation for Nitrate Salt-Bearing Waste Containers – Package 12

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)
Jeffery D. Mousseau, ADEP, (E-File)
Daniel R. Cox, ADEP, (E-File)
Victoria A. George, REG-DO, (E-File)

Cy (continued):
Selena Z. Sauer, LC-ESH, (E-File)
Kenneth M. Hargis, LTP-PTS, (E-File)
Mark P. Haagenstad, ENV-CP, (E-File)
Luciana Vigil-Holterman, ENV-CP, (E-File)
lasomailbox@nnsa.doe.gov, (E-File)
locatesteam@lanl.gov, (E-File)
env-correspondence@lanl.gov, (E-File)

Remediation and Repackaging Documentation for Nitrate Salt-Bearing Waste Containers – Package 12
ENV-DO-14-0254
LA-UR-14-26877

September 2014

Los Alamos
NATIONAL LABORATORY
EST. 1943

ENCLOSURE 1

Remediation and Repacking Documentation for Nitrate Salt-Bearing Waste Containers – Package 12

ENV-DO-14-0254

LAUR-14-26877

Date: SEP 2 2 2014

ParentID	Intermediate Daughters	PKG_ID	Overpacked Into
S843594		68566	
S843594		68570	
S843672		69630	
S843672		69636	
S843673	69903	69615	
S843673	69903	69639	
S843962	90880	92219	
S843962	90880	92220	
S843962	90880	92221	SB02094
S843962	90881	92580	
S844213		90872	
S844213	90875	92147	
S844213	90875	92148	SB02087
S844213	90877	92202	SB01933
S844213	90876	92343	SB01932
S844213	90878	92349	SB01932
S844215		69085	SB50021
S844215		69097	SB50063
S844253		69189	SB50108
S844253		69216	SB50057
S844253		69226	SB50104
S844573		68386	
S844689		68647	
S844689		68649	
S845031		68311	SB50086
S845031		68313	SB50103
S845031		68314	SB50012
S845031		68342	SB50019
S845072		68610	
S845072		68666	
S845104		68374	

S843594

S843594

Container H... 746954

File Options Reports Help

S843594

746954	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

S843594
- S843594
  - LA00000068566
  - LA00000068570
  - LA00000068519 – EMPTY

ATTACHMENT 1
Page 1 of 4

Working Copy
Date: 10 28-13 cw

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: S843594

6.2[4] Date Processed: 10-28-13

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: Frederick Hahlbeck / [signature] / 1275824 / 10-28-13
Waste Handling Tech (print) Signature Z # Date

ATTACHMENT 1
Page 2 of 4

4.1[6][B] Parent Waste Container No.: S843594

5.[18] Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable: 502.8 lb

6.2[5][A] Parent Drum Lead Blanket Weight (lb): 83 lbs lb

6.2[5][B]/ 6.2[6] Total Parent Drum Weight (lb) 585.8 lb

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

6.2[17][D] Drum lift hinge pin retaining clip replaced. N/A / / Initials Z# Date

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

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

ATTACHMENT 1
Page 3 of 4

4.1[6][B] Parent Waste Container No.: S843594

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	68566	68570		
10.1[4]	Daughter Drum Filter No.	KM-761	LM-844	N	
10.1[4]	Daughter Drum Bag Filter No.	L-10284	L-6746	A	
10.1[4]	Daughter Drum Purchase Order No.	501578	501578		
10.1[13][C]	WCG Fire Watch Stationed		☐ YES	☐ NO	☑ N/A
10.1[14][C][d]3/11.1[3]	WCG Fire Watch Secured		☐ YES	☐ NO	☑ N/A
10.2[4]	POC bag-on bag: Manufacturer				
	Model No.				
	Serial No.				
	Date of Manufacture				
10.2[5]	POC ID No			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	6 galons	1 galon		
10.3[7][A]	Opaque/Non-penetrable Item Description:	lead Shielding	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 (%)	100%	100%	N	A
10.5[3]/10.6[2]	Description Waste Added During Processing	1 gallon plastic container Cut. Plastic strips and Bags Kitty litter	Plastic Strips and Bags Kitty litter		

ATTACHMENT 1
Page 4 of 4

4.1[6][B] Parent Waste Container No.: S843594

Comments: Nitrate Salts, Kitty litter, Rum trash, Plastic PH-3 liquid neutralized & Absorbed, Poly liner lid. stub out bags & ~~Second shift~~ ~~&~~ Kitty Litter ~~stub~~ out Bags Degraded lead Shielding

11.1[1] Performed By: Adam Segovia [signature] 5n 176702 10-28-13
Waste Handling Tech (print) Signature Z # Date

11.1[8] Reviewed By: Clayton Mullins [signature] 240092 10/31/13 0331
SOS or designee (print) Signature Z # Date/Time

ATTACHMENT 2
Page 1 of 1

Working Copy
Date: 10-2-13

WCRRF OVERPACK DRUM ASSEMBLY PREPARATION DATA SHEET

5.[3] Overpack drum information:

Purchase Order No.:	501563
Lot No.:	D238367
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:	±40/0 cw ±60/0 ccw	±30/0 cw ±60/0 ccw

Overpack filtered vent information:

Manufacturer:	NUCFIL
Model No.:	013
Serial No.:	JL-1813
Manufacture Date:	10/11

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

5. [11] Performed By: MICHAEL MONTOYA / [signature] / 191352 / 10/02/13
Waste Handling Technician (print) Signature Z # Date

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

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

Comments: N/C

8.1[1] Performed By: MICHAEL MONTOYA / [signature] / 191352 / 10/02/13
Waste Handling Technician (print) Signature Z # Date

8.1[6] Reviewed By: Clayton Mullins / [signature] / 240092 / 10/31/13
Supervisor or designee (print) Signature Z # Date

Working Copy
Date: 10 28 13

ATTACHMENT 5
Page 1 of 1

WCRRF OVERPACK DRUM CLOSURE DATA SHEET

7.[17] Overpack Drum Unique Identifier No.: 68519

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

M&TE No.: ~~037418~~ 10-28-13 038367
Cal. Expiration Date: 3-6-14
Range in ft-lb: 10-80
Tolerance: +/- 3% cw +/- 6%

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

Performed By: Federico Rebolledo / [signature] / 122844 / 10-28-13
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): 176.8 lb

Comments: N/C

8.1[1] Performed By: Adam Segovia / [signature] / 076702 / 10-28-13
Waste Handling Technician (print) Signature Z # Date

8.1[7] Reviewed By: Clayton Mullins / [signature] / 124009 / 10/31/13
Supervisor or designee (print) Signature Z # Date

Date: 10-24-13

ATTACHMENT 1
Page 1 of 2

WCRRF DRUM PREPARATION DATA SHEET

5.[34][E] Drum ID No.: 68566

5.[3] Drum information:
Purchase Order No.: 501578
Lot No.: 240119
Manufacture Date: 2013

5.[17] Drum Liner Bag/Filter Assembly:
Manufacturer: BOP
Model No.: 10-24-13 BG ~~3CPVC~~ 6CPVC 1-5-2 SPVC
Serial No.: L-10284
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: BRIAN GALLEGOS / [signature] / 267029 / 10-24-13
Operator (print) Signature Z # Date

5.[23] Filtered vent information:
Manufacturer: NUCFIL
Model No.: 019DS
Serial No.: KM-741
Manufacture Date: 11/12

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

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

5.[30] Scale File ID number: 019045

ATTACHMENT 1
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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.: 019065

Comments: N/c

5.[35] Performed By: Frederick [illegible] / [signature] 1228826 10-28-13
Operator (print) Signature Z # Date

7.1[4] Reviewed By: Clayton Mullins / [signature] 1240092 10/31/13
Supervisor or designee (print) Signature Z # Date

10-24-13

ATTACHMENT 2
Page 1 of 2

WCRRF DRUM CLOSURE DATA SHEET

6.[3] Drum ID No.: 68566

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% and +/- 6%

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

Performed By: Fredrico Ashlock / [signature] / 122088 / 10-30-13
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:	N/A	N/A
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.: 68566

6.[26] Scale File ID number: 019065

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

6.[28] Drum gross weight: 019065 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: Adam Segovia (Operator (print)) [signature] (Signature) 236702 (Z #) 10-29-13 (Date)

7.1[4] Reviewed By: Clayton Mullins (Supervisor or designee (print)) [signature] (Signature) 240092 (Z #) 10/31/13 (Date)

ATTACHMENT 1
Page 1 of 2

Working Copy
Valid 10-24-13

WCRRF DRUM PREPARATION DATA SHEET

5.[34][E] Drum ID No.: 68570

5.[3] Drum information:
Purchase Order No.: 501578
Lot No.: 0240119
Manufacture Date: 2013

5.[17] Drum Liner Bag/Filter Assembly:
Manufacturer: BOP
Model No.: LCPVC 1.5-2SPVC
Serial No.: L-6746
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	12-18-13
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, 10/24/13
Operator (print) Signature Z # Date

5.[23] Filtered vent information:
Manufacturer: NUCFIL
Model No.: 01905
Serial No.: LM-844
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.: 68570

Comments: N/C

5.[35] Performed By: MICHAEL NEWTON [signature] 191352 / 10/24/13
Operator (print) Signature Z # Date

7.1[4] Reviewed By: Clayton Mullins [signature] 1240092 / 10/31/13
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 2
Page 1 of 2

102413

WCRRF DRUM CLOSURE DATA SHEET

6.[3] Drum ID No.: 68570

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

M&TE No.: 038369
Cal. Expiration Date: 12-18-13
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: Adam Sessoms / [signature] / 270204 / 10-18-13
Operator (print) / Signature / Z # / Date

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

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

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

	Filtered Vent	2 in. Bung
M&TE No.:		
Cal. Expiration Date:		
Range in 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.: 68570

6.[26] Scale File ID number: 019065

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

6.[28] Drum gross weight: 419.2 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: ADAM SEGOVIA (Operator (print)) [signature] (Signature) 276702 (Z #) 10-28-13 (Date)

7.1[4] Reviewed By: Clayton Mullins (Supervisor or designee (print)) [signature] (Signature) 240091 (Z #) 10/31/13 (Date)

Inspected SP72

LTP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Planning and Technical Solutions

Container ID: S843594 Container Type: STEEL DRUM (55 GAL) Gross Weight (lbs): 523.2465
Total PE-Ci Activity: 8.49E+00 Equivalent Combustible PE-Ci: 3.18E+00
Total Fissile Gram Equivalents: 9.38E+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 impenetrable object.

Potential Safety Risks: Nitrate salt drums often contain free liquids and are packaged in individual plastic bags. Net weight is ~397 lbs. and generator data shows 11 items of nitrate salts with weights ranging from ~16-55 lbs.

Performed By: Susan Ramsey (LTP-PTS (Print)) | Signature | 100681 (Z#) | 7/30/13 (Date)

IHS Representative

Potential IHS Safety Risks: May contain lead, Chromium, mercury. Caution on weight.

Performed By: Johnny Smallwood (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#) | 112609 (Date)

TRU Remediation Operations

Potential Safety Risks: Use Proper PPE And Kitty Litter Ratio

Performed By: G Mk (TRU Operations (Print)) | Signature | 149235 (Z#) | 8/12/13 (Date)

Operations Manager or designee

Processing Determination: ☒ Accept ☐ Reject

OM or designee Comments: Do not push or press on waste with hands. Use hexarmour gloves during processing. Use tools to handle waste when possible.

Approved By: José Jerez (OM or designee (Print)) | Signature | 221452 (Z#) | 8-13-13 (Date)

Noncertified TRU Waste Drum Item Information

DrumID: 019679

Item No	ItemID	Process Status	Net Wt (kg)	Matrix	Meas Code	SNM (g)	MT	Auth (Pg/Ln)		Comments
1	OX11579NE2		7.270	NITRATE SALTS		3.35	52	6/14	G468	
2	RR82VRNE1		8.860	NITRATE SALTS		9.98	52	6/14	G468	
3	RR82VRNE2		7.660	NITRATE SALTS		7.39	52	6/14	G468	
4	LR83NW1		22.720	NITRATE SALTS		21.92	52	6/14	G468	
5	LR83NE1		22.500	NITRATE SALTS		9.35	52	6/14	G468	
6	LR84NE1		20.800	NITRATE SALTS		6.92	52	6/14	G468	
7	LR84NW1		16.590	NITRATE SALTS		6.06	52	6/14	G468	
8	OX11685NE2		25.000	NITRATE SALTS		19.94	52	6/14	G468	
9	OX11685NE1		14.430	NITRATE SALTS		2.71	52	6/14	G468	
10	LR84NW2		23.180	NITRATE SALTS		6.9	52	6/14	G468	
11	LR-81NE1		11.250	NITRATE SALTS		5.08	52	6/14	G468	

Noncertified Waste Drum Material Summary

Gross Wt (kg): 237.3

Material Type	SNM (grams)	Items Net Wt (kg)
52	99.6	180.26
Totals	99.6	180.26

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])	8843594					
Container type sampled (e.g., 55-gal, 85-gal, 110-gal, or SWB) (5.[1])	55-Gal					
Filtered Vent Type (5.[1])	72					
Filtered Vent Unobstructed (5.[1])	☑ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT
WIPP-Approved Filtered Vent (5.[2])	☑ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT
Total CCP VOC value (< 7,000 ppm) (5.[4])	0 ppm	ppm	ppm	ppm	ppm	ppm
Hydrogen Reading (< 64,000 ppm) (5.[5])	135.07 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: Dave Hagen — 727975
CCP (Print) Z #

Reviewed By: Nathan Coles — 735566
CCP (Print) 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 — Susan S. Ramsey — 5/22/13
Waste Handling Operator (print) Signature Z # Date

InstName : Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\130521c\
Data File : S843594.D
Acq On : 21 May 2013 4:28 pm (#1); 21-May-13, 16:28:04 (#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 16:37:18 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	3920983	201.25 ppmv	-0.01
15) Chlorobenzene-d5	5.888	117	3373849	177.00 ppmv	-0.01
Target Compounds					Qvalue
1) Hydrogen	1.576	GC1	960m	135.07 ppmv	

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

vocgas.m Tue May 21 16:37:24 2013

10-28-13

0600 Assuming WCRRF operations center - Okelande
0615 Pre-job being conducted by SOS
0641 Pre-job has been concluded
0717 Starting outside rounds
0739 Completed outside rounds
0747 Starting inside rounds.
0821 Item 63 is OOS, POD in place, okay to proceed per CSE documentation.
0855 Inside rounds complete.
0849 Rounds have been signed off by SOS.
0905 Mode change performed TA50-69 and WCRRF yard now in operations
0907 Starting movement into 50-69.
0940 movement into 50 69 complete
0950 Bagging on 3862255
1013 Bag on complete.
1100 Notified by Operations that glove changes will need to be performed
1106 Mode change to warm TA50-69 and WCRRF yard
1116 Operations will be changing out station 4 and 8 right and left.
1132 Starting glove changes Station 4 and 8
1220 Glove changes are complete.
1230 Mode change performed TA50-69 and WCRRF yard now in operations
1356 Bagging off 1 daughter, Bagging on 1 daughter.
1413 Bag on, Bag off complete
1500 Bagging off, Bagging on 3843594
1504 Starting outside rounds.
1524 Outside rounds complete.
1534 Bag on, Bag off complete
1546 Starting rounds inside.
1607 Item 63 is OOS, POD in place okay to proceed per CSE documentation.
1650 Rounds signed off by SOS
1728 Bagging off 1 daughter, Bagging on another.
-Continued on next page -Okelande

1028-13 -Continued from previous page -Chelander
1724 Bag on, Bag off complete.
10 2523 800 Released by OIC Terri Coleman - Chelander

no further entries this page

Carried

10-28-13

1800 ~~0600~~ JC 10-28-13 Assuming UCRR operations center - Coleman

1815 Pre-job and turnover from morning shift being conducted. Safety topic was eyewash stations.

1835 Pre-job concluded.

1858 Operators entering 5069 to resume operations on drum # S843594.

2056 Bagging off 1 daughter, bagging on S846055.

2126 Bag off/on complete.

10-29-13 0000 Operators out for lunch.

0118 Operators back from lunch.

0210 Bagging off 1 daughter, bagging on another daughter.

0225 Bag off/on complete.

0325 Beginning inside rounds. Beginning outside rounds.

0345 Item # 63 is OOS, Okay to proceed per CSE documentation.

0346 Inside rounds complete.

HA 0352 Outside rounds complete.

0444 Bagging off 1 daughter, 1 POC, bagging on S804989.

0528 Bag off/on complete.

0552 Operators have identified 2 stations that need gloves changed - (1) L - (2) L + R.

0603 Both rounds reviewed by SOS.

10-29-13 0609 Being relieved by OCO, Clarissa Velarde - Coleman

No further entries this page

10-28-13 DAYSHIFT

0557 ASSUMED the WCRR SOM position John Guadagnol
Reviewed the WCRRF SOM turnover checklist and reviewed logs

0640 Completed attending the pre-job brief conducted by the SOS (Gilbert). The safety topic was safe driving - noted at NIGHTS animals and pedestrians. Roles and responsibilities were assigned. The SOM discussed/briefed on shift orders WCRR-SH-13-003 R_2 - Manual Drum Movements, WCRR-SH-13-005 R_0 - Precautions to prevent Bag Tears. The ES/PM discussed TSR/PECL Limits associated with YARD and Facility. No transfers will be conducted today from AREA G on to AREA G.

0705 Completed the daily AREA G - POD status update JH 10-28-13

0730 Reviewed caution tag logbook and requested ES/PM to ~~ES~~ have an operator evaluate caution tags on equipment for compliance.

0734 Operators complete outside rounds

0837 Operators complete inside rounds.

0905 Mode Change WCRR YARD and 50/69 Facility transition from WARM/COLD to Operations/Operations.

0940 Operations complete moving Four Parent drums into 50/69 Facility

1013 Inside operators complete prepping and bagon of Parent drum 5862255

1020 Initiated review of the Operator AID Logbook. Note Operator AID 50-11-01 R_2 Combustible Loading required updating to R_3. - updated and requested the SOS to post the current version and de-post R_2.

1106 Inside Operations obtained wipes from BAG-OK, and upon initiating wipe down of gloves and inspection, determined stations 4 and 8 both pair require changing due to being worn. The glovebox WG is in safe configuration. Mode Change conducted WCRR YARD and 50/69 Facility transition from Operations/Operations to WARM/WARM

1132 Inside Operations initiate glove changes

1200 Completed daily facility status with OM, PM, ES, and SOS

1220 Glove stations were completed (stations 4 and 8 - Left and Right) changed.

1230 Mode Change WCRR Yard and 50/69 transition from WARM/WARM to Operations/Operations

1356 Inside Operations report bagging off laundry and bagging on another.

1430 Bag on and bag off is noted completed.

1500 Operations report bag off conducted and bagging on 5843594

1536 Bag off and Bag on reported completed

1547 Review approved and authorized WO #477284-01 - 50/69 - Adjust Temp / Lights

(Continued on NEXT Page)

10-28-13 DAYSHIFT Continued

1625 Discussed PIOI-25 and PIOI-4 requirements with CSE (A. Crawford) Set up a meeting to go over requirements/changes to existing protocol. Procedure may require changing. New forms will be evaluated Meeting set for 10-29-13 - Lou's office 0800hrs

1642 - Operations obtained a new 24 hour clock for 50/69 facility. Also drum daily/coaster manipulation bars were obtained for WLRRF and AREA G, Dome 412

1709 Operations report bagging off a daughter and bagging on another and continue to operate.

1724 Bag off and bag on was noted completed

1804 Inside Operations report Parent drum 5843594 generated one daughter and requires additional processing prior to bagging off.

1811 Completed review of shift turnover checklist with oncoming SOM - R. Axtell.

1815 Relieved by R. Axtell [signature]

No further Entries this page

[signature]

10/28/13 Night Shift

1815 Reviewed shift turnover checklist and assumed WCRR SOM position. Approved and posted Night shift operations watchbill and attending pre job brief.

1840 Prejob brief concluded. ES IH Safety topic was eye wash stations - location and use. Also requested personnel to closely watch out for others being first night on shift in 3 weeks. Briefed workers to active shift orders WCRR-SH-13-003 R2 Manual drum movements and WCRR-SH-13-005 R.0 Precautions to prevent bag tears. Discussed WCRR Design Features for daily TSR related topic.

2126 Completed all bag offs for parent # 5843594 (2 daughters total) Bagged on drum # 5846055.

10/29/13 0000 Operators breaking for lunch.

0118 Resuming operations.

0225 Completed bag off of 1 daughter - continuing processing.

0330 Performed Monthly review of Operator Aid Binder. One discrepancy noted that Quarterly Combustible Loading Aid 50-11-07 R.3 was not updated in binder. Verified new revision is posted in 50-69 Updated Operator Aid # 50-10-01 R.30 for new torque wrench in use

0528 Completed all bag offs for parent # 5846055 (2 daughters and 1 POC total). Bagged on drum # 5804989. Operators will not open drum but are ~~and~~ RA 10/29/13 instead wiping down glovebox and inspecting gloves.

0552 Notified by OCO that operators identified gloves @ stations #1 (L) and #2 both (L) + (R) require changing.

0610 Completed review of roundsheets and compliance tracking worksheet.

10/29/13 0613 Relieved by J. Guadagnol as SOM.

No further entries this page
RA 9

10/28/13 WCKK SOS LOG BOOK

0600 Assuming SOS Position DLB MLJ
0615 Conducted shift brief discussed Safe Driving And some TSR Questions were asked.
0648 Shift brief Conducted.
0717 Started Rounds.
0849 Reviewed Inside And outside Rounds.
0905 Mode Change Complete
0907 Starting Movement Into Facility
0940 Move In Complete
0950 Bagging on 5862255 As well as wipe Alls to clean glove and due a thurough Inspection.
1013 Bag on Complete operators will clean box and due good inspection of Gloves
1100 Operators notified glove Changes will need to be Performed
1106 Mode change Complete WCKF In warm
1116 Changing Gloves on station 4 and 8
1152 Starting Glove changes
1220 Glove Changes Complete
1230 Mode change complete WCKF In operations
1356 Bagging off 1 daughter Bagging on another
1418 Bag on/off Complete
1500 Relieved by Daryl Blain DLB
1500 Assuming SOS position from Gilbert Martinez Received turnover from Gilbert Martinez DLB
1501 Starting bag off and bag on 5843594.
1536 Bag off and on completed.
1650 Rounds reviewed and signed off
1710 Bagging off 1 daughter and bagging on 1 more daughter.
1724 Bag off/on completed.
1805 Operators out of 30-69.
1815 Turned over to Clayton ~~Mattang~~ DLB 10 28 13 Mullins.
HEA ~~1820 Secured~~ DLB 10/28/13

No further entries this Page DLB

10/28/13 WCRR SOS Log Book

1816 Assuming SOS position. CA

1817 Starting Pre-Job with turnover from day shift on the status of the WCG. Also being cautions first night back on shift.

1838 Pre-Job complete.

2056 Bagging off, bagging on 5846055.

2126 Bag off/on complete.

0210 Bagging off 1st daughter, bagging on a second.

0225 Bag off/on complete.

0444 Bagging off 2nd daughter, bagging on 5804989.

0603 Signed off on the rounds.

0610 Turned over SOS position with Gilbert Martinez. CA 10/29/13

HA

No Further Entries on this Page

CCP Radiography Data Sheet

S843594

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0122
Examination Date:	11/1/2013
Waste Container ID:	68566
Video/Audio Recorded Media Number:	LA-RTR2-13-0122 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: 68566

Section 3: Container Inventory and Comments (Detailed descriptions)

IM:

AM:

OM: Scrap lead

OI:

C:

R:

XPM: 90 mil 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):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	8.0
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	6.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	131.6
Soils (S):	
Total WMP Weight:	145.6

CCP Radiography Data Sheet

Waste Container ID: 68566

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

RTR Operator:

Michael Simmons		11/1/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	68566	Count Sequence Number:	23774
Operator:	D3PW2DK1\operator		
Assay Start:	11/1/2013 12:19:40 PM		
Description 1:	1LANDA1858		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6, Not Precision		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 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:	23774	Batch Number:	1LANDA1858
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:	68566	Analysis Date:	11/1/2013

Net Weight	146000.0 g		
Pu mass	3.95E+001	+- 1.51E+001	g
TRU Alpha Activity	9.41E+000	+- 4.61E+000	Ci
TRU Activity Concentration	6.44E+004	+- 3.16E+004	nCi/g
Pu-239 Equivalent Activity	9.49E+000	+- 4.61E+000	Ci
Pu-239 FGE	3.73E+001	+- 1.51E+001	g
Decay heat	3.07E-001	+- 1.53E-001	W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	9.30E-007
U233	<LLD	<LLD	0.00E+000	9.58E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	2.77E-006
NP237	8.10E-002	5.71E-005	1.13E-005	4.02E-006
PU238	3.61E-003	6.18E-002	2.63E-002	1.04E-003
U238	<LLD	<LLD	0.00E+000	2.37E-005
PU239	3.71E+001	2.30E+000	9.35E-001	3.87E-002
PU240	2.37E+000	5.38E-001	2.32E-001	9.07E-003
AM241	1.90E+000	6.51E+000	4.51E+000	1.97E-001
PU241	4.54E-002	4.67E+000	2.01E+000	7.87E-002
PU242	7.91E-003	3.13E-005	1.35E-005	0.00E+000
AM243	5.60E-003	1.12E-003	2.23E-004	1.29E-005

Errors quoted at 1.000 sigma

Operator: _____ Date: 11·5·13

ITR: _____ Date: 11·5·13

Automated Independent Technical Review

Count Sequence Number: 23774
Batch Number: 1LANDA1858
Counter ID: MCS HENC #1
Container ID: 68566
Waste Matrix Code: Homo Sol. S3000
Count Type:
Sequence Type:
Assay Date: 11/1/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis No Add-a-Source warnings.	Ok
Section 2 - Passive Neutron Analysis Analysis Status: No errors. Ones Rate Analysis complete with warnings. - Error calculating the Ones Rate Pu-240 Effective MDA.	Ok Not data affecting.
Section 3 - Data Combiner Analysis Override enabled; Gamma data specified as input. Results taken from Quantitative Gamma data. Results comparison test passed.	Results taken from quantitative gamma data.
Section 4 - MGA Analysis Results are marked as invalid.	MGA analysis failed. AK isotopics applied. The AK information utilized was provided by Steve Schafer, AKE, and consists of data from CCP-AK-LANL-006, AK Source Document M237. MT-52.
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: 11-4-13

Waste Container ID: **68566**

BDR Number: **LA13FG2117**

Sampling Date: **11/15/2013**

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\131115c\
Data File : 68566.D
Acq On : 15 Nov 2013 2:02 pm (#1); 15-Nov-13, 14:01:24 (#2)
Operator : SA
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Nov 15 14:09:51 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	3.565	96	4324046	205.75 ppmv	0.05
15) Chlorobenzene-d5	5.871	117	3398109	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-RTR2-13-0122
Examination Date:	11/1/2013
Waste Container ID:	68570
Video/Audio Recorded Media Number:	LA-RTR2-13-0122 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.: 190.0 kg Tare Wt.: 33.4 kg Net Wt.: 156.6 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: 68570

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):	18.0
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	2.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	136.6
Soils (S):	
Total WMP Weight:	156.6

CCP Radiography Data Sheet

Waste Container ID: 68570

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

Comments: N/A

RTR Operator:

Michael Simmons		11/1/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	68570	Count Sequence Number:	23773
Operator:	D3PW2DK1\operator		
Assay Start:	11/1/2013 11:35:23 AM		
Description 1:	1LANDA1858		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6, Not Precision		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 157.0 kg	Net:	157.0 kg
Container:	Volume: 208.0 l	Full:	90.0 %
Density:	0.840 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:	23773	Batch Number:	1LANDA1858
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:	68570	Analysis Date:	11/1/2013

Net Weight	157000.0 g		
Pu mass	5.65E+001	+-	1.85E+001 g
TRU Alpha Activity	2.14E+001	+-	3.75E+000 Ci
TRU Activity Concentration	1.36E+005	+-	2.39E+004 nCi/g
Pu-239 Equivalent Activity	2.15E+001	+-	3.75E+000 Ci
Pu-239 FGE	5.63E+001	+-	1.85E+001 g
Decay heat	7.02E-001	+-	1.24E-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	1.72E-006
U233	<LLD	<LLD	0.00E+000	1.66E-002
U234	6.53E-002	4.06E-004	1.26E-004	0.00E+000
U235	4.66E+000	1.01E-005	3.13E-006	6.65E-006
NP237	2.92E-001	2.06E-004	4.25E-005	7.01E-006
PU238	5.16E-003	8.82E-002	3.28E-002	1.91E-003
U238	<LLD	<LLD	0.00E+000	6.39E-005
PU239	5.30E+001	3.28E+000	1.15E+000	7.10E-002
PU240	3.39E+000	7.69E-001	2.89E-001	1.66E-002
AM241	5.03E+000	1.72E+001	3.56E+000	2.54E-001
PU241	6.48E-002	6.68E+000	2.51E+000	1.44E-001
PU242	1.13E-002	4.46E-005	1.68E-005	0.00E+000
AM243	1.14E-002	2.27E-003	4.74E-004	2.24E-005

Errors quoted at 1.000 sigma

Operator: [illegible] Date: 11-5-13

ITR: Martha [illegible] Date: 11.5.13

Automated Independent Technical Review

Count Sequence Number: 23773
Batch Number: 1LANDA1858
Counter ID: MCS HENC #1
Container ID: 68570
Waste Matrix Code: Homo Sol. S3000
Count Type:
Sequence Type:
Assay Date: 11/1/2013

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
No Warnings Reported.	
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.
Results are marked as invalid.	
Section 5 - Gamma Analysis	
Analysis Status: No errors.	Ok
Miscellaneous	No additional nuclides contributing to 95% of the radiological hazard identified.

Expert Review by: Sheri Chambers 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: **68570**

BDR Number: **LA13FG2117**

Sampling Date: **11/15/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	567.08	
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\131115c\
Data File : 68570.D
Acq On : 15 Nov 2013 10:30 am (#1); 15-Nov-13, 10:29:51 (#2)
Operator : SA
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Nov 15 10:38:40 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	3.542	96	4321142	205.75 ppmv	0.02
15) Chlorobenzene-d5	5.848	117	3388934	177.50 ppmv	-0.01
Target Compounds					Qvalue
1) Hydrogen	1.616	GC1	4264m	567.08 ppmv	

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

S843672

S843672

Container 753828

File Options Reports Help

S843672

753828	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

S843672

- S843672
  - LA00000069630
  - LA00000069636
  - LA00000069581 - EMPTY

Working Copy
Date: 4-22-14

ATTACHMENT 1
Page 1 of 4

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: 5843672

6.2[4] Date Processed: 4/22/14

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

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

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

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

4.3[5][B] ($) Three 1-Liter containers carbon spheroids or MET-L-X in WCG: (SAC 5.10.1.7.1) JQ 4/22/14 (Initial and Date)

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

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

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

Performed By: JOE QUINTANA / Joe Q 239987 / 4/22/14
Waste Handling Tech (print) Signature Z # Date

ATTACHMENT 1
Page 2 of 4

4.1[6][B] Parent Waste Container No.: S 843672

5.[18] Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable: 440.8 lb

6.2[5][A] Parent Drum Lead Blanket Weight (lb): 83.0 lb ☐ N/A

6.2[5][B]/ 6.2[6] Total Parent Drum Weight (lb) 523.8 lb

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

6.2[16] Retaining clips in place ☑ SAT ☐ UNSAT

6.2[18][D] Drum lift hinge pin retaining clip replaced. ___ / N/A / ___ ☑ N/A
Initials Z# Date

6.2[26] Approval to leave a parent drum attached to the WCG overnight:

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

ATTACHMENT 1
Page 3 of 4

4.1[6][B] Parent Waste Container No.: 5843672

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	69630	69636		
10.1[4]	Daughter Drum Filter No.	KM307	KL311	N	
10.1[4]	Daughter Drum Bag Filter No.	L17354	L17348		N
10.1[4]	Daughter Drum Purchase Order No.	501578	501578		
10.1[19][C]	WCG Fire Watch Stationed		☐ YES	☐ NO	☑ N/A
10.1[20][C][d]3/11.1[3]	WCG Fire Watch Secured		☐ YES	☐ NO	☑ N/A
10.2[4]	POC bag-on bag: Manufacturer				
	Model No.				
	Serial No.				
	Date of Manufacture				
10.2[5]	POC ID No				
10.2[6]/10.2[7][B]	POC Item Description				
10.2[13]	POC Assembly closed per Manufacturer's instructions. (Initial and Z#)				
10.2[14]	POC Assembly Gross Weight (lb)			N/A	
10.2[15]	POC Rad. Survey Results (mrem/hr)		N		
10.3[3][A]	Approx. Containerized Liquid Vol./Units				
10.3[5][A]	Free Liquid Volume/Units				
10.3[7][A]	Opaque/Non-penetrable Item Description:				
10.3[9][A]	PCB-contaminated Waste Description				
10.3[9][B]	PCB Item ID No.				
10.3[10]	Remaining Waste Description	See Comments	See Comments		
10.3[13]/10.4[10]/ 10.5[4]/10.6[10]	Daughter Drum % Full (%)	100	50	N	N
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.: 5843672

Comments: LEAD, 6 GALS FREE LIQUID, NITRATE SALTS PLASTICS, STUB OUTS,

11.1[1] Performed By: JOE QUINTANA, Joe Q 289987, 4/22/14
Waste Handling Tech (print) Signature Z # Date

11.1[8] Reviewed By: Clayton Mullins, CM 240092, 4/23/14 0657
SOS or designee (print) Signature Z # Date/Time

ATTACHMENT 1
Page 1 of 1

vorking Co.
Date: 3-6-14

WCRRF OVERPACK DRUM ASSEMBLY PREPARATION DATA SHEET

5.[3] Overpack drum information:
Purchase Order No.: 501563
Lot No.: 0506-14 ~~0238367~~ 0240323
Manufacture Date: 2013

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

	Filtered Vent	2-in. Bung
M&TE No.:	101310	036245
Cal. Expiration Date:	11-12-14	08-05-14
Tolerance:	+/-4% cw +6% aw	+/-3% cw +6% aw

Overpack filtered vent information:
Manufacturer: Nucfil
Model No.: 013
Serial No.: HL-829
Manufacture Date: 8-11

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

5. [11] Performed By: James Smith / [signature] 1166621 03-06-14
Waste Handling Technician (print) Signature Z # Date

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

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

Comments: N/C

8.1[1] Performed By: James Smith / [signature] 1166621 03-06-14
Waste Handling Technician (print) Signature Z # Date

8.1[6] Reviewed By: Clayton Mullins / [signature] 1240094 4/23/14
Supervisor or designee (print) Signature Z # Date

Working Copy
Date: 4-22-14

ATTACHMENT 4
Page 1 of 1

WCRRF OVERPACK DRUM CLOSURE DATA SHEET

7.[17] Overpack Drum Unique Identifier No.: 69581

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

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

Performed By: JOE QUINTANA, Joe Q 239987, 4/22/14
Waste Handling Technician (print) Signature Z # Date

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

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

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

7.[34][D] 85-gal overpack drum gross weight (lb): 168.2 lb

Comments: N/C

8.1[1] Performed By: JOE QUINTANA, Joe Q 239987, 4/22/14
Waste Handling Technician (print) Signature Z # Date

8.1[7] Reviewed By: Clayton Mullins, CA 240092, 4/22/14
Supervisor or designee (print) Signature Z # Date

Working Copy
Date: 4-3-14

ATTACHMENT 1
Page 1 of 2

WCRRF DRUM PREPARATION DATA SHEET

5.[34][E] Drum ID No.: 69630

5.[3] Drum information:
Purchase Order No.: 50/578
Lot No.: 0240118
Manufacture Date: 2013

5.[17] Drum Liner Bag/Filter Assembly:
Manufacturer: BOP
Model No.: 6cpvc 1.5-2 Spvc
Serial No.: L-17354
Manufacture Date: 11-13

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: Tamara Sanchez / [signature] / 111662 / 04-03-14
Operator (print) / Signature / Z # / Date

5.[23] Filtered vent information:
Manufacturer: Nucfil
Model No.: 19DS
Serial No.: KM-307
Manufacture Date: 11-12

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

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

5.[30] Scale File ID number: 019065

ATTACHMENT 1
Page 2 of 2

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

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

5.[34][E] Drum ID No.: 69630

Comments: N/C

5.[35] Performed By: James Sandoval / [signature] / 114462 / 04-03-14
Operator (print) Signature Z # Date

7.1[4] Reviewed By: Clayton Mullins / [signature] / 124092 / 4/23/14
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 2
Page 1 of 2

WCRRF DRUM CLOSURE DATA SHEET

6.[3] Drum ID No.: 69630

6.[9] Drum closure ring torque wrench information:
M&TE No.: 038370
Cal. Expiration Date: 8/2/14
Range: 16 - 80 ft-lb
Tolerance (+/-): +/- 3 % CW
+/- 6 % CCW

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

Performed By: JOE QUINTANA / [signature] 289987 / 4/22/14
Operator (print) Signature Z # Date

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

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

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

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

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

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

ATTACHMENT 2
Page 2 of 2

6.[3] Drum ID No.: 69630

6.[26] Scale File ID number: 019065

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

6.[28] Drum gross weight: 437.8 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: JOE QUINTANA, Joe Z 239987, 4/22/14
Operator (print) Signature Z # Date

7.1[4] Reviewed By: Clayton Miller, CM 1240091, 4/23/14
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 1
Page 1 of 2

Working
Date: 4-3-14 **WCRRF DRUM PREPARATION DATA SHEET**

5.[34][E] Drum ID No.: 69636

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

5.[17] Drum Liner Bag/Filter Assembly:
Manufacturer: BOP
Model No.: 6COVC-1.5-2SPVC
Serial No.: L-17348
Manufacture Date: 11/13

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: MICHAEL MONTOYA / [signature] 191352 / 4-03-14
Operator (print) Signature Z # Date

5.[23] Filtered vent information:
Manufacturer: NUCFIL
Model No.: 019DS
Serial No.: K1-311
Manufacture Date: 11/11

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

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

5.[30] Scale File ID number: 019065

ATTACHMENT 1
Page 2 of 2

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

5.[32] Drum tare weight (lbs): 76.0 lbs

5.[34][E] Drum ID No.: 69636

Comments: N/C

5.[35] Performed By: MICHAEL MONTOYA / [signature] / 191352 4/03/14
Operator (print) Signature Z # Date

7.1[4] Reviewed By: Clayton Mullins / [signature] / 1240092 4/23/14
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 2
Page 1 of 2

WCRRF DRUM CLOSURE DATA SHEET

6.[3] Drum ID No.: 69636

6.[9] Drum closure ring torque wrench information:
M&TE No.: 038370
Cal. Expiration Date: 8/2/14
Range: 16-80 ft-lb
Tolerance (+/-): +/- 3%, CW
+/- 6%, CCW

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

Performed By: JOE QUINTANA, Joe Q 239987 4/22/14
Operator (print) Signature Z # Date

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

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

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

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

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

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

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

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

ATTACHMENT 2
Page 2 of 2

6.[3] Drum ID No.: 69636

6.[26] Scale File ID number: 019065

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

6.[28] Drum gross weight: 210.0 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: JOE QUINTANA, Joe Q 239987 4/22/14
Operator (print) Signature Z # Date

7.1[4] Reviewed By: Clayton Mullins, CM 1240092 4/23/14
Supervisor or designee (print) Signature Z # Date

Working Copy
Date: 4-21-14

ATTACHMENT 2
Page 1 of 1

WCRRF PARENT 55-GAL DRUM PREPARATION DATA SHEET

6.3[21] Prepared Parent 55-Gal Drum Number: S843672

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): 440.8

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: GERALD ESPENOSA [signature] 125789 4-21-14
Waste Handling Technician (print) Signature Z # Date

8.1[7] Reviewed By: Clayton Mullins [signature] 240021 4/23/14
Supervisor or designee (print) Signature Z # Date

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

8.1[8][D] Approved by: John Guadagnoli [signature] 125695 4-23-14 0715
SOS/SOM or designee (print) Signature Z # Date Time

Inspected Non-GG 1937 SP72

LTP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Planning and Technical Solutions

Container ID: S843672 Container Type: 85 GAL DRUM Gross Weight (lbs): 467.2395
Total PE-Ci Activity: 8.96E+00 Equivalent Combustible PE-Ci: 3.36E+00
Total Fissile Gram Equivalents: 9.72E+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 ~1.5 gallons of liquid, sealed containers >4L, unvented liner, 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 ~292 lbs. and generator data shows 9 items of nitrate salts with weights ranging from ~13–60 lbs.

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

IHS Representative

Potential IHS Safety Risks: Drum contains D007, D008, and D009. Contains free liquid, No other Hazard Noted

Performed By: John Smallwood (IHS Representative (Print)) | Signature | 240659 (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 | 162609 (Z#) | 9/30/13 (Date)

TRU Remediation Operations

Potential Safety Risks: Use proper tools and PPE when processing, as well as correct amount of kitty liter, 3 to 1.

Performed By: Clayton Mullins (TRU Operations (Print)) | Signature | 240092 (Z#) | 3/12/14 (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 when processing. Ensure all liquids are remediated.

Approved By: Jose Perez (OM or designee (Print)) | Signature | 221452 (Z#) | 3/13/14 (Date)

Discardable Waste Log Sheet

DrumID: 019694

Item#	ItemID	Net (kg)	Matrix	M Code	NM	MT	Anth	Remarks
1	RR92URA	✓5.91	NITRATE SALTS		7.88	52	6/14	G468 10/1/84
2	LR		NITRATE SALTS		7.05	52	6/14	G468 10/1/84 CAN'T READ ITEM ID OR NET WT.
3	OX11996NE1	23.18	NITRATE SALTS		36.93	52	6/14	G468 10/3/84
4	RR94NW1	9.1	NITRATE SALTS		3.95	51	6/14	G468 10/3/84
5	OX11996NW1	11.59	NITRATE SALTS		14.1	53	6/14	G468 10/3/84
6	LR97NE1	✓27.36	NITRATE SALTS		11.77	52	6/14	G468 10/3/84
7	LR98NW1	23.55	NITRATE SALTS		7.44	52	6/14	G468 10/3/84
8	LR99NE1	18.41	NITRATE SALTS		9.24	52	6/14	G468 10/4/84
9	MX100NE1	13.64	NITRATE SALTS		5.15	52	6/14	G468 10/15/84
		132.74 kg ✓						

ATTACHMENT 1
Page 1 of 1

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

5.[1] Sample Date: 5/29/13

Container No. (5.[1])	S843672					
Container type sampled (e.g., 55-gal, 85-gal, 110-gal, or SWB) (5.[1])	55-Gal (Over packed in 85-Gal)					
Filtered Vent Type (5.[1])	072					
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])	1920.39 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: Daria Aragon (CCP (Print)), 237975 (Z #)

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

Comments:
Email from Eric Loechelt verified LFC sample was taken through 55 gallon container. (R2) 3/4/4

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 #), 6/3/13 (Date)

InstName : Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\130529c\
Data File : S843672.D
Acq On : 29 May 2013 1:07 pm (#1); 29-May-13, 13:06:27 (#2)
Operator : SA
Sample :
Misc : 85 GAL LFL THROUGH UNOBSTRUCTED-072 (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 29 13:28:10 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	3.506	96	3934883	201.25	ppmv	-0.06
15) Chlorobenzene-d5	5.848	117	3390138	177.00	ppmv	-0.05
Target Compounds						Qvalue
1) Hydrogen	1.609	GC1	13649m	1920.39	ppmv	

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

vocgas.m Wed May 29 15:11:06 2013

4-22-14

0540 Assuming WCRR operation center. JCDeeman
0557 Beginning outside rounds.
0615 Pre-job being conducted by SOS. Beginning inside rounds. Outside rounds complete. Brief to Shift order WCRR-SH-14-004.
0637 Inside rounds complete. Pre-job completed.
0653 Both rounds reviewed by SOS.
0659 Mode changed to operations in WCRRF yard and 5069.
0812 Bagging on S816768. PPE check is Sat.
0825 Permission granted to lower the vehicle access gates to load the transfer vehicle for a shipment to Area G. Bag on complet
0911 Initiating a drum movement from transportainer to 5069.
0916 Test execute complete. Surveillance 4.1.1 performed. Move 1 drum into 5069.
0929 Drum movement into 5069 complete. Vehicle access gates restored. Transportainers secured. Shipment and complete
0945 Initiating a drum movement of 6 drums from 5069 to a transportainer.
1003 Denesting S870175 and bagging it on. Bagging off 2 PCC's and 1 daughter.
1005 Drum movement out of 5069 complete.
1030 Permission granted to lower the vehicle access to begin receip of drums from Area G.
1058 Test execution complete. Surveillance 4.1.1 complete.
1110 Denesting and bag off/on complete.
1244 PPE check is Sat. 2nd crew continuing to process S870175. Per RCT, one item encountered is 27 R on contact gamma, 5 mR neutron, 60 second time limit per operator at this dose rate.
1256 Bagging off 1 daughter, 1 PCC, continuing to process.
1334 Bag off/on complete. Vehicle access gates restored. Transportainers secured.
1413 JC 4-22-14. Bagging off 1 daughter and bagging on S 843672.
1432 Bag off/on complete
1433 Moving in 2 LLW drums into 5069 (65211 and 65216
1448 Movement in complete
Continued on next page JCDeeman

Int. Daughter 68998

4-22-14 Continued from previous page. SColeman
1449 Test execute complete. Surveillance 4.1.1 Complete.
1450 Beginning inside rounds.
1512 Inside rounds complete.
1543 Beginning outside rounds.
1550 Bagging off 2 daughters, empty, and placing pot cover
1600 Outside rounds complete.
1631 Bag off complete. Everything is in a safe configuration.
1640 Both rounds reviewed by SOS.
1642 Mode change complete. Warm standby in WCRRF yard and 5069.
4-22-14 1645 End of day. CCO position secured. SColeman

No further entries this page

4-22-14 WCRR SOM

600 Reviewed logs and assumed the WCRR SOM position for the [illegible]

Completed attending the pre-job brief conducted by the SOS (Gilbert). The safety message was stress and methods to control stress. There is a transfer in and a transfer out scheduled today. The shift order in effect was briefed and personnel signed the roster. RPO - discussed ALARA principals, the next drum bagged out is the Hi PECi drum SP-36 - 5870175. Operators were reminded to ensure LLW generated contains container ID, and weights and is called out to the OCC and production control.

0659 Made Changes 50/69 and had transition from warm/warm to Operations/Operations

0715 Completed the daily phone call to AREA G SOM updating POD status.

0716 Per OM all personnel are to complete required reading course #55769 Operators are to log on to U-Train, also the OCC will have a copy and roster at the Operations Center for those entering the shift to read and sign.

0812 Inside Operations initiate bag on of 5816768.

0825 Outside operations initiate transfer for inspection to be performed by PdT for the drums going to AREA G

0916 Outside Operations initiate a movement in of 1 drum 5870175 SP-36.

09 The movement into 50/69 is completed, and the transfer to AREA G/transfer vehicle is complete - 19 drums total.

0937 Outside Operations initiate a transfer from 50/69 to the transfer trailers 6 drums total

0903 Inside Operations initiate bag off of 2 POCs and 1 daughter and de-nesting of 5870175 - Hi PE - drum -

0905 Outside Operations complete the movement of 6 drums to the transportainer.

0914 Reviewed and approved WO#00468361-04 - Grounds Maintenance to allow cutting of weeds in the parking lot and outside the fence - Not in yard.

0930 Outside operators request and obtain permission to lower the vehicle access gates to receive the transfer of 6 drums from AREA G

1110 Inside Operators report bag off on completed.

1125 Inside Operators report they have a POC item.

1139 Late Entry for 1048 hours, operators indicate the Forklift charging station (only 1) is noted to not be charging. The breaker may not be set. Notification was made to crafts.

240 Completed the noon phone call with SOMs, OM, PM and others.

1244 The second crew enters 50/69 to continue processing Hi MAR drum. One item is 27R on contact and gamma was 5MR; Time limitations are set for Operators per Rad

(Continued on Next Page)

4-22-14 WCRR-SOM (cont)

1250 Inside Operators report initiating bag off of 1 daughter and 1 foc and continue to process.

1323 Outside Operators complete the receipt of the transfer of 6 drums. All 6 were secured in the transportainer.

1455 Completed extending Shift Order WCRR-SH-14-004 R0; Provide Instructions to Control TRUSR and TRU Drum Transfers to AREA G extended through 4-29-14.

1420 Outside operators initiate movement into 50/69 two drums 65216, and 65211 per the OM to process PIDs, Also inside operators were bagging off 1 daughter and bagging on 5843672 - SP. 72.

1432 Bag off and Bag on Complete - also a third drum is being moved into 50/69 for processing - SP. 81 - 06137.

1448 Movement into 50/69 Complete - 3 drums total

1501 EWMD arrives at WCRRF with NMED for inspection RSP brief and escorts provided.

1511 EWMD and escorts exited the facility - No issues identified during exit.

1550 Inside Operators report initiating bag off of 2 daughters and empty and will place the port cover for the WCG in place.

1608 Obtained notification from Craft management, that they will have an Electrician in the AM available to reset the forktruck breaker. Also the new eye wash safety basin and cart with

1631 Bag offs were noted completed the WCG glove box is in a safe configuration.

1642 Mode Change: 50/69 and Yard transition from Operations/Operations to WARM/WARM

1650 Secured the WCRR SOM Position [signature]

No further Entries this Page
[signature]

1-27-14 WCRR SOS LOG BOOK

0600 Assuming SOS Position [illegible]

0[illegible] Conducted shift brief discussed drum to process will be high PE-CI may need to rotate operators. starting Rounds Briefed to shift order

0632 Concluded shift Brief

0653 Reviewed Inside And outside Rounds

0659 Mode Change Complete WCRRF In operations

0812 Bagging on S816768

0825 Starting shipment to Area G. Bag on Complete.

0911 Initiating drum movement from Transportainer

0929 drum movement Complete shipment complete

0945 starting movement out of SD-69 6 drums

1003 Dewatering S870175 Had bagging It on Bagging off

1005 Move out complete

1030 starting movement In from Area G.

1110 Dewatering bag off / on Complete

1244 Per RCT on Item is 27 R on contact will be rotating operators out every 60 sec.

1[illegible] Bagging off / daughter bagging on Poc

1334 Bag on/off complete shipment complete.

1413 Bagging off / daughter bagging on S843672

1432 Bag on/off complete

1437 Moving In 2 LLW Drum's 65211 And 65216 will need to open and see what It consist of

1448 Moves In complete

1450 Starting Rounds

1508 Turning over Position to Clayton Mullins [illegible]

1509 Assuming SOS position. [illegible]

1550 Bagging off 2 daughters, placing port cover on.

1631 Bag off complete.

1640 Signed off on the rounds

1642 Mode change complete, WCRRF yard and SD-69 are now in Warm Standby.

1644 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-RTR2-14-0040
Examination Date:	4/25/2014
Waste Container ID:	69630
Video/Audio Recorded Media Number:	LA-RTR2-14-0040 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 14
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3110
Waste Stream I.D.:	LA-MIN02-V.001
Waste Container Weights:	Gross Wt.: 198.5 kg Tare Wt.: 33.4 kg Net Wt.: 165.1 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: 69630

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):	5.0
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	5.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	155.1
Soils (S):	
Total WMP Weight:	165.1

CCP Radiography Data Sheet

Waste Container ID: 69630

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

RTR Operator:

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

5843672

NDA 2000 Assay Report

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

Item ID:	69630	Count Sequence Number:	17133
Operator:	DCLTD231\Operator		
Assay Start:	4/28/2014 12:08:06 PM		
Description 1:	2LANDA1284		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gal Drum		
Weight:	Net: 165.0 kg	Net:	165.0 kg
Container:	Volume: 208.0 l	Full:	95.0 %
Density:	0.840 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

09

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number:	17133	Batch Number:	2LANDA1284
Assay Instrument:	HENC #2	Location:	LANL TA-54
Analysis Method:	CCP-TP-063 v 15	Software Version:	NDA 2000 V.4.0
Item ID:	69630	Analysis Date:	4/28/2014

Net Weight	165000.0 g		
Pu mass	7.54E+001	+-	2.31E+001 g
TRU Alpha Activity	2.00E+001	+-	1.01E+001 Ci
TRU Activity Concentration	1.21E+005	+-	6.12E+004 nCi/g
Pu-239 Equivalent Activity	2.01E+001	+-	1.01E+001 Ci
Pu-239 FGE	7.43E+001	+-	2.31E+001 g
Decay heat	6.52E-001	+-	3.35E-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	1.56E-006
U233	<LLD	<LLD	0.00E+000	1.61E-002
U234	7.05E-002	4.39E-004	1.32E-004	0.00E+000
U235	5.04E+000	1.09E-005	3.27E-006	8.18E-006
NP237	2.12E-001	1.50E-004	3.08E-005	3.64E-006
PU238	6.87E-003	1.17E-001	4.18E-002	1.63E-003
U238	<LLD	<LLD	0.00E+000	6.33E-005
PU239	7.06E+001	4.38E+000	1.43E+000	6.09E-002
PU240	4.69E+000	1.07E+000	3.79E-001	1.48E-002
AM241	4.19E+000	1.44E+001	9.99E+000	2.05E-001
PU241	9.31E-002	9.59E+000	3.41E+000	1.33E-001
PU242	1.51E-002	5.97E-005	2.12E-005	0.00E+000
AM243	7.73E-003	1.55E-003	3.19E-004	2.30E-005

Errors quoted at 1.000 sigma

Operator: _____ Date: 4.30.14

ITR: _____ Date: 4.30.14

Automated Independent Technical Review

Count Sequence Number: 17133
Batch Number: 2LANDA1284
Counter ID: HENC #2
Container ID: 69630
Waste Matrix Code: Homo Sol. S3000
Count Type:
Sequence Type:
Assay Date: 4/28/2014

Comments	Disposition
Section 1 - Add-A-Source Analysis No Add-a-Source warnings.	Ok
Section 2 - Passive Neutron Analysis Analysis Status: No errors.	Ok
Ones Rate Analysis complete with warnings. - Error calculating the Ones Rate Pu-240 Effective MDA.	Not data affecting.
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-52,53,51
Section 5 - Gamma Analysis Analysis Status: No errors.	Ok
Miscellaneous	No additional nuclides contributing to 95% of the radiological hazard identified.

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

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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-RTR2-14-0041
Examination Date:	4/28/2014
Waste Container ID:	69636
Video/Audio Recorded Media Number:	LA-RTR2-14-0041 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 14
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3110
Waste Stream I.D.:	LA-MIN02-V.001
Waste Container Weights:	Gross Wt.: 95.0 kg Tare Wt.: 33.4 kg Net Wt.: 61.6 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: 69636

Section 3: Container Inventory and Comments (Detailed descriptions)

IM:

AM:

OM: Scrap lead

OI:

C: Leather gloves

R:

XPM: Plastic sheeting, plastic bags

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP): Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	5.0
Other Inorganic Materials (OI)	
Cellulosics (C):	3.0
Rubber (R):	
Plastics (waste materials) (XPM):	3.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	50.6
Soils (S):	
Total WMP Weight:	61.6

CCP Radiography Data Sheet

Waste Container ID: 69636

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:

Eddie Rios	Eddie Rios	4/28/2014
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	69636	Count Sequence Number:	17137
Operator:	DCLTD231\Operator		
Assay Start:	4/28/2014 2:59:29 PM		
Description 1:	2LANDA1284		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gal Drum		
Weight:	Net: 61.6 kg	Net:	61.6 kg
Container:	Volume: 208.0 l	Full:	65.0 %
Density:	0.460 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:	17137	Batch Number:	2LANDA1284
Assay Instrument:	HENC #2	Location:	LANL TA-54
Analysis Method:	CCP-TP-063 v 15	Software Version:	NDA 2000 V.4.0
Item ID:	69636	Analysis Date:	4/28/2014

Net Weight	61600.0 g			
Pu mass	5.34E+001	+-	1.54E+001	g
TRU Alpha Activity	1.47E+001	+-	7.37E+000	Ci
TRU Activity Concentration	2.38E+005	+-	1.20E+005	nCi/g
Pu-239 Equivalent Activity	1.48E+001	+-	7.37E+000	Ci
Pu-239 FGE	5.03E+001	+-	1.54E+001	g
Decay heat	4.80E-001	+-	2.45E-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	7.52E-007
U233	<LLD	<LLD	0.00E+000	8.22E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	3.08E-006
NP237	1.41E-001	9.97E-005	1.44E-005	1.83E-006
PU238	4.86E-003	8.31E-002	2.82E-002	8.22E-004
U238	<LLD	<LLD	0.00E+000	3.17E-005
PU239	5.00E+001	3.10E+000	9.54E-001	3.06E-002
PU240	3.32E+000	7.54E-001	2.55E-001	7.45E-003
AM241	3.14E+000	1.08E+001	7.30E+000	1.12E-001
PU241	6.59E-002	6.79E+000	2.30E+000	6.71E-002
PU242	1.07E-002	4.22E-005	1.43E-005	0.00E+000
AM243	3.81E-003	7.62E-004	1.11E-004	1.12E-005

Errors quoted at 1.000 sigma

Operator: _____ Date: 4.30.14

ITR: _____ Date: 4.30.14

Automated Independent Technical Review

Count Sequence Number: 17137 Batch Number: 2LANDA1284
Counter ID: HENC #2
Container ID: 69636
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 4/28/2014

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
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; 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-52,53,51
Results are marked as invalid.	
Section 5 - Gamma Analysis	
Analysis Status: No errors.	Ok

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

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

S843673

S843673

Container F 753901

File Options Reports Help

S843673

753901	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

S843673

- S843673
  - LA00000069903
    - LA00000069639
    - LA00000069615
    - LA00000069702 - EMPTY
  - W801646
    - EMPTY

Working Copy
Date: 4-17-14

ATTACHMENT 1
Page 1 of 4

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: 69903

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

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

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

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

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

4.3[5][B] ($) Three 1-Liter containers carbon spheroids or MET-L-X in WCG: (SAC 5.10.1.7.1) 4-17-14 (Initial and Date)

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

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

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

Performed By: Frederick Rochlitz / [signature] / 1228524 / 4-17-14
Waste Handling Tech (print) Signature Z # Date

ATTACHMENT 1
Page 2 of 4

4.1[6][B]	Parent Waste Container No.: 69903	
5.[18]	Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable:	391.2 lb
6.2[5][A]	Parent Drum Lead Blanket Weight (lb):	_____ lb ☑ N/A
6.2[5][B]/ 6.2[6]	Total Parent Drum Weight (lb)	391.2 lb
6.2[7]	(S) Total Parent Drum Weight < 624 lb (SR 4.5.1):	☑ SAT ☐ UNSAT
6.2[16]	Retaining clips in place	☑ SAT ☐ UNSAT
6.2[18][D]	Drum lift hinge pin retaining clip replaced. _____ / _____ / _____ (Initials / Z# / Date)	☑ N/A
6.2[26]	Approval to leave a parent drum attached to the WCG overnight: N/A	

EWMO-FOD (print) Signature Z # Date

ATTACHMENT 1
Page 3 of 4

4.1[6][B] Parent Waste Container No.: 69903

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	69639	69615		
10.1[4]	Daughter Drum Filter No.	KL-318	KL-306		
10.1[4]	Daughter Drum Bag Filter No.	~~501578~~ L-10215	~~501578~~ L-10215		
10.1[4]	Daughter Drum Purchase Order No.	501578	501578		
10.1[19][C]	WCG Fire Watch Stationed		☐ YES	☐ NO	☑ N/A
10.1[20][C][d]3/11.1[3]	WCG Fire Watch Secured		☐ YES	☐ NO	☑ N/A
10.2[4]	POC bag-on bag: Manufacturer				
	Model No.				
	Serial No.				
	Date of Manufacture				
10.2[5]	POC ID No	N	N		
10.2[6]/10.2[7][B]	POC Item Description	A	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	2 gallons	1 GALLON		
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 (%)	95%	80%		
10.5[3]/10.6[2]	Description Waste Added During Processing	Kitty litter Plastic Stub outs	Kitty litter Plastic Stub out bags		

ATTACHMENT 1
Page 4 of 4

4.1[6][B] Parent Waste Container No.: 69903

Comments: Room trash, Plastic, Nitrate Salts, lead Shielding
Kitty Litter

11.1[1] Performed By: Federico [illegible] [illegible] 12288261 4-17-14
Waste Handling Tech (print) Signature Z # Date

11.1[8] Reviewed By: Gilbert Martinez [illegible] [illegible] 149235 4-27-14 0830
SOS or designee (print) Signature Z # Date/Time

Working Copy
Date: 4-17-14

ATTACHMENT 1
Page 1 of 1

WCRRF OVERPACK DRUM ASSEMBLY PREPARATION DATA SHEET

5.[3] Overpack drum information:

Purchase Order No.: _____

Lot No.: _____

Manufacture Date: _____

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

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

Overpack filtered vent information:

Manufacturer: _____

Model No.: _____

Serial No.: _____

Manufacture Date: _____

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

5. [11] Performed By: _____ / _____ / _____ / _____
Waste Handling Technician (print) Signature Z # Date

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

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

Comments: Drum Not Dropped @ WCRRF

8.1[1] Performed By: Frederico Archuleta / [signature] 1228241 4-17-14
Waste Handling Technician (print) Signature Z # Date

8.1[6] Reviewed By: [signature] / [signature] 1453235 4-22-14
Supervisor or designee (print) Signature Z # Date

Working Copy
Date: 4-17-14

ATTACHMENT 4
Page 1 of 1

WCRRF OVERPACK DRUM CLOSURE DATA SHEET

7.[17] Overpack Drum Unique Identifier No.: 69702

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

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

Performed By: Federico Arbolida [signature] 1228826 4-17-14
Waste Handling Technician (print) Signature Z # Date

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

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

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

7.[34][D] 85-gal overpack drum gross weight (lb): 162.4 lb

Comments: N/C

8.1[1] Performed By: Federico Arbolida [signature] 1228826 4-17-14
Waste Handling Technician (print) Signature Z # Date

8.1[7] Reviewed By: Gilbert Martinez [signature] 1160751 4-22-14
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 1
Page 1 of 2

Working Copy
Date: 4-31-14

WCRRF DRUM PREPARATION DATA SHEET

5.[34][E] Drum ID No.: 69615

5.[3] Drum information:
Purchase Order No.: 4-30-80 501578
Lot No.: 0240118
Manufacture Date: 2013

5.[17] Drum Liner Bag/Filter Assembly:
Manufacturer: BOP
Model No.: 6cpvc 1.5-2 Spvc
Serial No.: L-10215
Manufacture Date: 5/13

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

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

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

Performed By: Steven Mondragon (Operator (print)) / Steven Mondragon (Signature) V0478/1 (Z #) 4-3-14 (Date)

5.[23] Filtered vent information:
Manufacturer: Nucfil
Model No.: 019 DS
Serial No.: KL-306
Manufacture Date: 11/11

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

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

5.[30] Scale File ID number: 019065

ATTACHMENT 1
Page 2 of 2

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

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

5.[34][E] Drum ID No.: 69615

Comments: N/C

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

7.1[4] Reviewed By: Gilbert M / 149235 / 149235 / 4/22/14
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 2
Page 1 of 2

WCRRF DRUM CLOSURE DATA SHEET

6.[3] Drum ID No.: 609615

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% cv +/- 6% ccv

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

Performed By: Frederico Arbolita [signature] 1228826 4-17-14
Operator (print) Signature Z # Date

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

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

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

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

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

Performed By: Frederico Arbolita [signature] 1228826 4-17-14
Operator (print) Signature Z # Date

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

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

ATTACHMENT 2
Page 2 of 2

6.[3] Drum ID No.: 69615

6.[26] Scale File ID number: 019065

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

6.[28] Drum gross weight: 283.2 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: Frederico Arbolita [signature] 1228826 4-17-14
Operator (print) Signature Z # Date

7.1[4] Reviewed By: Gilbert Martinez [signature] 1492351 4/22/14
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 1
Page 1 of 2

Working Copy
Date: 4/3/14 HS

WCRRF DRUM PREPARATION DATA SHEET

5.[34][E] Drum ID No.: 69639

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

5.[17] Drum Liner Bag/Filter Assembly:
Manufacturer: BOP
Model No.: 6LPVC 15-2 SPVC
Serial No.: L-10226
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 (+/-):	+1.47cw +1.61ccw	1.31cw +1.61ccw

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

Performed By: Steven Mondragon / Steven Mondragon / 1104781 / 4-3-14
Operator (print) / Signature / Z # / Date

5.[23] Filtered vent information:
Manufacturer: Nucfil
Model No.: 019DS
Serial No.: 4-3-14 ~~KD~~ KL-318
Manufacture Date: 11/11

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

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

5.[30] Scale File ID number: 019065

ATTACHMENT 1
Page 2 of 2

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

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

5.[34][E] Drum ID No.: 69639

Comments: NK

5.[35] Performed By: Steven Mondragon / Steven Mondragon / 1047141 / 4-3-14
Operator (print) / Signature / Z # / Date

7.1[4] Reviewed By: Gilbert M. / [illegible] / 1149351 / 4/22/14
Supervisor or designee (print) / Signature / Z # / Date

ATTACHMENT 2
Page 1 of 2

WCRRF DRUM CLOSURE DATA SHEET

6.[3] Drum ID No.: 609639

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

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

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

Performed By: Frederico Archuleta / [signature] 1228826 / 4-17-14
Operator (print) Signature Z # Date

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

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

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

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

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

Performed By: Frederico Archuleta / [signature] 1228826 / 4-17-14
Operator (print) Signature Z # Date

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

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

ATTACHMENT 2
Page 2 of 2

6.[3] Drum ID No.: 69639

6.[26] Scale File ID number: 0190165

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

6.[28] Drum gross weight: 361.0 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: [illegible] | [illegible] | 1288261 | 4-17-14
Operator (print) | Signature | Z # | Date

7.1[4] Reviewed By: Gilbert [illegible] | [illegible] | 1148835 | 4/24/14
Supervisor or designee (print) | Signature | Z # | Date

UET Working Copy
Date: 4-17-14

ATTACHMENT 2
Page 1 of 1

WCRRF PARENT 55-GAL DRUM PREPARATION DATA SHEET

6.3[21] Prepared Parent 55-Gal Drum Number: 69903

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): 391.2

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 [signature] 267179 4-17-14
Waste Handling Technician (print) Signature Z # Date

8.1[7] Reviewed By: [signature] [signature] 149235 4.22-14
Supervisor or designee (print) Signature Z # Date

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

8.1[8][D] Approved by: [signature] [signature] 149235 4/22/14 0830
SOS/SOM or designee (print) Signature Z # Date Time

Inspected salvage Drum Non-GG

LTP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

1937 SP7

Drum # 69903

Planning and Technical Solutions

Container ID: S843673 Container Type: 85 GAL DRUM Gross Weight (lbs): 416.745
Total PE-Ci Activity: 6.97E+00 Equivalent Combustible PE-Ci: 2.61E+00
Total Fissile Gram Equivalents: 7.72E+01 Total Surface Dose Rate (mrem/hr): 6
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 gallons of liquids in the drum.

Potential Safety Risks: Nitrate salt drums often contain free liquids and are packaged in individual plastic bags. Net weight is ~294 lbs. and generator data shows 10 items of nitrate salts with weights ranging from ~8-67 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 and D009 Contains free liquid, no other hazards noted.

Performed By: Tommy Smallwood (IHS Representative (Print)) | Signature | 249659 (Z#) | 8-20-13 (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: Follow procedures and use proper PPE

Performed By: Melissa McCarda (TRU Operations (Print)) | Signature | 234079 (Z#) | 4/7/14 (Date)

Operations Manager or designee

Processing Determination: ☒ Accept ☐ Reject

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

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

Noncertified TRU Waste Drum Item Information

DrumID: 019696

Item No	ItemID	Process Status	Net Wt (kg)	Matrix	Meas Code	SNM (g)	MT	Auth (Pg/Ln)		Comments
1	OX120101NE		30.680	NITRATE SALTS		24.35	52	6/14	G468	
2	OX121102NW		15.000	NITRATE SALTS		9.58	52	6/14	G468	
3	OX121102NE		5.450	NITRATE SALTS		1.06	52	6/14	G468	
4	DS104NE1		25.680	NITRATE SALTS		18.02	52	6/14	G468	
5	DS104NW1		3.640	NITRATE SALTS		1.27	52	6/14	G468	
6	LR-105NW1		15.000	NITRATE SALTS		7.1	52	6/14	G468	
7	MX-106NE1		14.320	NITRATE SALTS		9.01	52	6/14	G468	
8	RR107VRNW1		7.270	NITRATE SALTS		1.39	51	6/14	G468	
9	RR108VRNE1		7.500	NITRATE SALTS		0.6	52	6/14	G468	
10	LR-109NE1		9.090	NITRATE SALTS		9.56	52	6/14	G468	

Noncertified Waste Drum Material Summary

Gross Wt (kg): 189.

Material Type	SNM (grams)	Items Net Wt (kg)
51	1.39	7.27
52	80.55	126.36
Totals	81.94	133.63

ATTACHMENT 1
Page 1 of 1

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

5.[1] Sample Date: 5/29/13

Container No. (5.[1])	S843673					
Container type sampled (e.g., 55-gal, 85-gal, 110-gal, or SWB) (5.[1])	55-Gal (overpacked in 85-Gal)					
Filtered Vent Type (5.[1])	072					
Filtered Vent Unobstructed (5.[1])	☑ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT
WIPP-Approved Filtered Vent (5.[2])	☑ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT N/A	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT
Total CCP VOC value (< 7,000 ppm) (5.[4])	0 ppm	ppm	ppm	ppm	ppm	ppm
Hydrogen Reading (< 64,000 ppm) (5.[5])	0 ppm	ppm	ppm	ppm	ppm	ppm
Methane Reading (< 16,000 ppm) (5.[5])	0 ppm	ppm	ppm	ppm	ppm	ppm

5.[7] Certified CCP Technician:

Performed By: Sara Aragon (CCP (Print)), 237975 (Z#)

Reviewed By: Nathan Wales (CCP (Print)), 238666 (Z#)

Comments:
Email from Erik Loechell verifies container was sampled through 55 gal. (SS) 3/4/14

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#), 6/3/13 (Date)

72

InstName : Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\130529c\
Data File : S843673.D
Acq On : 29 May 2013 1:41 pm (#1); 29-May-13, 13:40:59 (#2)
Operator : SA
Sample :
Misc : 85 GAL LFL THROUGH UNOBSTRUCTED-072 (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 29 14:08:54 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	3981200	201.25	ppmv	0.04
15) Chlorobenzene-d5	5.930	117	3464596	177.00	ppmv	0.03

Target Compounds Qvalue

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

vocgas.m Wed May 29 14:09:01 2013

4-17-14

0510 Assuming WCRRF operations center - Coleman

0556 Air quality arrived to perform the weekly stack monitoring

0602 Air quality stack monitoring complete. Begining outside rounds.

0615 Pre-job being conducted by SOS.

0618 Outside rounds complete.

0625 Beginning inside rounds.

0630 Pre-job concluded.

0655 Both rounds reviewed by SOS.

0711 Mode changed to operations in WCRRF yard and 5069.

0715 Surveillance 4.1.1 performed. Received confirmation from IC that moving 3 drums into 5069 will not exceed our MAR limit.

0716 Initiating a drum movement from transportainer to 5069.

0722 Drum movement complete into 5069.

0750 Notified by RCT that the Red lights are not working to be able to denest. RCT's placing portable red lights. Possibly not turned back on after maintenance on breaker.

0755 Operators denesting 3 drums. Portable red lights in place.

0832 Denesting complete. Bagging on 69903. PPE is Set.

0840 Bag on complete.

0926 Bagging off 1 daughter, bagging on another daughter. PPE check Set.

0938 Bag off/on complete.

0942 Operators report an elevated CAM.

1011 Bagging off 1 daughter, bagging on 68997.

1036 Bag off/on complete.

1124 Bagging off 1 daughter, bagging on another daughter.

1136 Bag off/on complete.

1236 Bagging off 1 daughter, bagging on 53801. PPE check Set.

1302 Bag off/on complete.

Continued on next page - Coleman

4-17-14 Continued from previous page. SColeman
1336 Bagging off 1 daughter, bagging on another daughter. PPE S
1348 Bag off/on complete.
1400 Beginning outside rounds. Beginning inside rounds.
1423 Inside rounds complete.
1425 Outside rounds complete.
1453 Both rounds reviewed by SOS.
1456 RCRA inspections complete.
1457 Bagging off last daughter of the day and placing port cover on.
1515 Bag off complete. Everything is in a safe configuration and port cover in place.
1520 Initiating a drum movement from 5069 to a transporter
1549 Drum movement out of 5069 complete. All inventory has been removed from 5069.
1558 Mode change complete. Cold in 5069, warm in WKRF yard.
4-14-14 1600 End of day. CCD position secured. SColeman

No further entries this page.

4-17-14 WCRR SOM Dayshift

0557 Reviewed logs and assumed the WCRR SOM position [signature]

0[illegible]2 Completed attending the pre-job brief conducted by the SOS (Colbert). The safety topic was Stand safe over Confidence, and watch out for each other. There are no scheduled transfers today. Discussion focused on PPE requirements, and spotters are to support forklift operations with a vest at all times. Noted to operators - good catch on the long stem filter found in 50/69. Follow procedures and ensure all precautions and limitations are met. Currently there is one shift order in effect, Control of TRUSRs.

0708 Completed the daily phone call with AREA 6 SOM updating WCRR POD activities

0711 Mode Change: 50/69 and Ufad transition from Cold/Warm to Operations/Operations

0722 Outside Operations complete transferring of 3 drums 53801-SP-36, 68997-SP-72, and 69903 SP 72 into 50/69

0750 RCTs report that the red lights to notify personnel that rooms 102, 103 of 50/69 are on full face, are not working. RCTs will initiate use of portables. Notification will be made to maintenance to check breakers during pm shift.

0755 Operations initiate denesting 3 drums, with portable red lights in place.

[illegible]32 Inside Operations report denesting complete and personnel were bagging on PARENT drum 69903 SP 72

0840 Bag on is noted complete.

0926 Inside Operations initiate bag off of 1 daughter and bag on another

0958 bag off completed and operations continue to process.

0942 Operations report an elevated CAM.

1011 Bagging off 1 daughter - bagging on 68997.

1036 Bag on and Bag off is noted complete

1124 Bagging off 1 daughter and bagging on another daughter

1136 Bag off and on complete

1236 Bagging off 1 daughter bagging on Parent 53801

1302 Operations Complete Bag off.

1336 Operations bag on one daughter bag off the other and continue processing.

1348 Bag off on completed

1457 Inside Operations initiate bag off of daughter, empty parent and place pattern on WCG.

1515 Bag offs completed and port covers in place on WCG - Safe Configuration

1[illegible] Movement out completed all drums secured.

1558 Mode Change: 50/69 and Ufad transition from Operations/Operations to Cold/warm

19 Secured the SOM Position [signature]

11-14 WCRR SOS LOG Book

0600 Assuming SOS Position [illegible]
0 : Conducted shift brief discussed drums going into 50-69.
0630 Conducted shift brief
0655 Reviewed Inside And outside Rounds
0711 Mode change Complete WCRF In operations.
0716 Starting Movement Into 50-69
0722 Move In Complete
0750 RCT's notified Red Lights not working will use portables for bagging off
0755 denesting 3 drums
0872 denesting Complete Bagging on 69903
0840 bag on Complete
0926 bagging off / daughter bagging on Another
0938 bagg on left complete
~~2 left~~ on 4-17-14 Operators Report at elevated Cam.
1011 Bagg off / on L8997
1036 Bag on / of complete
1124 Bagging off / daughter baggin on Another
1 Bag on left Complete
1236 Bagging off / on 53801
1302 Bag off / in Complete
1336 Bagging of / daughter bagging on Another
1348 Bag on left complete
1400 starting Rounds
1453 Reviewed Inside And outside Rounds
1457 Bagging on last drum of Day.
515 Bag off complete.
1520 starting movement out of 50-69.
1549 Movement out Complete
1558 Mode change Complete
1630 end of Day Securing Position [illegible]
no further entries.

on other page

1-17-14 WCRRF SOS Log Book

1655 Assuming SOS position.

1656 All log book entries for this shift will be made in the WCRRF Operations Center log book.

1658 Securing SOS position. CT

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-RTR2-14-0039
Examination Date:	4/23/2014
Waste Container ID:	69615
Video/Audio Recorded Media Number:	LA-RTR2-14-0039 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 14
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3110
Waste Stream I.D.:	LA-MIN02-V.001
Waste Container Weights:	Gross Wt.: 129.5 kg Tare Wt.: 33.4 kg Net Wt.: 96.1 kg
Rigid Liner and Liner Vent Description:	Liner: [X] No [ ] Yes Lid: [X] No [ ] Yes Type: [ ] 30-mil [ ] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [ ] Yes [X] N/A Punctured: [X] No [ ] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [ ] No [X] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 1 layer
Volume Utilization Percentage:	75 %

CCP Radiography Data Sheet

Waste Container ID: 69615

Section 3: Container Inventory and Comments (Detailed descriptions)

IM:

AM:

OM: Scrap lead

OI:

C:

R:

XPM:

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP): Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	23.0
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	
Organic Matrix (OR):	
Inorganic Matrix (IN):	73.1
Soils (S):	
Total WMP Weight:	96.1

CCP Radiography Data Sheet

Waste Container ID: 69615

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:

Eddie Rios	Eddie Rios	4/23/2014
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	69615	Count Sequence Number:	24591
Operator:	D3PW2DK1\operator		
Assay Start:	4/23/2014 3:41:15 PM		
Description 1:	1LANDA1933		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 96.1 kg	Net:	96.1 kg
Container:	Volume: 208.0 l	Full:	75.0 %
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:	24591	Batch Number:	1LANDA1933
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:	69615	Analysis Date:	4/23/2014

Net Weight	96100.0 g		
Pu mass	8.80E+001	+-	3.12E+001 g
TRU Alpha Activity	1.29E+001	+-	2.30E+000 Ci
TRU Activity Concentration	1.35E+005	+-	2.39E+004 nCi/g
Pu-239 Equivalent Activity	1.32E+001	+-	2.30E+000 Ci
Pu-239 FGE	8.58E+001	+-	3.12E+001 g
Decay heat	4.18E-001	+-	7.29E-002 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	7.36E-007
U233	<LLD	<LLD	0.00E+000	8.27E-003
U234	3.74E-002	2.33E-004	6.00E-005	0.00E+000
U235	2.67E+000	5.77E-006	1.49E-006	3.18E-006
NP237	1.15E-001	8.09E-005	1.40E-005	3.70E-006
PU238	2.09E-002	3.57E-001	2.37E-001	4.48E-003
U238	<LLD	<LLD	0.00E+000	2.56E-005
PU239	8.36E+001	5.18E+000	1.93E+000	6.50E-002
PU240	4.19E+000	9.50E-001	3.75E-001	1.19E-002
AM241	1.88E+000	6.44E+000	1.16E+000	1.56E-001
PU241	1.41E-001	1.45E+001	5.43E+000	1.82E-001
PU242	8.36E-002	3.30E-004	1.57E-004	0.00E+000
AM243	2.60E-003	5.19E-004	9.07E-005	1.09E-005

Errors quoted at 1.000 sigma

Operator: [signature] Date: 4-24-14

ITR: [signature] Date: 4-28-14

Automated Independent Technical Review

Count Sequence Number: 24591 Batch Number: 1LANDA1933
Counter ID: MCS HENC #1
Container ID: 69615
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 4/23/2014

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

Comments	Disposition
Section 4 - MGA Analysis Results are marked as invalid.	MGA analysis failed. 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: Sheri Chamberlin Date: 4-24-14

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **69615**

BDR Number: **LA14FG2060**

Sampling Date: **4/30/2014**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	267.32	
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\140430c\
Data File : 69615.D
Acq On : 30 Apr 2014 9:29 am (#1); 30-Apr-14, 09:28:21 (#2)
Operator : NW
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 30 09:37:02 2014
Quant Method : C:\msdchem\1\METHODS\VOCGAS.M
Quant Title : Flammable Gas Analysis
QLast Update : Tue Apr 08 10:24:48 2014
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
3) Fluorobenzene	3.578	96	2735498	199.75 ppmv	0.03
15) Chlorobenzene-d5	5.881	117	2179194	175.25 ppmv	0.02
Target Compounds					Qvalue
1) Hydrogen	1.612	GC1	1912m	267.32 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-RTR2-14-0039
Examination Date:	4/23/2014
Waste Container ID:	69639
Video/Audio Recorded Media Number:	LA-RTR2-14-0039 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.: 164.5 kg Tare Wt.: 33.4 kg Net Wt.: 131.1 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: 69639

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

Section 4: Packaging Material and Waste Material Parameters	
Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP): Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	15.0
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	3.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	113.1
Soils (S):	
Total WMP Weight:	131.1

CCP Radiography Data Sheet

Waste Container ID: 69639

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:

Eddie Rios	Eddie Rios	4/23/2014
Print Name	Signature	Date

5843673

NDA 2000 Assay Report

Item Information

Item ID:	69639	Count Sequence Number:	24596
Operator:	D3PW2DK1\operator		
Assay Start:	4/24/2014 10:41:16 AM		
Description 1:	1LANDA1934		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 131.0 kg	Net:	131.0 kg
Container:	Volume: 208.0 l	Full:	95.0 %
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:	24596	Batch Number:	1LANDA1934
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:	69639	Analysis Date:	4/24/2014

Net Weight	131000.0 g			
Pu mass	3.14E+001	+-	1.15E+001	g
TRU Alpha Activity	4.33E+000	+-	1.56E+000	Ci
TRU Activity Concentration	3.30E+004	+-	1.19E+004	nCi/g
Pu-239 Equivalent Activity	4.38E+000	+-	1.56E+000	Ci
Pu-239 FGE	3.16E+001	+-	1.15E+001	g
Decay heat	1.39E-001	+-	5.10E-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	4.67E-007
U233	<LLD	<LLD	0.00E+000	4.94E-003
U234	3.85E-002	2.39E-004	5.42E-005	0.00E+000
U235	2.75E+000	5.94E-006	1.35E-006	2.29E-006
NP237	5.82E-002	4.11E-005	7.37E-006	2.30E-006
PU238	7.71E-003	1.32E-001	8.65E-002	2.88E-003
U238	<LLD	<LLD	0.00E+000	2.84E-005
PU239	2.97E+001	1.84E+000	7.15E-001	4.02E-002
PU240	1.58E+000	3.59E-001	1.45E-001	7.84E-003
AM241	5.81E-001	1.99E+000	1.37E+000	9.74E-002
PU241	3.55E-002	3.66E+000	1.43E+000	7.98E-002
PU242	2.80E-002	1.11E-004	5.32E-005	0.00E+000
AM243	8.67E-004	1.73E-004	3.15E-005	6.57E-006

Errors quoted at 1.000 sigma

Operator: [signature] Date: 4/29/14

ITR: [signature] Date: 4-29-14

Automated Independent Technical Review

Count Sequence Number: 24596 Batch Number: 1LANDA1934
Counter ID: MCS HENC #1
Container ID: 69639
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 4/24/2014

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

Expert Review by: Sheri Chamberlain Date: 4-28-14

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **69639**

BDR Number: **LA14FG2060**

Sampling Date: **4/30/2014**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	223.70	
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\140430c\
Data File : 69639.D
Acq On : 30 Apr 2014 9:17 am (#1); 30-Apr-14, 09:17:04 (#2)
Operator : NW
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 30 09:25:27 2014
Quant Method : C:\msdchem\1\METHODS\VOCGAS.M
Quant Title : Flammable Gas Analysis
QLast Update : Tue Apr 08 10:24:48 2014
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
3) Fluorobenzene	3.552	96	2804010	199.75	ppmv	0.00
15) Chlorobenzene-d5	5.868	117	2198004	175.25	ppmv	0.00
Target Compounds						Qvalue
1) Hydrogen	1.615	GC1	1600m	223.70	ppmv	

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

14

S843962

S843962

Container Profile 748239

File Options Reports Help

S843962

748239	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

S843962

- S843962
  - 90882 – EMPTY
  - 90881
    - 92581 – EMPTY
    - 92580
  - 90880
    - 92222 – EMPTY
    - 92221
      - LASB02094
    - 92220
    - 92219

Task History

Transfer Details

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

Working Copy
Date 2-8-12

ATTACHMENT 1
Page 1 of 3

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: 5843962

6.2[4] Date Processed: 2-8-12

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: 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: GERALD Espinosa / Gerald Esp 0317201 2-8-12
Waste Handling Tech (print) Signature Z # Date

5.[16] Prepared Parent Drum Weight (lb): 377.2 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.: S843962

6.2[5][B]/ 6.2[6] Total Parent Drum Weight (lb) 377.2 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.	90880			
10.1[4]	Daughter Drum Filter No.	CL-1419		N	
10.1[4]	Daughter Drum Bag Filter No.	WO 11635		A	
10.1[4]	Daughter Drum Purchase Order No.	414997			
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	NCFL	☐ YES	☐ NO	☑ N/A
10.2[4]	POC bag-on bag: Manufacturer	BOP			
	Model No.	[illegible]			
	Serial No.	LL 208			
	Date of Manufacture	12-11			
10.2[5]	POC ID No	90881			
10.2[7][B]/10.2[6]	POC Item Description	SALTS			
10.2[7][D]/10.2[8][D]	Bag-out Bag Filter No.	LL208			
10.2[13]	POC Assembly closed per Manufacturer's instructions. (Initial and Z#)	DP 240012			
10.2[14]	POC Assembly Gross Weight (lb)	321.8		N	
10.2[15]	POC Rad. Survey Results (mrem/hr)	151			
10.3[3][A]	Approx. Containerized Liquid Vol./Units	- NA -		A	
10.3[7][A]	Opaque/Non-penetrable Item Description:	lead			
10.3[5][A]	Free Liquid Volume/Units	2 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 (%)	90%			
10.5[4]	Description Waste Added During Processing	ABSORBENT PLASTIC CHEESECLOTH			

ATTACHMENT 1
Page 3 of 3

4.1[6][B] Parent Waste Container No.: 5843962

Comments: LEAD LINED, LIQUID, SALTS, PLASTIC, 10 GAL BUCKET.

11.1[1] Performed By: GERALD ESPINOSA / Gerald Espinosa / 1737720 / 2-8-12
Waste Handling Tech (print) Signature Z # Date

11.1[7] Reviewed By: Anthony Vigil / Anthony Vigil / 1848614 / 2-8-12
SOS/SOM (print) Signature Z # Date/Time

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

85-Gallon Overpack ID Number 90882

RECORD Drum Filter information:
Filter ID Number:
Date of Manufacture:

TORQUE WRENCH INFORMATION			
Filter Torque Wrench		**Drum Lid Ring Bolt**	
M&TE ID#		M&TE ID#	038373
Cal Expiration Date		Cal Expiration Date	5-30-12
			±3% 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: 160 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 Espinosa	Gerald E	GE	237720	2-8-12
Anthony Vigil	Anthony Vigil	AV	181861	2-8-12

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

Drum ID#: 90880

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 #: 914992
Lot #: 217304
Date of Manufacture:

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: BOF
Model #: 3CPVC-2.5PVC
Serial #: WP-1635
Date of Manufacture: 6/11

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 #: 01905
Serial #: CL-1419
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: Eddie Rios Signature: [signature] Z#: 187822

5. Weigh Drum Assembly

RECORD weight information

Tare witght (lbs) 75.4
File ID #: 019045

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

6. Label Drum Assembly

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

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

Operator Print: Eddie Rios Operator Sign: [signature] Z#: 187822 Date: 1-03-12

Verifier Print: GERALD ESPINOZA Verifier Sign: [signature] Z#: 237720 Date: 2-8-12

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

DRUM ID#: 90880

1. LID INSTALLATION

NOTE: Install lid per manufacturer's instructions.

✓ Mount lid with filter directly over drum seam.

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

✓ Engage bolt and nut and torque per manufactures instructions.

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

✓ Tighten jam nut.

Record torque wrench information:

MT&E # : 038373

Cal expiration date: 5-30-12

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

Tolerance ±3% cw ±6% ccw

2. DRUM LABELING

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

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

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

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

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

RCRA Label:

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

OR

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

NOTE: Check only one of the above two boxes.

3. WEIGH DRUM ASSEMBLY

Record weight information:

Gross Weight(lbs.): 321.8

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.

GERALD ESPINOZA

Operator Print/Sign: [signature] Date: 2-8-12

Verifier Print/Sign: Anthony Vigil [signature] Date: 2-8-12

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

85-Gallon Overpack ID Number S843962

RECORD Drum Filter information:	NUCF.1-013
Filter ID Number:	F5-477
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		±3% cw
Tolerance	±6% ccw	Tolerance	±6% ccw
Torque wrench is within acceptable range as displayed on Calibration Certificate	☑ Yes ☐ No ☐ N/A	Torque wrench is within acceptable range as displayed on Calibration Certificate	☑ Yes ☐ No
		Bung Torque Wrench	
		M&TE ID#	040691
		Cal Expiration Date	8-2-12
		Tolerance ±3% cw	±6% ccw
		Torque wrench is within acceptable range as displayed on Calibration Certificate	☑ Yes ☐ No ☐ N/A

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

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

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

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

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

Drum lid ring ends touching: ☐ YES ☑ NO

Technician Name (print)	Signature	Initials	Z#	Date
Michael Romero	Michael Romero	MR	1182723	1-9-12
Clayton Mullins	[signature]	CM	240092	1/12/12

WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Production Control

Container ID: S843962 Container Type: 85-GAL Gross Weight (lbs): 379
Inner Seal #: 012432 Filter Prefix: LAVC Filter Serial #: 00065; 02611
AK Waste Stream: LA-MHD01.001 Certified RTR BDR: No BDR
TWSR Comments: LEACHED SOLIDS WAS S832348 STACKED 3/83 MST 12 RM434 NOT USED IN SRF TESTS
Total PE-Ci Activity: 6.47E+00 Equivalent Combustible PE-Ci: 2.43E+00 AM-241 PE-Ci: 5.25E-01
Total Fissile Gram Equivalents: 71.5 Total Surface Dose Rate (mrem/hr): 1
EPA Code(s): None
NCR RTR/NDA Comment: None
RTR Pre-Screen Date: 7/20/2007 Comment: Liquids, Impenetrable Obj, Liquid Location: 28
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: 12.1.11

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: 319lb. Five items, heaviest item weighs 147 lb and others range from 8lb to 39lb.
55gal drum overpacked in 85 gal drum.
May require RWP for >1000 and <10000 mrem/hr @ 30 cm
Drums containing nitrate salts may contain undocumented liquids

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

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: Vanessa Velarde (TRU Remediation Operations (Print)) Signature: [illegible] Z Number: 234079 Date: 12/12/11

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]):	S843962 LS	S845201 LS	S844213 LS
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])	S843962	S845201	S844213
Hydrogen Reading (ppm) (7.[10]):	290.00 ppm	470.21 ppm	447.14 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] 198650 / 1/31/11
Waste Handling Operator (print) Signature Z # Date

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

☑ No deficiencies

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

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

11.1[7][B]/ 11.1[8] Reviewed By: Kenny Romero Kenny Romero 117286 1.31.11
Waste Handling Supervisor (print) Signature Z # Date

InstName : Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\110126c\
Data File : S843962.D
Acq On : 26 Jan 2011 3:21 pm (#1); 26-Jan-11, 15:20:20 (#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 15:55:08 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	3.626	96	7549416	205.50	ppmv	0.00
15) Chlorobenzene-d5	5.955	117	6269069	182.75	ppmv	0.00
Target Compounds						Qvalue
1) Hydrogen	1.645	GC1	2269m	290.00	ppmv	

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

vocgas.m Wed Jan 26 15:55:25 2011

5

2-7-12

PROJECT NAME _____ NOTEBOOK NO. _____

0600 Assuming WCRRF Operations center - C Velarde
0602 Starting inside rounds
0613 Item #60 is OOS per CSE documentation OK to proceed.
0615 SOS conducting pre job briefing.
0620 Starting outside rounds.
0622 Completed inside rounds
0710 Inside and Outside rounds signed off by SOS.
0715 Mode change performed we are now in Operations
0754 Bagging on 9832464
0802 Starting movement out of 50-69
0812 Bag on complete
0816 Movement complete out of 50-69
0911 introducing absorbant thru introductory port.
0935 introductory port introduction complete.
0939 Starting movement from transportainer to transport vehicle permission granted to lower vehicle access gate.
0951 vehicle access gates have been restored movement complete to transport vehicle.
1051 Bagging off ~~5844213~~ 9832464 and POC's bagging on 5844213
1300 Bag off complete we have a total of 5 POCS.
1358 Starting off loading of transport vehicle to transportainer
1411 permission granted to lower vehicle access gate
1437 being relieved by OCO Lori Coleman - C Velarde
1438 Assuming WCRR operations cntr. - J Coleman
1439 Late entry at 1300 SOS notified op center that the tow cable on the vehicle barrier access was sagging. SOM notified, SOM notified CSE. JC
1505 Bagging off drum #~~5832~~ JC 2-7-12 5844213,
1506 Being relieved by OCO Clarissa Velarde. - J Coleman
1510 assuming WCRRF operations center - C Velarde.
1519 Bagging on 5843962 and bagging off 5844213 and POCS. CV 2-7-12
1605 movement ~~from~~ transportainer from transport vehicle completed vehicle access gates have been restored.
1641 Inside and outside rounds signed off by SOS
1646 mode change performed we are now in Warm
1700 end of day WCRRF Operations Center secure - C Velarde

no further entries this page

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

28-12
28-11 CW 28-11

PROJECT NAME _____ NOTEBOOK NO. _____

0000 Assuming WCRRF Operations center (Kelanda)
0001 Started inside rounds
0010 Item #60 is DOS. Per CSE documentation OK to proceed
0030 Completed inside rounds and started outside rounds
0048 Completed outside rounds.
0730 Mode change performed we are now in Operations
0750 Starting movement out of 50-69
0800 Starting to process drum 3843962
0833 movement out of 50-69 complete
0927 Bagging off 3843962 and 3 PDC's, bagging on 3838261
1104 Bagging off 3838261 and 3 PDC's, bagging on 3823194
1325 Operators introducing absorbant into drg three introductory part.
1329 completed introducing absorbant.
1344 Starting movement into 50-69
1412 movement completed into 50-69.
1431 starting movement out of 50-69.
1448 Starting to denest drums.
1459 movement complete out of 50-69.
1520 completed denesting of drums and bagging on 3845201, bagging off 3823194 and 12 PDC's.
1535 Starting inside rounds
1549 Item 61 on rounds is DOS per CSE documentation OK to proceed.
1553 Inside rounds completed
1618 Inside and outside rounds signed off by SOS
1632 Mode change performed we are now in Warm.
1648 end of day. WCRRF Operations center secure. - Kelanda

No further entries this page.

SIGNATURE _____ DATE _____ 20__

READ AND UNDERSTOOD

PROJECT NAME 2-8-12 NOTEBOOK NO.

0600 Reviewed shift turnover from previous shift and assumed the WCRR SOM position. (Jeremiah Hernandez)
0620 Attended pre-job briefing conducted by Shift Operations Supervisor. Energy Solutions manager came by to talk to operators about the use of absorbant.
0730 Mode change complete WCRR YARD and 50-69 from WARM to OPERATIONS.
1300 Meeting at 50-146 to discuss WCRR shift work. Energy Solutions will be bringing in 4 additional operators on 2-9-12 and 3 additional operators in two weeks. Second SOM needs to get qualified and 4 additional RCTs need to be on board. Anticipated date for 12 hour work day schedule change is March 5 2012.
1500 Attended a meeting at TA46 conference room to discuss an internal assessment team coming up to WCRR and GWCF. The team will be arriving "fresh eyes on safety". Team will discuss any issues identified with SOM informally.
1632 Mode change complete WCRR YARD and 50-69 from OPERATIONS to WARM standby mode.
1700 Securing the watch. (Jeremiah Hernandez)

DO Nuttal Expires

SIGNATURE Jeremiah Hernandez DATE 2-8 20 12
READ AND UNDERSTOOD DATE 20

0600 Reviewed shift turnover from previous shift and assumed the WCRR SOM position. [illegible]

0605 Attended the pre-job briefing conducted by Shift Operations Supervisor. Concerns brought up by operators was the amount of liquid in the drum and the amount of absorbant being used per manufacture instructions. SOS will follow through with manufacture and will speak with Energy Solutions on ordering additional absorbent.

0625 Mode change complete. WCRR YARD and 30-69 from WARM to OPERATIONS.

0951 Reported by the Operation Center and SOS that operations personnel notified them that while they were bagging out of a daughter drum, the operator removed the tape from the nuclie filter and the filter came off. The operator was following their procedure as written and all compensatory measures from standing order were being followed. No LAMs were reported of elevated and the contamination was detected. The rig was immediately placed back on to the daughter drum.

1004 SOM spoke to QA Robert Trujillo [illegible] regarding nuclie bags and incident that occurred inside 30-69 with a bad filter. He advised that as long as the compensatory measures were in place and being followed and because this was the first bag from the batch that operations has encountered bad, operation should resume as usual. He will notify his management and will follow up with a phone call if anything changes.

1006 SOM notified on-shift nuclie bag issue. He concurred with QA recommendations. SOM spoke with RP-T supervisor and she concurred as well.

1020 QA Robert Trujillo followed up with a phone call and he said his management concurred with forward. He also said he might come by today to look at nuclie bags in ARTIC. He recommend that operations follows up with any new issues identified with bags with QA.

1032 SOM spoke with SOS and requested he follow up with visiting prepping operations in ARTIC and ensuring nothing has changed.

1040 Reported by an RCT that when filter on bag came off a piece of tape was immediately placed on opening. Bag was removed within minutes and some contamination

PROJECT NAME WCRR SOS LOG Book NOTEBOOK NO.

2-8-12

0605 Reviewed SOS Turn over Assuming Position

0615 Shift Brief Completed with over the use of wash lik Also Issues with transportation Doors And revised RWPs

0715 Shift brief Concluded

0730 Mode Change Complete WCRR Yard And SO-69 IN Operations Mode

1618 Mode Change Complete WCRR Yard And SO-69 In warm

1630 End of Shift Securing SOS Position

GW 2/10/12

No further entries on this page

SIGNATURE _____ DATE _____ 20

READ AND UNDERSTOOD _____ DATE _____ 20

247

PROJECT NAME WCRR SOS LOG BOOK NOTEBOOK NO.

2-9-12

0602 Reviewed SOS Turnover Assuming SOS Position

0615 Shift brief Conducted.

0700 Shift briefs Concluded

0711 Reviewed inside and outside Rounds

0723 Mode change Complete WCRR Yard And SO-69 IN Operations mode.

0951 notified by Inside personal that during bag out operation A filter tape was peeled off and top layer off filter was peeled of SOS notified operators ok to continue do to All Comp. measures In place for this issue.

1010 CCP Notified ok to use bag as is no further action neccesary for ship.

1040 notified by RCT That during bag off operation off of the drum above There was contamination detected of 200dpm well ~~below~~ Gen 2-9-12 below RWP limit.

1215 Securing SOS Position

1215 Reviewed SOS Turnover Assuming SOS Position

1400 WENT WITH QA TO LOOK AT FILTERS ON NUCFEL BAGS. WE DETERMINED THAT MAYBE USING A SMALLER TAPE ON FILTER WILL HELP.

1445 NOTIFIED ~~M~~ THAT ANOTHER BAG HAD INTEGRETY ISSUES.

1633 REVIEWED INSIDE AND OUTSIDE ROUNDS

1634 MODE CHANGE COMPLETE WE ARE IN ~~WARM~~ WARM MODE.

1640 END OF SHIFT SECURING WCRR SOS POSITION

GMO 2/10/12

No Further entries on this page.

SIGNATURE _____ DATE _____ 20 ____

READ AND UNDERSTOOD _____ DATE _____ 20 ____

Working Copy
UET
Date: 10-18-12

ATTACHMENT 1
Page 1 of 4

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: 90880

6.2[4] Date Processed: 10/18/12

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

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

4.1[6][B] Parent Waste Container RCRA Designations: D007 - 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: Joe Quintana [signature] 239987 10/18/12
Waste Handling Tech (print) Signature Z # Date

ATTACHMENT 1
Page 2 of 4

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

5.[18] Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable: 326.8 lb

6.2[5][A] Parent Drum Lead Blanket Weight (lb): 120.0 lb

6.2[5][B]/ 6.2[6] Total Parent Drum Weight (lb) 446.8 lb

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

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

EWMO-FOD (print)	Signature	Z #	Date

ATTACHMENT 1
Page 3 of 4

4.1[6][B] Parent Waste Container No.: 90880

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	92219	92220	92221	
10.1[4]	Daughter Drum Filter No.	AM882	AM848	AM-833	N/A
10.1[4]	Daughter Drum Bag Filter No.	L8668	L3693	L-3769	
10.1[4]	Daughter Drum Purchase Order No.	416265	416265	416265	
10.1[13][C]	WCG Fire Watch Stationed		☐ YES	☐ NO	☑ N/A
10.1[14][C][d]3/11.1[3]	WCG Fire Watch Secured		☐ YES	☐ NO	☑ N/A
10.2[4]	POC bag-on bag: Manufacturer				
	Model No.				
	Serial No.			N/A	
	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	
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	see comments	see comments	N/A
10.3[13]/10.4[10]/10.5[4]/10.6[8]	Daughter Drum % Full (%)	80%	80%	80%	
10.5[3]/10.6[2]	Description Waste Added During Processing	Plastic Kitty Litter	Plastic Kitty Litter	Plastic Kitty Litter	

ATTACHMENT 1
Page 4 of 4

4.1[6][B] Parent Waste Container No.: 90880

Comments: SALTS, KITTY LITTER, PLASTICS, LEAD SHIELDING 10 GAL UNSEALED METAL CAN, HEXARMOR GLOVES

11.1[1] Performed By: JOE QUINTANA Joe Q S 239987, 10/18/12
Waste Handling Tech (print) Signature Z# Date

11.1[7] Reviewed By: Jose Perez, Jose Perez 1221452, 10-19-12 0945
SOS or designee (print) Signature Z# Date/Time

Working Copy
Date: 10-9-12

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-735
Manufacture Date: 8/11

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

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

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

Performed By: Steven Mandragón / Steven Mandragón 1004741 10-09-12
Waste Handling Technician (print) Signature Z# Date

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

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

Comments: N/C

8.1[1] Performed By: Steven Mandragón / Steven Mandragón 1004741 10-09-12
Waste Handling Technician (print) Signature Z# Date

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

8.1[7] Reviewed By: Jose Jerez / [signature] 221452 10-19-12
Supervisor or designee (print) Signature Z# Date

Working Copy
UET
Date: 10-18-12

ATTACHMENT 5
Page 1 of 1

WCRRF OVERPACK DRUM CLOSURE DATA SHEET

7.[19] Overpack Drum Unique Identifier No.: 92222

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: Joe Quintana [signature] 239987, 10/18/12
Waste Handling Technician (print) Signature Z# Date

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

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

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

7.[36][D] 85-gal overpack drum gross weight (lb): 162.2 lb

Comments: N/C

8.1[1] Performed By: Joe Quintana [signature] 239987, 10/18/12
Waste Handling Technician (print) Signature Z# Date

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

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

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

Drum ID#: 92219

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 #: 0229228
Date of Manufacture: 2012

2. Drum Liner Bag/Filter Assembly:

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

RECORD bag filter information:
Manufacturer: BOP
Model #: 6 CPVC 1.5 - 2.5 SPVC
Serial #: L8668
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 #: D19DS
Serial #: Am 882
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: +/- 3% cw, +/- 6% ccw

Jam Nut / Bung torque wrench:
M&TE ID #: 021151
Cal Expiration Date: 6/11/13
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: Michael Romero Signature: Michael Romero ZI#: 182723

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: Michael Romero Operator Sign: Michael Romero ZI#: 182723 Date: 10-3-12
Verifier Print: Brandon Chavez Verifier Sign: [illegible] ZI#: 204702 Date: 10-18-12

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

DRUM ID#: 92219

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): [illegible]

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 10/18/12

Verifier Print/Sign: [illegible] Date: 10-18-12

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

Drum ID#: 92220

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 #: 0229225
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 #: 6CPV1.5-2 3pvc
Serial #: L-30693
Date of Manufacture: 6-12

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

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

4. Install Lid/Drum Filter

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

RECORD drum filter information:

Manufacturer: NuCFIL
Model #: 019 DS
Serial #: 4M-846
Date of Manufacture: 1-12

RECORD torque wrench information:

Filter torque wrench:		Jam Nut / Bung torque wrench:	
M&TE ID #:	020614	M&TE ID #:	021151
Cal Expiration Date:	10-19-12	Cal Expiration Date:	6-11-13
Range (ft-lbs or in-lbs):	50-200	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 ID#: 182723

5. Weigh Drum Assembly

RECORD weight information

Tare wtght (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: Michael Romero Operator Sign: Michael Romero ID: 182723 Date: 10-11-12

Verifier Print: Brandon Chavez Verifier Sign: [illegible] ID: 207742 Date: 10-18-12

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

DRUM ID#: 92220

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): 181.4

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: JOE QUINTANA Date 10/18/12

Verifier Print/Sign: Brooke Clase Date: 10-18-12

Working Copy
Date: 10-11-12

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

Drum ID#: 92221

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 #: 446265
Lot #: 0229225
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 #: GCDV1.5-25PVC
Serial #: L-3769
Date of Manufacture: 6-12

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

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

4. Install Lid/Drum Filter

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

RECORD drum filter information:

Manufacturer: NUCFIL
Model #: 019-DS
Serial #: AM-833
Date of Manufacture: 1-12

RECORD torque wrench information.

Filter torque wrench:		Jam Nut / Bung torque wrench:	
M&TE ID #:	090614	M&TE ID #:	021151
Cal Expiration Date:	10-19-12	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 Z#: 182723

5. Weigh Drum Assembly

RECORD weight information

Tare wight (lbs) 75.4
File ID #: 019065

[ ] Write the tare weight on drum using permanent marker

6. Label Drum Assembly

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

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

Operator Print: Michael Romero Operator Sign: Michael Romero Z#: 182723 Date: 10-11-12

Verifier Print: Brandon Chavez Verifier Sign: [signature] Z#: 204742 Date: 10-15-12

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

DRUM ID#: 92221

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): 205.4

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: [signature] Date: 10/18/12

Verifier Print/Sign: Brandon Chmer [signature] Date: 10-18-12

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WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Production Control

Container ID: 90880 Container Type: 55-GAL Gross Weight (lbs): 322
Inner Seal #: None Filter Prefix: None Filter Serial #: CL-1419
AK Waste Stream: LA-MHD01.001 Certified RTR BDR: No BDR
TWSR Comments: PARENT #S843962
Total PE-Ci Activity: 3.24E+00 Equivalent Combustible PE-Ci: 1.21E+00 AM-241 PE-Ci: 2.63E-01
Total Fissile Gram Equivalents: 35.7 Total Surface Dose Rate (mrem/hr): 12
EPA Code(s): D008 D007 D009 VR 10/9/12
NCR RTR/NDA Comment: None
RTR Pre-Screen Date: 6/27/2012 Comment: Impenetrable, Liquid is present, S5000
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 kitty litter/zeolite must be mixed with 1:0 volume of nitrate salts.
Performed By: Susan Ramsey / Susan S. Ramsey / 100681 / 9/4/12
Production Control (Print) Signature Z Number Date

WDP Engineering

Chemicals Present (e.g., pyrophorics, acids, bases, shock sensitive, organic liquids, peroxides, crown ethers): ☐ Yes ☑ No ☐ Unknown
Processing Determination: ☑ Accept ☐ Reject
WDP Engineering Comments: Nitrate Salts/debris
Net Wt: 253 lb
Parent drum (SEDS attached) was part of WCRR nitrate salt repack campaign. This resulting daughter 55-gal drum may contain nitrate salts or a combination of nitrate salts and debris. RTR PS identifies impenetrable item(s) (likely homogeneous nitrate salts or debris such as lead) and liquids (requiring adjustment to the admixture/nitrate salt ratio). Nitrate salts carry waste codes for [redacted] and mercury. No chemicals present. May require RWP for ≥ 100 t < 1000 mrem/hr
Performed By: Valerie Rhodes / Valerie Rhodes / 112609 / 10/10/12
WDP Engineering (Print) Signature Z Number Date

TRU Remediation Operations

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

LR Z# 249750 10/15/12

IHS Review: RS 206362 10.11.12

Noncertified TRU Waste Drum Item Information

DrumID: 012432

Item No	ItemID	Process Status	Net Wt (kg)	Matrix	Meas Code	SNM (g)	NT	Auth (Pg/Ln)		Comments
1	IXFB-711-F1		3.640	NITRATE SALTS		3.97	52	6/11	G468	
2	IXFB-712-F1		46.590	NITRATE SALTS		47.58	52	6/11	G468	
3	IXFB-713-FD		6.590	NITRATE SALTS		6.31	52	6/11	G468	
4	SVCL-1-SA		11.820	NITRATE SALTS		16.13	52	6/11	G468	
5	IXF-715-OX31		17.730	NITRATE SALTS		1.96	52	6/11	G468	

Noncertified Waste Drum Material Summary

Gross Wt (kg): 171.8

Material Type	SNM (grams)	Items Net Wt (kg)
52	75.95	106.37
Totals	75.95	106.37

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])	90880					
Container type sampled (e.g., 55-gal, 85-gal, 110-gal, or SWB) (5.[1])	55 gal					
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])	60.18 ppm	ppm	ppm	ppm	ppm	ppm
Hydrogen Reading (< 64,000 ppm) (5.[5])	156.44 ppm	ppm	ppm	ppm	ppm	ppm
Methane Reading (< 16,000 ppm) (5.[5])	0 ppm	ppm	ppm	ppm	ppm	ppm

5.[7] Certified CCP Technician:

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

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

Comments: None

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

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

6.1[3] Performed By: SUSAN RAMSEY (Waste Handling Operator (print)) [signature] (Signature) 000681 (Z #) 10/10/12 (Date)

InstName : Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\121005c\
Data File : 90880.D
Acq On : 5 Oct 2012 1:39 pm (#1); 05-Oct-12, 13:39:18 (#2)
Operator : NW
Sample :
Misc : 55 gallon LFL drum through 019DS,unobstructed (Sig #1 , (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Oct 05 13:47:53 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	Qvalue
Internal Standards						
3) Fluorobenzene	3.561	96	6237027	201.25	ppmv	0.02
15) Chlorobenzene-d5	5.884	117	5510817	177.00	ppmv	0.00
Target Compounds						Qvalue
1) Hydrogen	1.609	GC1	1106m	156.44	ppmv	
4) Methanol	0.847	31	34608m	60.18	ppmv	

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

253
10-18-12

PROJECT NAME _____ NOTEBOOK NO. _____

0550 Assuming WCRR operations center. - JC Oeman
0557 Beginning outside rounds.
0600 Air quality personnel arrived to perform weekly stack monitoring.
0615 Outside rounds complete. Pre-job being conducted by SO
0646 Beginning inside rounds.
0703 Inside rounds complete.
0710 Both rounds reviewed by SOS.
0731 Mode change complete. We are now in operations.
0732 Bagging on drum #90865.
0744 Bag on complete.
0757 Operators staging the drums outside of 194/75 for the shipment to Area G.
0801 Permission granted to lower vehicle access gates.
0844 Transfer vehicle loaded. Vehicle access gates restored.
0848 Initiating a drum movement from 50-69 to a transportainer.
0918 Drum movement out of facility complete.
~~1010~~ JC 10-18-12
1034 Bag-off complete. Bagged on drum #90880.
1325 Bagging off 90880 and 3 daughters.
1326 Late entry at 0815 began bagoff of 90865 and 3 daughters. JC
1407 Beginning inside rounds.
1422 Initiating a drum movement from 50-69 to a transportainer
1436 Inside rounds complete.
1445 Drum movement out of facility complete.
1505 Beginning outside rounds.
1529 Outside rounds complete.
~~1533~~ JC 10-18-12
1530 Bagoff complete.
1549 Initiating a drum movement from 50-69 to a transportainer
1600 Drum movement out of 50-69 complete. All inventory has been removed from facility.
1601 Mode change complete. We are now in COLD in 50-69 and warm in WCRRF yard.
1630 End of day operations secure. - JC Oeman

No further

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

0600 Assumed WCRR SOM position.

0615 Attended pre job brief conducted by SOS. Discussed need to be in Cold @ COB and maintenance scheduled for weekend. Discussed drum processing and issues w/ mixing Kitty litter w/ waste.

0731 Completed Mode Change: WCRR Yard / Bldg 50-69 from Warm / Warm to Operations / Operations.

1100 Reviewed Timely Order Binder w/ OM and completed 4th Qtr review for Facility Standing Orders - OM cancelled S.O. for using strap on closing vehicle access barriers. Division Standing Orders require 5 of them to be extended by FOD. Added a cancelled SOP / Standing Order to 10/18/12 section to binder as well as a correspondence section to include e-mail extensions.

1140 Received final DOP package for Main drain flow test to be performed tomorrow. Gave to SOS to brief workers.

1315 Notified that keys for Fire King Cabinets could not be located @ TA-54. Contacted Scheduling to arrange locksmith to open cabinets.

1601 Completed Mode Change: WCRR Yard / Bldg. 50-69 from Operations / Operations to Warm / Cold.

1630 Secured SOM position.

No Further Entries this page

SIGNATURE DATE 10/18 20 12
READ AND UNDERSTOOD DATE 20

10-18-12 WCRR SOS Log Book

0600 Assuming SOS position. [illegible]

0615 Starting Pre-Job brief. Briefed remaining operators on EP-WCRR-FP-DOP-0301, R8. Processing Salt drums from Solution Package 72. Needing to go to Cold Mode by the end of the day. Shorthanded crew today, Operators with cuts that can not go in to process and call ins.

0630 Concluded Pre-Job brief.

0710 Signed off on rounds

0731 MODE Change. In operations MODE both yard and 50-69.

1130 Crew breaking for lunch. Only have enough personnel to run one crew, shorthanded on second crew.

1230 Crew going back in to finish processing 2nd drum

1601 MODE Change complete WCRR yard is in WATER 50-69 is in Cold.

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

LL 1619

See Next entries on this page.

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-HERTR-13-0051
Examination Date:	5/3/2013
Waste Container ID:	92219
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:	LA226
Waste Matrix Code:	S3110
Waste Stream I.D.:	LA-MIN02-V.001
Waste Container Weights:	Gross Wt.: 111.5 kg Tare Wt.: 33.4 kg Net Wt.: 78.1 kg
Rigid Liner and Liner Vent Description:	Liner: [X] No [ ] Yes Lid: [X] No [ ] Yes Type: [ ] 30-mil [ ] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [ ] Yes [X] N/A Punctured: [X] No [ ] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [ ] No [X] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 2 layers
Volume Utilization Percentage:	65 %

CCP Radiography Data Sheet

Waste Container ID: 92219

Section 3: Container Inventory and Comments (Detailed descriptions)

IM:

AM:

OM: Scrap lead

OI:

C:

R: Rubber gloves

XPM: Plastic bags

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP):Plastic 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):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	25.0
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	0.5
Plastics (waste materials) (XPM):	4.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	48.6
Soils (S):	
Total WMP Weight:	78.1

CCP Radiography Data Sheet

Waste Container ID: 92219

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:	92219	Count Sequence Number:	15762
Operator:	DCLTD231\Operator		
Assay Start:	5/13/2013 12:51:38 PM		
Description 1:	2LANDA1157		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gal Drum		
Weight:	Net: 78.1 kg	Net:	78.1 kg
Container:	Volume: 208.0 l	Full:	65.0 %
Density:	0.580 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:	15762	Batch Number:	2LANDA1157
Assay Instrument:	HENC #2	Location:	LANL TA-54
Analysis Method:	CCP-TP-063 v 14	Software Version:	NDA 2000 V.4.0
Item ID:	92219	Analysis Date:	5/13/2013

Net Weight	78100.0 g		
Pu mass	6.20E+000	+-	1.11E+000 g
TRU Alpha Activity	1.65E+000	+-	6.41E-001 Ci
TRU Activity Concentration	2.11E+004	+-	8.20E+003 nCi/g
Pu-239 Equivalent Activity	1.66E+000	+-	6.41E-001 Ci
Pu-239 FGE	5.85E+000	+-	1.04E+000 g
Decay heat	5.40E-002	+-	2.14E-002 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	1.43E-002	1.02E-005	1.70E-006	5.89E-007
PU238	5.69E-004	9.84E-003	1.76E-003	3.67E-005
PU239	5.82E+000	3.66E-001	6.56E-002	1.36E-003
PU240	3.72E-001	8.55E-002	1.53E-002	3.19E-004
AM241	3.42E-001	1.19E+000	6.37E-001	1.78E-002
PU241	7.28E-003	7.57E-001	1.36E-001	2.82E-003
PU242	1.24E-003	4.93E-006	8.83E-007	0.00E+000
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	2.40E-007
U233	<LLD	<LLD	0.00E+000	2.36E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	7.35E-007
U238	<LLD	<LLD	0.00E+000	6.76E-006
AM243	3.37E-004	6.81E-005	1.14E-005	3.36E-006

Errors quoted at 1.000 sigma

Operator: _____ Date: 5-15-13

ITR: _____ Date: 5-15-13

Automated Independent Technical Review

Count Sequence Number: 15762 Batch Number: 2LANDA1157
Counter ID: HENC #2
Container ID: 92219
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 5/13/2013

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

Expert Review by: Sheri Chamberlin Date: 5-15-13

Waste Container ID: **92219**

BDR Number: **LA13FG2057**

Sampling Date: **5/17/2013**

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\130517c\
Data File : 92219.D
Acq On : 17 May 2013 10:57 am (#1); 17-May-13, 10:56:30 (#2)
Operator : NW
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 17 12:53:03 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	3975481	201.25	ppmv	-0.04
15) Chlorobenzene-d5	5.868	117	3473181	177.00	ppmv	-0.03

Target Compounds Qvalue

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

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination	[ ] RTR Replicate Scan [ ] RTR Independent Observation
Site ID:	LANL
Batch Number:	LA-RTR2-13-0063
Examination Date:	4/26/2013
Waste Container ID:	92220
Video/Audio Recorded Media Number:	LA-RTR2-13-0063 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.: 82.5 kg Tare Wt.: 33.4 kg Net Wt.: 49.1 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: 92220

Section 3: Container Inventory and Comments (Detailed descriptions)

IM: Scrap metal

AM:

OM: Scrap lead

OI:

C:

R: Rubber glove

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):	5.0
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	5.0
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	1.0
Plastics (waste materials) (XPM):	2.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	36.1
Soils (S):	
Total WMP Weight:	49.1

CCP Radiography Data Sheet

Waste Container ID: 92220

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

Comments:N/A

RTR Operator:

Thad Hasselstrom	Thad Hasselstrom	4/26/2013
Print Name	Signature	Date

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

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

Item ID:            92220              Count Sequence Number:  22662
Operator:           D3PW2DK1\operator
Assay Start:        4/30/2013  12:00:01 PM
Description 1:      1LANDA1761
Description 2:      N/A
Location:           LANL TA-54
Comment:            AK-6
Matrix Type:        Homo Sol. S3000
Container Type:     55 gallon drum
Weight:             Net:        49.1   kg        Net:    49.1 kg
Container:          Volume:    208.0   l        Full:    55.0 %
Density:                         0.430 kg /l


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

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

Errors quoted at  1.000 sigma
```

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number:	22662	Batch Number:	1LANDA1761
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:	92220	Analysis Date:	4/30/2013

Net Weight	49100.0 g		
Pu mass	1.37E+001	+-	2.07E+000 g
TRU Alpha Activity	2.58E+000	+-	2.57E-001 Ci
TRU Activity Concentration	5.26E+004	+-	5.24E+003 nCi/g
Pu-239 Equivalent Activity	2.61E+000	+-	2.57E-001 Ci
Pu-239 FGE	1.29E+001	+-	1.94E+000 g
Decay heat	8.40E-002	+-	8.44E-003 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	2.72E-002	1.94E-005	2.75E-006	1.36E-006
PU238	1.25E-003	2.17E-002	3.28E-003	3.53E-005
PU239	1.28E+001	8.06E-001	1.22E-001	1.31E-003
PU240	8.19E-001	1.88E-001	2.85E-002	3.07E-004
AM241	4.52E-001	1.57E+000	2.24E-001	2.86E-002
PU241	1.61E-002	1.67E+000	2.53E-001	2.72E-003
PU242	2.73E-003	1.08E-005	1.64E-006	0.00E+000
SR90	3.93E-009	5.43E-007	3.28E-007	0.00E+000
CS137	6.18E-009	5.43E-007	3.28E-007	3.54E-007
U233	<LLD	<LLD	0.00E+000	2.96E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	8.19E-007
U238	<LLD	<LLD	0.00E+000	8.20E-006
AM243	5.33E-004	1.08E-004	1.54E-005	3.96E-006

Errors quoted at 1.000 sigma

Operator: _____ Date: 5-2-13

ITR: _____ Date: 5-3-13

Automated Independent Technical Review

Count Sequence Number: 22662 Batch Number: 1LANDA1761
Counter ID: MCS HENC #1
Container ID: 92220
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 4/30/2013

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

Expert Review by: Sheri Chandler Date: 5-1-13

Waste Container ID: **92220**

BDR Number: **LA13FG2052**

Sampling Date: **5/9/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	90.37	U
74-82-8	Methane	142.14	U
67-56-1	Methanol	35.23	U
60-29-7	Ethyl Ether	0.96	U
75-35-4	1,1-Dichloroethylene	6.38	U
67-64-1	Acetone	18.08	U
75-34-3	1,1-Dichloroethane	4.08	U
156-59-2	cis-1,2-Dichloroethene	0.76	U
78-93-3	Methyl ethyl ketone	11.73	U
110-82-7	Cyclohexane	5.10	U
71-43-2	Benzene	1.77	U
107-06-2	1,2-Dichloroethane	3.66	U
71-36-3	1-Butanol	1.84	U
108-10-1	Methyl isobutyl ketone	9.82	U
108-88-3	Toluene	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\130509c\
Data File : 92220.D
Acq On : 9 May 2013 3:16 pm (#1); 09-May-13, 15:15:38 (#2)
Operator : SA
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 09 15:24:31 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	3.571	96	3736332	201.25	ppmv	0.00
15) Chlorobenzene-d5	5.901	117	3177198	177.00	ppmv	0.00

Target Compounds	Qvalue

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

CCP Radiography Data Sheet

5843962

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0063
Examination Date:	4/26/2013
Waste Container ID:	92221
Video/Audio Recorded Media Number:	LA-RTR2-13-0063 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.: 93.5 kg Tare Wt.: 33.4 kg Net Wt.: 60.1 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: 92221

Section 3: Container Inventory and Comments (Detailed descriptions)

IM:

AM:

OM: Scrap lead

OI:

C:

R:

XPM: Plastic bags, liner lid

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP):Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	4.0
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	5.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	51.1
Soils (S):	
Total WMP Weight:	60.1

CCP Radiography Data Sheet

Waste Container ID: 92221

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

Comments:N/A

RTR Operator:

Thad Hasselstrom	Thad Hasselstrom	4/26/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	92221	Count Sequence Number:	22655
Operator:	D3PW2DK1\operator		
Assay Start:	4/29/2013 3:43:25 PM		
Description 1:	1LANDA1760		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 60.1 kg	Net:	60.1 kg
Container:	Volume: 208.0 l	Full:	55.0 %
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: 22655
Assay Instrument: MCS HENC #1
Analysis Method: CCP-TP-063 v 14
Item ID: 92221

Batch Number: 1LANDA1760
Location: LANL TA-54
Software Version: NDA 2000 V.4.0
Analysis Date: 4/29/2013

Net Weight	60100.0 g		
Pu mass	2.92E+000	+-	4.53E-001 g
TRU Alpha Activity	7.32E-001	+-	2.78E-001 Ci
TRU Activity Concentration	1.22E+004	+-	4.62E+003 nCi/g
Pu-239 Equivalent Activity	7.39E-001	+-	2.78E-001 Ci
Pu-239 FGE	2.75E+000	+-	4.25E-001 g
Decay heat	2.40E-002	+-	9.27E-003 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	1.02E-002	7.25E-006	1.17E-006	7.58E-007
PU238	2.68E-004	4.63E-003	7.19E-004	3.59E-005
PU239	2.74E+000	1.72E-001	2.67E-002	1.33E-003
PU240	1.75E-001	4.03E-002	6.25E-003	3.12E-004
AM241	1.48E-001	5.15E-001	2.76E-001	1.83E-002
PU241	3.44E-003	3.57E-001	5.54E-002	2.77E-003
PU242	5.85E-004	2.32E-006	3.60E-007	0.00E+000
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	2.31E-007
U233	<LLD	<LLD	0.00E+000	1.68E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	4.96E-007
U238	<LLD	<LLD	0.00E+000	4.97E-006
AM243	1.92E-004	3.88E-005	6.23E-006	2.22E-006

Errors quoted at 1.000 sigma

Operator: _____ Date: 5-1-13

ITR: _____ Date: 5.2.13

Automated Independent Technical Review

Count Sequence Number: 22655 Batch Number: 1LANDA1760
Counter ID: MCS HENC #1
Container ID: 92221
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 4/29/2013

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

Expert Review by: Sherri Clearwater Date: 5-1-13

Waste Container ID: **92221**

BDR Number: **LA13FG12078**

Sampling Date: **8/19/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	80.34	
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	0.52	
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	7.44	
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\130819C\
Data File : 92221.D
Acq On : 19 Aug 2013 9:49 am (#1); 19 Aug 2013 9:48 am (#2)
Operator : RJ
Sample :
Misc : 55 Gallon drum through filter. (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Aug 19 09:58:34 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	4.067	96	9629148	207.75	ppmv	0.00
15) Chlorobenzene-d5	6.642	117	6930786	178.75	ppmv	0.00
Target Compounds						Qvalue
1) Hydrogen	1.910	GC1	22917m	80.34	ppmv	
12) Benzene	3.717	78	20369	0.52	ppmv #	90
17) Toluene	5.580	92	208171	7.44	ppmv	95

(#) = 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.: 90881

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

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

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

4.1[6][B] Parent Waste Container RCRA Designations: 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 / Bri Dosup / 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.: 90881

5.[18] Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable: 379.0 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) 379.0 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.: 90881

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	92580			
10.1[4]	Daughter Drum Filter No.	AM-1024		A	
10.1[4]	Daughter Drum Bag Filter No.	L-4413			
10.1[4]	Daughter Drum Purchase Order No.	501011	N/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			A	
10.2[13]	POC Assembly closed per Manufacturer's instructions. (Initial and Z#)				
10.2[14]	POC Assembly Gross Weight (lb)		N		
10.2[15]	POC Rad. Survey Results (mrem/hr)				
10.3[3][A]	Approx. Containerized Liquid Vol./Units				
10.3[5][A]	Free Liquid Volume/Units				
10.3[7][A]	Opaque/Non-penetrable Item Description:				
10.3[9][A]	PCB-contaminated Waste Description				
10.3[9][B]	PCB Item ID No.				
10.3[10]	Remaining Waste Description	BAG OUT STUBS		A	
10.3[13]/10.4[10]/10.5[4]/10.6[8]	Daughter Drum % Full (%)	100%	N		
10.5[3]/10.6[2]	Description Waste Added During Processing	SEE COMMENTS			

ATTACHMENT 1
Page 4 of 4

4.1[6][B] Parent Waste Container No.: 90881

Comments: POCLIDS, ROOM TRASH, CARD BOARD, PLASTICS, SALTS, KITTY-LITTER

11.1[1] Performed By: BRIAN GALLEGOS [signature] 267129 1-13-13
Waste Handling Tech (print) Signature Z# Date

11.1[7] Reviewed By: G Martinez [signature] 149235 1-16-13 0810
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: NUCFIL
Model No.: 013
Serial No.: IL-84
Manufacture Date: 9/11

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

	Filtered Vent	2 in. Bung
M&TE No.:	0466094	0383107
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 Esparza / [signature] 123779 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 Esparza / [signature] 123779 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: GMK / [signature] M9238 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.: 925581

7.[25] Overpack drum closure ring torque wrench information:
M&TE No.: 021651
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 / Bi Gallegos 267129 1-13-13
Waste Handling Technician (print) Signature Z # Date

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

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

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

7.[36][D] 85-gal overpack drum gross weight (lb): 324.8 lb

Comments: N/C

8.1[1] Performed By: BRIAN GALLEGOS / Bi Gallegos 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] 149235 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#: 92580

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 #: 0238370
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 #: 10CPVC1.5-2 3PVC
Serial #: L-4413
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: NUCFTC
Model #: CX9DS
Serial #: AM 1024
Date of Manufacture: 1-12

RECORD torque wrench information:

Filter torque wrench:		Jam Nut / Bung torque wrench:	
M&TE ID #:	0406941	M&TE ID #:	0383667
Cal Expiration Date:	9-26-13	Cal Expiration Date:	3-16-13
Range (ft-lbs or in-lbs):	40-200	Range (ft-lbs or in-lbs):	10-80
Tolerance:	±4% CW ±6% CCW	Tolerance:	±3% CW ±6% CCW

Torque wrenches listed above are within the acceptable ranges as displayed on the calibration certificate.
[x] Yes [ ] No
Print Name: Gerald Espinosa Signature: [signature] Z#: 237720

5. Weigh Drum Assembly

RECORD weight information
Tare wight (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: Gerald Espinosa Operator Sign: [signature] Z#: 237720 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#: 9258D

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: 4-11-13

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): 242.6

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: B. Haney Date 1-13-13

Verifier Print/Sign: [illegible] Date: 1-17-13

WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Production Control

Container ID: 90881 Container Type: POC Gross Weight (lbs): 375
Inner Seal #: None Filter Prefix: None Filter Serial #: EL-320; EL-440
RK Waste Stream: LA-MHD01.001 Certified RTR BDR: No BDR
TWSR Comments: PARENT #S843962 WTS-12STD-841
Total PE-Ci Activity: 3.24E+00 Equivalent Combustible PE-Ci: 1.21E+00 AM-241 PE-Ci: 2.63E-01
Total Fissile Gram Equivalents: 35.7 Total Surface Dose Rate (mrem/hr): 1
EPA Code(s): D008 D007 D009 VR 12/3/12
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: T50 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 admixture/zeolite must be mixed with 1.0 volume of nitrate salts
Performed By: Susan Ramsey (Production Control (Print)) Signature: [signature] Z Number: 106681 Date: 9/10/12

WDP Engineering

Chemicals Present (e.g., pyrophorics, acids, bases, shock sensitive, organic liquids, peroxides, crown ethers): ☐ Yes ☒ No ☐ Unknown
Processing Determination: ☑ Accept ☐ Reject
WDP Engineering Comments: Nitrate Salts – POC
Net Wt: 65 lb Parent drum (SEDS attached) was part of WCRR nitrate salt repack campaign using Waste Lock 770®. This resulting daughter POC is being repacked to adjust the admixture/nitrate salt ratio. Nitrate salts carry waste codes [redacted] lead and mercury. No chemicals present. May require RWP for > 100 + < 1000 mrem/hr
Performed By: Valerie Rhodes (WDP Engineering (Print)) Signature: Valerie Rhodes Z Number: 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. 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: [signature] Z Number: 221452 Date: 10-9-12
AA 24-249750 10/17/12

HS REVIEW: AS 206362 10.4.12

Noncertified TRU Waste Drum Item Information

DrumID: 012432

Item No	ItemID	Process Status	Net Wt (kg)	Matrix	Mass Code	SNM (g)	NT	Auth (Pg/Lm)		Comments
1	IXFS-711-F1		3.640	NITRATE SALTS		3.97	52	6/11	G468	
2	IXFS-712-F1		68.590	NITRATE SALTS		47.58	52	6/11	G468	
3	IXFS-713-FD		6.390	NITRATE SALTS		6.31	52	6/11	G468	
4	SVCL-1-SA		11.820	NITRATE SALTS		16.13	52	6/11	G468	
5	IXF-715-OX31		17.730	NITRATE SALTS		1.96	52	6/11	G468	

Noncertified Waste Drum Material Summary

Gross Wt (Kg): 171.8

Material Type	SNM (grams)	Items Net Wt (kg)
52	75.95	106.37
Totals	75.95	106.37

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])	90881					
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: 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 : 90881.D
Acq On : 3 Oct 2012 2:35 pm
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 14:49:50 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	2172245	206.00 ppm	0.00
15) Chlorobenzene-d5	5.936	117	1960645	179.50 ppm	0.00

Target Compounds	Qvalue

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

Vocgas.m Wed Oct 03 14:50:03 2012

1-15-13
0600 Assuming WCRRF operations center - Cleland
0615 Pre job being conducted by SCS.
0630 Pre job concluded.
0637 Outside rounds being started.
0645 Starting inside rounds
0705 Outside rounds complete.
0720 Starting movement out of 50-69
0721 Item #61 is OOS, POD in place OK to continue
0724 Completed inside rounds.
0740 Inside and outside rounds signed off by SCS. Movement comp
0753 Mode change performed TASD-69 and WCRRF now in operations.
0800 Notified by RCT in truck bay that lights ~~in the~~ 1-13-13 on the UPS are flashing. SOS and SOM have been notified
0801 Have ~~contacted CSE~~ called CSE left message.
0807 Alarm on UPS supporting lead notec/alarm Power Off.
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 50-69 condition was ~~temporary~~ 1-13-12 temporary and would not of affected operability of UPS. SOM with Ops manager continuance performed TOO that system was operable and no TOOS were required to be entered.
0839 bagging on 90836
0850 1-13-12 bag on is complete PPE check is sat.
0946 PPE check is sat.
0949 bagging off 90836, bagging on 90849
1015 bag off is complete, PPE check is sat.
1055 bagging off 90849, bagging on 90851, PPE check is sat
1117 bag off is complete.
1147 notified by inmating that inside system is down. Operations coming out for lunch. SOM has contacted department
— continued on next page — cleland —

1-13-13 Continued from previous page - [illegible]
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 check is out
1519 bag on, bag off complete
1524 Starting inside rounds, PPE check is out
1546 item #61 is OOS, POD in place, OK to proceed.
1550 1-13-13 Inside rounds completed.
1614 bagging off 90852, bagging on 90881
1640 bag on, bag off complete. PPE check is out
1730 bagging off 90881, PPE check is out.
1737 Starting movement out of 50-69
1741 bag off is complete.
1758 1-13-13 movement complete to transportation.
1800 Mode change performed WCRRF yard and TA57 is in warm standby.
1830 End of day WCRRF operations certain secure [illegible]

No further entries this page.

1/13/13

0600 Assumed WCRR SOM position.

0605 Attended pre job brief conducted by SOS. Issues brought up from yesterdays operation regards the type of bags being used on daughter drums. Some were prepped with old style bags which are harder to work with - more brittle in colder temps. Operators will allow time for bags to warm up inside facility as much as possible prior to use

0720 Signed off on RCRA rounds for the week.

0753 Completed Mode Change: WCRR Yard / Bldg 50-69 from Warm/Warm to Operations/Operations.

0800 Notified by OCO of flashing light on UPS - first identified by RCT working in high bay. Investigating w/ SOS and placed call on message w/ CSE. OM notified. Processing waste on hold

0811 While investigating UPS the flashing light turned to steady green.

0830 After discussion w/ CSE determined alarm was probably due to a low temp condition due to opening of outer bay door for waste move out. Condition was temporary and would not have affected operability of UPS according to CSE. SOM w/ OM concurrence performed IOD ~~was~~ 1/13/13 calling UPS operable and LCO's not required to be entered.

0850 First bag on complete

1147 Notified by OCO that Oracle system is down. Contacted Computer Help Desk and gave permission for resetting of system.

1200 Oracle system back on line.

1425 Updated DOP PM of WCRR Status.

1800 Completed Mode Change: WCRR Yard / Bldg 50-69 from Operations/Operations to Warm/Warm.

1830 Secured SOM position

No Further Entries this page

1/13 13

1.13.13 WCRR SOS LOG Book

0600 Assuming SOS Position [illegible]

0615 Conducted shift brief

0630 Conducted shift brief

0740 Reviewed Inside And outside Rounds.

0753 Made Change Complete WCRRF In Operations.

0800 noticed by RCTS that lights on UPS were Flashing

0801 Called CSE left Message UPS Reading Notice Alarm Power 0%

0811 Checked UPS System normal. On pause until we hear back from CSE

0830 Per CSE ok [illegible] Low Temp was the reason for flashing light

0839 bagging on First shift 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 Security control Grade System down breaker 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 90851

1654 PPE Check Sat

1737 bagging off last shift off Day

1800 Made Change Complete WCRRF In Operations

1.13.13 1830 end of shift [illegible]

(M) 1.14.13 No [illegible]

CCP Radiography Data Sheet

58439162

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:	92580
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.: 110.0 kg Tare Wt.: 33.4 kg Net Wt.: 76.6 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: 92580

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):	17.6
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):	45.0
Soils (S):	
Total WMP Weight:	76.6

CCP Radiography Data Sheet

Waste Container ID: 92580

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:	92580	Count Sequence Number:	15240
Operator:	DCLTD231\Operator		
Assay Start:	3/11/2013 10:55:07 AM		
Description 1:	2LANDA1115		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gal Drum		
Weight:	Net: 76.6 kg	Net:	76.6 kg
Container:	Volume: 208.0 l	Full:	75.0 %
Density:	0.490 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:	15240	Batch Number:	2LANDA1115
Assay Instrument:	HENC #2	Location:	LANL TA-54
Analysis Method:	CCP-TP-063 v 14	Software Version:	NDA 2000 V.4.0
Item ID:	92580	Analysis Date:	3/11/2013

Net Weight	76600.0 g			
Pu mass	1.42E+001	+-	2.55E+000	g
TRU Alpha Activity	3.44E+000	+-	1.27E+000	Ci
TRU Activity Concentration	4.49E+004	+-	1.66E+004	nCi/g
Pu-239 Equivalent Activity	3.47E+000	+-	1.27E+000	Ci
Pu-239 FGE	1.34E+001	+-	2.39E+000	g
Decay heat	1.12E-001	+-	4.25E-002	W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	4.38E-002	3.13E-005	4.69E-006	9.47E-007
PU238	1.31E-003	2.26E-002	4.05E-003	3.61E-005
PU239	1.34E+001	8.41E-001	1.50E-001	1.34E-003
PU240	8.54E-001	1.96E-001	3.52E-002	3.14E-004
AM241	6.84E-001	2.38E+000	1.26E+000	3.37E-002
PU241	1.69E-002	1.75E+000	3.14E-001	2.80E-003
PU242	2.85E-003	1.13E-005	2.03E-006	0.00E+000
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	3.23E-007
U233	<LLD	<LLD	0.00E+000	3.90E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	2.18E-006
U238	<LLD	<LLD	0.00E+000	1.09E-005
AM243	5.42E-004	1.10E-004	1.66E-005	5.55E-006

Errors quoted at 1.000 sigma

Operator: _____ Date: 3-15-13

ITR: _____ Date: 3-18-13

Automated Independent Technical Review

Count Sequence Number: 15240 Batch Number: 2LANDA1115
Counter ID: HENC #2
Container ID: 92580
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 3/11/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis Add-a-Source WARNINGS: Add-a-Source correction factor is less than one.	Ok
Section 2 - Passive Neutron Analysis Analysis Status: No errors. 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: 3-12-13

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **92580**

BDR Number: **LA13FG8018**

Sampling Date: **3/14/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	92.10	U
74-82-8	Methane	213.40	U
67-56-1	Methanol	27.87	U
60-29-7	Ethyl Ether	1.25	U
75-35-4	1,1-Dichloroethylene	5.71	U
67-64-1	Acetone	16.90	U
75-34-3	1,1-Dichloroethane	4.24	U
156-59-2	cis-1,2-Dichloroethene	0.55	U
78-93-3	Methyl ethyl ketone	9.86	U
110-82-7	Cyclohexane	5.84	U
71-43-2	Benzene	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\130314c\
Data File : 92580.D
Acq On : 14 Mar 2013 12:46 pm (#1); 14 Mar 2013 12:45 pm (#2)
Operator : SA
Sample :
InstName : Unit 8
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 14 12:54:54 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	2303663	206.00 ppm	0.00
15) Chlorobenzene-d5	5.936	117	2109355	179.50 ppm	0.00

Target Compounds	Qvalue

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

S844213

S844213

Container 764178

File Options Reports Help

S844213

764178	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

Genealogy

S844213

- S844213
  - 90879 – EMPTY
  - 90878
    - 92350 – EMPTY
    - 92349
      - SB01932
  - 90877
    - 92203 – EMPTY
    - 92202
      - SB01933
  - 90876
    - 92343
      - SB01932
    - 92344 – EMPTY
  - 90875
    - 92149 – EMPTY
    - 92148
      - LASB02087
    - 92147
  - 90872

ATTACHMENT 1
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2-7-12

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: S844213

6.2[4] Date Processed: 2-7-12

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

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

4.1[6][B] Parent Waste Container RCRA Designations: NONE

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

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

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

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

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

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

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

Performed By: Michael Romero Michael Romero 180723 2-7-12
Waste Handling Tech (print) Signature Z # Date

5.[16] Prepared Parent Drum Weight (lb): 369.2 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.: S844213

6.2[5][B], 6.2[6] Total Parent Drum Weight (lb) 369.2 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.	90872			
10.1[4]	Daughter Drum Filter No.	CL-1418		N/A	
10.1[4]	Daughter Drum Bag Filter No.	wo 1126			
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	NUCFil	BOP	BOP
	Model No.	3-1.5-2	036-DA	3-1.5-2	3-1.5-2
	Serial No.	wo 2511	LL-230	wo 1602	wo 2523
	Date of Manufacture	10/11	12/11	6/11	10/11
10.2[5]	POC ID No	90875	90876	90877	90878
10.2[7][B] 10.2[6]	POC Item Description	plastic Salts	plastic Salts	plastic Salts	plastic Salts
10.2[7][D]'10.2[8][D]	Bag-out Bag Filter No.	N/A	N/A	N/A	N/A
10.2[13]	POC Assembly closed per Manufacturer's instructions. (Initial and Z#)	MR 182723	MR 182723	MR 182723	MR 182723
10.2[14]	POC Assembly Gross Weight (lb)	377.2	378.4	391.0	359.2
10.2[15]	POC Rad. Survey Results (mrem/hr)	1002	700	1002	501
10.3[3][A]	Approx. Containerized Liquid Vol. Units	N/A	N/A	N/A	N/A
10.3[7][A]	Opaque Non-penetrable Item Description:	Lead Shielding			
10.3[5][A]	Free Liquid Volume/Units	4 Gallons			
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 (%)	60%			
10.5[4]	Description Waste Added During Processing	plastic			

ATTACHMENT 1
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4.1[6][B] Parent Waste Container No.: S844213

Comments: plastic, Lead shielding, Salts,

11.1[1] Performed By: Michael Romero Michael Romero 182723 / 2-7-12
Waste Handling Tech (print) Signature / # Date

11.1[7] Reviewed By: G. Albert Mf. G. Albert Mf 149255 2-8-12
SOS/SOM (print) Signature / # Date Time

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

85-Gallon Overpack ID Number 90879

RECORD Drum Filter information: NUCFil-013	
Filter ID Number: FJ- 490	
Date of Manufacture: 6/09	

TORQUE WRENCH INFORMATION			
Filter Torque Wrench		**Drum Lid Ring Bolt**	
M&TE ID#		M&TE ID#	038373
Cal Expiration Date		Cal Expiration Date	5-30-12
			±3% cw
Tolerance N		Tolerance	±6% ccw
Torque wrench is within acceptable range as displayed on Calibration Certificate A	☐ Yes ☐ No ☐ N/A	Torque wrench is within acceptable range as displayed on Calibration Certificate	☑ Yes ☐ No
		Bung Torque Wrench	
		M&TE ID# N	
		Cal Expiration Date A	
		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
Alonzo Guerrero	[signature]	[illegible]	238782	2-7-12
Michael Romero	[signature]	MR	182723	2-7-12

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

Drum ID#: 90872

1. Drum/Lid Assembly

- [x] Remove and discard ¾" bung from lid
- [x] 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 #: 414992
Lot #: 217307
Date of Manufacture: 2011

2. Drum Liner Bag/Filter Assembly:

- [x] Place yellow vinyl tape, with smear centered on tape, over filter
- [ ] Fill bag with air from compressed air source
- [x] Inspect bag for damage, cuts, or leaks by looking, listening, and feeling
  - NOTE: Reject or repair damaged, cut, or leaking bags
- [ ] 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 #: 3CDC-2 3PVC
Serial #: 1KC-1126
Date of Manufacture: 5/11

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
- [ ] 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
- [x] Torque 2" bung plug
- [ ] 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 #: 0985
Serial #: CL-1918
Date of Manufacture: 5/11

RECORD torque wrench information:

Filter torque wrench:		Jam Nut / Bung torque wrench:	
M&TE ID #:	040695	M&TE ID #:	040691
Cal Expiration Date:	4-12-12	Cal Expiration Date:	8-2-12
Range (ft-lbs or in-lbs):	40-200	Range (ft-lbs or in-lbs):	16-80
Tolerance:	±3% ±6 ccw	Tolerance:	±3% ±6 ccw

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

[x] Yes [ ] No

Print Name: [illegible] Signature: [illegible] Z#: 187822

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: [illegible] Operator Sign: [illegible] Z#: 187822 Date: 1-3-12

Verifier Print: Michael Romero Verifier Sign: Michael Romero Z#: 182723 Date: 2-7-12

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

DRUM ID#: 90872

1. LID INSTALLATION

NOTE: Install lid per manufacturer's instructions

✓ Mount lid with filter directly over drum seam.

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

✓ Engage bolt and nut and torque per manufactures instructions

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

✓ Tighten jam nut.

Record torque wrench information:

MT&E #: 038373

Cal expiration date: 5-30-12

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

--- Tolerance ±3% cw ±6% ccw

2. DRUM LABELING

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

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

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

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

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

RCRA Label:

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

OR

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

NOTE: Check only one of the above two boxes

3. WEIGH DRUM ASSEMBLY

Record weight information:

Gross Weight(lbs): 196.4

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 2-7-12

Verifier Print/Sign: [illegible] Date: 2-7-12

Working Copy
Date: 1-9-12

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

85-Gallon Overpack ID Number 5844213

RECORD Drum Filter information: NUCFil-013			
Filter ID Number: FJ-490			
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		±3% cw
Tolerance	±6% ccw	Tolerance	±6% ccw
Torque wrench is within acceptable range as displayed on Calibration Certificate	☑ Yes ☐ No ☐ N/A	Torque wrench is within acceptable range as displayed on Calibration Certificate	☑ Yes ☐ No
		Bung Torque Wrench	
		M&TE ID#	040691
		Cal Expiration Date	8-2-12
		Tolerance ±3% cw	±6% ccw
		Torque wrench is within acceptable range as displayed on Calibration Certificate	☑ Yes ☐ No ☐ N/A

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

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

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

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

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

Drum lid ring ends touching: ☐ YES ☑ NO

Technician Name (print)	Signature	Initials	Z#	Date
Michael Romero	Michael Romero	MR	182723	1-9-12
Clayton Mullins	[signature]	CM	240092	1/12/12

WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Production Control

Container ID: S844213 ✓ Container Type: 85-GAL ✓ Gross Weight (lbs): 395 ✓
Inner Seal #: 015310 ✓ Filter Prefix: LAVC Filter Serial #: 00041, 02809 ✓
AK Waste Stream: LA-MHD01.001 ✓ Certified RTR BDR: No BDR ✓
TWSR Comments: LEACHED SOLIDS MST 12 RM 434 NITRATE SALTS ✓
Total PE-Ci Activity: 1.34E-01 ✓ Equivalent Combustible PE-Ci: 5.04E-00 ✓ AM-241 PE-Ci: 1.14E-00
Total Fissile Gram Equivalents: 144.5 ✓ Total Surface Dose Rate (mrem/hr): 5 ✓
EPA Code(s): None
NCR RTR/NDA Comment: AK Review-Non-cemented Evap Salt
RTR Pre-Screen Date: 7/12/2007 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:

Performed By: R. W. Jones (Production Control (Print)) Signature: R. Jones 117434 (Number) 12-1-11 (Date)

WDP Engineering

Chemicals Present (e.g., pyrophorics, acids, bases, shock sensitive, organic liquids, peroxides, crown ethers): Yes ~~No~~ Unknown
Processing Determination: X Accept Reject
WDP Engineering Comments: Leached solids - nitrate salts
Net Wt: 335 lb. No record of items or weights
55 gal drum overpacked in 85 gal drum
May require RWP for >1000 and <10000 mrem/hr @ 30 cm
Drums containing nitrate salts may have undocumented liquids
Total SWM mass is 154 g

Performed By: Valerie Rhodes (WDP Engineering (Print)) Signature: Valerie Rhodes 12609 (Number) 12/11/11 (Date)

TRU Remediation Operations

Waste Container Information Evaluated Less Than 130 lbs RTR Video Available
Other Specific Safety Concerns:

Processing Determination: Accept Reject
TRU Remediation Operations Comments:

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

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	7 #	Date
Sara Aragon	Sara Aragon	1233975	1-31-11

Container No. (7.[1]):	S843962	S845201	S844213
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])	S843962	S845201	S844213
Hydrogen Reading (ppm) (7.[10])	290.00 ppm	470.21 ppm	447.14 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] 198850 / 1/31/11
Waste Handling Operator (print) Signature Z # Date

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

☑ No deficiencies

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

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

11.1[7][B]/ Reviewed By: Kenny Romero, Kenny Romero 111786 / 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 : S844213.D
Acq On : 26 Jan 2011 4:34 pm (#1); 26-Jan-11, 16:33:56 (#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 16:44:13 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	3.635	96	7164093	205.50 ppmv	0.00
15) Chlorobenzene-d5	5.958	117	6053053	182.75 ppmv	0.00
Target Compounds					Qvalue
1) Hydrogen	1.651	GC1	36360m	4647.14 ppmv	

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

vocgas.m Wed Jan 26 16:44:26 2011

2-7-12
0000 Inserting WCRRF Operations center - Chalmers
0002 Starting inside rounds
0013 Item #40 to OCS per CSE documentation OK to proceed
0015 SOS conducting pre JOD briefing.
0020 Starting outside rounds.
0022 Completed inside rounds
0710 Inside and outside rounds signed off by SOS
0715 Mode change performed we are now in operations
0734 Bagging on S8324164
0800 Starting movement out of SD-69
0812 Bag on complete
0810 Movement complete out of SD-69
0811 introducing absorbant then introductory part
0815 introductory part introduction complete
0817 Starting movement from transportainer to transport vehicle permission granted to lower vehicle access gate
0851 vehicle access gate have been restored movement complete to transport vehicle.
1051 Bagging off S8441332 and S8324164 and PCA's bagging on S8442213
1100 Bag off complete we have a total of 5 pacs
1358 Starting off loading of transport vehicle to transportainer
1411 permission granted to lower vehicle access gate
1432 being relieved by OCC Lori Coleman - Chalmers
1438 assuming WCRR operations center. - Coleman
1439 site entry at 1300 SOS notified ops center that the topcable on the vehicle barrier access was sagging. SOM notified. SOM notified CSE. JC
1505 Bagging off drum ~~S8322~~ JC 2-7-12 S8442213,
1506 Being relieved by OCC Clarissa Velarde. - Coleman
1510 assuming WCRRF operations center - Chalmers.
1519 Bagging on S8439162 and bagging off S8442213 and PCA's to JV 2-7-12
1605 movement from transportainer from transport vehicle completed vehicle access gates have been restored.
1641 Inside and outside rounds signed off by SOS
1646 mode change performed we are now in idem
1700 end of day WCRRF Operations Center Duane Chalmers

no further entries this page

2-7-12

0600 Reviewed previous shift turnover and assumed the WCRR SOM position. [signature]

0640 Listened in on morning call in. Area 9 is experiencing MAR conflicts in their database. Per FOD. All shipments and transfers will be paused until MAR issues are resolved.

0715 Mode change complete. WCRR YARD and 50-69 from WARM mode to OPERATIONS.

0800 Met with FOD to discuss SOP-0208 WCRRF and Loading TA50-69 MAR Inventory Control.

1200 Notified by Shift Operations Supervisor that vehicle barriers (wire rope) top one is loose (sag) and bottom one is tight and operators are having difficulties. An FSR has been submitted and the CSE was called but didn't answer so a message was left.

1230 SOM followed through with calling engineer manager and left a message.

1400 CSE R. Wilde called back and he will be up at WCRRF before close of business to look at cables (wire rope) on vehicle barriers. CSE stated that as long as sag isn't greater than six inches then vehicle barriers are OK and operable. CSE will be making that determination.

1455 CSE came by to WCRR and looked at cables (wire ropes) on vehicle barriers. Per CSE cables (wire ropes) sagging are not an issue. Sag is not over, ~~out~~ or near six inches.

1532 Notified by operations (SOS) that 2-7-12 operations is down to one last bag of absorbent. SOM notified Energy Solutions Manager via email and phone.

1615 Notified by Energy Solutions Manager that the absorbent will be delivered on 2-8-12 prior to processing drums containing liquid.

1446 Mode change complete. WCRR YARD and 50-69 from OPERATIONS to WARM mode.

1700 Leaving the watch. [signature]

No further entries

[signature]

2-7 12

2-7-12

0600 Received SOS Turnover ASSUMING WCRR SOS POSITION Anthony

0615 Beginning Pre-Job

0645 Pre-Job Concluded

0710 Received Inside & Outside Rounds

0715 MODE CHANGE COMPLETE OPERATIONS IN BUILDING 69 and Yard.

1200 Noticed SOM THAT VEHICLE BARRIER CABLE WAS SAGING SOM THEN NOTIFIED CSE

1455 CSE CAME TO CHECK OUT CABLE IN VEHICLE BARRIER AND SAID IT WAS OK TO PROCEED.

1641 RECEIVED INSIDE & Outside Rounds

1646 MODE CHANGE COMPLETE

1651 END OF SHIFT SECURING SOS POSITION Anthony

GW 2/10/12

No Further Entries On This Page

CCP Radiography Data Sheet

584213

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0012
Examination Date:	1/25/2013
Waste Container ID:	90872
Video/Audio Recorded Media Number:	LA-RTR2-13-0012 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:	LA224
Waste Matrix Code:	S3140
Waste Stream I.D.:	LA-MIN04-S.001
Waste Container Weights:	Gross Wt.: 89.5 kg Tare Wt.: 33.4 kg Net Wt.: 56.1 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: 90872

Section 3: Container Inventory and Comments (Detailed descriptions)

IM:

AM:

OM: Scrap lead

OI:

C: Cloth material

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):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	13.2
Other Inorganic Materials (OI)	
Cellulosics (C):	6.0
Rubber (R):	
Plastics (waste materials) (XPM):	4.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	32.9
Soils (S):	
Total WMP Weight:	56.1

CCP Radiography Data Sheet

Waste Container ID: 90872

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		1/25/2013
Print Name	Signature	Date

S844213

NDA 2000 Assay Report

Item Information

Item ID:	90872	Count Sequence Number:	15751
Operator:	DCLTD231\Operator		
Assay Start:	5/10/2013 12:48:17 PM		
Description 1:	2LANDA1156		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gal Drum		
Weight:	Net: 56.1 kg	Net:	56.1 kg
Container:	Volume: 208.0 l	Full:	50.0 %
Density:	0.540 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:	15751	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:	90872	Analysis Date:	5/10/2013

Net Weight	56100.0 g		
Pu mass	1.92E+001	+-	3.36E+000 g
TRU Alpha Activity	4.88E+000	+-	1.84E+000 Ci
TRU Activity Concentration	8.71E+004	+-	3.28E+004 nCi/g
Pu-239 Equivalent Activity	4.95E+000	+-	1.84E+000 Ci
Pu-239 FGE	1.80E+001	+-	3.35E+000 g
Decay heat	1.60E-001	+-	6.15E-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	4.19E-007
U233	<LLD	<LLD	0.00E+000	4.71E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	1.46E-006
NP237	8.01E-002	5.72E-005	9.07E-006	1.17E-006
PU238	2.95E-003	5.11E-002	3.77E-002	1.20E-003
U238	<LLD	<LLD	0.00E+000	1.11E-005
PU239	1.78E+001	1.12E+000	2.11E-001	2.64E-002
PU240	1.27E+000	2.91E-001	5.65E-002	6.84E-003
AM241	9.85E-001	3.42E+000	1.83E+000	3.77E-002
PU241	3.27E-002	3.40E+000	6.45E-001	7.99E-002
PU242	1.75E-002	6.93E-005	2.82E-005	0.00E+000
AM243	1.28E-003	2.59E-004	4.13E-005	7.01E-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: 15751 Batch Number: 2LANDA1156
Counter ID: HENC #2
Container ID: 90872
Waste Matrix Code: Homo Sol. S3000 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
Section 2 - Passive Neutron Analysis Analysis Status: No errors. Ones Rate Analysis complete with warnings. - Error calculating the Ones Rate Pu-240 Effective MDA.	Ok Not data affecting.
Section 3 - Data Combiner Analysis Override enabled; Gamma data specified as input. Results taken from Quantitative Gamma data. Results comparison test passed.	Results taken from quantitative gamma data.
Section 4 - MGA Analysis Results are marked as invalid.	MGA analysis failed. 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: Sheri Chamberlain 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: **90872**

BDR Number: **LA13FG2056**

Sampling Date: **5/15/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	199.23	
74-82-8	Methane	142.14	U
67-56-1	Methanol	189.58	
60-29-7	Ethyl Ether	0.96	U
75-35-4	1,1-Dichloroethylene	6.38	U
67-64-1	Acetone	39.06	
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	10.73	
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\130515c\
Data File : 90872.D
Acq On : 15 May 2013 11:00 am (#1); 15-May-13, 10:59:26 (#2)
Operator : GR
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER. (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 15 11:37:45 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	3.538	96	4816041	201.25	ppmv	-0.03
15) Chlorobenzene-d5	5.881	117	4058923	177.00	ppmv	-0.02
Target Compounds						Qvalue
1) Hydrogen	1.604	GC1	1416m	199.23	ppmv	
4) Methanol	0.831	31	92218	189.58	ppmv	100
7) Acetone	1.379	58	64081	39.06	ppmv	77
17) Toluene	4.837	92	154395	10.73	ppmv	99

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

10-2-12a)

ATTACHMENT 1
Page 1 of 4

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: 90875

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: 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] (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.: 014065
Cal. Due Date: 7-31-13
E.Ris 10-2-12

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

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

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

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

Performed By: Eddie Rios, Eddie Rios, [illegible] 10-2-12
Waste Handling Tech (print) Signature Z # Date

ATTACHMENT 1
Page 2 of 4

4.1[6][B] Parent Waste Container No.: 90875

5.[18] Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable: 382.0 lb

6.2[5][A] Parent Drum Lead Blanket Weight (lb): 0 lb

6.2[5][B] Total Parent Drum Weight (lb) 382.0 lb
6.2[6]

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.: 90875

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	92147	~~92198~~		
10.1[4]	Daughter Drum Filter No.	#M-883	10-3-12		
10.1[4]	Daughter Drum Bag Filter No.	L-3669			
10.1[4]	Daughter Drum Purchase Order No.	416263			
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		DOP		
	Model No.	A	6CPVC 1.5-2.5 SPVC		
	Serial No.		L-3669		
	Date of Manufacture		6-12		
10.2[5]	POC ID No		D-204		
10.2[7][B]/10.2[6]	POC Item Description		Plastic, Salts		
10.2[13]	POC Assembly closed per Manufacturer's instructions. (Initial and Z#)		187822		
10.2[14]	POC Assembly Gross Weight (lb)		385.2		
10.2[15]	POC Rad. Survey Results (mrem/hr)		210 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:		POL		
10.3[9][A]	PCB-contaminated Waste Description	N	none		
10.3[9][B]	PCB Item ID No.		none		
10.3[10]	Remaining Waste Description	See Comments	Plastic Kitty litter		
10.3[13]/10.4[10]/10.5[4]/10.6[8]	Daughter Drum % Full (%)	85%	95%		
10.5[3]/10.6[2]	Description Waste Added During Processing	See Comments	See Comments		

ATTACHMENT 1
Page 4 of 4

4.1[6][B] Parent Waste Container No.: 90875

Comments: Plastic, kitty litter, salts cardboard

11.1[1] Performed By: Edgar Rios (Waste Handling Tech (print)) [signature] 187822 (I.#) 10-2-12 (Date)

11.1[7] Reviewed By: Jose Serra (SOS or designee (print)) [signature] 221452 (I.#) 10-3-12 (Date Time) 1145

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.: ~~01905~~ 013 KB 10/02/12
Serial No.: ~~AM-768~~ HL-961
Manufacture Date: ~~1/12~~ 8/11

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

	Filtered Vent	2 in. Bung
M&TE No.:	030614	021151
Cal. Expiration Date:	10-19-12	06-11-13
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: Eddie Rios [signature] 16782 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] 16782 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

By: Jose Torres [signature] 221452 10-3-12
(print) Signature

ATTACHMENT 5
Page 1 of 1

10242

WCRRF OVERPACK DRUM CLOSURE DATA SHEET

7.[19] Overpack Drum Unique Identifier No.: 92129

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 / +-8% cw

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

Performed By: Edie Rios Edie Rios 187822 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: 014085
Platform scale calibration expiration date: 2-3-13

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

Comments: N/A

8.1[1] Performed By: Edie Rios Edie Rios 187822 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 10-3-12
Supervisor or designee (print) Signature Z # Date

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

Drum ~~ID~~: 92147

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 #: 416 265
Lot #: 0229225
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: ROP
Model #: 66PVC 1.5-2.5 EPVC
Serial #: L-3669
Date of Manufacture: 06-12

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

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

4. Install Lid/Drum Filter

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

RECORD drum filter information:

Manufacturer: Nucfil
Model #: 019DS
Serial #: A7M-YXS
Date of Manufacture: 01-12

RECORD torque wrench information:

Filter torque wrench:
M&TE ID #: 020614
Cal Expiration Date: 10-15-12
Range (ft-lbs or in-lbs): 40-200
Tolerance: ±4% ±5% CW

Jam Nut / Bung torque wrench:
M&TE ID #: 02M51
Cal Expiration Date: 06-11-13
Range (ft-lbs or in-lbs): 16-80
Tolerance: ±5% ±2% CW

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

Print Name: Don Pacheco Signature: [signature] ZI: 240012

5. Weigh Drum Assembly

RECORD weight information
Tare wight (lbs) 19.6
File ID #: 019065

- [x] 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: Don Pacheco Operator Sign: [signature] ZI: 240012 Date: 10-02-12
Verifier Print: Eddie Rios Verifier Sign: [signature] ZI: 18822 Date: 10-2-12

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

DRUM ID#: 92147

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% or +-6 in-lbs

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): 101.2

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: [illegible] Date: 10-2-12

Verifier Print/Sign: [illegible] Date: 10-2-12

WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Production Control

Container ID: 90879 Container Type: POC Gross Weight (lbs): 377

Inner Seal #: None Filter Prefix: None Filter Serial #: EL-22; EL-245

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

TWSR Comments: PARENT #S844213 WTS-12STD-776

Total PE-Ci Activity: 2.69E+00 Equivalent Combustible PE-Ci: 1.01E+00 AM-241 PE-Ci: 2.28E-01

Total Fissile Gram Equivalents: 28.9 Total Surface Dose Rate (mrem/hr): 0

EPA Code(s): D008 D007 D009 VE 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 Vermiculite 770 from previous repack campaign. A minimum of 1.2 volume of vermiculite must be mixed with 1.0 volume of nitrate salts

Personnel By: Susan Ramsey (Production Control (Print)) Signature: Susan B. Ramsey Z Number: 700681 Date: 9/10/12

WDP Engineering

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

Processing Determination: ☑ Accept ☐ Reject

WDP Engineering Comments: Nitrate Salts - POC

Net Wt: 671lb. Parent drum (S844213 attached) was part of LWRR nitrate salt repack campaign using Vermiculite 770. This resulting daughter POC is being repacked to adjust admixture/nitrate salt (ratio Nitrate salt: vermiculite). Waste codes for arsenic (D007), lead (D008) & mercury (D009). No hydrochemicals present.

May require RWP for >100 and <1000 mrem/hr

Performed By: Valerie Rhodes (WDP Engineering (Print)) Signature: Valerie Rhodes Z Number: 112609 Date: 9/25/12

TRU Remediation Operations

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

Other Specific Safety Concerns:

Processing Determination: ☑ Accept ☐ Reject

TRU Remediation Operations Comments: Ensure kitty litter is bagged in...

Performed By: Gilbert Martinez (TRU Remediation Operations (Print)) Signature: [illegible] Z Number: 142285 Date: 9.26.12

IHS Review [illegible] CST Contains Chromium, lead, and Hg 9/26/12

Document No: EP-DIV-AP-0107 [illegible] - 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])	90875					
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/A	☐ 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])	21237.09 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 (I.#)

Reviewed By: Sara Aragon (CCP (Print)) 237975 (I.#)

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 (I.#) 9.24.12 (Date)

InstName : Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\120921c\
Data File : 90875.D
Acq On : 21 Sep 2012 4:33 pm (#1); 21-Sep-12, 16:32:26 (#2
Operator : NW
Sample :
Misc : LFL POC THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 21 16:40:42 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	3.581	96	6546395	201.25	ppmv	0.04
15) Chlorobenzene-d5	5.907	117	5858771	177.00	ppmv	0.03
Target Compounds						Qvalue
1) Hydrogen	1.573	GC1	150138	21237.09	ppmv	100

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

10-2-12
0545 Assuming WCRR operations center. JColeman
0550 Beginning outside rounds.
0615 Pre job 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 operations.
0732 Movement out of facility complete.
0738 Bagging on 90955.
0754 Bag on complete
0814 Bagging off 90955, bagging on 90811.
0830 Bag off complete.
0853 Bagging off 90811, bagging on 90859.
0910 Bag on complete.
0936 Being relieved by OCO, Clarissa Velarde. JColeman.
0937 Assuming WCRR operations center - Velarde.
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 OCO Terri Coleman - Velarde.
1001 Assuming WCRR operations center, JColeman.
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. Transportainers secured. JC
1406 Drum movement out of the JC 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, JC 10-2-12
continued on next page. JColeman

continued from previous page. JColeman
1550 Bag of complete. Begining inside rounds.
1616 Inside rounds complete.
1622 Rounds reviewed by SOS.
1624 Mode chang complete. We are now in warm standby.
1630 End of day. Operations secure - JColeman

No further entries this page.

0600 ~~Received SOM turnover~~ 10/2/12 Assumed SOM position.

0615 Attended prejob 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 emerged 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 / LIP management. Discussed increase in production of SP 72 drums and need to keep shipments on schedule. Require SEDS/CPL's to be increased.

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

10-4-12

No further entries this page

SIGNATURE DATE 10/2 20 12

READ AND UNDERSTOOD DATE 20

10-2-12 WCRR 505 Log Book

0600 Assuming 505 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 505 position for the day. [illegible]

No Further Entries on this Page

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-HERTR-12-0108
Examination Date:	10/9/2012
Waste Container ID:	92147
Video/Audio Recorded Media Number:	LA-HERTR-12-0108 C&D
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.: 82.0 kg Tare Wt.: 33.4 kg Net Wt.: 48.6 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: 92147

Section 3: Container Inventory and Comments (Detailed descriptions)

IM: Metal hardware, metal lid

AM:

OM:

OI:

C: Fiberboard sleeve, fiberboard

R:

XPM: Plastic bags, EL 10/10/12 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):	10.0
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	
Other Inorganic Materials (OI)	
Cellulosics (C):	15.0
Rubber (R):	
Plastics (waste materials) (XPM):	6.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	17.6
Soils (S):	
Total WMP Weight:	48.6

CCP Radiography Data Sheet

Waste Container ID: 92147

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	[signature]	10/9/2012 10/10/12
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	92147	Count Sequence Number:	21370
Operator:	D3PW2DK1\operator		
Assay Start:	10/10/2012 11:20:50 AM		
Description 1:	1LANDA1652		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6, Not Precision		
Matrix Type:	Debris S5000		
Container Type:	55 gallon drum		
Weight:	Net: 48.6 kg	Net:	48.6 kg
Container:	Volume: 208.0 l	Full:	90.0 %
Density:	0.260 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: 21370
Assay Instrument: MCS HENC #1
Analysis Method: CCP-TP-063 v 14
Item ID: 92147

Batch Number: 1LANDA1652
Location: LANL TA-54
Software Version: NDA 2000 V.4.0
Analysis Date: 10/10/2012

Net Weight	48600.0 g		
Pu mass	2.32E+001	+-	3.34E+000 g
TRU Alpha Activity	3.31E+000	+-	8.27E-001 Ci
TRU Activity Concentration	6.82E+004	+-	1.70E+004 nCi/g
Pu-239 Equivalent Activity	3.38E+000	+-	8.27E-001 Ci
Pu-239 FGE	2.17E+001	+-	3.11E+000 g
Decay heat	1.07E-001	+-	2.75E-002 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	3.82E-002	2.73E-005	3.02E-006	1.40E-006
PU238	3.78E-003	6.54E-002	9.42E-003	5.36E-005
PU239	2.16E+001	1.36E+000	1.96E-001	1.11E-003
PU240	1.54E+000	3.54E-001	5.10E-002	2.90E-004
AM241	4.42E-001	1.53E+000	8.02E-001	3.09E-002
PU241	3.39E-002	3.52E+000	5.08E-001	2.89E-003
PU242	2.15E-002	8.55E-005	1.23E-005	0.00E+000
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	3.01E-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	8.55E-007
U238	<LLD	<LLD	0.00E+000	7.83E-006
AM243	1.16E-003	2.34E-004	2.64E-005	4.22E-006

Errors quoted at 1.000 sigma

Operator: [signature] Date: 10-16-12

ITR: Beverly Brown Date: 10/16/12

Automated Independent Technical Review

Count Sequence Number: 21370 Batch Number: 1LANDA1652
Counter ID: MCS HENC #1
Container ID: 92147
Waste Matrix Code: Debris S5000 Count Type:
Sequence Type: Assay Date: 10/10/2012

Comments	Disposition
Section 1 - Add-A-Source Analysis	
Add-a-Source WARNINGS:	
Add-a-Source correction factor is less than one.	OK
Add-a-Source correction factor was set to one.	OK
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.	Pu results taken from Passive Neutron data, U from Quantitative Gamma data.
Pu results taken from Passive Neutron data, U from Quantitative Gamma data.	
Results comparison test passed.	
Section 4 - MGA Analysis	MGA analysis failed. FRAM results applied. FRAM results attached.
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: _____ Date: 10/16/12

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **92147**

BDR Number: **LA12FG8065**

Sampling Date: **10/16/2012**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	114.19	
74-82-8	Methane	213.40	U
67-56-1	Methanol	27.87	U
60-29-7	Ethyl Ether	1.25	U
75-35-4	1,1-Dichloroethylene	5.71	U
67-64-1	Acetone	16.90	U
75-34-3	1,1-Dichloroethane	4.24	U
156-59-2	cis-1,2-Dichloroethene	0.55	U
78-93-3	Methyl ethyl ketone	9.86	U
110-82-7	Cyclohexane	5.84	U
71-43-2	Benzene	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	3.91	
108-90-7	Chlorobenzene	1.69	U
100-41-4	Ethylbenzene	2.62	U
108-38-3/106-42-3	m- and p-Xylene	1.48	U
95-47-6	o-Xylene	1.76	U
108-67-8	1,3,5-Trimethylbenzene	3.14	U
95-63-6	1,2,4-Trimethylbenzene	3.92	U

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\121016c\
Data File : 92147.D
Acq On : 16 Oct 2012 2:00 pm (#1); 16 Oct 2012 1:59 pm (#2)
Operator : SA
Sample :
InstName : Unit 8
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Oct 16 14:12:03 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	2376712	206.00 ppm	0.00
15) Chlorobenzene-d5	5.936	117	2085263	179.50 ppm	0.00
Target Compounds					Qvalue
1) Hydrogen	8.982	GC1	28215m	114.19 ppm	
17) Toluene	4.776	92	18827	3.91 ppm	99

(#) = 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-RTR2-13-0003
Examination Date:	1/9/2013
Waste Container ID:	92148
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.: 174.5 kg Tare Wt.: 145.1 kg Net Wt.: 29.4 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:	95 %

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:	92148
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.: 174.5 kg Tare Wt.: 145.1 kg Net Wt.: 29.4 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:	95 %

TS 2\6\13

Superseded TS 2\6\13

40A

CCP Radiography Data Sheet

Waste Container ID: 92148

Section 3: Container Inventory and Comments (Detailed description optional)

IM:

AM:

OM: Scrap lead

OI:

C:

R:

XPM:

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):	109.0
Plastics (PP): Rigid Liner w/ Lid; Plastic Liner Bag (Inside POC)	8.1
Other: Fiberboard (CP); 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):	3.0
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	
Organic Matrix (OR):	~~26.4~~ ms 1.30.13
Inorganic Matrix (IN):	26.4 ms 1.30.13
Soils (S):	
Total WMP Weight:	29.4

CCP Radiography Data Sheet

Waste Container ID: 92148

Section 3: Container Inventory and Comments (Detailed descriptions)

IM:

AM:

OM: Scrap lead

OI:

C:

R:

XPM:

OR: Vermiculite

IN:

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	109.0
Plastics (PP): Rigid Liner w/ Lid; Plastic Liner Bag (Inside POC)	8.1
Other: Fiberboard (CP); 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):	3.0
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	
Organic Matrix (OR):	26.4
Inorganic Matrix (IN):	
Soils (S):	
Total WMP Weight:	29.4

TG 2/6/13

41A

Superseded TG 2/6/13

CCP Radiography Data Sheet

Waste Container ID: 92148

Section 5: RTR Summary	
(Questions [illegible] will be explained [illegible] completion [illegible])	
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. NCR-LANL-0188-13

MS 1-30-13

RTR Operator:

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

[signature] 1-30-13

CCP Radiography Data Sheet

Waste Container ID: 92148

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:

Michael Simmons		1/9/2013
Print Name	Signature	Date

Superseded 02/06/13

42A 02/06/13

NDA 2000 Assay Report

Item Information

Item ID:	92148	Count Sequence Number:	14844
Operator:	DCLTD231\Operator		
Assay Start:	1/16/2013 1:35:49 PM		
Description 1:	2LANDA1079		
Description 2:	POC- 174.5		
Location:	LANL TA-54		
Comment:	AK-6, Not Precision		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gal Drum		
Weight:	Net: 29.4 kg	Net:	29.4 kg
Container:	Volume: 208.0 l	Full:	95.0 %
Density:	0.743 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: 14844
Assay Instrument: HENC #2
Analysis Method: CCP-TP-063 v 14
Item ID: 92148

Batch Number: 2LANDA1079
Location: LANL TA-54
Software Version: NDA 2000 V.4.0
Analysis Date: 1/16/2013

Net Weight	29400.0 g		
Pu mass	1.77E+002	+-	3.56E+001 g
TRU Alpha Activity	2.03E+001	+-	4.32E+000 Ci
TRU Activity Concentration	6.89E+005	+-	1.47E+005 nCi/g
Pu-239 Equivalent Activity	2.07E+001	+-	4.32E+000 Ci
Pu-239 FGE	1.66E+002	+-	3.33E+001 g
Decay heat	6.47E-001	+-	1.42E-001 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	1.17E-001	8.38E-005	1.60E-005	2.17E-006
PU238	2.12E-002	3.67E-001	7.37E-002	4.37E-005
PU239	1.66E+002	1.04E+001	2.09E+000	1.24E-003
PU240	1.14E+001	2.62E+000	5.26E-001	3.12E-004
AM241	1.98E+000	6.86E+000	3.74E+000	8.09E-002
PU241	2.43E-001	2.53E+001	5.08E+000	3.01E-003
PU242	4.97E-002	1.97E-004	3.96E-005	0.00E+000
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	8.91E-007
U233	<LLD	<LLD	0.00E+000	9.31E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	3.02E-006
U238	<LLD	<LLD	0.00E+000	2.04E-005
AM243	2.51E-003	5.06E-004	9.73E-005	1.37E-005

Errors quoted at 1.000 sigma

Operator: _____ Date: 1-21-13

ITR: _____ Date: 1-28-13

Automated Independent Technical Review

Count Sequence Number: 14844
Batch Number: 2LANDA1079
Counter ID: HENC #2
Container ID: 92148
Waste Matrix Code: Homo Sol. S3000
Count Type:
Sequence Type:
Assay Date: 1/16/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis Add-a-Source WARNINGS: Add-a-Source correction factor is less than one.	Ok
Section 2 - Passive Neutron Analysis Analysis Status: No errors. Ones Rate Analysis complete with warnings. - Error calculating the Ones Rate Pu-240 Effective MDA.	Ok Not data affecting.
Section 3 - Data Combiner Analysis Override enabled; Passive Neutron Pu and Gamma U data specified as input. Pu results taken from Passive Neutron data, U from Quantitative Gamma data. Results comparison test passed.	Passive Neutron Pu and Gamma U data specified as input.
Section 4 - MGA Analysis Results are marked as invalid.	MGA analysis failed. AK isotopics applied. The AK information utilized was provided by Steve Schafer, AKE, and consists of data from CCP-AK-LANL-006, AK Source Document M237. MT-52,53.
Section 5 - Gamma Analysis Analysis Status: No errors.	Ok
Miscellaneous	No additional nuclides contributing to 95% of the radiological hazard identified. Pu239 FGE >200g with 2*TMU but <325g.

Expert Review by: Sheri Chamberlin Date: 1-17-13

Waste Container ID: **92148**

BDR Number: **LA13FG2040**

Sampling Date: **4/17/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	420.69	
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\130417c\
Data File : 92148.D
Acq On : 17 Apr 2013 4:10 pm (#1); 17-Apr-13, 16:09:33 (#2)
Operator : GR
Sample :
Misc : POC THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 17 16:18:26 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	3.578	96	4988961	201.25 ppmv	0.00
15) Chlorobenzene-d5	5.907	117	4253969	177.00 ppmv	0.00
Target Compounds					Qvalue
1) Hydrogen	1.600	GC1	2990m	420.69 ppmv	

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

Working Copy
Date: 11/8/12 cm

ATTACHMENT 1
Page 1 of 4

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: 90876

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: 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: JOE QUINTANA, [signature] 239987, 11/8/12
Waste Handling Tech (print) Signature Z # Date

ATTACHMENT 1
Page 2 of 4

4.1[6][B] Parent Waste Container No.: 90876

5.[18] Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable: 382.2 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) 382.2 lb

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

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

EWMO-FOD (print)	Signature	Z #	Date
NA		NA	11-10-12

ATTACHMENT 1
Page 3 of 4

4.1[6][B] Parent Waste Container No.: 90876

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	92343			
10.1[4]	Daughter Drum Filter No.	JL1319			
10.1[4]	Daughter Drum Bag Filter No.	L 1753			
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				
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	Kitty Litter			

ATTACHMENT 1
Page 4 of 4

4.1[6][B] Parent Waste Container No.: 90876

Comments: Kitty Litter, Salts, Plastic, metal lid,

11.1[1] Performed By: Joe Quintana, Joe Q 239987, 11/8/12
Waste Handling Tech (print) Signature Z # Date

11.1[7] Reviewed By: Jose Jesus [illegible] 1221452 11/10/12 0859
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.: 013
Serial No.: TL - 2108
Manufacture Date: 2/11

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

	Filtered Vent	2 in. Bung
M&TE No.:	040694	021151
Cal. Expiration Date:	9.26.13	6.11.13
Tolerance:	±4% cw ±6% ccw	±3% cw ±6% ccw

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

Performed By: Michael Ronsecco [signature] [redacted] 10.29.12
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 Ronsecco [signature] [redacted] 10.29.12
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 Tevez [signature] 221951 10-30-12
Supervisor or designee (print) Signature Date

Working Copy
Date: 11/8/12 cm

ATTACHMENT 5
Page 1 of 1

WCRRF OVERPACK DRUM CLOSURE DATA SHEET

7.[19] Overpack Drum Unique Identifier No.: 92344

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: JOE QUINTANA, Joe Q 239987 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): 321.4 lb

Comments: N/C

8.1[1] Performed By: JOE QUINTANA, Joe Q 239987 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 Tevez, [signature] 122454 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#: 92343

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 #: GCDVC 1.5-2.5,2VC
Serial #: L-17253
Date of Manufacture: 2-12

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

- [x] Inspect cardboard liner/plastic liner (circle type of liner used)
  - NOTE: Reject any damaged liners
- [x] Place cardboard/plastic liner into drum liner bag/filter assembly
- [x] Line up filter with drum seam
- [x] Place liner/bag/filter assembly into drum
- [ ] 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 #: 019D9
Serial #: JL-1319
Date of Manufacture: 10/11

RECORD torque wrench information:

Filter torque wrench:		Jam Nut / Bung torque wrench:	
M&TE ID #:	040614	M&TE ID #:	021151
Cal Expiration Date:	9-24-13	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	Tolerance:	±3% cw ±4% ccw

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

[x] Yes [ ] No

Print Name: Michael Ramirez Signature: [signature] ZR: 182272

5. Weigh Drum Assembly

RECORD weight information

Tare wight (lbs) 76.0483
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 Ramirez Operator Sign: [signature] ZR: 182223 Date: 11-7-12

Verifier Print: JOE QUINTANA Verifier Sign: [signature] ZR: 239987 Date: 11/8/12

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

DRUM ID#: 92343

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): ~~+/- 30~~ 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 ~5" from the bottom of the drum ~120" from previously placed ID label.

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

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

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

RCRA Label:

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

OR

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

NOTE: Check only one of the above two boxes.

3. WEIGH DRUM ASSEMBLY

Record weight information: JQ 11/8/12

Gross Weight(lbs): ~~257.2~~ 265.6

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: Joe Quinsaat Date: 11/8/12

Verifier Print/Sign: Brandon Clover Date: 11-8-12

WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Production Control

Container ID: 90876 Container Type: POC Gross Weight (lbs): 378

Liner Seal #: None Filter Prefix: None Filter Serial #: EL-575; EL-65

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

TWSR Comments: PARENT #S844213 WTS-12STD-733

Total PE-Ci Activity: 2.69E+00 Equivalent Combustible PE-Ci: 1.01E+00 AM-241 PE-Ci: 2.28E-01

Total Fissile Gram Equivalents: 28.9 Total Surface Dose Rate (mrem/hr): —

EPA Code(s): D008 D007 D009

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 volume of kitty litter 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: 9/10/12

WDP Engineering

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

Processing Determination: Accept | Reject

WDP Engineering Comments: Nitrate Salts – POC

Ref Wt. 1082b. Parent drum (SED's attached) was part of the nitrate salt repack campaign using WasteLoc 770. This resulting daughter POC is being repacked to adjust the admixture/nitrate salt ratio. Nitrate salts carry waste codes for Chromium (D007) lead (D008) and mercury (D009). No reg chemicals present

May require RWP for >100 and <1000 mrem/hr

Performed By: Valerie Rhodes (WDP Engineering (Print)) Signature: Valerie Rhodes Z Number: 112109 Date: 9/25/12

TRU Remediation Operations

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

Other Specific Safety Concerns:

Processing Determination: Accept | Reject

TRU Remediation Operations Comments: Mix Fm Kitty Litter Per Procedure

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

HS Review [illegible] CSP Contains lead, Chromium, Hg, No other Concerns 10/1/12.

Document No: EP-DIV-AP-0107

221452 10-1-12

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])	90876					
Container type sampled (e.g., 55-gal, 85-gal, 110-gal, or SWB) (5.[1])	POC					
Filtered Vent Type (5.[1])	19DS			N		
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])	371.59 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 : 90876.D
Acq On : 21 Sep 2012 4:10 pm (#1); 21-Sep-12, 16:09:26 (#2
Operator : NW
Sample :
Misc : LFL POC THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 21 16:18:13 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	3.601	96	6641269	201.25	ppmv	0.06
15) Chlorobenzene-d5	5.923	117	5966176	177.00	ppmv	0.05
Target Compounds						Qvalue
1) Hydrogen	1.610	GC1	2627	371.59	ppmv	100

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

11-8-17

0600 Assuming WCRRF Operations center - Overlands.
0601 Started initial rounds, stack sampling being performed.
0638 performing shift turnover with Terri Coleman - Overlands.
0639 Assuming WCRRF operations center - Coleman
Dwill have Clayton Mullen in training under my direction. (JC)
0650 Assuming WCRRF Operations Center training under Terri Coleman
0651 Late entry at 0605 stack sampling was completed. (TM)
0651 Late entry at 0610 Outside Rounds completed. (TM)
0651 Late entry at 0642 Inside Rounds completed. (TM)
0651 Late entry at 0645 both rounds reviewed by SOS. (TM)
0702 Mode change performed TA-50-69 and WCRRF yard in Operations.
0722 Starting movement out of 50-69.
0737 Completed movement out of 50-69.
0738 Starting shipment out of WCRRF. Permission granted to lower vehicle access gate.
0741 bagging on 90869.
0755 bag on complete.
0831 bagging off 90869 and bagging on 90867.
0900 Shipment complete, vehicle access gate restored, and transportain 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 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 Inside Rounds. (TM)
1504 Late entry at 1440 Completed Inside Rounds. (TM)
1505 Bagging off 90937.
1510 Both rounds reviewed by SOS.

continued on next page. (TM)

11-8-12

0600 Assumed the WCRR SOM position. [signature] 2
0615 Attended pre-job briefing conducted by SOS. Discussed RHWA 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 150-69 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. 123
1200 WCRRF/DVS DOP 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 Janitorial 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 7 drums requiring transfer to area 9 to support WCRR COLD standby.
1548 WCRR processed 9 parent drums producing 7 daughters.
1550 Mode change complete. WCRR YARD 150-69 from OPERATIONS/OPERATIONS to WARM/COLD.
1630 Securing the SOM position. [signature]

No further entries this page.

[signature] 11-8 12

11-8-12 WCRK SOS LOG BOOK

0600 Assuming SOS Position [illegible]

0615 Conducted Shift brief

0638 Concluded Shift brief

0645 Reviewed Inside And outside Rounds

0702 Made Change Complete WCRK In operations.

1510 ~~Made Chg~~ (in 11-9-12) Reviewed Inside And outside Rounds

1550 Made Change Complete WCRK Yard In warm 50-69 In Cold.

11-8-12 1630 End of shift Securing SOS Position [illegible]

11-9

No further entries on this page

CCP Radiography Data Sheet

S844213

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0005
Examination Date:	1/15/2013
Waste Container ID:	92343
Video/Audio Recorded Media Number:	LA-RTR2-13-0005 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.: 120.5 kg Tare Wt.: 33.4 kg Net Wt.: 87.1 kg
Rigid Liner and Liner Vent Description:	Liner: [X] No [ ] Yes Lid: [X] No [ ] Yes Type: [ ] 30-mil [ ] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [ ] Yes [X] N/A Punctured: [X] No [ ] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [ ] No [X] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 1 layer
Volume Utilization Percentage:	90 %

CCP Radiography Data Sheet

Waste Container ID: 92343

Section 3: Container Inventory and Comments (Detailed descriptions)

IM: Scrap metal, metal lid, metal hardware

AM:

OM: Scrap lead

OI:

C: Fiberboard insert sleeve, fiberboard material

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):	16.6
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	24.0
Other Inorganic Materials (OI)	
Cellulosics (C):	8.0
Rubber (R):	
Plastics (waste materials) (XPM):	10.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	28.5
Soils (S):	
Total WMP Weight:	87.1

CCP Radiography Data Sheet

Waste Container ID: 92343

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

RTR Operator:		
Dennis Powell Eric Lyles	Dennis Powell	1-15-13 1/15/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	92343	Count Sequence Number:	14866
Operator:	DCLTD231\Operator		
Assay Start:	1/18/2013 12:38:44 PM		
Description 1:	2LANDA1081		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Debris S5000		
Container Type:	55 gal Drum		
Weight:	Net: 87.1 kg	Net:	87.1 kg
Container:	Volume: 208.0 l	Full:	90.0 %
Density:	0.470 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:	14866	Batch Number:	2LANDA1081
Assay Instrument:	HENC #2	Location:	LANL TA-54
Analysis Method:	CCP-TP-063 v 14	Software Version:	NDA 2000 V.4.0
Item ID:	92343	Analysis Date:	1/18/2013

Net Weight	87100.0 g		
Pu mass	7.86E+001	+-	1.31E+001 g
TRU Alpha Activity	1.21E+001	+-	3.39E+000 Ci
TRU Activity Concentration	1.39E+005	+-	3.89E+004 nCi/g
Pu-239 Equivalent Activity	1.23E+001	+-	3.39E+000 Ci
Pu-239 FGE	7.38E+001	+-	1.22E+001 g
Decay heat	3.92E-001	+-	1.13E-001 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	1.31E-001	9.34E-005	1.37E-005	1.74E-006
PU238	9.40E-003	1.63E-001	2.70E-002	4.25E-005
PU239	7.34E+001	4.62E+000	7.67E-001	1.21E-003
PU240	5.05E+000	1.16E+000	1.93E-001	3.03E-004
AM241	1.79E+000	6.21E+000	3.30E+000	6.62E-002
PU241	1.03E-001	1.07E+001	1.78E+000	2.80E-003
PU242	2.20E-002	8.74E-005	1.45E-005	0.00E+000
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	8.11E-007
U233	<LLD	<LLD	0.00E+000	7.81E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	2.32E-006
U238	<LLD	<LLD	0.00E+000	1.71E-005
AM243	2.73E-003	5.51E-004	8.12E-005	1.13E-005

Errors quoted at 1.000 sigma

Operator: Martha Gr Date: 1.23.13

ITR: A Gilly Date: 1-24-13

Automated Independent Technical Review

Count Sequence Number: 14866
Batch Number: 2LANDA1081
Counter ID: HENC #2
Container ID: 92343
Waste Matrix Code: Debris S5000
Count Type:
Sequence Type:
Assay Date: 1/18/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis Add-a-Source WARNINGS: Add-a-Source correction factor is less than one.	Ok
Section 2 - Passive Neutron Analysis Analysis Status: No errors. Ones Rate Analysis complete with warnings. - Error calculating the Ones Rate Pu-240 Effective MDA.	Ok Not data affecting.
Section 3 - Data Combiner Analysis Override enabled; Passive Neutron Pu and Gamma U data specified as input. Pu results taken from Passive Neutron data, U from Quantitative Gamma data. Results comparison test passed.	Passive Neutron Pu and Gamma U data specified as input.
Section 4 - MGA Analysis Results are marked as invalid.	MGA analysis failed. AK isotopics applied. The AK information utilized was provided by Steve Schafer, AKE, and consists of data from CCP-AK-LANL-006, AK Source Document M237. MT-52,53.
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: 1-21-13

Waste Container ID: **92343**

BDR Number: **LA13FG2004**

Sampling Date: **1/22/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	365.67	
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\130122c\
Data File : 92343.D
Acq On : 22 Jan 2013 3:01 pm (#1); 22-Jan-13, 15:00:40 (#2)
Operator : GR
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jan 22 15:18:19 2013
Quant Method : C:\msdchem\1\METHODS\vocgas.m
Quant Title : Flammable Gas Analysis
QLast Update : Wed Oct 10 14:26:44 2012
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
3) Fluorobenzene	3.574	96	4644254	201.25	ppmv	0.00
15) Chlorobenzene-d5	5.910	117	4119970	177.00	ppmv	0.00
Target Compounds						Qvalue
1) Hydrogen	1.617	GC1	2599m	365.67	ppmv	

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

20

90877

UET Copy
10-15-12 a

ATTACHMENT 1
Page 1 of 4

WCRRF WCG WASTE PROCESSING DATA SHEET

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

6.2[4] Date Processed: [illegible]

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

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

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

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

4.3[1]/4.3[2] (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.: [illegible]
Cal. Due Date: [illegible]

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) [illegible] (Initial and Date)

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

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

Performed By: [illegible] / [illegible] / [illegible] / [illegible]
Waste Handling Tech (print) Signature Z # Date

ATTACHMENT 1
Page 2 of 4

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

5.[18] Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable: 326.4 lb

6.2[5][A] Parent Drum Lead Blanket Weight (lb): 6 lb

6.2[5][B]/ 6.2[6] Total Parent Drum Weight (lb) 326.4 lb

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

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

EWMO-FOD (print)	Signature	Z #	Date
	NA		

ATTACHMENT 1
Page 3 of 4

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

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	[illegible]			
10.1[4]	Daughter Drum Filter No.	[illegible]			
10.1[4]	Daughter Drum Bag Filter No.	[illegible]			
10.1[4]	Daughter Drum Purchase Order No.	[illegible]			
10.1[13][C]	WCG Fire Watch Stationed		☐ YES	☐ NO	☑ N/A
10.1[14][C][d]3/11.1[3]	WCG Fire Watch Secured		☐ YES	☐ NO	☑ N/A
10.2[4]	POC bag-on bag: Manufacturer				
	Model No.				
	Serial No.				
	Date of Manufacture				
10.2[5]	POC ID No				
10.2[7][B]/10.2[6]	POC Item Description				
10.2[13]	POC Assembly closed per Manufacturer's instructions. (Initial and Z#)				
10.2[14]	POC Assembly Gross Weight (lb)				
10.2[15]	POC Rad. Survey Results (mrem/hr)				
10.3[3][A]	Approx. Containerized Liquid Vol./Units				
10.3[5][A]	Free Liquid Volume/Units				
10.3[7][A]	Opaque/Non-penetrable Item Description:				
10.3[9][A]	PCB-contaminated Waste Description				
10.3[9][B]	PCB Item ID No.				
10.3[10]	Remaining Waste Description	See Generated			
10.3[13]/10.4[10]/10.5[4]/10.6[8]	Daughter Drum % Full (%)	15%			
10.5[3]/10.6[2]	Description Waste Added During Processing	[illegible]			

ATTACHMENT 1
Page 4 of 4

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

Comments: [illegible]

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

11.1[7] Reviewed By: Jose Perez / [illegible] / 122452 / 10 17-12 1300
SOS or designee (print) Signature Z # Date/Time

~~Final Copy~~ UET
10-9-12

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: Nuclear
Model No.: 013
Serial No.: HL-741
Manufacture Date: 8/11

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

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

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

Performed By: Steven Mendoza / Steven Mendoza 114708 / 10-09-12
Waste Handling Technician (print) Signature Z # Date

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

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

Comments: N/C

8.1[1] Performed By: Steven Mendoza / Steven Mendoza 114708 / 10-09-12
Waste Handling Technician (print) Signature Z # Date

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

8.1[7] Reviewed By: Jose Jerez / [signature] E214521 10-17-12
Supervisor or designee (print) Signature Z # Date

Working Copy
Date: 10-15-12

ATTACHMENT 5
Page 1 of 1

WCRRF OVERPACK DRUM CLOSURE DATA SHEET

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

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

M&TE No.: [illegible]
Cal. Expiration Date: [illegible]
Range in ft-lb: [illegible]
Tolerance: [illegible]

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

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

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

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

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

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

Comments: [illegible]

8.1[1] Performed By: [illegible] / [illegible] [illegible] / [illegible]
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 / [illegible] [illegible] 10-17-12
Supervisor or designee (print) Signature Z # Date

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

Drum [redacted]: [illegible]

1. Drum/Lid Assembly

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

RECORD drum information:
- Purchase Request #: 416265
- Lot #: 0229225
- Date of Manufacture: 1012

2. Drum Liner Bag/Filter Assembly:

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

RECORD bag filter information:
- Manufacturer: BOP
- Model #: 6 CPVC 1.5-2.5 SPVC
- Serial #: 43763
- 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: NULFIL
- Model #: 01905
- Serial #: AM 885
- Date of Manufacture: 1/12

RECORD torque wrench information:

Filter torque wrench:		Jam Nut / Bung torque wrench:	
M&TE ID #:	020614	M&TE ID #:	021151
Cal Expiration Date:	10/19/12	Cal Expiration Date:	6/11/13
Range (ft-lbs or in-lbs):	40-285	Range (ft-lbs or in-lbs):	16-80
Tolerance:	~~+/- 3% cw~~ +/- 6% ccw	Tolerance:	+/- 3% cw +/- 6% ccw

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

[x] Yes [ ] No

Print Name: Steven Mackenzie Signature: [signature] ZI: 104741

5. Weigh Drum Assembly

RECORD weight information
- Tare wtight (lbs) 754
- File ID #: [illegible]

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

6. Label Drum Assembly

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

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

Operator Print: Steven Mackenzie Operator Sign: [signature] ZI: 104741 Date: 10-5-12

Verifier Print: [illegible] Verifier Sign: [signature] ZI: [illegible] Date: [illegible]

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

DRUM ID#: 9222

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: 7-15-13

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

Tolerance ±1-3% or ±1-6% or

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): 256.2

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: Alexis Gonzalez Date: 10-15-12

Verifier Print/Sign: Brandon Chavez Date: 10-15-12

WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Production Control

Container ID: 90877 Container Type: POC Gross Weight (lbs): 391

Inner Seal #: None Filter Prefix: None Filter Serial #: EL-17; EL-75

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

TWSR Comments: PARENT #S844213 WTS-12STD-777

Total PE-Ci Activity: 2.69E+00 Equivalent Combustible PE-Ci: 1.01E+00 AM-241 PE-Ci: 2.28E-01

Total Fissile Gram Equivalents: 28.9 Total Surface Dose Rate (mrem/hr): 8

EPA Code(s): D008 D007 D009 LL 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: TBP Production Control Comments: Need to add EPA Codes D007 & D009

Nitrate salts mixed with Watteloc 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 Signature: Susan P. Ramsey Z Number: 100681 Date: 9/10/12

Production Control (Print)

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. 811b. Parent drum (SEDS attached) was part of WCRR nitrate salt repack campaign using Watteloc 770. This repackaging during filter POC is being repacked to adjust admixture/nitrate salt ratio. Nitrate salts carry waste codes for chromium (D007), lead (D008), and mercury (D009). No hg chemicals present.

May require RWP for DOE and < 100 mrem/hr

Performed By: Valerie Rhodes Signature: Valerie Rhodes Z Number: 112609 Date: 9/25/12

WDP Engineering (Print)

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: Need to mix in Kitty Litter

Performed By: Gilbert Martinez Signature: Gilbert Martinez Z Number: 149235 Date: 9-27-12

TRU Remediation Operations (Print)

HS [illegible] 9-26-12 CSP contains lead, chromium & Hg

Document No: EP-DIV-AP-0107 JJ - 221452 - 9-28-12

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])	90877					
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/A	☐ 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])	3937.00 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 : 90877.D
Acq On : 21 Sep 2012 3:10 pm (#1); 21 Sep 2012 3:09 pm (#2)
Operator : SA
Sample :
InstName : Unit 8
Misc : LFL POC THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 21 15:18:01 2012
Quant Method : C:\msdchem\1\METHODS\Vocgas.m
Quant Title : Flammable Gas Analysis for Transportation
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
3) Fluorobenzene	3.256	96	2486146	206.00 ppm	0.00
15) Chlorobenzene-d5	5.936	117	2191653	179.50 ppm	0.00
Target Compounds					Qvalue
1) Hydrogen	5.786	GC1	972764m	3937.00 ppm	

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

Vocgas.m Fri Sep 21 15:18:09 2012

10-15-12

0600 Assuming WCRRF operations center - Orelande
0603 starting outside rounds.
0615 pre job being conducted by SES.
0630 completed Outside rounds.
0650 Starting inside rounds.
0744 Inside and outside rounds signed off by SES
0815 mode change performed TASL-69 and WCRRF yard now in operations.
0808 Starting movement into 50-69.
0817 Movement into 50-69 is complete.
0835 bagging on 90877
0842 Permission granted to lower vehicle access gates for loading of transport vehicle.
0844 bag on complete.
0919 vehicle access gates have been restored, loading of transport vehicle is complete
0957 bagging off 90877 and will bagging on 90968.
1023 bag on complete.
1114 bagging off 90968 and will be bagging on 91000.
1200 bag on complete.
1230 Operators waiting for lunch.
1324 Operators entering back operations
1428 Starting inside rounds
1450 Starting outside rounds.
1458 bagging off last drum of the day will not be bagging on another one due to not having any more straps.
1533 bag off complete.
1549 Starting movement out of 50-69
~~1632 end~~ 10-15-12
1613 Completed movement out of 50-69.
HG 1635 end of day WCRRF operations center secure - Orelande.

No further entries this page.

10/15/12

0600 Assumed SOM position.

0605 Attended prejob brief conducted by SOS. Discussed RPO issues from Friday maintenance work and need to reschedule w/ workers available this Friday. OM has requested a formal post job review to be conducted.

0805 Completed Mode change: WCRR Yard/Bldg 50-69 from Warm/~~Warm~~ 10/15/12 Cold to Operations/Operations.

0810 (Late Entry - 0715) CSE Leonard Moore onsite to conduct measurements of FSS sprinkler heads w/ Design Engineering. Got verbal OK w/ scheduling to emerge work. Engineers delayed and rescheduling for this PM after mode change.

0830 Attended Post Job Review w/ OM, RP-1, MSS, Operations. OM will send out findings.

0945 Released W.O 446624-01 50-84 Repair Deficiency (Installation install).

1500 Notified by SOS that all lifting straps for renestings POC's into 85 gal DM's have been used => Will not bag on any additional drums. Processing will be on hold until new straps obtained or shipment of non-POC 55's are received to process. OM notified.

1505 (Late Entry - 1400) Operators conducted lift demonstration of an empty 55 gal DM to renest into 85 using forklift and straps. Due to drum being light the choke slipped up one chime and when coming off the ground swung back & forth excessively — would require workers to get under forklift forks to steady drum.

1558 Mode change completed: WCRR Yard / Bldg 50-69 from Operations/Operations to Warm/Warm.

1600 Design engineers entered facility to obtain measurements of sprinkler heads. RP-1 supervisor would not allow CSE entry into CA due to wound even though covered w/ occlusion bandaid. CSE refused to produce exception from Occ Med.

1640 Secured SOM position

10-15-12

No further entries this date

10/15 12

10-15-12 WCRF SOS 10G Book

0600 Assuming SOS position for the day. [illegible]

0615 Conducting Pre-Job brief. Continuing to process solution package 72 and having to use slings to load into 85 gall empty drums. Reviewed procedure WCRRF Hydrant Flow Test, EP-WCRR-FP-DOP-0301, R-8

0744 SO [illegible] 10-10-12 Signed off on rounds

0805 Mode Change In Operations in 50-69 and Yard.

1023 PIC from Inside of 50-69 reporting that the straps being used are thick and when they start to place the parent POC inside of the empty 85 gallon drum the area where they are choked at are [illegible] 10-15-12 rubbing against the sides and sometimes catching causing the straps to rub against the tape and possibly tearing and causing contamination. Also the first drum caught on the side [illegible] 10-15-12 and the drum fell to the bottom of the 85 gallon drum.

1128 I went into 50-69 to observe the loading of the Parent POC into an empty 85 gallon drum along with the RCT supervisor. We watched them lower the POC into the 85 gallon drum and observed the straps catching on the lip of the 85 and pushing against the tape and the POC. The POC was able to be lowered into the 85 by moving it around. Also witnessed the bolt being pressed against.

1215 RCT supervisor and myself reported the findings to the SOM and explained what we saw. SOM notified the Ops Manager of the situation also so that he understands and to make sure the correct straps are ordered.

1230 Operators exiting for lunch. Unable to run second crew due to two operators with wounds and unable to process waste

1324 Operators returning from lunch.

1458 Bagging off last drum for the day. Three total processed. No more slings available that are thin for nesting operations.

1533 Bag off Complete

Continued on Next Page.

10-15-12 WXRR 505 Log Book

Continued from Previous Page.

10-15-12 1628 Securing 505 position for the day. Jim Jay

No further entries on this page.

CCP Radiography Data Sheet

S844213

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0005
Examination Date:	1/15/2013
Waste Container ID:	92202
Video/Audio Recorded Media Number:	LA-RTR2-13-0005 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.: 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:	90 %

CCP Radiography Data Sheet

Waste Container ID: 92202

Section 3: Container Inventory and Comments (Detailed descriptions)

IM: Scrap metal, metal lid, metal hardware

AM:

OM: Scrap lead

OI:

C: Fiberboard insert sleeve, fiberboard material

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):	16.6
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	20.0
Other Inorganic Materials (OI)	
Cellulosics (C):	8.0
Rubber (R):	
Plastics (waste materials) (XPM):	10.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	28.5
Soils (S):	
Total WMP Weight:	83.1

CCP Radiography Data Sheet

Waste Container ID: 92202

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

RTR Operator:		
Dennis Powell Eric Lyles		1-15-13 1/15/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	92202	Count Sequence Number:	14864
Operator:	DCLTD231\Operator		
Assay Start:	1/18/2013 11:14:29 AM		
Description 1:	2LANDA1081		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Debris S5000		
Container Type:	55 gal Drum		
Weight:	Net: 83.1 kg	Net:	83.1 kg
Container:	Volume: 208.0 l	Full:	90.0 %
Density:	0.440 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:	14864	Batch Number:	2LANDA1081
Assay Instrument:	HENC #2	Location:	LANL TA-54
Analysis Method:	CCP-TP-063 v 14	Software Version:	NDA 2000 V.4.0
Item ID:	92202	Analysis Date:	1/18/2013

Net Weight	83100.0 g			
Pu mass	5.04E+001	+-	8.19E+000	g
TRU Alpha Activity	1.18E+001	+-	4.28E+000	Ci
TRU Activity Concentration	1.42E+005	+-	5.15E+004	nCi/g
Pu-239 Equivalent Activity	1.20E+001	+-	4.28E+000	Ci
Pu-239 FGE	4.74E+001	+-	7.65E+000	g
Decay heat	3.87E-001	+-	1.43E-001	W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	1.35E-001	9.61E-005	1.36E-005	1.62E-006
PU238	6.03E-003	1.04E-001	1.69E-002	4.22E-005
PU239	4.71E+001	2.96E+000	4.81E-001	1.20E-003
PU240	3.24E+000	7.44E-001	1.21E-001	3.01E-004
AM241	2.31E+000	8.03E+000	4.25E+000	5.71E-002
PU241	6.91E-002	7.19E+000	1.17E+000	2.91E-003
PU242	1.41E-002	5.61E-005	9.11E-006	0.00E+000
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	8.97E-007
U233	<LLD	<LLD	0.00E+000	7.32E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	2.07E-006
U238	<LLD	<LLD	0.00E+000	1.71E-005
AM243	2.51E-003	5.07E-004	7.21E-005	1.03E-005

Errors quoted at 1.000 sigma

Operator: Marta [illegible] Date: 1.23.13

ITR: [illegible] Date: 1-24-13

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Automated Independent Technical Review

Count Sequence Number: 14864
Batch Number: 2LANDA1081
Counter ID: HENC #2
Container ID: 92202
Waste Matrix Code: Debris S5000
Count Type:
Sequence Type:
Assay Date: 1/18/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis Add-a-Source WARNINGS: Add-a-Source correction factor is less than one.	Ok
Section 2 - Passive Neutron Analysis Analysis Status: No errors. Ones Rate Analysis complete with warnings. - Error calculating the Ones Rate Pu-240 Effective MDA.	Ok Not data affecting.
Section 3 - Data Combiner Analysis Override enabled; Passive Neutron Pu and Gamma U data specified as input. Pu results taken from Passive Neutron data, U from Quantitative Gamma data. Results comparison test passed.	Passive Neutron Pu and Gamma U data specified as input.
Section 4 - MGA Analysis Results are marked as invalid.	MGA analysis failed. AK isotopics applied. The AK information utilized was provided by Steve Schafer, AKE, and consists of data from CCP-AK-LANL-006, AK Source Document M237. MT-52,53.
Section 5 - Gamma Analysis Analysis Status: No errors.	Ok
Miscellaneous	No additional nuclides contributing to 95% of the radiological hazard identified.

Expert Review by: Sheri Chambers Date: 1-21-13

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **92202**

BDR Number: **LA13FG2004**

Sampling Date: **1/22/2013**

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\130122c\
Data File : 92202.D
Acq On : 22 Jan 2013 2:34 pm (#1); 22-Jan-13, 14:34:02 (#2)
Operator : GR
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jan 22 15:00:04 2013
Quant Method : C:\msdchem\1\METHODS\vocgas.m
Quant Title : Flammable Gas Analysis
QLast Update : Wed Oct 10 14:26:44 2012
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
3) Fluorobenzene	3.584	96	4688685	201.25	ppmv	0.02
15) Chlorobenzene-d5	5.913	117	4025356	177.00	ppmv	0.01

Target Compounds	Qvalue

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

ATTACHMENT 1
Page 1 of 4

11/8/12 cn

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: 90878

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, 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.: 019068
Cal. Due Date: 7-31-12

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

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

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

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

Performed By: Michael Romero Michael Romero 188-7231 11/8/12
Waste Handling Tech (print) Signature Z # Date

ATTACHMENT 1
Page 2 of 4

4.1[6][B] Parent Waste Container No.: 90878

5.[18] Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable: 359.4 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) 359.4 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 Z # Date

ATTACHMENT 1
Page 3 of 4

4.1[6][B] Parent Waste Container No.: 90878

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	92349			
10.1[4]	Daughter Drum Filter No.	SL-1322		N/A	
10.1[4]	Daughter Drum Bag Filter No.	L-3715			
10.1[4]	Daughter Drum Purchase Order No.	416184			
10.1[13][C]	WCG Fire Watch Stationed		☐ YES	☐ NO	☑ N/A
10.1[14][C][d]3/11.1[3]	WCG Fire Watch Secured		☐ YES	☐ NO	☑ N/A
10.2[4]	POC bag-on bag: Manufacturer				
	Model No.				
	Serial No.				
	Date of Manufacture				
10.2[5]	POC ID No.				
10.2[7][B]/10.2[6]	POC Item Description				
10.2[13]	POC Assembly closed per Manufacturer's instructions. (Initial and Z#)				
10.2[14]	POC Assembly Gross Weight (lb)				
10.2[15]	POC Rad. Survey Results (mrem/hr)	N/A			
10.3[3][A]	Approx. Containerized Liquid Vol./Units			N/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	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 outs			

ATTACHMENT 1
Page 4 of 4

4.1[6][B] Parent Waste Container No.: 90878

Comments: plastic, metal lid bolts, salts Kitty Litter

11.1[1] Performed By: Michael Romero [signature] 1R07231 11/8/12
Waste Handling Tech (print) Signature Z # Date

11.1[7] Reviewed By: Jose Jorge [signature] 1Z14521 11/10/12 0527
SOS or designee (print) Signature Z # Date/Time

11 8 12

ATTACHMENT 2

Page 1 of 1

WCRRF OVERPACK DRUM ASSEMBLY PREPARATION DATA SHEET

5.[3] Overpack drum information:

Purchase Order No.: 413954

Lot No.: 211424

Manufacture Date: 2010

5.[8] Overpack filtered vent information:

Manufacturer: NUCFIL

Model No.: 013

Serial No.: IU-289

Manufacture Date: 09/11

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

	Filtered Vent	2 in. Bung
M&TE No.:	0406914	021181
Cal. Expiration Date:	9-26-13	6-11-13
Tolerance:	±4% cw ±6% ccw	±3% cw ±6% ccw

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

Performed By: BRIAN GALLEGOS [signature] [redacted] 11-08-12
Waste Handling Technician (print) Signature Z # Date

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

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

Comments N/A

8.1[1] Performed By: BRIAN GALLEGOS [signature] [redacted] 11-08-12
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 Jorge [signature] 221482 11-10-12
Supervisor or designee (print) Signature Z # Date

15/7
11/8/12 cm

ATTACHMENT 5
Page 1 of 1

WCRRF OVERPACK DRUM CLOSURE DATA SHEET

7.[19] Overpack Drum Unique Identifier No.: 92350

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 Michael Romero 181723 11/8/12
Waste Handling Technician (print) Signature Z # Date

7.[28] Overpack drum closure ring torque value: 100 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: 019045
Platform scale calibration expiration date: 7-31-13

7.[36][D] 85-gal overpack drum gross weight (lb): 322.4 lb

Comments: N/C

8.1[1] Performed By: Michael Romero Michael Romero [illegible] 11/8/12
Waste Handling Technician (print) Signature Z # Date

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

8.1[7] Reviewed By: Jose Jerez [illegible] 221621 11-20-12
Supervisor or designee (print) Signature Z # Date

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

Drum ID#: 92349

1. Drum/Lid Assembly

- [x] Remove and discard ⅝" 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 #: 229234
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 #: GPUC 1.5-2 SPUC
Serial #: L-3715
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. Inner 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 ⅝" 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: AVCO
Model #: 019 D3
Serial #: SL-1322
Date of Manufacture: 10/11

RECORD torque wrench information.

Filter torque wrench:		Jam Nut / Bung torque wrench:	
M&TE ID #:	040494	M&TE ID #:	021151
Cal Expiration Date:	9-26-13	Cal Expiration Date:	12-11-13
Range (ft-lbs or in-lbs):	40-200	Range (ft-lbs or in-lbs):	16-80
Tolerance:	±4% cw ±20% 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#: 182223

5. Weigh Drum Assembly

RECORD weight information

Tare weight (lbs) 75.8
File ID #: 019065

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

6. Label Drum Assembly

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

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

Operator Print: Michael Romero Operator Sign: Michael Romero Z#: 182223 Date: 11-7-12

Verifier Print: Gerald Espinoza Verifier Sign: [signature] Z#: 227730 Date: 11/8/12

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

DRUM ID#: 92349

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.): 216.0

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 Pittman Date: 11/8/12

Verifier Print/Sign: M. Hallman Date: 11/8/12

WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Production Control

Container ID: 90876 Container Type: POC Gross Weight (lbs): 359

Container Seal #: None Filter Prefix: None Filter Serial #: EL-531; EL-598

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

TWSR Comments: PARENT #S844213 WTS-12STD-743

Total PE-Ci Activity: 2.69E+00 Equivalent Combustible PE-Ci: 1.01E+00 AM-241 PE-Ci: 2.28E-01

Total Fissile Gram Equivalents: 28.9 Total Surface Dose Rate (mrem/hr): 2

EPA Code(s): D008 D007 D009 10/2/12

NCR RTR/NDA Comment: None

RTR Pre-Screen Date: None Comment: None

Certified RTR Comment: None

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

Security Determination: Green Yellow

Remediation Determination: VE PID Split Repack

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

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

Nitrate salts mixed with Waste Lock 770 from previous repack campaign. Admixture of 1:2 ratio of Waste Lock 770 to nitrate salts. Must be packed with 1:1 ratio of admixture to nitrate salts.

Performed By: Susan Ramsey Signature Z Number Date 9/10/12

Production Control (Print)

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: 49lb 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] mercury. No chemicals present. May require RWP for > 100 + < 1000 mrem/hr

Performed By: Valerie Rhodes Signature Z Number Date 10/2/12

WDP Engineering (Print)

TRU Remediation Operations

Waste Container Information Evaluated Less Than 170 lbs RTR Video Available

Other Specific Safety Concerns: Use proper PPE when handling waste inside of glove box. Do not push or press on waste.

Processing Determination: Accept Reject

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

Performed By: Jose Jerez Signature Z Number 221452 Date 10-4-12

TRU Remediation Operations (Print)

Z# 249750 10/9/12

HS Review Z# 206262 10.3.12

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])	90878					
Container type sampled (e.g., 55-gal, 85-gal, 110-gal, or SWB) (5.[1])	PEC					
Filtered Vent Type (5.[1])	19DS					
Filtered Vent Unobstructed (5.[1])	☑ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT
WIPP-Approved Filtered Vent (5.[2])	☑ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT
Total CCP VOC value (< 7,000 ppm) (5.[4])	0 ppm	ppm	ppm	ppm	ppm	ppm
Hydrogen Reading (< 64,000 ppm) (5.[5])	0 ppm	ppm	ppm	ppm	ppm	ppm
Methane Reading (< 16,000 ppm) (5.[5])	0 ppm	ppm	ppm	ppm	ppm	ppm

5.[7] Certified CCP Technician:

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

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

Comments: None

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

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

6.1[3] Performed By: SUSAN S. RAMSEY (Waste Handling Operator (print)) [signature] (Signature) 100681 (I #) 10/2/12 (Date)

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\120928C\
Data File : 90878.D
Acq On : 28 Sep 2012 3:36 pm (#1); 28 Sep 2012 3:35 pm (#2)
Operator : SA
Sample :
InstName : Unit 8
Misc : LFL POC THROUGH FILTER-19DS FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 28 15:44:00 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	2345236	206.00	ppm	0.00
15)	Chlorobenzene-d5	5.940	117	2095884	179.50	ppm	0.00

Target Compounds							Qvalue

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

Vocgas.m Fri Sep 28 15:44:11 2012

11-8-17

0600 Assuming WCRRF Operations Center - Reloader
0601 Started inside rounds; stack sampling being performed.
0638 performing shift turnover with Terri Coleman - Reloader.
0639 Assuming WCRRF Operations Center - Reloader
Dwell have Clayton Mullen in training under my direction. (OC)
0650 Assuming WCRRF Operations Center training under Terri Coleman
0651 Late entry at 0605 stack sampling was completed. (LM)
0651 Late entry at 0610 Outside Rounds completed. (LM)
0651 Late entry at 0642 Inside Rounds completed. (LM)
0651 Late entry at 0645 both rounds reviewed by SOS. (LM)
0702 Mode change performed TA-50-69 and WCRRF yard in Operations
0722 Starting movement out of 50-69
0737 Completed movement out of 50-69.
0738 Starting shipment out of WCRRF. Permission granted to lower vehicle access gate.
0741 bagging on 90869.
0755 bag on complete.
0831 bagging off 90869 and bagging on 90877.
0900 Shipment complete, vehicle access gate restored, and transportain 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 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 Inside Rounds. (LM)
1504 Late entry at 1440 Completed Inside Rounds. (LM)
1505 Bagging off 90937.
1510 Both rounds reviewed by SOS.

continued on next page. (LM)

11-8-12

0600 Assumed the WCRR SOM position. [illegible]
0615 Attended pre-job briefing conducted by SOS. Discussed RWMA 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 Last drum of the day bagged on.
0742 Walked down OC steep lift @ 50-84 with OM and Energy Solutions IH. Caution tape was placed around problem areas.
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 DOP 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 COLD standby.
1548 WCRR processed parent drums producing 7 daughters.
1550 Mode change complete: WCRR YARD | 50-69 from OPERATIONS | OPERATIONS to WARM | COLD.
1630 Securing the SOM position. [signature]

No further entries this page.

[signature] 11-8 12

11-8-12 WCRK SOS LOG BOOK

0600 Assuming SOS Position [illegible]

0625 Conducted shift brief

0638 Concluded shift brief

0645 Reviewed Inside And outside Rounds

0702 Mode Change Complete WCRRF In operations

1510 ~~Mode Chg~~ (Cm 11-8-12) Reviewed Inside And outside Rounds

1550 Mode Change Complete WCRR Yard In warm 50-69 In Cold.

11-8-12 1630 End of shift Securing SOS Position [illegible]

No further entries on this page

CCP Radiography Data Sheet

584213

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0005
Examination Date:	1/15/2013
Waste Container ID:	92349
Video/Audio Recorded Media Number:	LA-RTR2-13-0005 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.: 98.0 kg Tare Wt.: 33.4 kg Net Wt.: 64.6 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:	80 %

CCP Radiography Data Sheet

Waste Container ID: 92349

Section 3: Container Inventory and Comments (Detailed descriptions)

IM: Scrap metal, metal lid, metal hardware

AM:

OM: Scrap lead

OI:

C: Fiberboard insert sleeve, fiberboard material

R:

XPM: Plastic sheeting, 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):	16.6
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	5.0
Other Inorganic Materials (OI)	
Cellulosics (C):	8.0
Rubber (R):	
Plastics (waste materials) (XPM):	10.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	25.0
Soils (S):	
Total WMP Weight:	64.6

CCP Radiography Data Sheet

Waste Container ID: 92349

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

RTR Operator:		
Dennis Powell Eric Lyles		1-15-13 1/15/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	92349	Count Sequence Number:	14863
Operator:	DCLTD231\Operator		
Assay Start:	1/18/2013 10:32:12 AM		
Description 1:	2LANDA1081		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Debris S5000		
Container Type:	55 gal Drum		
Weight:	Net: 64.6 kg	Net:	64.6 kg
Container:	Volume: 208.0 l	Full:	80.0 %
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:	14863	Batch Number:	2LANDA1081
Assay Instrument:	HENC #2	Location:	LANL TA-54
Analysis Method:	CCP-TP-063 v 14	Software Version:	NDA 2000 V.4.0
Item ID:	92349	Analysis Date:	1/18/2013

Net Weight	64600.0 g		
Pu mass	1.71E+001	+-	2.81E+000 g
TRU Alpha Activity	4.49E+000	+-	1.70E+000 Ci
TRU Activity Concentration	6.95E+004	+-	2.63E+004 nCi/g
Pu-239 Equivalent Activity	4.54E+000	+-	1.70E+000 Ci
Pu-239 FGE	1.60E+001	+-	2.62E+000 g
Decay heat	1.47E-001	+-	5.66E-002 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	6.51E-002	4.65E-005	6.16E-006	1.05E-006
PU238	2.04E-003	3.53E-002	5.81E-003	4.22E-005
PU239	1.60E+001	1.00E+000	1.65E-001	1.20E-003
PU240	1.10E+000	2.52E-001	4.14E-002	3.01E-004
AM241	9.22E-001	3.20E+000	1.69E+000	4.09E-002
PU241	2.34E-002	2.43E+000	4.00E-001	2.91E-003
PU242	3.42E-003	1.36E-005	2.23E-006	0.00E+000
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	3.59E-007
U233	<LLD	<LLD	0.00E+000	4.79E-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	1.05E-005
AM243	1.63E-003	3.29E-004	4.39E-005	6.61E-006

Errors quoted at 1.000 sigma

Operator: Marie Fu Date: 1·23·13

ITR: D Gill Date: 1-24-13

Automated Independent Technical Review

Count Sequence Number: 14863
Batch Number: 2LANDA1081
Counter ID: HENC #2
Container ID: 92349
Waste Matrix Code: Debris S5000
Count Type:
Sequence Type:
Assay Date: 1/18/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis Add-a-Source WARNINGS: Add-a-Source correction factor is less than one.	Ok
Section 2 - Passive Neutron Analysis Analysis Status: No errors. Ones Rate Analysis complete with warnings. - Error calculating the Ones Rate Pu-240 Effective MDA.	Ok Not data affecting.
Section 3 - Data Combiner Analysis Override enabled; Passive Neutron Pu and Gamma U data specified as input. Pu results taken from Passive Neutron data, U from Quantitative Gamma data. Results comparison test passed.	Passive Neutron Pu and Gamma U data specified as input.
Section 4 - MGA Analysis Results are marked as invalid.	MGA analysis failed. AK isotopics applied. The AK information utilized was provided by Steve Schafer, AKE, and consists of data from CCP-AK-LANL-006, AK Source Document M237. MT-52,53.
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 Chamberlain Date: 1-21-13

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Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **92349**

BDR Number: **LA13FG2004**

Sampling Date: **1/22/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	169.96	
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\130122c\
Data File : 92349.D
Acq On : 22 Jan 2013 3:17 pm (#1); 22-Jan-13, 15:16:49 (#2)
Operator : GR
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jan 22 15:25:53 2013
Quant Method : C:\msdchem\1\METHODS\vocgas.m
Quant Title : Flammable Gas Analysis
QLast Update : Wed Oct 10 14:26:44 2012
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
3) Fluorobenzene	3.571	96	4514594	201.25 ppmv	0.00
15) Chlorobenzene-d5	5.910	117	4016551	177.00 ppmv	0.00
Target Compounds					Qvalue
1) Hydrogen	1.617	GC1	1208m	169.96 ppmv	

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

S844215

S844215

Container 754000

File Options Reports Help

S844215

754000	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

S844215

- S844215
  - LA00000069203 – EMPTY
  - LA00000069097
    - LASB50063
  - LA00000069085
    - LASB50021

ATTACHMENT 1
Page 1 of 4

1/10/14 HB

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: S8441215

6.2[4] Date Processed: 1-10-14

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 METAL-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: Brandon Chavez / [signature] Z0472121 1-10-14
Waste Handling Tech (print) Signature Z # Date

ATTACHMENT 1
Page 2 of 4

4.1[6][B] Parent Waste Container No.: 5844215

5.[18] Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable: 334.2 lb

6.2[5][A] Parent Drum Lead Blanket Weight (lb): 83.0 lb

6.2[5][B]/ 6.2[6] Total Parent Drum Weight (lb) 417.2 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. _____ / _____ / _____
Initials Z# Date

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

_____ / _____ / _____
FWMO-FOD (print) Signature Z # Date

ATTACHMENT 1
Page 3 of 4

4.1[6][B] Parent Waste Container No.: S844215

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	69097		N/A	
10.1[4]	Daughter Drum Filter No.	L-10359			
10.1[4]	Daughter Drum Bag Filter No.	JL-843			
10.1[4]	Daughter Drum Purchase Order No.	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	BOP			
	Model No.	[illegible]			
	Serial No.	L-10537			
	Date of Manufacture	5-13			
10.2[5]	POC ID No	69085			
10.2[7][B]/10.2[6]	POC Item Description	Wrap Sorbs Utility Liner			
10.2[13]	POC Assembly closed per Manufacturer's instructions. (Initial and Z#)	BC 204742			
10.2[14]	POC Assembly Gross Weight (lb)	346.4			
10.2[15]	POC Rad. Survey Results (mrem/hr)	2560.5			
10.3[3][A]	Approx. Containerized Liquid Vol./Units				
10.3[5][A]	Free Liquid Volume/Units	4 gal			
10.3[7][A]	Opaque/Non-penetrable Item Description:	Lead			
10.3[9][A]	PCB-contaminated Waste Description	N/A			
10.3[9][B]	PCB Item ID No.				
10.3[10]	Remaining Waste Description	see comments			
10.3[13]/10.4[10]/ 10.5[4]/10.6[10]	Daughter Drum % Full (%)	100%			
10.5[3]/10.6[2]	Description Waste Added During Processing	Plastic			

ATTACHMENT 1
Page 4 of 4

4.1[6][B] Parent Waste Container No.: S844215

Comments: Lead, nitrate salts, kitty litter, liquids

11.1[1] Performed By: Brandon Chase / [signature] 504702 11-10-14
Waste Handling Tech (print) Signature Z # Date

11.1[8] Reviewed By: Gilbert [illegible] / [signature] 1142251 11/17/14 1048
SOS or designee (print) Signature Z # Date/Time

ATTACHMENT 2
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1/16/14 HS

WCRRF OVERPACK DRUM ASSEMBLY PREPARATION DATA SHEET

5.[3] Overpack drum information:

Purchase Order No.: 501563
Lot No.: 02385366
Manufacture Date: 13

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: _____ / _____ / _____
Waste Handling Technician (print) Signature Z # Date

5.[15] Filtered Vent torque value [120 in-lb (96 to 144 in-lb)] N/A _____ in-lb

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

Comments: processed at 710-54

8.1[1] Performed By: Brandon Chase / _____ 00[illegible] 11-10-14
Waste Handling Technician (print) Signature Z # Date

8.1[6] Reviewed By: Gilbert Martinez / _____ [illegible] 1/12/14
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 5
Page 1 of 1

1/10/14 HS

WCRRF OVERPACK DRUM CLOSURE DATA SHEET

7.[17] Overpack Drum Unique Identifier No.: 69203

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

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

Performed By: Brandon Chavez / [signature] Z# [illegible] Date 1-10-14
Waste Handling Technician (print) Signature

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): 166.4 lb

Comments: N/C

8.1[1] Performed By: Brandon Chavez / [signature] Z# [illegible] Date 1-10-14
Waste Handling Technician (print) Signature

8.1[7] Reviewed By: Gilbert Martinez / [signature] Z# [illegible] Date 1/12/14
Supervisor or designee (print) Signature

ATTACHMENT 1
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1/6/14 HS

WCRRF DRUM PREPARATION DATA SHEET

5.[34][E] Drum ID No.: 69097

5.[3] Drum information:
Purchase Order No.: 501892 ~~0244449~~ 1/5/14
Lot No.: 0244449
Manufacture Date: 2013

5.[17] Drum Liner Bag/Filter Assembly:
Manufacturer: BOP
Model No.: 6C.PVC
Serial No.: L-10359
Manufacture Date: 05/13

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: Joe Kamma (Operator (print)) Joe Kamma (Signature) 1109704 (Z #) 1/5/14 (Date)

5.[23] Filtered vent information:
Manufacturer: NUCFIL
Model No.: 0190S
Serial No.: JL-843
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
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5.[31] Scale is within the calibration frequency. ☑ SAT ☐ UNSAT

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

5.[34][E] Drum ID No.: 69097

Comments: N/a

5.[35] Performed By: Joe Romero [signature] 1108204 6/5/14
Operator (print) Signature Z # Date

7.1[4] Reviewed By: Gilbert Martinez [signature] 1162351 6/12/14
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 2
Page 1 of 2

WCRRF DRUM CLOSURE DATA SHEET

6.[3] Drum ID No.: 69097

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: Brandon Chavez / [signature] / 2017112 / 11-10-14
Operator (print) Signature I # 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 I # 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.: 69097

6.[26] Scale File ID number: 019065

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

6.[28] Drum gross weight: 414.6 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: Brandon Chacz / [signature] [illegible] 1-10-14
Operator (print) Signature Z # Date

7.1[4] Reviewed By: Gilbert Martinez / [signature] 1102551 1/10/14
Supervisor or designee (print) Signature Z # Date

1-9-14 JL

ATTACHMENT 3
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WCRRF PARENT 55-GAL DRUM PREPARATION DATA SHEET

6.3[21] Prepared Parent 55-Gal Drum Number: SS4L1215

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): 334.2

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 (Waste Handling Technician (print)) (Signature) 276204 (Z #) 1-9-14 (Date)

8.1[7] Reviewed By: Gilbert Maldonado (Supervisor or designee (print)) (Signature) (Z #) 1/12/14 (Date)

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

8.1[8][D] Approved by: Gilbert Maldonado (SOS/SOM or designee (print)) (Signature) 114285 (Z #) 1/14/14 (Date) 1045 (Time)

1944 SP78

LTP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Planning and Technical Solutions

Container ID: S844215 Container Type: 85 GAL DRUM Gross Weight (lbs): 344.862
Total PE-Ci Activity: 1.62E+01 Equivalent Combustible PE-Ci: 6.07E+00
Total Fissile Gram Equivalents: 1.79E+02 Total Surface Dose Rate (mrem/hr): 5
EPA Code(s): D007; D008; D009
Waste Description: Nitrate salts

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

Drum venting and gas sampling completed on 3/5/13. Attachment 3 of DOP-1030 is attached. RTR pre-screen indicates liquid in 90 mil liner, lead liner, and rigid liner in the drum

Potential Safety Risks: Nitrate salt drums often contain free liquids and are packaged in individual plastic bags. Net weight is ~198 lbs. and generator data shows 13 items of nitrate salts with weights ranging from ~9-24 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, and D009, May contain free liquids

Performed By: John Smallwood (IHS Representative (Print)) | Signature | 246598 (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#) | 9/3/13 (Date)

TRU Remediation Operations

Potential Safety Risks: USE Proper PPE. Right Kitty Litter Ratio

Performed By: Gilbert Martinez (TRU Operations (Print)) | Signature | 149235 (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 liquids. Use hermanner gloves during processing. Use proper tool for the job.

Approved By: Jose Tovar (OM or designee (Print)) | Signature | 221452 (Z#) | 12/6/13 (Date)

Noncertified TRU Waste Drum Item Information

DrumID: 015979

Item No	ItemID	Process Status	Net Wt (kg)	Matrix	Meas Code	SNM (g)	MT	Auth (Pg/Ln)		Comments
1	IXFS996F1			NITRATE SALTS		5.08	52	6/14	G468	
2	9970X54FA		14.530	NITRATE SALTS		95.89	52	6/14	G468	
3	IXS918FA		4.310	NITRATE SALTS		1.12	52	6/14	G468	
4	IXFS998R1		7.730	NITRATE SALTS		4.98	52	6/14	G468	
5	IXFS999FA		9.540	NITRATE SALTS		2.74	52	6/14	G468	
6	IXFS998FR2		4.550	NITRATE SALTS		8.3	52	6/14	G468	
7	10000X60		10.910	NITRATE SALTS		17.45	52	6/14	G468	
8	IXF1001FA		✓10.910	NITRATE SALTS		[redacted]	52	6/14	G468	
9	10020X61C		✓4.000	NITRATE SALTS		3.82	52	6/14	G468	
10	IXF992-FA		5.230	NITRATE SALTS		14.59	52	6/14	G468	
11	IXF1003FA		4.000	NITRATE SALTS		5.61	52	6/14	G468	
12	IXF1004FA		7.270	NITRATE SALTS		5.89	52	6/14	G468	
13	IXF1005FA		7.050	NITRATE SALTS		3.16	52	6/14	G468	

Noncertified Waste Drum Material Summary

Gross Wt (kg): 156.4

Material Type	SNM (grams)	Items Net Wt (kg)
52	189.75	90.03
Totals	189.75	90.03 ✓

TW 189.76

ATTACHMENT 3
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TA-54 AREA G DRUM VENTING DATA SHEET

7.[2] Waste Container Unique Identifier: 5844215

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

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

55-gal drum: ☑ SAT ☐ UNSAT ☐ N/A

85-gal drum: ☐ SAT ☐ UNSAT ☑ N/A

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

7.[9]

Head Space Gas sample results:	85-gal (☑ N/A)	55-gal (☐ N/A)
Hydrogen	____ %	0.194256 %
Methane	____ ppm	0.000 ppm
VOC	____ ppm	96.35 ppm
Filter Vent Unique Identifier No.:	____	AN-347
Filter Vent Installed:		
Stub Stem (e.g., NucFil-007S)	☐ (☑ N/A)	☐ (☑ N/A)
Short Stem (e.g., NucFil-7DS)	☐ (☑ N/A)	☐ (☑ N/A)
Long Stem (e.g., NucFil-08DS)	☐ (☑ N/A)	☑ (☐ N/A)

ATTACHMENT 3
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7.[2] Waste Container Unique Identifier: S844215

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

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

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

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

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

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

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

ATTACHMENT 3
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7.[2] Waste Container Unique Identifier: 9844215

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

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

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

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

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

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

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

- Hydrogen concentration less than or equal to 2.4% (24,000 ppm) (RS) 12/6/13
- VOC less than or equal to 5,250 ppm

Comments: N/A

7.[11][M] [23] Performed By: Chris Vigil [signature] 163082 3-5-13
LTP-DDP Supervisor designee (Print) Signature / # Date

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

10.1[4] Reviewed by Chris Vigil [signature] 163082 3-5-13
LTP-DDP Supervisor designee (print) Signature Date

ATTACHMENT 2
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TA-54 AREA G DRUM VENTING PROCESS DRUM RECEIPT DATA SHEET

5.[3]/6.[3] Waste Container Unique Identifier: S844215
PE-Ci Content: 16.17804368
PE-Ci Equivalent Combustible content: 14.23667844
FGE content 178.6788467
Weight (lb) 344.862
Outermost Waste Container configuration:
☑ Vented 85-gal ☐ Unvented 85-gal ☐ Unvented 55-gal

5.[3]/6.[3] Performed By: Chris Vigil [signature] 1463082 3-5-13
LTP-DDP Supervisor/designee (Print) Signature Z # Date

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

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

6.[8] (S) Drum-lid restraint inspected for degradation (e.g., no indication of cracked parts, missing fasteners, loose or frayed parts, excessive wear, or unusual deformation): (SAC 5.6.4.5.1) ☐ SAT ☐ UNSAT ☑ N/A

ATTACHMENT 2
Page 2 of 2

5.[3]/6.[3] Waste Container Unique Identifier: 3844215

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-12-016) ☐ SAT ☐ UNSAT ☑ N/A
- UNVENTED DRUMS containing MAR ≥ 300 PE-Ci are separated from each other by at least 10 ft. (SR 4.6.3) ☐ SAT ☐ UNSAT ☑ N/A
- Distance between the posted perimeter of the UNVENTED WASTE CONTAINER STORAGE AREA and areas where normal operations occur is at least 15 ft [AC 5.6.8(9a)] ☐ SAT ☐ UNSAT ☑ N/A
- Access restrictions for the UNVENTED WASTE CONTAINER STORAGE AREA are in place. (SR 4.6.2) ☐ SAT ☐ UNSAT ☑ N/A

Comments: N/A

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

10.1[3] Reviewed by: Chris Vigil [signature] 163082 / 3-5-13
LTP-DDP Supervisor designee (print) Signature Z # Date

10.1[6] Acceptance criteria satisfied: ☑ YES ☐ NO

10.1[8] Approved by: Chris Vigil [signature] 163082 3-5-13
SOS SOM or designee (print) Signature Z # Date Time

DVS Gas Determination Results Report

Date: 3/5/2013

Waste Container Number: S844215

Batch Number: DVS2130305

Filter Type Installed: 08DS

Number of Filters Installed:

Flammable Volatile Organic Compounds (VOCs)

Compound	Concentration (ppmV)	Upper Calibration Range (ppmV)	Exceeds Calibration (Y/N)	Calculated Value (if exceeds calibration)
Methanol	63.58	1591.00	N	N/A
Diethyl Ether	0	503.00	N	N/A
1,1 Dichloroethene	0	402.80	N	N/A
Acetone	28.41	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	2.64	1503.00	N	N/A
Cyclohexane	0	497.30	N	N/A
Benzene	1.72	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	96.35	I.V.R. Intial and Date	RF 3-5-13

Compound	Concentration		Upper Calibration Range		Exceeds Calibration (Y/N)
Hydrogen	0.194356	%	6.45	%	N
Methane	0.000	ppm	15990.00	ppm	N

03-05-13

Comments:

AN-347

Doug Eisele — DVS Operator Print Name

Signature

03-05-13 — Date

1-10-14

0600 ASSUMMING OPERATIONS CENTER HSMITH

0615 STARTING PRE-JOB BRIEFING

0630 PREJOB BRIEFING CONCLUDED

0640 STARTING OUTSIDE ROUNDS

0645 STARTING INSIDE ROUNDS

0658 ITEM #63 INSIDE ROUNDS OOS, POD IN PLACE, PERMISSION GRANTED TO PROCEED

0706 OUTSIDE ROUNDS COMPLETED

0710 INSIDE ROUNDS COMPLETED

0719 INSIDE AND OUTSIDE ROUNDS REVIEWED BY SDS

0729 MODE CHANGE INCREASE TO OPERATIONS IN WCRR YARD AND TA 50-69

0729 LATE ENTRY: OPERATORS IN TO PROCESS AT 0700, HS

0805 BAGGING ON S852588

0817 BAG ON COMPLETED

1000 BAGGING OFF BAGGING ON S844215

1023 BAGGING ON COMPLETED

1059 STARTING SHIPMENT INTO TA50-194/75,

1126 OPERATORS NOTIFIED ~~OPERATIONS~~ 1/10/14 HS OPS CENTER OF BROKEN LED LINED GLASS ON GLOVEBOX STATION 2

1220 OPERATORS EWT FOR LUNCH

1342 BEING RELIEVED BY OCO CLARISA VELARDE, HSMITH

1351 Assuming WCRRF Operations Center - CVelarde

1355 late entry - Vehicle access gates have been restored shipment into WCRRF complete 123B CV.

1435 Bag on, Bag off complete

1440 movement into 50-69 being performed.

1500 movement into 50-69 complete, ~~Bag on Bag off now complete~~ 01-10-14.

1523 Starting inside rounds

1537 Item 63 @ OOS POD in place, okay to proceed per CSE documentation.

1543 Inside rounds complete, starting movement out of 50-69

1615 movement out of 50-69 complete.

1619 Bagging off, Bagging on 68741

1647 Bag on, Bag off complete.

- Continue on next page - CVelarde

1-10-14 - Continued from previous page Collard

1648 Rounds signed off by SCS.

1745 Bagging off last drum, will be installing port covers.

1808 Bag off complete.

1821 Mode change to ~~operations~~ warm standby, TA50-69 and WCRRF yard.

1-10-14 1850 End of day WCRRF operations center secure - Collard

HG

Further entries this page

1/10/14 WCRR SOM

0600 Reviewed Shift Turnover Checklist and assumed the WCRR SOM position.

0603 Bldg 50-69 inside temp @ 70°F as noted on HVA-001 display in Ops Center.

0634 Prejob brief conducted by SOS (G. Martinez) concluded. ES-II safety topic was proper use of PPE - eyewear in particular. Discussed current inventory w/ drums scheduled to be received today - backfill drums on spill pallets inside 50-69 and use of shielding stands for heavy SP-57 drums. Noted that a couple of operators having wounds

0711 Completed daily call in to TA-54 SOM for WCRR POD activities.

0729 Completed Mode Change: WCRR Yard / Bldg 50-69 from Warm/Warm to Operations/Operations

0735 Operators adjusted thermostat in 50-69 to 68°F.

0817 Completed bag on of drum # 5852588.

1023 Completed all bag offs for drum 5852588 (1 daughter total), bagged on drum # 5844215

1435 All bag off completed for drum # 5844215 (1 daughter and 1 POC total), bagged on #68754.

1500 Completed a move in of 4 drums from transportainers to 50-69. All drums are SP-72.

1647 Completed all bag offs for parent # 68754 (1 daughter total), bagged on drum # 68761

1808 Completed all bag offs for parent # 68761 (1 daughter, 1 POC total) Port cover in place.

1821 Completed Mode Change: WCRR Yard / Bldg 50-69 from Operations/Operations to Warm/Warm

1830 Secured the SOM position.

No further entries this page
RAA

PROJECT NAME WERR SCS LOGBOOK NOTEBOOK NO.

1/10/14

0600 Assuming SCS Position at the MG
0605 Conducted shift Brief read over drums Inside 50-62 also read over EP-WERR-FC-DOP-192, R.0
0610 Concluded shift brief.
0719 Sighted off Inside and outside Rounds
0725 Mode Change Complete WERR To Operations Mode late entry Operator In to process at circ. fan
0845 Bagging on SK52588
0847 Bag on Complete
1000 Bagging off for SK44215
1005 Bag on Complete
1030 Starting Shipment To From 6
1125 Operators rotated at breaks led lunch Place on station 2.
1200 Operator exiting for lunch.
1230 Shipment Complete
1330 2 operators Returning operations
1410 bagging off for 68754
1435 Bagging complete Complete.
1440 Moving into building R65
1500 Move to Complete
1525 Starting Rounds
1545 Starting Move out at 50-62
1615 Move out complete
1619 Bagging off for 65761
1642 Bag on left complete
1646 Conducted Inside and outside Rounds
1745 Bagging at last drum of Day.
1748 bag off complete.
1831 Mode change Complete WERR to ~~Secure~~ Cat Night ingress
1/10/14 1830 Securing SCS Position end of shift.

HA

xo

further

entries

on

this

page

Best Available Copy

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-RTR2-14-0006
Examination Date:	1/16/2014
Waste Container ID:	69097
Video/Audio Recorded Media Number:	LA-RTR2-14-0006 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.: 187.5 kg Tare Wt.: 33.4 kg Net Wt.: 154.1 kg
Rigid Liner and Liner Vent Description:	Liner: [X] No [ ] Yes Lid: [X] No [ ] Yes Type: [ ] 30-mil [ ] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [ ] Yes [X] N/A Punctured: [X] No [ ] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [ ] No [X] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 2 layers
Volume Utilization Percentage:	100 %

CCP Radiography Data Sheet

Waste Container ID: 69097

Section 3: Container Inventory and Comments (Detailed descriptions)

IM: Drum rings

AM:

OM: Scrap lead

OI:

C:

R:

XPM: Plastic bags, 90 mil liner lid

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP): Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	3.0
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	21.7
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	6.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	123.4
Soils (S):	
Total WMP Weight:	154.1

CCP Radiography Data Sheet

Waste Container ID: 69097

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		1/16/2014
Print Name	Signature	Date

S844215

NDA 2000 Assay Report

Item Information

Item ID:	69097	Count Sequence Number:	24211
Operator:	D3PW2DK1\operator		
Assay Start:	1/27/2014 9:18:31 AM		
Description 1:	1LANDA1899		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 154.0 kg	Net:	154.0 kg
Container:	Volume: 208.0 l	Full:	100.0 %
Density:	0.740 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: 24211
Assay Instrument: MCS HENC #1
Analysis Method: CCP-TP-063 v 15
Item ID: 69097

Batch Number: 1LANDA1899
Location: LANL TA-54
Software Version: NDA 2000 V.4.0
Analysis Date: 1/27/2014

Net Weight	154000.0 g		
Pu mass	9.81E+001	+-	2.85E+001 g
TRU Alpha Activity	1.10E+001	+-	3.18E+000 Ci
TRU Activity Concentration	7.12E+004	+-	2.06E+004 nCi/g
Pu-239 Equivalent Activity	1.12E+001	+-	3.18E+000 Ci
Pu-239 FGE	9.25E+001	+-	2.84E+001 g
Decay heat	3.50E-001	+-	1.04E-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	7.16E-007
U233	<LLD	<LLD	0.00E+000	7.86E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	2.34E-006
NP237	1.01E-001	7.10E-005	1.36E-005	3.69E-006
PU238	8.95E-003	1.53E-001	5.11E-002	1.70E-003
U238	<LLD	<LLD	0.00E+000	1.60E-005
PU239	9.21E+001	5.71E+000	1.76E+000	6.33E-002
PU240	5.88E+000	1.34E+000	4.53E-001	1.48E-002
AM241	1.10E+000	3.77E+000	2.61E+000	1.62E-001
PU241	1.11E-001	1.15E+001	3.89E+000	1.27E-001
PU242	1.96E-002	7.76E-005	2.63E-005	0.00E+000
AM243	1.70E-003	3.41E-004	6.54E-005	1.09E-005

Errors quoted at 1.000 sigma

Operator: D. R. Date: 1.29.14

ITR: Date: 1.30.14

Automated Independent Technical Review

Count Sequence Number: 24211 Batch Number: 1LANDA1899
Counter ID: MCS HENC #1
Container ID: 69097
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 1/27/2014

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

Expert Review by: Sheri Chamberlin Date: 1-29-14

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **69097**

BDR Number: **LA14FG12014**

Sampling Date: **1/29/2014**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	354.33	
74-82-8	Methane	6.56	U
67-56-1	Methanol	7.05	
60-29-7	Ethyl Ether	0.12	U
75-35-4	1,1-Dichloroethylene	0.20	U
67-64-1	Acetone	2.23	
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 : 69097.D
Acq On : 29 Jan 2014 3:54 pm (#1); 29 Jan 2014 3:53 pm (#2)
Operator : DE
Sample :
Misc : 55 GALLON ~~THROUGH FILTER~~ DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1 for 1-30-14

Quant Time: Jan 29 16:02:56 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	4.063	96	9180968	207.75	ppmv	0.00
15) Chlorobenzene-d5	6.639	117	7152634	178.75	ppmv	0.00
Target Compounds						Qvalue
1) Hydrogen	1.920	GC1	101074	354.33	ppmv	100
4) Methanol	0.831	31	3418	7.05	ppmv	100
7) Acetone	1.357	58	5457	2.23	ppmv #	63

(#) = 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:	69085
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.: 156.5 kg Tare Wt.: 145.1 kg Net Wt.: 11.4 kg
Rigid Liner and Liner Vent Description:	Liner: [ ] No [X] Yes Lid: [ ] No [X] Yes Type: [ ] 30-mil [X] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [X] Yes [ ] N/A Punctured: [ ] No [X] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [X] No [ ] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 2 layers
Volume Utilization Percentage:	50 %

CCP Radiography Data Sheet

Waste Container ID: 69085

Section 3: Container Inventory and Comments (Detailed descriptions)

IM: Scrap metal

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):	0.5
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):	8.9
Soils (S):	
Total WMP Weight:	11.4

CCP Radiography Data Sheet

Waste Container ID: 69085

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

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

RTR Operator:

Thad Hasselstrom	Thad Hasselstrom	1/15/2014
Print Name	Signature	Date

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

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

Item ID:            69085              Count Sequence Number:  24159
Operator:           D3PW2DK1\operator
Assay Start:        1/21/2014   1:15:05 PM
Description 1:      1LANDA1894
Description 2:      POC 156.5
Location:           LANL TA-54
Comment:            AK-6
Matrix Type:        Homo Sol. S3000
Container Type:     55 gallon drum
Weight:             Net:        11.4   kg        Net:    11.4 kg
Container:          Volume:    208.0   l        Full:    95.0 %
Density:                         0.652 kg /l


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

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

Errors quoted at  1.000 sigma
```

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number:	24159	Batch Number:	1LANDA1894
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:	69085	Analysis Date:	1/21/2014

Net Weight	11400.0 g		
Pu mass	5.07E+001	+-	1.99E+001 g
TRU Alpha Activity	6.27E+000	+-	2.16E+000 Ci
TRU Activity Concentration	5.50E+005	+-	1.89E+005 nCi/g
Pu-239 Equivalent Activity	6.38E+000	+-	2.16E+000 Ci
Pu-239 FGE	4.78E+001	+-	1.98E+001 g
Decay heat	2.01E-001	+-	7.02E-002 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	5.14E-007
U233	<LLD	<LLD	0.00E+000	4.64E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	1.37E-006
NP237	6.07E-002	4.28E-005	7.62E-006	2.30E-006
PU238	4.63E-003	7.91E-002	3.44E-002	1.06E-003
U238	<LLD	<LLD	0.00E+000	1.21E-005
PU239	4.76E+001	2.95E+000	1.23E+000	3.95E-002
PU240	3.04E+000	6.91E-001	3.04E-001	9.24E-003
AM241	7.42E-001	2.55E+000	1.75E+000	9.67E-002
PU241	5.76E-002	5.94E+000	2.61E+000	7.94E-002
PU242	1.02E-002	4.01E-005	1.76E-005	0.00E+000
AM243	7.19E-004	1.44E-004	2.59E-005	6.54E-006

Errors quoted at 1.000 sigma

Operator: _____ Date: 1·22·14

ITR: _____ Date: 1·23·14

Automated Independent Technical Review

Count Sequence Number: 24159 Batch Number: 1LANDA1894
Counter ID: MCS HENC #1
Container ID: 69085
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 1/21/2014

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

Expert Review by: Shein Chandra Date: 1-22-14

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **69085**

BDR Number: **LA14FG2011**

Sampling Date: **1/30/2014**

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\140130c\
Data File : 69085.D
Acq On : 30 Jan 2014 2:16 pm (#1); 30-Jan-14, 14:16:13 (#2)
Operator : NW
Sample :
Misc : POC THROUGH FILTER
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jan 30 14:24:35 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	3.594	96	3240748	205.75 ppmv	0.08
15) Chlorobenzene-d5	5.891	117	2578339	177.50 ppmv	0.03

Target Compounds	Qvalue

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

S844253

S844253

Container P 47318

File Options Reports Help

S844253

747318	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

S844253

- S844253
  - LA00000069226
    - LASB50104
  - LA00000069216
    - LASB50057
  - LA00000069189
    - LASB50108
  - LA00000069243 -EMPTY

Task History

Transfer Details

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

UFT Lima Cont.

1-17-14

ATTACHMENT 1
Page 1 of 4

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: 5844/253

6.2[4] Date Processed: 01/17/14

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.: 0190065
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: GERALD ESPINOZA [signature] 183720 01/17/14
Waste Handling Tech (print) Signature Z # Date

ATTACHMENT 1
Page 2 of 4

4.1[6][B] Parent Waste Container No.: 584253

5.[18] Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable: 339.4 lb

6.2[5][A] Parent Drum Lead Blanket Weight (lb): 22. lb

6.2[5][B]/ 6.2[6] Total Parent Drum Weight (lb) 361.4 lb

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

6.2[17][D] Drum lift hinge pin retaining clip replaced. N/A
Initials Z# Date

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

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

ATTACHMENT 1
Page 3 of 4

4.1[6][B] Parent Waste Container No.: S8W2253

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	692226	692110		
10.1[4]	Daughter Drum Filter No.	JZ-819	LM-3600	N/A	
10.1[4]	Daughter Drum Bag Filter No.	L-116069	L-116072		N/A
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	BOP			
	Model No.	LCCPV1.5-25PK			
	Serial No.	L-10085			
	Date of Manufacture	5-13			
10.2[5]	POC ID No	W189/029951		N/A	
10.2[7][B]/10.2[6]	POC Item Description	NITRATE SALTS			
10.2[13]	POC Assembly closed per Manufacturer's instructions. (Initial and Z#)	GE Z37720			
10.2[14]	POC Assembly Gross Weight (lb)				
10.2[15]	POC Rad. Survey Results (mrem/hr)	1025MR			
10.3[3][A]	Approx. Containerized Liquid Vol./Units	1 GAL			
10.3[5][A]	Free Liquid Volume/Units	2 GAL			
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	N/A	
10.3[9][B]	PCB Item ID No.				
10.3[10]	Remaining Waste Description	SEE COMMENTS	SEE COMMENTS		N/A
10.3[13]/10.4[10]/10.5[4]/10.6[10]	Daughter Drum % Full (%)	70%	50%		
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.: S8448253

Comments: NITRATE SALTS, PLASTIC, LEAD

11.1[1] Performed By: GERARDO ESPINOZA [signature] 123780 1/17/14
Waste Handling Tech (print) Signature Z # Date

11.1[8] Reviewed By: Clayton Mullins [signature] 1240092 1/17/14 1404
SOS or designee (print) Signature Z # Date/Time

1-14-14

ATTACHMENT 2
Page 1 of 1

WCRRF OVERPACK DRUM ASSEMBLY PREPARATION DATA SHEET

5.[3] Overpack drum information:

Purchase Order No.: 501893
Lot No.: 02424138
Manufacture Date: 13

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

	Filtered Vent	2-in. Bung
M&TE No.:	100310	03602415
Cal. Expiration Date:	11-12-14	8-5-14
Tolerance:	±4% cw ±6% ccw	±3% cw ±6% ccw

Overpack filtered vent information:

Manufacturer: NUCFIL
Model No.: 213
Serial No.: HL-8815
Manufacture Date: 8-11

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

5.[11] Performed By: Gerardo Espinoza [signature] 237201 1-10-14
Waste Handling Technician (print) Signature Z # Date

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

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

Comments: N/A

8.1[1] Performed By: Gerardo Espinoza [signature] 237201 01/10/14
Waste Handling Technician (print) Signature Z # Date

8.1[6] Reviewed By: Clayton Mullins [signature] 240090 1/17/14
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 5
Page 1 of 1

1-1714 gr

WCRRF OVERPACK DRUM CLOSURE DATA SHEET

7.[17] Overpack Drum Unique Identifier No.: 1092463

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

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

Performed By: GERALD ESPINOZA / [signature] / 1237001 / 01/17/14
Waste Handling Technician (print) Signature Z # Date

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

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

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

7.[34][D] 85-gal overpack drum gross weight (lb): 164.0 lb

Comments: N/A

8.1[1] Performed By: GERALD ESPINOZA / [signature] / 1237704 / 01/17/14
Waste Handling Technician (print) Signature Z # Date

8.1[7] Reviewed By: Clayton Miller / [signature] / 240092 / 1/17/14
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 1
Page 1 of 2

WCRRF DRUM PREPARATION DATA SHEET 1-15 14w

5.[34][E] Drum ID No.: 69216

5.[3] Drum information:
Purchase Order No.: 501892
Lot No.: 0244449
Manufacture Date: 13

5.[17] Drum Liner Bag/Filter Assembly:
Manufacturer: BOP
Model No.: LCPVC.1.5.25PVC
Serial No.: L-11672
Manufacture Date: 6-13

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

	Filtered Vent	2 in. Bung
M&TE No.:	101310	036245
Cal. Expiration Date:	11.12.14	8.5.14
Range:	40-200 in-lb	16-80 ft-lb
Tolerance (+/-):	+/-4% CW +/-6% CCW	+/-3% CW +/-6% CCW

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

Performed By: GERARDO ESPINOZA / HOWARD SMITH — Operator (print); Signature; 237726 / [illegible] — Z#; 1-15-14 / 1/15/14 — Date

5.[23] Filtered vent information:
Manufacturer: NUCFIL
Model No.: 019DS
Serial No.: LM360
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.: 69216

Comments: N/C

5.[35] Performed By: GERRALD ESPINOZA / HOWARD SMITH — Operator (print) — Signature — 237720 / 1226789 — Z # — 1-15-14 / 1/15/14 — Date

7.1[4] Reviewed By: Clayton Miller — Supervisor or designee (print) — Signature — 240090 — Z # — 1/17/14 — Date

ATTACHMENT 2
Page 1 of 2

WCRRF DRUM CLOSURE DATA SHEET

6.[3] Drum ID No.: 69216

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

M&TE No.: 038370
Cal. Expiration Date: 8-2-14
Range: 10-80 ft-lb
Tolerance (±%): ±3%w/6/cw

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

Performed By: Gerardo Espinoza (Operator (print)) Signature Date 01/17/14

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: Gerardo Espinoza (Operator (print)) Signature Date 01/17/14

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.: U92160

6.[26] Scale File ID number: 019065

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

6.[28] Drum gross weight: 232.2 lbs

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

Comments: NC

6.[32] Performed By: Gerardo Espinoza [signature] [illegible] 01/17/14
Operator (print) Signature Z # Date

7.1[4] Reviewed By: Clayton Mullins [signature] 240092 1/17/14
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 1
Page 1 of 2

1-15-14

WCRRF DRUM PREPARATION DATA SHEET

5.[34][E] Drum ID No.: 69226

5.[3] Drum information:
Purchase Order No.: 501892
Lot No.: 0244449
Manufacture Date: 13

5.[17] Drum Liner Bag/Filter Assembly:
Manufacturer: BOP
Model No.: 6CPVC · 1.5 · 25PVC
Serial No.: 1-11669
Manufacture Date: 6/13

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

	Filtered Vent	2 in. Bung
M&TE No.:	101310	036245
Cal. Expiration Date:	1·12·14	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: Gerardo Estrada / Jesse Smith — Operator (print); Signature; 257720 / 1246731 — Z#; 1-15-14 / 1/15/14 — Date

5.[23] Filtered vent information:
Manufacturer: NUCFIL
Model No.: A19DS
Serial No.: JL819
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.: 11669

Comments:
N/C

5.[35] Performed By: Howard Smith (Operator (print)) — Signature — 24773 / 1/15/14 (I # / Date)

7.1[4] Reviewed By: Clayton Mullins (Supervisor or designee (print)) — Signature — 240092 / 1/17/14 (I # / Date)

ATTACHMENT 2
Page 1 of 2

WCRRF DRUM CLOSURE DATA SHEET

6.[3] Drum ID No.: 692260

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% of reading / reading

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

Performed By: GERARDO ESPINOZA (Operator (print)) [signature] (Signature) 237720 (/ #) 01/17/14 (Date)

6.[12] Drum closure ring torque value: 120 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: [illegible] (Operator (print)) [signature] (Signature) 237170 (/ #) 01/17/14 (Date)

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

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

ATTACHMENT 2
Page 2 of 2

6.[3] Drum ID No.: L-9226

6.[26] Scale File ID number: 019665

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

6.[28] Drum gross weight: 3004 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) 222720 (I.D. #) 01/17/14 (Date)

7.1[4] Reviewed By: Clayton Mullins (Supervisor or designee (print)) [signature] (Signature) 240092 (I.D. #) 1/17/14 (Date)

ATTACHMENT 3
Page 1 of 1

1-17-14

WCRRF PARENT 55-GAL DRUM PREPARATION DATA SHEET

6.3[21] Prepared Parent 55-Gal Drum Number: S844253

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

6.3[16] Platform scale serial number: 019045
Platform scale calibration expiration date: 10-14-14

6.3[18] Prepared parent 55-gal drum weight (lb): 339.4

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: GERARD ESPINOZA [signature] 1057000 1-17-14
Waste Handling Technician (print) Signature Z # Date

8.1[7] Reviewed By: Clayton Mullins [signature] 240092 1/17/14
Supervisor or designee (print) Signature Z # Date

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

8.1[8][D] Approved by: John Gundersen [signature] 1235853 1-17-14 1409 1-17-14
SOS/SOM or designee (print) Signature Z # Date Time

Not on MF

SP77

LTP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Planning and Technical Solutions

Container ID: S844253 Container Type: 85 GAL DRUM Gross Weight (lbs): 365.8095
Total PE-Ci Activity: 1.52E+01 Equivalent Combustible PE-Ci: 5.70E+00
Total Fissile Gram Equivalents: 1.04E+02 Total Surface Dose Rate (mrem/hr): 12
EPA Code(s): D007; D008; D009
Waste Description: Nitrate salts

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

Drum venting and gas sampling completed on 3/5/13. Attachment 3 of DOP-1030 is attached. RTR pre-screen indicates liquids in 6 mil liner, lead liner, and rigid liner.

Potential Safety Risks: Nitrate salt drums often contain free liquids and are packaged in individual plastic bags. Net weight is ~ 3010 lbs - and the number of waste items in the drum is unknown.

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

IHS Representative

Potential IHS Safety Risks: Drums contain D007, D008, and D009 may contain free liquid within liner.

Performed By: Johnny Broadwaters (IHS Representative (Print)) | Signature | 204657 (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 | 142255 (Z#) | 10/6/13 (Date)

Operations Manager or designee

Processing Determination: ☒ Accept ☐ Reject

OM or designee Comments: Do not push or press on waste with tongs. Use heavyweight gloves during processing. Use proper tool for the job.

Approved By: Jose Juarez (OM or designee (Print)) | Signature | 122452 (Z#) | 10/6/13 (Date)

ATTACHMENT 3
Page 1 of 3

TA-54 AREA G DRUM VENTING DATA SHEET

7.[2] Waste Container Unique Identifier: S844253

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

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

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

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

7.[9]

Head Space Gas sample results:	85-gal (☑ N A)	55-gal (☐ N A)
Hydrogen	_____ %	0.474443 %
Methane	_____ ppm	0.000 ppm
VOC	_____ ppm	40 ppm
Filter Vent Unique Identifier No.:		AN-359
Filter Vent Installed:		
Stub Stem (e.g., NucFil-007S)	☐ (☑ N A)	☐ (☑ N A)
Short Stem (e.g., NucFil-7DS)	☐ (☑ N A)	☐ (☑ N A)
Long Stem (e.g., NucFil-08DS)	☐ (☑ N A)	☑ (☐ N A)

ATTACHMENT 3
Page 2 of 3

7.[2] Waste Container Unique Identifier: S844253

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

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

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

7.[11][B][a] Number of required WIPP-approved filtered vents
- 55-gal Waste Container ☑ N/A
- 85-gal Waste Container ☐ N/A

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

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

ATTACHMENT 3
Page 3 of 3

7.[2] Waste Container Unique Identifier: 9844253

7.[11][B][1] Number of WIPP-approved filtered vents installed:

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

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

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

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

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

7.[13][A] (S) 55-gal waste containers to be transferred to WCRRF satisfy the following criteria (WCRRF SAC 5.10.2.3.4.a): ☑ SAT ☐ UNSAT ~~☑ N/A~~ 12/6/13

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

Comments: N/A

[11][M] Performed By: Chris Vigil 163082 3-5-13
LTP-DOP Supervisor designee (Print) Signature Date

10.[B] Headspace meters O2% and thermometer set ☑ SAT ☐ UNSAT

10.[D] Reviewed By: Chris Vigil 163082
LTP-DOP Supervisor designee (print) Signature Date

ATTACHMENT 2
Page 1 of 2

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

5.[3]/6.[3] Waste Container Unique Identifier: 9844253
PE-Ci Content: 15.19166407
PE-Ci Equivalent Combustible content: 13.36866438
FGE content: 163.8036313
Weight (lb): 365.8095
Outermost Waste Container configuration:
☑ Vented 85-gal ☐ Unvented 85-gal ☐ Unvented 55-gal

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

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

	TRU Waste Container Bottom (5.17/6.18)	TRU Waste Container (except bottom) (5.19/6.16)
(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., external surfaces constructed of metal or concrete) (AC 5.6.8(9c))	☑ SAT ☐ UNSAT	☑ SAT ☐ UNSAT

6.[8] (S) Drum lid re-strant 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
Page 2 of 2

5.[3]/6.[3] Waste Container Unique Identifier: S844253

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-12-016) ☐ SAT ☐ UNSAT ☑ N/A
- UNVENTED DRUMS containing MAR ≥ 300 PE-Ci are separated from each other by at least 10 ft. (SR 4.6.3) ☐ SAT ☐ UNSAT ☑ N/A
- Distance between the posted perimeter of the UNVENTED WASTE CONTAINER STORAGE AREA and areas where normal operations occur is at least 15 ft [AC 5.6.8(9a)] ☐ SAT ☐ UNSAT ☑ N/A
- Access restrictions for the UNVENTED WASTE CONTAINER STORAGE AREA are in place. (SR 4.6.2) ☐ SAT ☐ UNSAT ☑ N/A

Comments:

N/A

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

10.1[3] Reviewed by: Chris Vigil [signature] 163082 3-5-13
LTP-DDP Supervisor designee (print) Signature Z # Date

10.1[6] Acceptance criteria satisfied ☑ YES ☐ NO

10.1[8] Approved by: Chris Vigil [signature] 163082 3-5-13 1011
SOS SOM or designee (print) Signature Z # Date Time

DVS Gas Determination Results Report

Date: 3/5/2013

Waste Container Number: S844753

Batch Number: DVS2130305

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	34.08	1591.00	N	N/A
Diethyl Ether	0	503.00	N	N/A
1,1 Dichloroethene	0	402.80	N	N/A
Acetone	3.21	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	2.71	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	40	I.V.R. Intial and Date	JAS 3/5/13

Compound	Concentration		Upper Calibration Range		Exceeds Calibration (Y/N)
Hydrogen	0.474443	%	6.45	%	N
Methane	0.000	ppm	15990.00	ppm	N

Comments:

AN-359

Doug Eisele
DVS Operator Print Name

Signature

03-05-13
Date

1-17-14 Assuming WCRR operations center. Coleman
0555 Beginning outside rounds.
0600 Beginning inside rounds. Pre-job being conducted by SES.
0617 Outside rounds complete.
0634 Pre-job concluded.
0642 Inside rounds complete.
0655 Both rounds reviewed by SES.
0703 mode change complete. We are now in operations in WCRRF yard and 5069.
0719 CM states he cancelled the crosby clips maintenance that was to be performed on the vehicle barrier today.
0728 Notified pest control regarding the mouse droppings in the Morgan where supplies are kept.
0802 Operators denesting 2 drums, then bagging on.
0910 Denesting complete. Operators bagged on S844253.
0941 Permission granted to lower the vehicle access gates to
1043 begin receipt of drums from area G.
1114 1043 Bagging off 1 daughter and 1 PCC, bagging on another daughter
1048 Vehicle access gates restored. Shipment accepted. Transportainer secured.
1113 Bag off/on complete, PPE check w/ Sat.
1210 Bagging off 1 daughter, bagging on S813655.
1240 Bag off/on complete, PPE check is Sat.
1412 Bagging off 1 daughter, bagging on another daughter.
1428 Bag off/on complete.
1446 Initiating a drum movement from 5069 to a transportainer.
1500 Drum movement out of 5069 complete.
1605 Beginning inside rounds.
1606 Late entry - at 0640, item 63005, okay to proceed. (JC)
1622 Item# 63005, okay to proceed per CSE documentation.
1632 Inside rounds complete.
1640 Beginning outside rounds.
1642 Bagging off 2 daughters, bagging on 90927.
1708 Outside rounds complete.
1718 Bag off/on complete. Operators report an elevated CAM.
Continued on next page Coleman

1-17-14 Continued from previous page. JColeman
1722 Operators report CAM reading normal now.
1748 Both rounds reviewed by SOS.
1759 Received permission from OM to leave drum #90927 bagged or overnight. Everything is in a safe configuration.
1811 Mode change complete. We are now in Warm Standby in WCRRF yard and 5069.
1-17-14 1830 End of day. OCO position secured. JColeman

No further entries this page

1-17-14 WCRR SOM

0558 Reviewed shift turnover checklist and logs and assumed the WCRR SOM position from Guadagnoli

0636 Completed attending the pre-job brief conducted by the SOS (Clayton)

0638 ES/III discussed the safety topic of the day chemical storage at work and at home. There is a transfer scheduled into WCRRF - 9 drums total. Film crew is to arrive around noon and film personnel existing facility. Shift orders in effect were discussed. Maintenance are to install crosby clamps - we will monitor mode change with crafts. Operations are requesting straps for de-nesting. 1"x 10' and if unable to locate, will notify Mr Vigil.

0708 Completed morning phone call with AREA 4 status using WCRRF - POD

0719 The CM counsels crafts on installation of crosby clamps

0719 Late entry for 0703 - Mode Change 50/55 and cpand transition from WARM/WARM to Operations/Operations

0722 OCC notifies Pest Control of dropping with the Morgan.

0802 Inside operations initiate denesting of two drums current inside temperature is 64°F

0901 Conducted walkdown of Vehicle Barrier gate and marked the gate with gray tape on where the 3 crosby clips are to be attached.

0910 Operations complete the de-nesting and bag on of Parent drum 58442253 SP-72

0932 Completed working with the procedure writer on comments for DOP-1197 in which the OLD number is DOP-0236. Also PJT assures for transfer of 9 drums from Area G.

1042 Inside operators report initiating bag off of 1 daughter and 1 PBC and bagging on another daughter and continue to process.

1050 The transfer of 9 drums into WCRRF from AREA G was completed

1113 Inside operators complete bag off and bag on of the daughter

1210 Operators initiate bag off and bag on of Parent 58613655 - SP 57

1240 Bag off noted completed, and the photographer is positions for operators to switch for lunch and continue to operate.

1412 Inside operators report bagging off 1 daughter and bagging on another, and continue

1424 Operators report bag off and bag on completed.

1446 Outside operators initiate movement from facility to transportainers, Also RW not replacement tool and electric impact wrench were secured for SWB arrival Tuesday by ES and they provide for Area

1525 Completed sign off of EP-AREAG-WD-DOP-1085 R_2 IPC 2 - to allow procedure writer to submit to USQ - all comments from disciplines were incorporated.

1642 Inside Operators initiate bag off off ~~2 daughter~~ 1 daughter 1-17-14 and bag on of Parent 90927

1716 Bag off and on completed RCT noted elevated CAM.

1722 CAM Reading was reported normal.

1745 Reviewed Rounds and RCRA to ensure completed

(Continued on Next page)

1-17-14 WCBR SOM (continued)

1750 Obtained update from AREA G SOS working Dome 224. Noted 4 parents generated 4 daughters.

1759 Obtained approval from the OM to allow WCBR Operations to leave Parent 90927 bagged on overnight, the WCG is in a safe configuration.

1809 Inside temperature in 50/69 is noted at 65°F the setpoint is at 77°F

1811 Mode change: 50/69 and yard transition from Operations/Operations to Warm/WARM

1818 Secured the SOM position John Guadagnoli

No further Entries this Page
RK

1/17/14
0600 Assuming SOS position. CT
0615 Starting Pre-Job, discussed proper storage with all tools, equipment, chemicals. With heavy drums ensure the load capacity is not being violated.
0638 Pre-Job complete.
0655 Signed off on the rounds.
0703 Mode change complete, WCRRF yard and 50-69 are now in Operations.
0802 Starting to denest 2 drums.
0910 Denesting and bag on complete, 5844253.
0941 Starting to recieve shipment into WCRRF.
1043 Bagging off 1st daughter, bagging on a 2nd.
1048 Shipment in complete.
1113 Bag off/on complete, also bagged off a POC.
1215 Bagging off 2nd daughter, bagging on 5813655
1240 Bag off/on complete.
1412 Bagging off 1st daughter, bagging on a 2nd.
1428 Bag off/on complete.
1446 Starting movement out of 50-69.
1500 Movement out complete.
1642 Bagging off 2nd and 3rd daughters, bagging on 90927.
1718 Bag off/on complete. Slightly elevated CAM, unable to depost.
1722 CAM's readings back to normal.
1748 Signed off on the rounds.
1759 Permission from OM to leave drum on overnight.
1811 Mode change complete, WCRRF yard and 50-69 are now in Warm Standby.
1/17/14 1819 Securing SOS position. CT
1819

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-RTR2-14-0010
Examination Date:	1/24/2014
Waste Container ID:	69189
Video/Audio Recorded Media Number:	LA-RTR2-14-0010 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.: 155.5 kg Tare Wt.: 145.1 kg Net Wt.: 10.4 kg
Rigid Liner and Liner Vent Description:	Liner: [ ] No [X] Yes Lid: [ ] No [X] Yes Type: [ ] 30-mil [X] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [X] Yes [ ] N/A Punctured: [ ] No [X] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [X] No [ ] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 2 layers
Volume Utilization Percentage:	60 %

CCP Radiography Data Sheet

Waste Container ID: 69189

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):	8.4
Soils (S):	
Total WMP Weight:	10.4

CCP Radiography Data Sheet

Waste Container ID: 69189

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

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

RTR Operator:

Thad Hasselstrom	Thad Hasselstrom	1/24/2014
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	69189	Count Sequence Number:	1277
Operator:	CLREMO67292\User		
Assay Start:	1/31/2014 3:32:41 PM		
Description 1:	4LANDA0044		
Description 2:	POC 155.5		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	S3000		
Container Type:	55 Gal Drum		
Weight:	Net: 10.4 kg	Net:	10.4 kg
Container:	Volume: 208.0 l	Full:	95.0 %
Density:	0.647 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:	1277	Batch Number:	4LANDA0044
Assay Instrument:	MILCC	Location:	LANL TA-54
Analysis Method:	CCP-TP-076 v 0	Software Version:	NDA 2000 V.4.0
Item ID:	69189	Analysis Date:	1/31/2014

Net Weight	10400.0 g		
Pu mass	1.18E+001	+-	4.12E+000 g
TRU Alpha Activity	2.21E+000	+-	5.15E-001 Ci
TRU Activity Concentration	2.12E+005	+-	4.95E+004 nCi/g
Pu-239 Equivalent Activity	2.23E+000	+-	5.15E-001 Ci
Pu-239 FGE	1.11E+001	+-	4.11E+000 g
Decay heat	7.17E-002	+-	1.68E-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	1.96E-007
U233	<LLD	<LLD	0.00E+000	2.35E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	4.43E-007
NP237	4.48E-002	3.16E-005	9.30E-006	4.62E-007
PU238	1.30E-003	2.22E-002	1.65E-002	2.70E-004
U238	<LLD	<LLD	0.00E+000	8.42E-006
PU239	1.10E+001	6.82E-001	2.55E-001	8.32E-003
PU240	7.71E-001	1.75E-001	7.15E-002	2.14E-003
AM241	3.88E-001	1.33E+000	4.42E-001	7.81E-003
PU241	9.58E-003	9.87E-001	3.70E-001	1.20E-002
PU242	3.35E-003	1.32E-005	6.76E-006	0.00E+000
AM243	4.07E-004	8.15E-005	2.41E-005	2.10E-006

Errors quoted at 1.000 sigma

Operator: [signature] Date: 2-4-14

ITR: [signature] Date: 2/5/14

Automated Independent Technical Review

Count Sequence Number: 1277
Counter ID: MILCC
Container ID: 69189
Waste Matrix Code: S3000
Sequence Type:

Batch Number: 4LANDA0044
Count Type:
Assay Date: 1/31/2014

Comments	Disposition
Data Combiner Analysis No Multi-Modal Results Combination TMU results available for reporting purposes.	OK
MGA Analysis Results are marked as invalid.	MGA analysis failed. FRAM results applied. FRAM results attached.
Gamma Analysis Analysis Status: No errors.	OK
Miscellaneous	No additional nuclides contributing to 95% of the radiological hazard identified.

Expert Review by: _____ Date: 2/4/14

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **69189**

BDR Number: **LA14FG12018**

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

S 844253

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	283.20	
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	2.53	
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	2.94	
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\140204c\
Data File : 69189.D
Acq On : 4 Feb 2014 2:19 pm (#1); 4 Feb 2014 2:18 pm (#2)
Operator : DE
Sample :
Misc : POC THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Feb 04 14:29:49 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	9587679	207.75	ppmv	0.00
15) Chlorobenzene-d5	6.639	117	7336943	178.75	ppmv	0.00
Target Compounds						Qvalue
1) Hydrogen	1.917	GC1	80783m	283.20	ppmv	
7) Acetone	1.364	58	6444	2.53	ppmv	92
17) Toluene	5.580	92	87101	2.94	ppmv	96

(#) = 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-RTR2-14-0010
Examination Date:	1/24/2014
Waste Container ID:	69216
Video/Audio Recorded Media Number:	LA-RTR2-14-0010 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.: 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 1 layer
Volume Utilization Percentage:	60 %

CCP Radiography Data Sheet

Waste Container ID: 69216

Section 3: Container Inventory and Comments (Detailed descriptions)

IM:

AM:

OM: Scrap lead

OI:

C: Leather gloves

R:

XPM:

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP): Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	20.0
Other Inorganic Materials (OI)	
Cellulosics (C):	2.0
Rubber (R):	
Plastics (waste materials) (XPM):	
Organic Matrix (OR):	
Inorganic Matrix (IN):	50.1
Soils (S):	
Total WMP Weight:	72.1

CCP Radiography Data Sheet

Waste Container ID: 69216

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	1/24/2014
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	69257	Count Sequence Number:	24219
Operator:	D3PW2DK1\operator		
Assay Start:	1/27/2014 3:08:01 PM		
Description 1:	1LANDA1899		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-10		
Matrix Type:	Debris S5000		
Container Type:	55 gallon drum		
Weight:	Net: 19.1 kg	Net:	19.1 kg
Container:	Volume: 208.0 l	Full:	70.0 %
Density:	0.130 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: 24218
Assay Instrument: MCS HENC #1
Analysis Method: CCP-TP-063 v 15
Item ID: 69216

Batch Number: 1LANDA1899
Location: LANL TA-54
Software Version: NDA 2000 V.4.0
Analysis Date: 1/27/2014

Net Weight	72100.0 g		
Pu mass	9.06E+001	+-	2.68E+001 g
TRU Alpha Activity	1.06E+001	+-	3.14E+000 Ci
TRU Activity Concentration	1.47E+005	+-	4.35E+004 nCi/g
Pu-239 Equivalent Activity	1.08E+001	+-	3.14E+000 Ci
Pu-239 FGE	8.51E+001	+-	2.68E+001 g
Decay heat	3.38E-001	+-	1.02E-001 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	8.72E-007
U233	<LLD	<LLD	0.00E+000	6.10E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	1.67E-006
NP237	1.14E-001	8.03E-005	1.33E-005	2.83E-006
PU238	1.07E-002	1.84E-001	6.36E-002	1.82E-003
U238	<LLD	<LLD	0.00E+000	1.43E-005
PU239	8.47E+001	5.25E+000	1.66E+000	5.22E-002
PU240	5.72E+000	1.30E+000	4.49E-001	1.29E-002
AM241	1.12E+000	3.83E+000	2.62E+000	1.20E-001
PU241	1.13E-001	1.17E+001	4.03E+000	1.16E-001
PU242	2.36E-002	9.32E-005	3.22E-005	0.00E+000
AM243	1.53E-003	3.05E-004	5.14E-005	8.23E-006

Errors quoted at 1.000 sigma

Operator: _____ Date: 1·29·14

ITR: _____ Date: 1·30·14

Automated Independent Technical Review

Count Sequence Number: 24218 Batch Number: 1LANDA1899
Counter ID: MCS HENC #1
Container ID: 69216
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 1/27/2014

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; 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-52,53.
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 Chamberlin Date: 1-29-14

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **69216**

BDR Number: **LA14FG2014**

Sampling Date: **2/3/2014**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	275.03	
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\140203C\
Data File : 69216.D
Acq On : 3 Feb 2014 1:00 pm (#1); 03-Feb-14, 13:00:07 (#2)
Operator : RJ
Sample :
Misc : 55 Gallon drum through filter. (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Feb 03 13:08:48 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	3.568	96	3170474	205.75	ppmv	0.05
15) Chlorobenzene-d5	5.871	117	2498892	177.50	ppmv	0.00
Target Compounds						Qvalue
1) Hydrogen	1.617	GC1	2068m	275.03	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-RTR2-14-0010
Examination Date:	1/24/2014
Waste Container ID:	69226
Video/Audio Recorded Media Number:	LA-RTR2-14-0010 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 14
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3110
Waste Stream I.D.:	LA-MIN02-V.001
Waste Container Weights:	Gross Wt.: 136.0 kg Tare Wt.: 33.4 kg Net Wt.: 102.6 kg
Rigid Liner and Liner Vent Description:	Liner: [X] No [ ] Yes Lid: [X] No [ ] Yes Type: [ ] 30-mil [ ] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [ ] Yes [X] N/A Punctured: [X] No [ ] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [ ] No [X] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 2 layers
Volume Utilization Percentage:	60 %

CCP Radiography Data Sheet

Waste Container ID: 69226

Section 3: Container Inventory and Comments (Detailed descriptions)

IM: Scrap metal

AM:

OM: Scrap lead

OI:

C: Tape rolls

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):	0.5
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	5.0
Other Inorganic Materials (OI)	
Cellulosics (C):	0.2
Rubber (R):	
Plastics (waste materials) (XPM):	7.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	89.9
Soils (S):	
Total WMP Weight:	102.6

CCP Radiography Data Sheet

Waste Container ID: 69226

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	1/24/2014
Print Name	Signature	Date

S844253

NDA 2000 Assay Report

Item Information

Item ID:	69226	Count Sequence Number:	16903
Operator:	DCLTD231\Operator		
Assay Start:	1/27/2014 1:34:53 PM		
Description 1:	2LANDA1258		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gal Drum		
Weight:	Net: 103.0 kg	Net:	103.0 kg
Container:	Volume: 208.0 l	Full:	60.0 %
Density:	0.830 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:	16903	Batch Number:	2LANDA1258
Assay Instrument:	HENC #2	Location:	LANL TA-54
Analysis Method:	CCP-TP-063 v 15	Software Version:	NDA 2000 V.4.0
Item ID:	69226	Analysis Date:	1/27/2014

Net Weight	103000.0 g			
Pu mass	1.07E+002	+-	3.49E+001	g
TRU Alpha Activity	2.00E+001	+-	8.66E+000	Ci
TRU Activity Concentration	1.94E+005	+-	8.40E+004	nCi/g
Pu-239 Equivalent Activity	2.06E+001	+-	8.66E+000	Ci
Pu-239 FGE	1.01E+002	+-	3.48E+001	g
Decay heat	1.08E+000	+-	3.04E-001	W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
CO60	3.00E-010	3.39E-007	7.83E-008	1.12E-007
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	1.46E-006
U233	<LLD	<LLD	0.00E+000	1.72E-002
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	5.53E-006
NP237	4.88E-001	3.44E-004	7.02E-005	4.08E-006
PU238	9.78E-003	1.67E-001	6.27E-002	1.87E-003
U238	<LLD	<LLD	0.00E+000	2.99E-005
PU239	1.00E+002	6.21E+000	2.16E+000	6.96E-002
PU240	6.77E+000	1.54E+000	5.77E-001	1.72E-002
AM241	3.51E+000	1.20E+001	8.36E+000	1.18E-001
PU241	1.34E-001	1.38E+001	5.17E+000	1.54E-001
CM242	3.56E-003	1.18E+001	2.79E+000	2.88E-001
PU242	2.15E-002	8.48E-005	3.18E-005	0.00E+000
AM243	4.93E-003	9.86E-004	2.02E-004	2.54E-005

Errors quoted at 1.000 sigma

Operator: _____ Date: 1-31-14

ITR: _____ Date: 1-31-14

Automated Independent Technical Review

Count Sequence Number: 16903 Batch Number: 2LANDA1258
Counter ID: HENC #2
Container ID: 69226
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 1/27/2014

Comments	Disposition
Section 1 - Add-A-Source Analysis Add-a-Source WARNINGS: Add-a-Source correction factor is less than n-sigma * the correction factor error.	Ok
Section 2 - Passive Neutron Analysis Analysis Status: No errors.	Ok
FGE is greater than the upper limit of 200.00	Neutron results suspect. Gamma results applied.
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.
Analysis Status: Override enabled; data marked not available but were used. Results taken from Quantitative Gamma data. Results comparison test passed.	
Section 4 - MGA Analysis Results are marked as invalid.	MGA analysis failed. AK isotopics applied. The AK information utilized was provided by Steve Schafer, AKE, and consists of data from CCP-AK-LANL-006, AK Source Document M237. MT-52,53.

Comments	Disposition
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: 1-30-14

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **69226**

BDR Number: **LA14FG2019**

Sampling Date: **2/12/2014**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	836.39	
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\140212c\
Data File : 69226.D
Acq On : 12 Feb 2014 2:20 pm (#1); 12-Feb-14, 14:20:17 (#2)
Operator : SA
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Feb 12 14:29:10 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	3.584	96	3170745	205.75	ppmv	0.07
15) Chlorobenzene-d5	5.881	117	2543180	177.50	ppmv	0.02
Target Compounds						Qvalue
1) Hydrogen	1.638	GC1	6289m	836.39	ppmv	

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

S844573

S844573

Container 753980

File Options Reports Help

S844573

753980	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

S844573
- S844573
  - LA00000068386
  - LA00000068361 - EMPTY

Working Copy

9-18-13

ATTACHMENT 1
Page 1 of 4

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: 584/573

6.2[4] Date Processed: 9-18-13

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

4.1[6][B] Prohibited Items:
☑ Sealed Containers > 4L ☑ Liquids GE 9-18-13 ☐ Pressurized Containers ☐ N/A

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

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

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

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

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

4.3[6] ($) Stationary Fire Watch has been established:
(> 300 PE-Ci Equivalent Combustible)
(SAC 5.10.1.7.2)
☑ N/A
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: GERARD ESPINOZA [signature] 1237720 9-18-13
Waste Handling Tech (print) Signature Z # Date

ATTACHMENT 1
Page 2 of 4

4.1[6][B] Parent Waste Container No.: 5844573

5.[18] Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable: 305.4 lb

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

6.2[5][B]/ 6.2[6] Total Parent Drum Weight (lb) 305.4 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.: 5844573

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	083386			
10.1[4]	Daughter Drum Filter No.	KL-539			
10.1[4]	Daughter Drum Bag Filter No.	L-865			
10.1[4]	Daughter Drum Purchase Order No.	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				
10.3[5][A]	Free Liquid Volume/Units	2gallons			
10.3[7][A]	Opaque/Non-penetrable Item Description:	Lead Shielding			
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[10]/ 10.5[4]/10.6[10]	Daughter Drum % Full (%)	100%			
10.5[3]/10.6[2]	Description Waste Added During Processing	PLASTIC Stubouts Kitty litter			

ATTACHMENT 1
Page 4 of 4

4.1[6][B] Parent Waste Container No.: 5844573

Comments: Nitrate salts, Kitty litter, plastic, stub outs lead shielding.

11.1[1] Performed By: GERALD ESPINOZA [signature] 123772 9-18-13
Waste Handling Tech (print) Signature Z # Date

11.1[8] Reviewed By: Clayton Mallinas [signature] 1240082 9/18/13 0504
SO8 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.: 501323
Lot No.: 6238025
Manufacture Date: 13

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

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

Overpack filtered vent information:

Manufacturer: NUCFIL
Model No.: 013
Serial No.: JL-1824
Manufacture Date: 10/11

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

5. [11] Performed By: Michael Montoya / [signature] / 1913524 / 7-03-13
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: Michael Montoya / [signature] / 1913524 / 7-03-13
Waste Handling Technician (print) Signature Z # Date

8.1[6] Reviewed By: Clayton Mullins / [signature] / 240092 / 9/18/13
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 5
Page 1 of 1

4-1@ 13 ft

WCRRF OVERPACK DRUM CLOSURE DATA SHEET

7.[17] Overpack Drum Unique Identifier No.: 68361

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] 1237720 / 9/18/13
Waste Handling Technician (print) Signature Z # Date

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

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

7.[34][B] Platform scale serial number: 019605
Platform scale calibration expiration date: 10-14-14

7.[34][D] 85-gal overpack drum gross weight (lb): 165.8 lb

Comments: N/C

8.1[1] Performed By: GERALD ESPINOZA / [signature] 1237720 / 9/18/13
Waste Handling Technician (print) Signature Z # Date

8.1[7] Reviewed By: Clayton Mullins / [signature] 240092 9/18/13
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 1
Page 1 of 2

Working Copy
Date: 9-10-13

WCRRF DRUM PREPARATION DATA SHEET

5.[34][E] Drum ID No.: 68386

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.: 6L PVC 1.5-2.5 PVC
Serial No.: L-98165
Manufacture Date: 01/13

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: JAN M BROWER | [signature] | 12862 | 9-17-13
Operator (print) Signature Z # Date

5.[23] Filtered vent information:
Manufacturer: NUCFIL
Model No.: 019DS
Serial No.: KL-539
Manufacture Date: 11/11

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

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

5.[30] Scale File ID number: 019065

ATTACHMENT 1
Page 2 of 2

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

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

5.[34][E] Drum ID No.: 68386

Comments: N/C

5.[35] Performed By: Ian Marquez / [signature] Z76 [illegible] 9-17-13
Operator (print) Signature Z # Date

7.1[4] Reviewed By: Clayton Mullins / [signature] 1240092 9/18/13
Supervisor or designee (print) Signature Z # Date

Working copy
9-18-13

ATTACHMENT 2
Page 1 of 2

WCRRF DRUM CLOSURE DATA SHEET

6.[3] Drum ID No.: 68386

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

M&TE No.: 038370
Cal. Expiration Date: 8-2-14
Range in ft-lb: 10-50
Tolerance: ±3% low, ±6% over

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

Performed By: Gerardo Espinoza [signature] 1237720 9-18-13
Operator (print) Signature Z # Date

6.[12] Drum closure ring torque value: [illegible] 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: Gerardo Espinoza [signature] 1237720 9-18-13
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.: 683866

6.[26] Scale File ID number: 0190605.

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

6.[28] Drum gross weight: 399.6 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: GERALD ESPINOZA / [signature] 1237720 / 9-18-13
Operator (print) Signature Z # Date

7.1[4] Reviewed By: Clayton Mullins / [signature] 240096 / 9/18/13
Supervisor or designee (print) Signature Z # Date

WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Note of Form SP72

Production Control

Container ID: S844573 Container Type: 55-GAL Gross Weight (lbs): 313

Inner Seal #: 015304 Filter Prefix: LAVC Filter Serial #: 02934

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

TWSR Comments: LEACHED PROCESS RESIDUE MST 12 RM 434

Total PE-Ci Activity: 1.71E+01 Equivalent Combustible PE-Ci: 6.40E+00 AM-241 PE-Ci: 1.42E+00

Total Fissile Gram Equivalents: 186.0 Total Surface Dose Rate (mrem/hr): 2

EPA Code(s): D007; D008; D009

NCR RTR/NDA Comment: None

RTR Pre-Screen Date: 6/12/2007 Comment: Liquids, Impenetrable Obj Liquid Location: 15", 27"

Certified RTR Comment: None

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

Security Determination: 2 VE 1/23/13 ☑ Green ☐ Yellow

Remediation Determination: ☐ VE ☑ PID ☐ Split ☑ Repack

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

TRUCON Code: Production Control Comments: Ensure EPA Codes D007, D008, and D009 are on the label. A minimum of 1.2 volumes of kitty litter/zeolite must be mixed with 1.0 volume of nitrate salts.

Performed By: Susan Ramsey (Production Control (Print)) / Susan P. Ramsey (Signature) / 100681 (Z Number) / 12/20/12 (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: Likely nitrate salts
Net Wt: 253#, Generator TWSR shows leached process residues from room 434, indicating waste likely consists of nitrate salts. No individual items or weights identified. No RTR BDR. Nitrate salts are typically packaged in plastic bags; undecomposed liquids +/or debris may be present. RTR PS shows prohibited liquids +/or impenetrable item(s). Presence of chemicals unknown (no generator info). Applicable waste codes are for chromium, lead, + mercury. Nitrate salts require repack w/ admixture. Note elevated EDEs

Performed By: Valerie Rhodes (WDP Engineering (Print)) / Valerie Rhodes (Signature) / 112609 (Z Number) / 1/23/13 (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 Hexamaxx gloves during processing.

Processing Determination: ☒ Accept ☐ Reject

TRU Remediation Operations Comments: USE PE mix Radio

Performed By: G Martinez (TRU Remediation Operations (Print)) / G M.J. (Signature) / 149235 (Z Number) / 6/18/13 (Date)

Jose Jerez / Jose Jerez / 221452 / 6/22/13

IHS Review Johny Amallou CSP, may contain Pb, Hg + Cr

1-29-13

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])	S844573					
Container type sampled (e.g., 55-gal, 85-gal, 110-gal, or SWB) (5.[1])	55-Gal					
Filtered Vent Type (5.[1])	HDS					
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])	65.09 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 # 341853

Reviewed By: Nathan Ales — 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 — Waste Handling Operator (print) — Signature — Z # 100681 — Date 5/20/13

Quantitation Report (QT Reviewed)

InstName : FGA Unit 12

Data Path : C:\msdchem\1\DATA\130418c\
Data File : S844573.D
Acq On : 18 Apr 2013 1:33 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 13:44:04 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	4.060	96	8652251	207.75 ppmv	0.00
15) Chlorobenzene-d5	6.636	117	7056252	178.75 ppmv	0.00
Target Compounds					Qvalue
1) Hydrogen	1.893	GC1	18566	65.09 ppmv	100

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

VOCGAS M Thu Apr 18 13:44:34 2013 UNIT12

9-17-13
1813 Assuming WCRR operations center. JColeman 9-17-13
1823 Pre-job being conducted by SOS. Discussed ~~systems~~ symtoms and signs of stress and ways to reduce it.
1837 Pre job concluded.
1918 Operators entering 50-69 to perform glove inspections and glove changes.
1952 Initiating a drum movement from 50-69 to a transportainer.
2020 Operators beginning glove changes on Station 1 (L)+(R), station 2 (L) gloves.
2025 Drum movement out of 50-69 complete.
2124 Glove changes complete.
2129 Mode change complete. We are now in operations in WCRRF yard and 50-69.
2250 Bagging off 1 daughter, bagging on another daughter.
2300 Bag off/on complete.
0008 Operators out for lunch.
0030 Beginning outside rounds.
0049 Item #19 on the rounds is unsat, okay to proceed, FSR in place.
0057 Outside rounds complete.
0127 Operators back from lunch.
0220 Bagging off 1 daughter, bagging on S844573.
0248 Bag off/on complete.
0255 Beginning inside rounds.
0309 Item #63 on the rounds is OOS, okay to proceed per CSE documentation
0320 Inside rounds complete.
0423 Bagging off 1 daughter, bagging on S841240.
0436 Both rounds reviewed by SOS.
0442 Bag off/on complete.
0510 Operator reports a leak by the scale and toolbox.
9-18-13 0600 Relieved by OO Clarissa Velarde-JColeman

No further entries this page.

9/17/13 Night Shift

1820 Reviewed Shift turnover checklist, approved and posted Night Shift Warm Standby watchbill and assumed the WCRR SOM position.

1821 Attended pre job brief conducted by SOS. Safety topic from IH was stress - causes, indications and ways to deal with it. Discussed current condition of facility - Station #1 gloves both R+L require changing, prior shift having problems w/ glove ring expander.

1945 SOS reported that other gloves in the WCG were caked w/ waste material and operators are cleaning them to determine if any other gloves will be required to be changed.

2015 Notified by Operators they are in process of changing gloves - in addition to Station #1 R+L, station #2 L will also be changed.

2025 Operators completed a movement of 4 drums from 50-69 to transportainers - Inventory control reported that WCATS hand held scanner worked w/ no issues for move out.

2124 All glove changes are completed.

2129 Completed mode change: WCRR Yard / Bldg 50-69 from Warm/Warm to Operations / Operations.

2300 Completed bagging off 1 daughter - continuing processing.

9/18/13 0000 Operators breaking for lunch.

0127 Resuming operations.

0157 Sent marked up version of 55 gal Daughter Drum prep and closure procedure to procedure writers to address labeling and weighing issues in regards to WCAT's.

0220 Bagging off another daughter to complete drum # 5855943 (3 daughters total) and bagging on 5844573.

0423 Bagged off 1 daughter and parent # 5844573. Bagged on drum # 5841240.

0538 Operators reported a small amount of rainwater leaking into facility at the floor scale and tool box areas as identified during prior rain events.

9/18/13 0600 Relieved by J. Guadagnoli as SOM

No further entries this page

HG

9/17/13 WCRR SOS Log Book

1816 Assuming SOS position. CA

1823 Starting Pre-Job, discussed topic from IH about the signs and symptoms of stress, and the ways to reduce or manage stress.

1840 Pre-Job complete.

1952 Starting movement out of 50-69.

2010 After cleaning and inspecting glovebox glove, operators will have to chang station 2 left hand along with both gloves on station 1 as ~~report~~ cm 9-17-13 previously notified.

2020 Beginning to change station 1 both gloves and station 2 left hand.

2025 Movement out of 50-69 complete.

2050 Notified by operators inside that glove expanders not working properly. Assembling a new expander and passing it into 50-69 to complete glove changes

2122 Glove changes complete.

2129 Mode change complete, WCRRF yard and 50-69 are now in Operations.

2250 Bagging off 1st daughter, bagging a 2nd daughter on.

2300 Bag off/on complete.

0220 Bagging off 2nd daughter, bagging on 5844573.

0248 Bag off/on complete.

0423 Bagging off 1 daughter, bagging on 5841240.

0436 Signed off on the rounds.

0441 Bag off/on complete.

0610 Relieved by Gilbert Martinez on 9/18/13. CA

No Further Entries on this Page

S844573

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0113
Examination Date:	9/24/2013
Waste Container ID:	68386
Video/Audio Recorded Media Number:	LA-RTR2-13-0113 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 13
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3110
Waste Stream I.D.:	LA-MIN02-V.001
Waste Container Weights:	Gross Wt.: 181.5 kg Tare Wt.: 33.4 kg Net Wt.: 148.1 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:	80 %

CCP Radiography Data Sheet

Waste Container ID: 68386

Section 3: Container Inventory and Comments (Detailed descriptions)

IM: Metal hardware

AM:

OM: Scrap lead

OI:

C:

R:

XPM: Plastic bags, liner lid

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP): Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	0.1
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	2.0
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	5.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	141.0
Soils (S):	
Total WMP Weight:	148.1

CCP Radiography Data Sheet

Waste Container ID: 68386

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 Thad Hasselstrom.

RTR Operator:

Eddie Rios Thad Hasselstrom	Eddie Rios Thad Hasselstrom	9-24-13 9/24/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	68386	Count Sequence Number:	23660
Operator:	D3PW2DK1\operator		
Assay Start:	9/26/2013 1:55:48 PM		
Description 1:	1LANDA1849		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6, Not Precision		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 148.0 kg	Net:	148.0 kg
Container:	Volume: 208.0 l	Full:	80.0 %
Density:	0.890 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: 23660
Assay Instrument: MCS HENC #1
Analysis Method: CCP-TP-063 v 15
Item ID: 68386

Batch Number: 1LANDA1849
Location: LANL TA-54
Software Version: NDA 2000 V.4.0
Analysis Date: 9/26/2013

Net Weight	148000.0 g		
Pu mass	1.42E+002	+-	2.08E+001 g
TRU Alpha Activity	1.39E+001	+-	2.23E+000 Ci
TRU Activity Concentration	9.39E+004	+-	1.51E+004 nCi/g
Pu-239 Equivalent Activity	1.41E+001	+-	2.23E+000 Ci
Pu-239 FGE	1.33E+002	+-	1.95E+001 g
Decay heat	4.41E-001	+-	7.28E-002 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	1.37E-001	9.63E-005	2.05E-005	2.72E-006
PU238	2.06E-002	3.52E-001	5.16E-002	5.20E-005
PU239	1.33E+002	8.24E+000	1.21E+000	1.22E-003
PU240	8.61E+000	1.95E+000	2.87E-001	2.89E-004
AM241	9.75E-001	3.35E+000	1.85E+000	1.04E-001
PU241	1.21E-001	1.24E+001	1.83E+000	1.84E-003
PU242	8.58E-002	3.39E-004	4.97E-005	0.00E+000
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	6.93E-007
U233	<LLD	<LLD	0.00E+000	9.44E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	2.76E-006
U238	<LLD	<LLD	0.00E+000	2.29E-005
AM243	6.33E-004	1.27E-004	2.73E-005	1.27E-005

Errors quoted at 1.000 sigma

Operator: Brittlight Date: 10-1-13

ITR: [illegible] Date: 10·1·13

Automated Independent Technical Review

Count Sequence Number: 23660 Batch Number: 1LANDA1849
Counter ID: MCS HENC #1
Container ID: 68386
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 9/26/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis No Add-a-Source warnings.	Ok
Section 2 - Passive Neutron Analysis Analysis Status: No errors.	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. 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: Sherri Chandler Date: 9-30-13

Waste Container ID: **68386**

BDR Number: **LA13FG12107**

Sampling Date: **10/23/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	78.13	
74-82-8	Methane	9.63	U
67-56-1	Methanol	54.08	
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\131023C\
Data File : 68386.D
Acq On : 23 Oct 2013 1:08 pm (#1); 23 Oct 2013 1:07 pm (#2)
Operator : RJ
Sample :
Misc : 55 Gallon drum through filter. (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Oct 23 13:17:04 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	4.060	96	7212476	207.75 ppmv	0.00
15) Chlorobenzene-d5	6.639	117	5354699	178.75 ppmv	0.00
Target Compounds					Qvalue
1) Hydrogen	1.907	GC1	22288m	78.13 ppmv	
4) Methanol	0.827	31	20610m	54.08 ppmv	

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

30

S844689

S844689

Container Profile 768036

File Options Reports Help

S844689

768036	TBD-TRU	T-TTRU-TEMP	Active	Decommissioned

- General Information
- Weights/Volumes
- Location
- Account Information
- Waste Material Parameters
- Layers of Confinement
- Prohibited Items
- EPA Codes
- UHC
- Radioassay
- Radiological Survey

Genealogy

S844689

- S844689
  - LA00000068647
  - LA00000068649
  - LA00000068646 – EMPTY

ATTACHMENT 1
Page 1 of 4

11/13/13 HS

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: S844689

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

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

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

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

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

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

4.3[4][B] Platform Scale: Equipment No.: 019065
Cal. Due Date: 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: James Sulk / [signature] / 116662 11-13-13
Waste Handling Tech (print) Signature Z # Date

ATTACHMENT 1
Page 2 of 4

4.1[6][B] Parent Waste Container No.: 5844689

5.[18] Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable: 390.2 lb

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

6.2[5][B]/ 6.2[6] Total Parent Drum Weight (lb) 390.2 lb

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

6.2[17][D] Drum lift hinge pin retaining clip replaced. N/A
Initials Z# Date

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

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

ATTACHMENT 1
Page 3 of 4

4.1[6][B] Parent Waste Container No.: 5844609

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	608649	608647		
10.1[4]	Daughter Drum Filter No.	LM-323	LM-321	N	
10.1[4]	Daughter Drum Bag Filter No.	L-11502	L-11501	A	
10.1[4]	Daughter Drum Purchase Order No.	501578	501578		
10.1[13][C]	WCG Fire Watch Stationed		☐ YES	☐ NO	☑ N/A
10.1[14][C][d]3/11.1[3]	WCG Fire Watch Secured		☐ YES	☐ NO	☑ N/A
10.2[4]	POC bag-on bag: Manufacturer				
	Model No.				
	Serial No.				
	Date of Manufacture				
10.2[5]	POC ID No				
10.2[7][B]/10.2[6]	POC Item Description		N		
10.2[13]	POC Assembly closed per Manufacturer's instructions. (Initial and Z#)		A		
10.2[14]	POC Assembly Gross Weight (lb)				
10.2[15]	POC Rad. Survey Results (mrem/hr)				
10.3[3][A]	Approx. Containerized Liquid Vol./Units				
10.3[5][A]	Free Liquid Volume/Units	10 gallons	N/A		
10.3[7][A]	Opaque/Non-penetrable Item Description:	lead shielding	Lead Shielding	N	A
10.3[9][A]	PCB-contaminated Waste Description	N			
10.3[9][B]	PCB Item ID No.		A	N	
10.3[10]	Remaining Waste Description	See comments	See comments		A
10.3[13]/10.4[10]/ 10.5[4]/10.6[10]	Daughter Drum % Full (%)	25%	100%		
10.5[3]/10.6[2]	Description Waste Added During Processing	Stuff outs plastic kitty litter	Stuff outs kitty litter plastic		

ATTACHMENT 1
Page 4 of 4

4.1[6][B] Parent Waste Container No.: 5844699

Comments: nitrate salts, Kitty litter, plastic, stubouts and lead shielding

11.1[1] Performed By: Edward Martinez, [signature] 1239910 / 11-13-13
Waste Handling Tech (print) Signature Z # Date

11.1[8] Reviewed By: Clayton Mullins, CA 1240092 / 11/14/13 0444
SOS or designee (print) Signature Z # Date/Time

ATTACHMENT 2
Page 1 of 1

Working Copy
11/7/13 HS

WCRRF OVERPACK DRUM ASSEMBLY PREPARATION DATA SHEET

5.[3] Overpack drum information:

Purchase Order No.:	501563 11/7/13
Lot No.:	~~0238~~ 0238562
Manufacture Date:	2013

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

	Filtered Vent	2-in. Bung
M&TE No.:	100216	036245
Cal. Expiration Date:	12/18/13	8/5/14
Tolerance:	+/- 4% CW +/- 6% CCW	+/- 3% CW +/- 6% CCW

Overpack filtered vent information:

Manufacturer:	NUCFIL
Model No.:	013
Serial No.:	TL1046
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: Joe Quintana, Joe Q 239987 11/7/13
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: JQ 11/7/13 ~~Joe~~ Joe Quintana, Joe Q 239987 11/7/13
Waste Handling Technician (print) Signature Z # Date

8.1[6] Reviewed By: Clayton Mullins, CM 240082 11/14/13
Supervisor or designee (print) Signature Z # Date

Working Copy
Date: 11-13-13

ATTACHMENT 5
Page 1 of 1

WCRRF OVERPACK DRUM CLOSURE DATA SHEET

7.[17] Overpack Drum Unique Identifier No.: 609690

7.[23] Overpack drum closure ring torque wrench information:
M&TE No.: 036245
Cal. Expiration Date: 08/05/2014
Range in ft-lb: 16-80
Tolerance: +/-3% CW and +/-6% CCW

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

Performed By: Edward Martinez, [signature] 1239911 11-13-13
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): 166.6 lb

Comments: N/A

8.1[1] Performed By: Edward Martinez, [signature] 1239911 11-13-13
Waste Handling Technician (print) Signature Z # Date

8.1[7] Reviewed By: Clayton Mullins, [signature] 1240021 11/14/13
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 1
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11/12/13 HS

WCRRF DRUM PREPARATION DATA SHEET

5.[34][E] Drum ID No.: 686647

5.[3] Drum information:
Purchase Order No.: 501578
Lot No.: 0240119
Manufacture Date: 2013

5.[17] Drum Liner Bag/Filter Assembly:
Manufacturer: BOP
Model No.: 6CNC 15-2 SMC
Serial No.: L-11501
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: [illegible] [illegible] [illegible] 11-12-13
Operator (print) Signature Z # Date

5.[23] Filtered vent information:
Manufacturer:
Model No.: 019DS
Serial No.: 2M-321
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.: 68647

Comments: N/A

5.[35] Performed By: Frederico Arellano / [signature] 1228826 / 11-12-13
Operator (print) Signature Z # Date

7.1[4] Reviewed By: Clayton Mullins / [signature] 1240092 / 11/18 11/14/13
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 2
Page 1 of 2

WCRRF DRUM CLOSURE DATA SHEET

6.[3] Drum ID No.: 68647

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

M&TE No.: 036245
Cal. Expiration Date: 08/05/2014
Range: 16-80 ft-lb
Tolerance (+/-): +/-3% CW and +/-6% CCW

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

Performed By: Edward Martinez / [signature] / 723991 / 11/13/13
Operator (print) Signature Z # Date

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

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

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

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

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

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

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

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

ATTACHMENT 2
Page 2 of 2

6.[3] Drum ID No.: 68647

6.[26] Scale File ID number: C19065

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

6.[28] Drum gross weight: 426.8 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: Edward Martinez | Signature | 1239911 | 11-13-13
Operator (print) Signature Z # Date

7.1[4] Reviewed By: Clayton Mullins | CA | 1240092 | 11/14/13
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 1
Page 1 of 2

Master Copy

WCRRF DRUM PREPARATION DATA SHEET 11/12/13 HJ

5.[34][E] Drum ID No.: 68649

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.: 6CPUC 1-5-2 5PUC
Serial No.: L-11502
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 Cowley (Operator (print)) [signature] (Signature) 1285354 (Z #) 11/12/13 (Date)

5.[23] Filtered vent information:
Manufacturer: NUCFil
Model No.: 01905
Serial No.: LM-273
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: 09065

ATTACHMENT 1
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5.[31] Scale is within the calibration frequency. ☑ SAT ☐ UNSAT

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

5.[34][E] Drum ID No.: 68649

Comments: N/C

5.[35] Performed By: Brian Cordova | [signature] | 1287544 | 11/12/13
Operator (print) Signature Z # Date

7.1[4] Reviewed By: Clayton Mullins | [signature] | 1240092 | 11/14/13
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 2
Page 1 of 2

WCRRF DRUM CLOSURE DATA SHEET

6.[3] Drum ID No.: 68649

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

M&TE No.: 036245
Cal. Expiration Date: 08/05/2014
Range: 16-80 ft-lb
Tolerance (+/-): +/-3% CW and +/-6% CCW

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

Performed By: Edward Martinez [signature] 1239411 11-13-13
Operator (print) Signature Z # Date

6.[12] Drum closure ring torque value: 66 ft-lb

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

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

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

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

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

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

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

ATTACHMENT 2
Page 2 of 2

6.[3] Drum ID No.: 68649

6.[26] Scale File ID number: 019065

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

6.[28] Drum gross weight: 207.8 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: Edward Martinez (Operator (print)), [signature] (Signature), 1239941 (Z #), 11-13-13 (Date)

7.1[4] Reviewed By: Clayton Mullins (Supervisor or designee (print)), [signature] (Signature), 240092 (Z #), 11/14/13 (Date)

Working Copy
11-13-13

ATTACHMENT 3
Page 1 of 1

WCRRF PARENT 55-GAL DRUM PREPARATION DATA SHEET

6.3[21] Prepared Parent 55-Gal Drum Number: S844689

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): 390.2

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: Edward MacAlvin / [signature] / 1239911 / 11-13-13
Waste Handling Technician (print) / Signature / Z # / Date

8.1[7] Reviewed By: Clayton Mullins / [signature] / 1240092 / 11/14/13
Supervisor or designee (print) / Signature / Z # / Date

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

8.1[8][D] Approved by: Randy Axtell / [signature] / 1109185 / 11/14/13 / 0445
SOS/SOM or designee (print) / Signature / Z # / Date / Time

Inspected No Evidence of Leaking SPF

WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Production Control

Container ID: S844689 Container Type: ~~55~~-GAL 85 11-4-12 Gross Weight (lbs): 416

Inner Seal #: 015315 Filter Prefix: LAVC Filter Serial #: 04667

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

TWSR Comments: LEACHED SOLIDS MST 12 RM 434

Total PE-Ci Activity: 1.23E+01 Equivalent Combustible PE-Ci: 4.60E+00 AM-241 PE-Ci: 1.07E+00

Total Fissile Gram Equivalents: 130.1 Total Surface Dose Rate (mrem/hr): 3

EPA Code(s): D007; D008; D009

NCR RTR/NDA Comment: None

RTR Pre-Screen Date: 5/5/2007 Comment: Liquids, Impenetrable Obj Liquid Location: 24

Certified RTR Comment: None

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

Security Determination: 1/18/13 ☑ Green ☐ Yellow

Remediation Determination: ☐ VE ☑ PID ☐ Split ☑ Repack

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

TRUCON Code: Production Control Comments: Ensure EPA Codes D007, D008, and D009 are on the label. A minimum of 1.2 volumes of kitty litter/zeolite must be mixed with 1.0 volume of nitrate salts.

Performed By: Susan Ramsey (Production Control (Print)) Signature: Susan Ramsey 100681 (Z Number) 12/20/12 (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: Likely nitrate salts Net Wt: 356#. Generator TWSR shows leached solids from room 434, indicating waste likely consists of nitrate salts. No individual items or weights identified. No RTR BDR. Nitrate salts are typically packaged in plastic bags; unaccounted liquids and/or debris may be present. RTR PS shows prohibited liquids + impenetrable item(s). Presence of chemicals unknown (no generator info). Applicable waste codes are for chromium, lead, + mercury. Nitrate salts require repack w/ admixture

Performed By: Valerie Rhodes (WDP Engineering (Print)) Signature: Valerie Rhodes Z Number: [illegible] Date: 1/23/13

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 when processing

Processing Determination: ☑ Accept ☐ Reject

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

Performed By: Darrel L. Blain (TRU Remediation Operations (Print)) Signature: Darrel L. Blain Z Number: 218029 Date: 10/29/13

HS Review Jeremy Smallwood CGI, may contain Pb, Hg + Cr

1-29-13

Jose Jerez 221452 10-29-13

ATTACHMENT 1
Page 1 of 1

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

5.[1] Sample Date: 4/4/13

Container No. (5.[1])	S844689					
Container type sampled (e.g., 55-gal, 85-gal, 110-gal, or SWB) (5.[1])	55-Gal					
Filtered Vent Type (5.[1])	072					
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])	165.19 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)) 2[illegible]75 (Z #)

Reviewed By: Nathan Yates (CCP (Print)) 23-8[illegible] (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, [signature], 100084 (Z #) 5/20/13 (Date)
Waste Handling Operator (print) Signature

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\130411c\
Data File : S844689.D
Acq On : 11 Apr 2013 2:23 pm (#1); 11 Apr 2013 2:22 pm (#2)
Operator : SA
Sample :
InstName : Unit 8
Misc : 55 GALLON LFL THROUGH UNOBSTRUCTED 072 (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 11 15:53:17 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	1981227	206.00 ppm	0.00
15) Chlorobenzene-d5	5.940	117	1798648	179.50 ppm	0.00
Target Compounds					Qvalue
1) Hydrogen	8.978	GC1	40816m	165.19 ppm	

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

Vocgas.m Thu Apr 11 15:53:23 2013

N DAUGHTER
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1-13-13
1803 Assuming WCRR operations center. - JColeman
1815 Pre-job being conducted by SOS.
1823 Late entry at 1810, denesting of S844689 complete and bagge on. YC
1841 Pre-job concluded.
1906 Operators entering 50-69 to begin operations on S844689.
2119 Bagging off 1 daughter, bagging on another daughter.
2130 Bagoff 1 on complete.
2243 Initiating a drum movement from transportainer to 50-69.
2252 Drum movement into 50-69 complete.
2305 Initiating a drum movement from 50-69 to a transportainer.
2315 Drum movement out of 50-69 complete.
2336 Bagging off 1 daughter.
1-14-13 0000 Bagoff complete.
0010 Operators out for lunch.
0030 Beginning outside rounds.
0057 Outside rounds complete.
0137 Operators entering 50-69 after lunch.
0218 Denesting drum #S832144 and bagging it on.
0252 Denesting and bag on complete.
0400 Beginning inside rounds.
0415 Minor issue - The SOS reports that the light bulb on top of the WCG has blown out causing poor visibility at stations 3 and 8. The path forward - FSR and notifying electrician
0420 An FSR has been submitted for the light bulb on top of the WCG. FSR# 114298.
0422 Item #63 is OOS. Okay to proceed per CSE documentation.
0424 Inside rounds complete.
0436 Bagging off 1 Daughter and 1 POC., bagging on another daughter.
0439 Supervisor has signed off on both rounds.
0510 Bagoff complete.
0522 Initiating a drum movement from 50-69 to a transportainer.
0536 Drum movement out of 50-69 complete.
0600 Air quality has arrived to perform the weekly stack monitoring.
3 ~~0607~~ 0604 Air quality has completed the weekly stack monitoring.
3 0607 Being relieved by OCO, Howard Smith - JColeman
No further entries this page.

11-13-13 DAYSHIFT

0610 Received the shift turnover checklist and assumed the WCRR SOM position John Guardagnoli

0638 Completed attending the pre-job brief conducted by the SOS (Clarissa) The safety topic was to stay focused and think thru the steps. There is one transfer scheduled out. Operators mentioned that the roto-grip is seen to generate a static spark. The SOS reminded operators of the two shift orders in effect. Discussion focused on lead windows and where the 1/4 in steel was placed. Note: Station 2 was taped with lead ~3 inches top of window - No shine identified by the RCTs. The 1/4" steel plate was placed on station 5 outside. The SOS will evaluate using 1/4" steel on station 6. ~~15 ft~~ 1 inch 3 During bag offs the steel will be required to be removed so that operators can see what items may be loaded (PCCs). RCTs are required to be present when shielding is removed and replaced. Notification made to OM on static electricity.

0710 Completed daily phone call updating Plan of Day status for WCRRF

0800 P&T arrives to inspect TRU drums in the transportainer.

0808 Operators initiate Bag off of 1 daughter, 1 PCC, and Bag on of Parent 585 3326

0817 RCTs inform operators center of red Beacon light in Rm 104 not working smell of faint smoke noted, RCT kept switch off, and RCTs posted doors with battery operated units on doors.

0830 Further evaluation identifies the strobe/mirror globe came off spindle in Rm 104. An FSR was submitted for repair.

0851 Bag off and Bag on was completed, however RCTs note there were elevated CAMs, RCTs will allow cam to cycle, the CAM was A-3, noted at 11 DAC hour

0920 RP-1 reports 1 high dexterity glove was thrown away due to 500dpm; also the cutter was thrown away, additional surveys are in progress.

0922 RCT request a pause of work due to the use of cutters. Notification is made to the OM. The SOM requested personnel to exit 50/69 and regroup in the break trailer.

0940 RP-1 reports all surveys (post) were NDA, and CAM was normal. The cutters were noted between 10K and 20K - which were tossed, new cutters will be provided.

1030 Completed Safety pause to discuss contamination control and proper techniques of bag offs/ bag cuts and the positioning of the cutting tool and after the cut, what to do with the cutter, wiping the blade and placement of cutter and waste. The message was, expect the unexpected, be slow, meticulous and ensure proper steps and techniques when making cuts to control contamination. Operators are to work and

(Continued on Next Page)

11-13-13 DAYSHIFT continued

listen to RCTs and if questions arise ask prior to proceeding. It was noted, that the operator cutting the pig tail of the daughter drum, performed a double cut. He thought the 1st cut was all the way through, but it was not. Also, operators were holding the pig tail at a good/normal distance to initiate the second cut.

1030 Operators and SOS performed cold/mock up pig tail cuts in the break trailer with RCTs present. Upon completion of practice, all personnel were on the same page/thought and all were personnel, including RCTs were satisfied to continue operations. During mockup, proper PPE was used

1108 Operators initiate entrance into 50/69 to continue operating.

1226 Participated in the noon phone call with PM, OM, SOS and others

1235 Outside operators completed a movement of 11 drums from 50/69 to the transportainers.

1315 Discussed shift orders with SOS and ES/PM to incorporate mechanical means and two person rule for removal of drums from the red lift table. The procedure writer was contacted and will initiate changes in current draft for review.

1505 Inside Operations report bagging off 1 daughter, bagging on another and continue to process.

1536 Bag on and bagoff noted complete

1600 Obtained an update from the SOS, that he had inside operators leave the ¼ inch stainless steel plate on station 5 outside and added another ¼ inch stainless steel plate to Station 2 – per RCTs, station 2 was shielded with lead glass and tape (lead) – additional SS plate was added for extra precaution.

1629 Operations Center Operator reports two operators exiting 50/69 due to excessive sweating. They will change modesty's rehydrate and re-enter.

1710 Inside Operations initiate bagoff of 1 daughter, bag on another daughter, denest, prep, then bag on Parent S844689.

1807 Operations completed the denest and bag on's –

1811 Relieved by R. Axtell [signature]

No further entries this page

11/13/13 Night Shift.

1811 Reviewed shift turnover checklist, approved and posted the night shift operators watchbill. Assumed WCDR SOM position. [signature]

1845 Pre job brief conducted by SOS is concluded. IH safety topic was today's start safe message of hand injuries – primary discussion of glove selection/use. Talked about lessons learned w/ today's bag out during day shift. Stressed operators to slow down and if a mistake happens to stop and evaluate. Discussed the problems involving control is having w/ WCAT's and to ensure prepped empties are completed in WCAT's prior to moving into 50-69. Discussed issue w/ Beacon Light for HSEA posting. Briefed the active shift orders.

2130 Completed bag off of 1 daughter – continuing to process

2252 Operators moved in 2 drums from transportainer to 50-69 for processing.

11/14/13 0000 Completed all bag offs for parent # 844689 (2 daughters total). Port cover placed on WCG. Operators will denest and bag on after lunch.

0010 Operators breaking for lunch.

0137 Resuming operations.

0252 Completed denesting S832144 and bagged on WCG.

0415 SOS reported that light on the WCG @ stations 3 & 8 has burned out resulting in poor visibility. Directed to have FSR submitted and continue processing that waste which is ready to be bagged off and then place in safe configuration.

0420 FSR is submitted for WCG light – # 114298.

0450 Reviewed both inside and outside rounds.

0510 Completed bagoff of 1 daughter and 1 POC.

0536 Completed move out of 3 drums from 50-69 to transportainer

11/13 0604 Relieved by J. Guadagnoli as SOM. [signature]

No further entries this page
KAG

PROJECT NAME WCRRF SOS Log Book

11/13/13

1812 Assuming SOS position. CA

1821 Starting Pre-Job with turnover from day shift. Discussed hand injury prevention and ensuring you have the proper PPE.

1846 Pre-Job complete.

2119 Bagging off 1st daughter, bagging on a 2nd.

2130 ~~Bagging~~ cm 11-14-13 Bag off/on complete.

2243 Starting movement into 50-69.

2252 Movement in complete.

2305 Starting movement out of 50-69.

2315 Movement out complete.

2336 Bagging off 2nd daughter to complete processing of parent drum, will denest after lunch.

0000 Bag off complete.

0218 Starting to denest then bag on 5832144.

0252 Denesting ~~and~~ cm 11-14-13 bag on complete.

0415 Miner issue lights above station 5 and 6 has gone out. Operators will bag off material in WCG, place lid back on parent drum, and prepare for maintenance.

0420 FSR#114298 has been submitted.

0436 Bagging off first daughter and 1 maybe 2 POC's, bagging ~~off~~ cm 11-14-13 on 2nd daughter.

0439 Signed off on the rounds.

0510 Bag off/on complete, was just 1 POC.

RKCL 0522 Starting movement out of 50-69.

0536 Movement out complete.

11/14/13 0606 Turning over SOS position to Clarissa Velarde. CA

SIGNATURE

REGISTERED ENGINEER

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0130
Examination Date:	11/19/2013
Waste Container ID:	68647
Video/Audio Recorded Media Number:	LA-RTR2-13-0130 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.: 190.0 kg Tare Wt.: 33.4 kg Net Wt.: 156.6 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:	100 %

CCP Radiography Data Sheet

Waste Container ID: 68647

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):	144.6
Soils (S):	
Total WMP Weight:	156.6

CCP Radiography Data Sheet

Waste Container ID: 68647

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]	11/19/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	68647	Count Sequence Number:	23937
Operator:	D3PW2DK1\operator		
Assay Start:	12/5/2013 11:55:17 AM		
Description 1:	1LANDA1873		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 157.0 kg	Net:	157.0 kg
Container:	Volume: 208.0 l	Full:	100.0 %
Density:	0.760 kg /l		

System Configuration

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

Errors quoted at 1.000 sigma

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number:	23937	Batch Number:	1LANDA1873
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:	68647	Analysis Date:	12/5/2013

Net Weight	157000.0 g		
Pu mass	1.30E+002	+- 2.76E+001	g
TRU Alpha Activity	1.89E+001	+- 5.29E+000	Ci
TRU Activity Concentration	1.20E+005	+- 3.37E+004	nCi/g
Pu-239 Equivalent Activity	1.92E+001	+- 5.29E+000	Ci
Pu-239 FGE	1.22E+002	+- 2.75E+001	g
Decay heat	6.08E-001	+- 1.75E-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	5.79E-007
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	3.20E-006
NP237	2.05E-001	1.44E-004	2.80E-005	5.53E-006
PU238	1.66E-002	2.85E-001	7.59E-002	3.72E-003
U238	<LLD	<LLD	0.00E+000	2.72E-005
PU239	1.21E+002	7.53E+000	1.70E+000	9.84E-002
PU240	8.50E+000	1.93E+000	5.14E-001	2.52E-002
AM241	2.66E+000	9.12E+000	4.98E+000	1.14E-001
PU241	1.76E-001	1.81E+001	4.81E+000	2.37E-001
PU242	4.04E-002	1.60E-004	4.26E-005	0.00E+000
AM243	2.32E-003	4.64E-004	9.05E-005	1.54E-005

Errors quoted at 1.000 sigma

Operator: _____ Date: 12/10/13

ITR: _____ Date: 12·10·13

Automated Independent Technical Review

Count Sequence Number: 23937 Batch Number: 1LANDA1873
Counter ID: MCS HENC #1
Container ID: 68647
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 12/5/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis	
No Add-a-Source warnings.	Ok
Section 2 - Passive Neutron Analysis	
Analysis Status: No errors.	Ok
NCC Pu mass was above calibration range. FGE is greater than the upper limit of 200.00 The Standard NCC Pu effective mass exceeds the Upper Calibration Limit. No roots found within the limits while determining the Standard NCC Pu Mass, Chose largest positive root. Ones Rate Analysis complete with warnings. - Error calculating the Ones Rate Pu-240 Effective MDA.	Neutron results rejected. Gamma results applied. Not data affecting.
Section 3 - Data Combiner Analysis	
Override enabled; Gamma data specified as input. Results taken from Quantitative Gamma data. Results comparison test passed.	Results taken from quantitative gamma data.
Section 4 - MGA Analysis Results are marked as invalid.	MGA analysis failed. AK isotopics applied. The AK information utilized was provided by Steve Schafer, AKE, and consists of data from CCP-AK-LANL-006, AK Source Document M237. MT-52,53.

Comments	Disposition
Section 5 - Gamma Analysis Analysis Status: No errors.	Ok
Miscellaneous	No additional nuclides contributing to 95% of the radiological hazard identified.

Expert Review by: Sheri Chamberlin Date: 12-9-13

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **68647**

BDR Number: **LA13FG2125**

Sampling Date: **12/9/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	90.37	U
74-82-8	Methane	142.14	U
67-56-1	Methanol	35.23	U
60-29-7	Ethyl Ether	0.96	U
75-35-4	1,1-Dichloroethylene	6.38	U
67-64-1	Acetone	18.08	U
75-34-3	1,1-Dichloroethane	4.08	U
156-59-2	cis-1,2-Dichloroethene	0.76	U
78-93-3	Methyl ethyl ketone	11.73	U
110-82-7	Cyclohexane	5.10	U
71-43-2	Benzene	1.77	U
107-06-2	1,2-Dichloroethane	3.66	U
71-36-3	1-Butanol	1.84	U
108-10-1	Methyl isobutyl ketone	9.82	U
108-88-3	Toluene	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\131209c\
Data File : 68647.D
Acq On : 9 Dec 2013 1:04 pm (#1); 09-Dec-13, 13:03:24 (#2)
Operator : EL
Sample :
Misc : 55 Gallon Drum Through Filter (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Dec 09 13:12:11 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	3.588	96	3806806	205.75	ppmv	0.07
15) Chlorobenzene-d5	5.887	117	3012398	177.50	ppmv	0.03

Target Compounds	Qvalue

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

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0130
Examination Date:	11/19/2013
Waste Container ID:	68649
Video/Audio Recorded Media Number:	LA-RTR2-13-0130 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.: 94.5 kg Tare Wt.: 33.4 kg Net Wt.: 61.1 kg
Rigid Liner and Liner Vent Description:	Liner: [X] No [ ] Yes Lid: [X] No [ ] Yes Type: [ ] 30-mil [ ] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [ ] Yes [X] N/A Punctured: [X] No [ ] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [ ] No [X] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 2 layers
Volume Utilization Percentage:	40 %

CCP Radiography Data Sheet

Waste Container ID: 68649

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):	3.0
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	5.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	53.1
Soils (S):	
Total WMP Weight:	61.1

CCP Radiography Data Sheet

Waste Container ID: 68649

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		11/19/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	68649	Count Sequence Number:	23934
Operator:	D3PW2DK1\operator		
Assay Start:	12/5/2013 9:33:28 AM		
Description 1:	1LANDA1873		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 61.1 kg	Net:	61.1 kg
Container:	Volume: 208.0 l	Full:	40.0 %
Density:	0.730 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:	23934	Batch Number:	1LANDA1873
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:	68649	Analysis Date:	12/5/2013

Net Weight	61100.0 g		
Pu mass	2.00E+000	+-	3.58E-001 g
TRU Alpha Activity	2.16E-001	+-	3.03E-002 Ci
TRU Activity Concentration	3.54E+003	+-	4.96E+002 nCi/g
Pu-239 Equivalent Activity	2.21E-001	+-	3.03E-002 Ci
Pu-239 FGE	2.58E+000	+-	3.91E-001 g
Decay heat	6.89E-003	+-	9.70E-004 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
SR90	2.08E-009	2.87E-007	1.03E-007	0.00E+000
CS137	3.30E-009	2.87E-007	1.03E-007	1.79E-007
U233	<LLD	<LLD	0.00E+000	1.51E-003
U234	1.53E-002	9.53E-005	2.17E-005	0.00E+000
U235	1.09E+000	2.36E-006	5.39E-007	8.13E-007
NP237	1.60E-002	1.13E-005	2.16E-006	8.07E-007
PU238	2.56E-004	4.37E-003	1.04E-003	5.26E-004
U238	<LLD	<LLD	0.00E+000	6.56E-006
PU239	1.87E+000	1.16E-001	2.21E-002	1.39E-002
PU240	1.31E-001	2.96E-002	7.04E-003	3.56E-003
AM241	1.94E-002	6.65E-002	1.94E-002	1.88E-002
PU241	2.74E-003	2.83E-001	6.72E-002	3.40E-002
PU242	6.21E-004	2.45E-006	5.83E-007	0.00E+000
AM243	6.05E-005	1.21E-005	2.39E-006	2.10E-006

Errors quoted at 1.000 sigma

Operator: _____ Date: 12/10/13

ITR: _____ Date: 12-10-13

Automated Independent Technical Review

Count Sequence Number: 23934 Batch Number: 1LANDA1873
Counter ID: MCS HENC #1
Container ID: 68649
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 12/5/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis No Add-a-Source warnings.	Ok
Section 2 - Passive Neutron Analysis Analysis Status: No errors. No Warnings Reported.	Ok
Section 3 - Data Combiner Analysis Override enabled; 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-52,53.
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: 12-9-13

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **68649**

BDR Number: **LA13FG2125**

Sampling Date: **12/9/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	90.37	U
74-82-8	Methane	142.14	U
67-56-1	Methanol	35.23	U
60-29-7	Ethyl Ether	0.96	U
75-35-4	1,1-Dichloroethylene	6.38	U
67-64-1	Acetone	18.08	U
75-34-3	1,1-Dichloroethane	4.08	U
156-59-2	cis-1,2-Dichloroethene	0.76	U
78-93-3	Methyl ethyl ketone	11.73	U
110-82-7	Cyclohexane	5.10	U
71-43-2	Benzene	1.77	U
107-06-2	1,2-Dichloroethane	3.66	U
71-36-3	1-Butanol	1.84	U
108-10-1	Methyl isobutyl ketone	9.82	U
108-88-3	Toluene	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\131209c\
Data File : 68649.D
Acq On : 9 Dec 2013 12:41 pm (#1); 09-Dec-13, 12:40:43 (#2)
Operator : EL
Sample :
Misc : 55 Gallon Drum Through Filter (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Dec 09 12:49:25 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	3.548	96	3795678	205.75	ppmv	0.03
15) Chlorobenzene-d5	5.855	117	2932392	177.50	ppmv	0.00

Target Compounds	Qvalue

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

S845031

S845031

Container K 754158

File Options Reports Help

S845031

754158	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

S845031

- S845031
  - LA00000068342 – LANL
    - LASB50019
  - LA00000068313 – WCS
    - LASB50103
  - LA00000068311 – LANL
    - LASB50086
  - LA00000068314 – LANL
    - LASB50012
  - LA00000068352 – EMPTY

Task History

Transfer Details

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

ATTACHMENT 1
Page 1 of 4

9/5/13 HS CJ

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: 5845031

6.2[4] Date Processed: 9-05-13

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.: 019565
Cal. Due Date: 10-14-14

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

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

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

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

Performed By: Brian Gallegos / Bri Gallegos / 261129 / 9-05-13
Waste Handling Tech (print) Signature Z # Date

ATTACHMENT 1
Page 2 of 4

4.1[6][B] Parent Waste Container No.: 5845031

5.[18] Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable: 388.2 lb

6.2[5][A] Parent Drum Lead Blanket Weight (lb): 120.0 lb

6.2[5][B]/ 6.2[6] Total Parent Drum Weight (lb) 508.2 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.: 5845031

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	68314	68311	68313	
10.1[4]	Daughter Drum Filter No.	KL-528	DL-540	KL-545	N/A
10.1[4]	Daughter Drum Bag Filter No.	L-6715	L-06629	L-6874	
10.1[4]	Daughter Drum Purchase Order No.	501321	501321	501321	
10.1[13][C]	WCG Fire Watch Stationed		☐ YES	☐ NO	☑ N/A
10.1[14][C][d]3/11.1[3]	WCG Fire Watch Secured		☐ YES	☐ NO	☑ N/A
10.2[4]	POC bag-on bag: Manufacturer	BOP			
	Model No.	Lepell S-2804			
	Serial No.	L-06232			
	Date of Manufacture	3-13			
10.2[5]	POC ID No	02441/68342			
10.2[7][B]/10.2[6]	POC Item Description	NITRATE SALTS			
10.2[13]	POC Assembly closed per Manufacturer's instructions. (Initial and Z#)	GE 237720		N/A	
10.2[14]	POC Assembly Gross Weight (lb)	333.8			
10.2[15]	POC Rad. Survey Results (mrem/hr)	1800.5			
10.3[3][A]	Approx. Containerized Liquid Vol./Units	1 GALLON			
10.3[5][A]	Free Liquid Volume/Units	4 GALLONS			
10.3[7][A]	Opaque/Non-penetrable Item Description:	LEAD SHIELDING			
10.3[9][A]	PCB-contaminated Waste Description	N/A			
10.3[9][B]	PCB Item ID No.				
10.3[10]	Remaining Waste Description	SEE COMMENTS	SEE COMMENTS	SEE COMMENTS	
10.3[13]/10.4[10]/ 10.5[4]/10.6[10]	Daughter Drum % Full (%)	50%	90%	80%	N/A
10.5[3]/10.6[2]	Description Waste Added During Processing	PLASTIC KITTY LITTER	PLASTIC KITTY LITTER	PLASTIC KITTY LITTER	

ATTACHMENT 1
Page 4 of 4

4.1[6][B] Parent Waste Container No.: S845031

Comments: NITRATE SALTS, LEAD SHIELDING, PLASTIC, LIQUID

11.1[1] Performed By: GERALD ESPINOZA [signature] 1237170 9-6-13
Waste Handling Tech (print) Signature Z # Date

11.1[8] Reviewed By: Clayton Mullins, CA 1240082 9/6/13 0558
SOS or designee (print) Signature Z # Date/Time

ATTACHMENT 2
Page 1 of 1

ate: 8/27/13 HS

WCRRF OVERPACK DRUM ASSEMBLY PREPARATION DATA SHEET

5.[3] Overpack drum information:

Purchase Order No.: 501323
Lot No.: 0238025
Manufacture Date: 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-1888
Manufacture Date: 10/11

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

5. [11] Performed By: MICHAEL MONTOYA / Joe Romero — Waste Handling Technician (print) — Signature — 191352 — Z # — 8/27/13 — Date
1109702 — Z # — 8/27/13 — Date

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

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

Comments: N/C

8.1[1] Performed By: MICHAEL MONTOYA / Joe Romero — Waste Handling Technician (print) — Signature — 191352 — Z # — 8/27/13 — Date
109702 — Z # — 8/27/13 — Date

8.1[6] Reviewed By: Clayton Mullins — Supervisor or designee (print) — Signature — 240092 — Z # — 9/6/13 — Date

UET Working Copy

95-13a

ATTACHMENT 5
Page 1 of 1

WCRRF OVERPACK DRUM CLOSURE DATA SHEET

7.[17] Overpack Drum Unique Identifier No.: L08352

7.[23] Overpack drum closure ring torque wrench information:
M&TE No.: 038373
Cal. Expiration Date: 9-11-13
Range in ft-lb: 10-80
Tolerance: ±3.00 ±6% ccw

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

Performed By: Gerardo Espinoza [signature] 1237720 9-5-13
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: GE 9-5-13 10-14-14

7.[34][D] 85-gal overpack drum gross weight (lb): 1606.0 lb

Comments: N/C

8.1[1] Performed By: Gerardo Espinoza [signature] 1237720 9-6-13
Waste Handling Technician (print) Signature Z # Date

8.1[7] Reviewed By: Clayton Mullins [signature] 1241071 9/6/13
Supervisor or designee (print) Signature Z # Date

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

Drum ID#: 68311

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 #: 501521
Lot #: 1023 4720
Date of Manufacture: 2013

2. Drum Liner Bag/Filter Assembly:

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

RECORD bag filter information:

Manufacturer: BOP
Model #: 6CPVC 1.5 25 PVC
Serial #: 6629
Date of Manufacture: 01/13

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

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

4. Install Lid/Drum Filter

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

RECORD drum filter information:

Manufacturer: NUCFIL
Model #: 01 5103
Serial #: DC-5710
Date of Manufacture: 1/11

RECORD torque wrench information.

Filter torque wrench:
M&TE ID #: 100216
Cal Expiration Date: 12-18-13
Range (ft-lbs or in-lbs): 40-200
Tolerance: +/- 5% or +/- 6% [illegible]

Jam Nut / Bung torque wrench:
M&TE ID #: 038369
Cal Expiration Date: 12-18-13
Range (ft-lbs or in-lbs): 10-66
Tolerance: +/- 5% or +/- 6% [illegible]

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

- [x] Yes
- [ ] No

Print Name: IAN MARQUEZ Signature: [illegible] Z#: 276208

5. Weigh Drum Assembly

RECORD weight information

Tare witght (lbs) 760
File ID #: 019065

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

6. Label Drum Assembly

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

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

Operator Print: IAN MARQUEZ Operator Sign: [illegible] Z#: 276208 Date: 8-15-13

Verifier Print: GERALD ESPINOZA Verifier Sign: [illegible] Z#: 237720 Date: 9-5-13

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

DRUM ID# 68311

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 # : 088873

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) 3300.0

Scale ID#: 0190065

✓ 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 9-6-13

Verifier Print/Sign: Clayton Mullins Date: 9/6/13

8/15/13

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

Drum ID#: 68313

1. Drum/Lid Assembly

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

RECORD drum information:
Purchase Request #: 501321
Lot #: 02377120
Date of Manufacture: 2013

2. Drum Liner Bag/Filter Assembly:

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

RECORD bag filter information: BG 8-15-13
Manufacturer: BOP
Model #: 6CPVC1.5-2SPVC
Serial #: L-6874
Date of Manufacture: 01/13

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

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

4. Install Lid/Drum Filter

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

RECORD drum filter information.
Manufacturer: NUCFIL
Model #: 019DS
Serial #: KL-945
Date of Manufacture: 11/11

RECORD torque wrench information:

Filter torque wrench:
M&TE ID #: 100214
Cal Expiration Date: 12-18-13
Range (ft-lbs or in-lbs): 40-200
Tolerance: ±4% cw ±6% ccw

Jam Nut / Bung torque wrench:
M&TE ID #: 038369
Cal Expiration Date: 12-18-13
Range (ft-lbs or in-lbs): 10-80
Tolerance: ± 3% cw ±6% ccw

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

5. Weigh Drum Assembly

RECORD weight information
Tare witght (lbs) 76.2
File ID #: 019065

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

6. Label Drum Assembly

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

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

Operator Print: BRIAN GALLEGOS Operator Sign: [signature] Z#: 267129 Date: 8-15-13
Verifier Print: GERALD ESPARZA Verifier Sign: [signature] Z#: 237720 Date: 9.6.13

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

DRUM ID#: 68313

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.) 308.0

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: Gerardo Espinoza Date 9/6/13

Verifier Print/Sign: Clay A. Mullins CA Date: 9/6/13

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

Drum ID#: 68314

1. Drum/Lid Assembly

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

RECORD drum information:

Purchase Request #: 501321
Lot #: 0237720
Date of Manufacture: 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 #: 6CPVC1.5-2.5PVC
Serial #: L-6715
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 #: 019105
Serial #: KL-528
Date of Manufacture: 11/11

RECORD torque wrench information:

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

Jam Nut / Bung torque wrench:
M&TE ID #: 038369
Cal Expiration Date: 12-18-13
Range (ft-lbs or in-lbs): 10-80
Tolerance: ±3%CW ±6%CCW

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

5. Weigh Drum Assembly

RECORD weight information

Tare wtight (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 MONTOYA Operator Sign: [signature] Z#: 191352 Date: 8/27/13
Verifier Print: ADAM Segovia Verifier Sign: [signature] Z#: 276702 Date: 9-5-13

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

DRUM ID#: 68314

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 #: 088373

Cal expiration date: 9-11-13

Range/ Value (ft-lbs): 40-80

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): 206.2

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: Gerald Espinoza Date 9.10.13

Verifier Print/Sign: Clyde Mullins Date 9/10/13

WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

No No Nitrate SP70

Production Control

Container ID: S845031 Container Type: 55-GAL Gross Weight (lbs): 421

Inner Seal #: 015344 Filter Prefix: LAVC Filter Serial #: 02181

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

TWSR Comments: LEACHED SOLIDS MST 12 RM 434

Total PE-Ci Activity: 1.52E+01 Equivalent Combustible PE-Ci: 5.69E+00 AM-241 PE-Ci: 1.37E+00

Total Fissile Gram Equivalents: 158.4 Total Surface Dose Rate (mrem/hr): 4

EPA Code(s): D007; D008; D009

NCR RTR/NDA Comment: None

RTR Pre-Screen Date: 6/12/2007 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: Production Control Comments: Ensure EPA Codes D007, D008, and D009 are on the label. A minimum of 1.2 volumes of kitty litter/zeolite must be mixed with 1.0 volume of nitrate salts.

Performed By: Susan Ramsey (Production Control (Print)) / Signature / 100681 (Z Number) / 12/20/12 (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: likely Nitrate Salts

Net Wt: 361# Generator TWSR shows leached solids from room 434, indicating waste likely consists of nitrate salts. No individual items or weights identified. No RTR BDR. Nitrate salts are typically packaged in plastic bags; undocumented liquids &/or debris may be present. RTR PS shows Impenetrable object(s). Presence of chemicals unknown (no generator info). Applicable waste codes are for chromium, lead, & mercury. Nitrate Salts require repack w/ admixture.

Performed By: Valerie Rhodes (WDP Engineering (Print)) / Valerie Rhodes (Signature) / 112609 (Z Number) / 1/18/13 (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:

Performed By: G. Martinez (TRU Remediation Operations (Print)) / Signature / 149235 (Z Number) / 6/19/13 (Date)

Jose Jerez 221452 6/22/13

HG Review - Spilling sand and CoP, may contain Pb, Hg, Cr

1-28-13

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])	S84523					
Container type sampled (e.g., 55-gal, 85-gal, 110-gal, or SWB) (5.[1])	55-Gal					
Filtered Vent Type (5.[1])	72					
Filtered Vent Unobstructed (5.[1])	☑ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT
WIPP-Approved Filtered Vent (5.[2])	☑ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT
Total CCP VOC value (< 7,000 ppm) (5.[4])	0 ppm	ppm	ppm	ppm	ppm	ppm
Hydrogen Reading (< 64,000 ppm) (5.[5])	959.66 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 Giles 238866
CCP (Print) 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, Susan Ramsey, 100681, 5/22/13
Waste Handling Operator (print) Signature Z # Date

InstName : Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\130521c\
Data File : S845031.D
Acq On : 21 May 2013 12:27 pm (#1); 21-May-13, 12:26:44 (#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 12:35:09 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	3.486	96	5007406	201.25 ppmv	0.08
15) Chlorobenzene-d5	5.845	117	4040582	177.00 ppmv	0.06
Target Compounds					Qvalue
1) Hydrogen	1.602	GC1	6816m	959.00 ppmv	

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

vocgas.m Tue May 21 12:35:59 2013

9513 Assuming WCRL operations center Coleman
1804 Pre-job being conducted by SOS.
1818 Operators entering 50-69 to begin operations on drum #5845031.
1925 Bagging off 1 daughter, bagging on another daughter.
~~19~~ 2200 Bag off/on complete.
2218 Operators out for lunch.
0008 Operators entering 50-69 to resume operations.
0129 Beginning outside rounds.
0200 Item #19 on the rounds is unsat, okay to proceed, FSR in place.
0219 Outside rounds complete.
0228 Bagging off 1 daughter and 1 POC, bagging on another daughter.
0305 Posting #055 prepared for being aware of the cords to the computer inside 50-69.
0325 Bag off/on complete.
0332 Beginning inside rounds.
0400 Item #63 on the rounds is OOS, okay to proceed, POD in place.
0418 Inside rounds complete.
0419 Bagging off 1 daughter and bagging on drum #891513.
0448 Bag off/bag on complete.
0515 Both rounds reviewed by SOS.
0527
9613 0600 Shift turnover brief with OCO Clarissa Velarde-Coleman

No further entries this page

9-5-13 Nightshift WCRR - SOM

1813 Reviewed the shift turnover checklist with the dayshift SOM and assumed the SOM position. John Guadagnoli

1837 Completed attending the pre-job brief conducted by the SOS (Clayton). The AM - Jose was in attendance and ES/IH. The safety topic discussed by the ES/IH person. It was safety shoulder strains and glovebox operations. Operators are to take frequent breaks when performing strenuous activities and support each other in moving items. Facility update was provided, and status of current drums.

1925 Operations entered the 50/69 facility to process Parent drum 5845031

2125 SOM worked with WCATS support person to load JAVA on the computer then work a couple of reports. Currently there is one LLW container showing in WCATS DRUM L-12226673. Additional discussion will be required on the management of LLW in WCATS and the management of empty Parents and movement from WCRR to RREAG. (LLW vs TRU)

2145 Operations were having trouble with the liquid being neutralized. Approximately 45 gallons of liquid noted with a pH of 0 when starting - initiated foaming when neutralizing agent was added - then went to pH of 2. After 45 minutes went to a pH of 6 - and solidified with Kitty litter. The bag containing the salt also requires neutralization and contains ~ 2-3 gallons of liquid.

2200 Inside Operations report initiating bagging off 1 daughter drum, and bagging on another and continue to process. Outside support provides additional Kitty litter.

2218 Bag off and Bag On - Completed.

2310 Completed updating LLW inventory spreadsheet

0010 Inside Operations break for lunch

0130 Operations personnel re-enter 50/69 to continue processing.

0159 Requested scheduling of the gamma-spectrometer to assay 5 drums LLW - noted in the 50-75 trans pertainer. Scheduling for next week is sufficient.

0304 Operations initiated bagging off 1 daughter, 1 POC and bagging on 1 Daughter and continue to process.

0331 Bag off and Bag On evolution is noted completed

0448 Inside Operations bagging off 1 Daughter and bagging on Parent 5891513

0513 Late Entry for 0325 Implemented Posting 055 for: Beware of Cord Rm 102 near desk.

0515 Bag offs and Bag On's completed. Parent 5845031 generated 3 daughters and 1 POC

0620 Reviewed the shift turnover checklist with the dayshift SOM.

0625 Secured the Nightshift SOM position - John Guadagnoli

No Further Entries Entries thru pg

9/5/13 WCRR SOS Log Book

1801 Assuming SOS position.
1818 Starting Pre-Job, discussed shoulder strains and fatigue.
1850 Pre-Job complete.
1940 Operators perform glove inspection, all gloves ok.
2150 Liquid taking a while to neutralize, took over an hour to go from a pH of 0 to a pH of 6.
2200 Bagging off 1st daughter, bagging on a 2nd.
2216 Bag off/on complete.
0305 Bagging off 2nd daughter and 1 POC, bagging on a 3rd daughter.
0332 Bag off/on complete
0448 Bagging off 3rd daughter, bagging on 589151
0515 Bag off/on complete.
0527 Signed off on the rounds.
0610 Turning over SOS position to Gilbert Martinez. CA

No Further Entries on this Page

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-14-0007
Examination Date:	1/17/2014
Waste Container ID:	68311
Video/Audio Recorded Media Number:	LA-RTR2-14-0007 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.: 139.0 kg Tare Wt.: 33.4 kg Net Wt.: 105.6 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: 68311

Section 3: Container Inventory and Comments (Detailed descriptions)

IM: Metal lid

AM:

OM:

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):	0.1
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	
Other Inorganic Materials (OI)	
Cellulosics (C):	0.3
Rubber (R):	
Plastics (waste materials) (XPM):	6.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	99.2
Soils (S):	
Total WMP Weight:	105.6

CCP Radiography Data Sheet

Waste Container ID: 68311

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		1/17/2014
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	68311	Count Sequence Number:	24187
Operator:	D3PW2DK1\operator		
Assay Start:	1/23/2014 3:41:16 PM		
Description 1:	1LANDA1896		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 106.0 kg	Net:	106.0 kg
Container:	Volume: 208.0 l	Full:	75.0 %
Density:	0.680 kg /l		

System Configuration

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

Errors quoted at 1.000 sigma

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number:	24187	Batch Number:	1LANDA1896
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:	68311	Analysis Date:	1/23/2014

Net Weight	106000.0 g		
Pu mass	3.06E+001	+-	5.97E+000 g
TRU Alpha Activity	5.29E+000	+-	1.67E+000 Ci
TRU Activity Concentration	4.99E+004	+-	1.57E+004 nCi/g
Pu-239 Equivalent Activity	5.34E+000	+-	1.67E+000 Ci
Pu-239 FGE	3.21E+001	+-	5.99E+000 g
Decay heat	1.71E-001	+-	5.52E-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	6.37E-007
U233	<LLD	<LLD	0.00E+000	5.91E-003
U234	6.92E-002	4.31E-004	9.28E-005	0.00E+000
U235	4.94E+000	1.07E-005	2.30E-006	3.22E-006
NP237	8.73E-002	6.16E-005	1.12E-005	2.90E-006
PU238	6.46E-003	1.10E-001	5.24E-002	1.88E-003
U238	<LLD	<LLD	0.00E+000	3.11E-005
PU239	2.88E+001	1.78E+000	3.69E-001	3.03E-002
PU240	1.77E+000	4.03E-001	8.74E-002	6.86E-003
AM241	8.71E-001	2.99E+000	1.62E+000	6.36E-002
PU241	3.39E-002	3.49E+000	7.31E-001	5.94E-002
PU242	2.67E-002	1.05E-004	3.18E-005	0.00E+000
AM243	7.94E-004	1.59E-004	2.94E-005	1.14E-005

Errors quoted at 1.000 sigma

Operator: Ann Barton Date: 1/28/14

ITR: [illegible] Date: 1-28-14

Automated Independent Technical Review

Count Sequence Number: 24187 Batch Number: 1LANDA1896
Counter ID: MCS HENC #1
Container ID: 68311
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. 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 Expert review is recommended; the following validity tests failed: Normalized fit value (19.54) is greater than allowed (1.15). Fit value (229.8) is greater than allowed (2.50). Uncertainty in Pu240 effective (56.0%) is greater than allowed (20.0%). Pu239 weight percent is outside limits [92.5, 95.0].	MGA analysis failed. FRAM results applied. FRAM results attached.

Comments	Disposition
Section 5 - Gamma Analysis Analysis Status: No errors.	OK
Miscellaneous	No additional nuclides contributing to 95% of the radiological hazard identified.

Expert Review by: Jared F Date: 1/28/14

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **68311**

BDR Number: **LA14FG12014**

Sampling Date: **1/29/2014**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	224.39	
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 : 68311.D
Acq On : 29 Jan 2014 1:53 pm (#1); 29 Jan 2014 1:52 pm (#2)
Operator : DE
Sample : DRUM THROUGH FILTER
Misc : 55 GALLON ~~THROUGH FILTER~~ (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1 1-30-14

Quant Time: Jan 29 14:02:02 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	8776550	207.75	ppmv	0.00
15) Chlorobenzene-d5	6.639	117	6943002	178.75	ppmv	0.00
Target Compounds						Qvalue
1) Hydrogen	1.920	GC1	64008	224.39	ppmv	100

(#) = 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-RTR2-14-0007
Examination Date:	1/17/2014
Waste Container ID:	68313
Video/Audio Recorded Media Number:	LA-RTR2-14-0007 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.: 140.0 kg Tare Wt.: 33.4 kg Net Wt.: 106.6 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: 68313

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):	19.0
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	4.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	83.6
Soils (S):	
Total WMP Weight:	106.6

CCP Radiography Data Sheet

Waste Container ID: 68313

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		1/17/2014
Print Name	Signature	Date

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

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

Item ID:            68313              Count Sequence Number:  24204
Operator:           D3PW2DK1\operator
Assay Start:        1/25/2014   1:48:50 PM
Description 1:      1LANDA1898
Description 2:      N/A
Location:           LANL TA-54
Comment:            AK-6
Matrix Type:        Homo Sol. S3000
Container Type:     55 gallon drum
Weight:             Net:       107.0   kg        Net:   107.0 kg
Container:          Volume:    208.0   l        Full:    65.0 %
Density:                         0.790 kg /l


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

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

Errors quoted at  1.000 sigma
```

584503 1

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number:	24204	Batch Number:	1LANDA1898
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:	68313	Analysis Date:	1/25/2014

Net Weight	107000.0 g		
Pu mass	1.19E+002	+- 3.76E+001	g
TRU Alpha Activity	1.39E+001	+- 2.62E+000	Ci
TRU Activity Concentration	1.30E+005	+- 2.44E+004	nCi/g
Pu-239 Equivalent Activity	1.42E+001	+- 2.62E+000	Ci
Pu-239 FGE	1.12E+002	+- 3.75E+001	g
Decay heat	4.44E-001	+- 8.22E-002	W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
SR90	1.63E-008	2.25E-006	1.05E-006	0.00E+000
CS137	2.59E-008	2.25E-006	1.05E-006	7.90E-007
U233	<LLD	<LLD	0.00E+000	7.47E-003
U234	2.30E-002	1.43E-004	5.04E-005	0.00E+000
U235	1.64E+000	3.55E-006	1.25E-006	3.24E-006
NP237	9.93E-002	7.00E-005	1.40E-005	3.52E-006
PU238	1.63E-002	2.78E-001	1.02E-001	2.69E-003
U238	<LLD	<LLD	0.00E+000	2.73E-005
PU239	1.11E+002	6.87E+000	2.33E+000	6.64E-002
PU240	8.00E+000	1.81E+000	6.66E-001	1.75E-002
AM241	1.44E+000	4.93E+000	9.88E-001	1.42E-001
PU241	1.69E-001	1.74E+001	6.39E+000	1.68E-001
PU242	4.29E-002	1.69E-004	6.22E-005	0.00E+000
AM243	9.29E-004	1.86E-004	3.75E-005	1.01E-005

Errors quoted at 1.000 sigma

Operator: [signature] Date: 1.29.14

ITR: [signature] Date: 1-29-14

Automated Independent Technical Review

Count Sequence Number: 24204 Batch Number: 1LANDA1898
Counter ID: MCS HENC #1
Container ID: 68313
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 1/25/2014

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 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-52,53,54
Section 5 - Gamma Analysis Analysis Status: No errors.	Ok
Miscellaneous	No additional nuclides contributing to 95% of the radiological hazard identified.

Expert Review by: Sheri Chamberlin Date: 1-29-14

Waste Container ID: **68313**

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 : 68313.D
Acq On : 29 Jan 2014 2:08 pm (#1); 29 Jan 2014 2:07 pm (#2)
Operator : DE
Sample :
Misc : 55 GALLON ~~THROUGH FILTER~~ DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: ~~1~~ 24 1-30-14

Quant Time: Jan 29 14:18:05 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	8699645	207.75 ppmv	0.00
15) Chlorobenzene-d5	6.639	117	6876311	178.75 ppmv	0.00

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-RTR2-14-0007
Examination Date:	1/17/2014
Waste Container ID:	68314
Video/Audio Recorded Media Number:	LA-RTR2-14-0007 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.: 93.5 kg Tare Wt.: 33.4 kg Net Wt.: 60.1 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: 68314

Section 3: Container Inventory and Comments	(Detailed descriptions)
IM:	
AM:	
OM:	
OI:	
C:	Tape roll
R:	
XPM:	Plastic bag, 90 mil liner lid
OR:	
IN:	Homogeneous solids
S:	

Section 4: Packaging Material and Waste Material Parameters	
Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP): Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	
Other Inorganic Materials (OI)	
Cellulosics (C):	0.1
Rubber (R):	
Plastics (waste materials) (XPM):	6.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	54.0
Soils (S):	
Total WMP Weight:	60.1

CCP Radiography Data Sheet

Waste Container ID: 68314

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		1/17/2014
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	68314	Count Sequence Number:	24186
Operator:	D3PW2DK1\operator		
Assay Start:	1/23/2014 2:56:48 PM		
Description 1:	1LANDA1896		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 60.1 kg	Net:	60.1 kg
Container:	Volume: 208.0 l	Full:	50.0 %
Density:	0.580 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:	24186	Batch Number:	1LANDA1896
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:	68314	Analysis Date:	1/23/2014

Net Weight	60100.0 g		
Pu mass	1.00E+001	+- 1.39E+000	g
TRU Alpha Activity	1.79E+000	+- 5.29E-001	Ci
TRU Activity Concentration	2.97E+004	+- 8.80E+003	nCi/g
Pu-239 Equivalent Activity	1.81E+000	+- 5.29E-001	Ci
Pu-239 FGE	9.98E+000	+- 1.30E+000	g
Decay heat	5.79E-002	+- 1.75E-002	W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	2.78E-002	1.96E-005	3.27E-006	1.35E-006
PU238	4.23E-003	7.23E-002	1.00E-002	1.17E-004
PU239	9.27E+000	5.74E-001	7.97E-002	9.31E-004
PU240	7.42E-001	1.68E-001	2.33E-002	2.73E-004
AM241	2.83E-001	9.72E-001	5.22E-001	3.20E-002
PU241	1.22E-002	1.25E+000	1.74E-001	2.03E-003
PU242	1.61E-002	6.37E-005	8.84E-006	0.00E+000
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	1.58E-007
U233	<LLD	<LLD	0.00E+000	2.83E-003
U234	1.46E-002	9.07E-005	2.20E-005	0.00E+000
U235	1.04E+000	2.24E-006	5.45E-007	1.26E-006
U238	<LLD	<LLD	0.00E+000	1.11E-005
AM243	3.32E-004	6.65E-005	1.13E-005	3.80E-006

Errors quoted at 1.000 sigma

Operator: Jim Barton Date: 1/28/14

ITR: [illegible] Date: 1-28-14

Automated Independent Technical Review

Count Sequence Number: 24186
Batch Number: 1LANDA1896
Counter ID: MCS HENC #1
Container ID: 68314
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; Passive Neutron Pu and Gamma U data specified as input. Pu results taken from Passive Neutron data, U from Quantitative Gamma data. Results comparison test passed.	Pu results taken from Passive Neutron data, U from Quantitative Gamma data.
Section 4 - MGA Analysis Results are marked as invalid.	MGA analysis failed. 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: Jacob F. Date: 1/28/14

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **68314**

BDR Number: **LA14FG12014**

Sampling Date: **1/29/2014**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	89.68	
74-82-8	Methane	6.56	U
67-56-1	Methanol	5.37	
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	1.27	
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 : 68314.D
Acq On : 29 Jan 2014 2:21 pm (#1); 29 Jan 2014 2:20 pm (#2)
Operator : DE
Sample :
Misc : 55 GALLON ~~THROUGH FILTER~~ DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1 DE 1-30-14

Quant Time: Jan 29 14:31:12 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	4.063	96	8686898	207.75 ppmv	0.00
15) Chlorobenzene-d5	6.639	117	6909302	178.75 ppmv	0.00
Target Compounds					Qvalue
1) Hydrogen	1.917	GC1	25581	89.68 ppmv	100
4) Methanol	0.831	31	2463m	5.37 ppmv	
17) Toluene	5.580	92	35571	1.27 ppmv	93

(#) = 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-RTR2-14-0007
Examination Date:	1/17/2014
Waste Container ID:	68342
Video/Audio Recorded Media Number:	LA-RTR2-14-0007 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.: 151.5 kg Tare Wt.: 145.1 kg Net Wt.: 6.4 kg
Rigid Liner and Liner Vent Description:	Liner: [ ] No [X] Yes Lid: [ ] No [X] Yes Type: [ ] 30-mil [X] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [X] Yes [ ] N/A Punctured: [ ] No [X] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [X] No [ ] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 2 layers
Volume Utilization Percentage:	35 %

CCP Radiography Data Sheet

Waste Container ID: 68342

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; Plastic Liner Bag (Inside POC)	8.1
Other: Fiberboard (CP); 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):	5.4
Soils (S):	
Total WMP Weight:	6.4

CCP Radiography Data Sheet

Waste Container ID: 68342

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:

Michael Simmons		1/17/2014
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	68342	Count Sequence Number:	1234
Operator:	CLREMO67292\User		
Assay Start:	1/27/2014 12:53:34 PM		
Description 1:	4LANDA0041		
Description 2:	POC 151.5		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	S3000		
Container Type:	55 Gal Drum		
Weight:	Net: 6.4 kg	Net:	6.4 kg
Container:	Volume: 208.0 l	Full:	95.0 %
Density:	0.627 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:	1234	Batch Number:	4LANDA0041
Assay Instrument:	MILCC	Location:	LANL TA-54
Analysis Method:	CCP-TP-076 v 0	Software Version:	NDA 2000 V.4.0
Item ID:	68342	Analysis Date:	1/27/2014

Net Weight	6400.0 g		
Pu mass	1.59E+001	+- 4.53E+000	g
TRU Alpha Activity	2.51E+000	+- 5.22E-001	Ci
TRU Activity Concentration	3.92E+005	+- 8.15E+004	nCi/g
Pu-239 Equivalent Activity	2.54E+000	+- 5.22E-001	Ci
Pu-239 FGE	1.50E+001	+- 4.52E+000	g
Decay heat	8.09E-002	+- 1.70E-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	2.03E-007
U233	<LLD	<LLD	0.00E+000	1.91E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	4.27E-007
NP237	3.08E-002	2.17E-005	6.26E-006	4.77E-007
PU238	1.34E-003	2.29E-002	1.68E-002	1.78E-004
U238	<LLD	<LLD	0.00E+000	8.22E-006
PU239	1.49E+001	9.24E-001	2.80E-001	7.16E-003
PU240	1.02E+000	2.30E-001	7.05E-002	1.79E-003
AM241	3.87E-001	1.33E+000	4.34E-001	7.66E-003
PU241	2.01E-002	2.07E+000	6.29E-001	1.60E-002
PU242	1.02E-002	4.01E-005	1.80E-005	0.00E+000
AM243	2.50E-004	5.00E-005	1.45E-005	2.30E-006

Errors quoted at 1.000 sigma

Operator: Brit Lupton Date: 1-31-14

ITR: Jim Barton Date: 2/3/14

Automated Independent Technical Review

Count Sequence Number: 1234
Batch Number: 4LANDA0041
Counter ID: MILCC
Container ID: 68342
Waste Matrix Code: S3000
Count Type:
Sequence 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 Expert review is recommended; the following validity tests failed: Normalized fit value (34.41) is greater than allowed (1.25). Fit value (437.2) is greater than allowed (2.50). Am separation time (53.8 years) is greater than allowed (50.0). Uncertainty in Pu240 effective (87.5%) is greater than allowed (20.0%). Pu239 weight percent is outside limits [60.0, 98.0].	MGA analysis failed. FRAM results applied. FRAM results attached.
Gamma Analysis Analysis Status: No errors.	OK
Miscellaneous	No additional nuclides contributing to 95% of the radiological hazard identified.

Expert Review by: _____ Date: ~~1/14/31~~ 1/31/14 F 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: **68342**

BDR Number: **LA14FG12018**

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

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	567.95	
74-82-8	Methane	6.56	U
67-56-1	Methanol	32.93	
60-29-7	Ethyl Ether	0.12	U
75-35-4	1,1-Dichloroethylene	0.20	U
67-64-1	Acetone	5.39	
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	2.06	
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\140204c\
Data File : 68342.D
Acq On : 4 Feb 2014 1:23 pm (#1); 4 Feb 2014 1:22 pm (#2)
Operator : DE
Sample :
Misc : POC THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Feb 04 13:34:07 2014
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	4.060	96	10087699	207.75	ppmv	0.00
15) Chlorobenzene-d5	6.639	117	7546723	178.75	ppmv	0.00
Target Compounds						Qvalue
1) Hydrogen	1.917	GC1	162007	567.95	ppmv	100
4) Methanol	0.821	31	17554m	32.93	ppmv	
7) Acetone	1.357	58	14459	5.39	ppmv	91
17) Toluene	5.577	92	62891	2.06	ppmv	94

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

21

S845072

S845072

Container Profile 754001

File Options Reports Help

S845072

754001	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

Genealogy

S845072

- S845072
  - LA00000068666
  - LA00000068610
  - LA00000068673 – EMPTY

ATTACHMENT 1
Page 1 of 4

Working Copy
Date: 11/14/13 HS

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: S845072

6.2[4] Date Processed: 11-14-14

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: Frederick Abeleta / [signature] 1282261 11-14-13
Waste Handling Tech (print) Signature Z # Date

ATTACHMENT 1
Page 2 of 4

4.1[6][B] Parent Waste Container No.: S84507Z

5.[18] Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable: 388.8 lb

6.2[5][A] Parent Drum Lead Blanket Weight (lb): 22.0 lb

6.2[5][B]/ 6.2[6] Total Parent Drum Weight (lb) 410.8 lb

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

6.2[17][D] Drum lift hinge pin retaining clip replaced. N/A / / Initials Z# Date

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

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

ATTACHMENT 1
Page 3 of 4

4.1[6][B] Parent Waste Container No.: 9845072

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	608610	688666		
10.1[4]	Daughter Drum Filter No.	LM-314	LM-856	N	
10.1[4]	Daughter Drum Bag Filter No.	L-10362	L-10334		
10.1[4]	Daughter Drum Purchase Order No.	501578	501578	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			N	
10.2[13]	POC Assembly closed per Manufacturer's instructions. (Initial and Z#)			A	
10.2[14]	POC Assembly Gross Weight (lb)				
10.2[15]	POC Rad. Survey Results (mrem/hr)				
10.3[3][A]	Approx. Containerized Liquid Vol./Units	1 gallon			
10.3[5][A]	Free Liquid Volume/Units	3 gallons			
10.3[7][A]	Opaque/Non-penetrable Item Description:	Lead shielding	Lead shielding	N	
10.3[9][A]	PCB-contaminated Waste Description			A	
10.3[9][B]	PCB Item ID No.				
10.3[10]	Remaining Waste Description	See comment	See comments		
10.3[13]/10.4[10]/ 10.5[4]/10.6[10]	Daughter Drum % Full (%)	100%	80%	N	
10.5[3]/10.6[2]	Description Waste Added During Processing	Kitty litter stuff parts plastic	Kitty litter	A	

ATTACHMENT 1
Page 4 of 4

4.1[6][B] Parent Waste Container No.: 5845072

Comments: Nitrate salts, Kitty litter, plastic, stubouts and lead.

11.1[1] Performed By: Edward Martinez / [signature] / 1234444 / 11-14-13
Waste Handling Tech (print) Signature Z # Date

11.1[8] Reviewed By: Jose Jerez / [signature] / 1221452 / 11/15/13 0554
SOS or designee (print) Signature Z # Date/Time

Working Copy

ATTACHMENT 2
Page 1 of 1

11/14/13 SB

WCRRF OVERPACK DRUM ASSEMBLY PREPARATION DATA SHEET

5.[3] Overpack drum information:

Purchase Order No.: 501563
Lot No.: 0239366-1
Manufacture Date: 13

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:	N/A	N/A

Overpack filtered vent information:

Manufacturer: NUCFIL
Model No.: 019
Serial No.: EK-1146
Manufacture Date: 5/10

5.[9] Torque wrench listed above is within the acceptable ranges as displayed on the calibration certificate. ☒ N/A Yes ☒ N/A 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: 85 not prepped at TA-50

8.1[1] Performed By: Edward Martinez
Waste Handling Technician (print) Signature 123[illegible] Z # 11-14-13 Date

8.1[6] Reviewed By: Jose Sevez
Supervisor or designee (print) Signature 1221521 Z # 11/15/13 Date

ATTACHMENT 5
Page 1 of 1

11/14/13 ES

WCRRF OVERPACK DRUM CLOSURE DATA SHEET

7.[17] Overpack Drum Unique Identifier No.: 68673

7.[23] Overpack drum closure ring torque wrench information:
M&TE No.: 036245
Cal. Expiration Date: 08/05/2014
Range in ft-lb: 16-80
Tolerance: +/-3% CW and +/-6% CCW

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

Performed By: Edward Martinez, [signature] 1239911 11-14-13
Waste Handling Technician (print) Signature Z # Date

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

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

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

7.[34][D] 85-gal overpack drum gross weight (lb): 170.2 lb

Comments: N/C

8.1[1] Performed By: Edward Martinez, [signature] 1239911 11-14-13
Waste Handling Technician (print) Signature Z # Date

8.1[7] Reviewed By: Jose Perez, [signature] 1224521 11/13/13
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 1
Page 1 of 2

IC-3113 jc

WCRRF DRUM PREPARATION DATA SHEET

5.[34][E] Drum ID No.: 68610

5.[3] Drum information:
Purchase Order No.: 501578
Lot No.: 0240119
Manufacture Date: 13

5.[17] Drum Liner Bag/Filter Assembly:
Manufacturer: BOP
Model No.: 6cpvc1.5-2 spvc
Serial No.: L-10362
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 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] 1237766 10/31/13
Operator (print) Signature Z # Date

5.[23] Filtered vent information:
Manufacturer: NUCFIL
Model No.: 019DS
Serial No.: LM1-314
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): 76.0 lbs

5.[34][E] Drum ID No.: 68610

Comments: N/C

5.[35] Performed By: GERALD ESPINOZA | [signature] | 1287720 | 10/31/13
Operator (print) Signature Z # Date

7.1[4] Reviewed By: Jose Juarez | [signature] | 1221452 | 11/15/13
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 2
Page 1 of 2

WCRRF DRUM CLOSURE DATA SHEET

6.[3] Drum ID No.: 68610

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

M&TE No.: C36745
Cal. Expiration Date: 08/05/2014
Range in ft-lb: 10-80
Tolerance: +/-3% CW and +/-6% CCW

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

Performed By: Edward Martinez [signature] 1239411 11-14-13
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: N/A
Operator (print) Signature Z # Date

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

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

ATTACHMENT 2
Page 2 of 2

6.[3] Drum ID No.: 68610

6.[26] Scale File ID number: 019065

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

6.[28] Drum gross weight: 362.4 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: Edward Martinez (Operator (print)) [signature] (Signature) 1239911 (Z #) 11-14-13 (Date)

7.1[4] Reviewed By: Joe Jerez (Supervisor or designee (print)) [signature] (Signature) 1224521 (Z #) 11/15/13 (Date)

ATTACHMENT 1
Page 1 of 2

Orig Copy
11/13/13 HS

WCRRF DRUM PREPARATION DATA SHEET

5.[34][E] Drum ID No.: 68666

5.[3] Drum information:
Purchase Order No.: 501578
Lot No.: 0240119
Manufacture Date: ~~2012~~ 2013
JQ 11/13/13

5.[17] Drum Liner Bag/Filter Assembly:
Manufacturer: BOP
Model No.: 6CPVC 1.5-2.5PVC
Serial No.: L-10334
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: Joe Quinnamon / Joe Q / 239987 / 11/13/13
Operator (print) Signature Z # Date

5.[23] Filtered vent information:
Manufacturer: NUCFIL
Model No.: 019 DS
Serial No.: LM-856
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.: 68666

Comments: N/C

5.[35] Performed By: JOE QUINTANA [signature] 239987 11/13/13
Operator (print) Signature Z # Date

7.1[4] Reviewed By: Jose Jerez [signature] 1221521 11/13/13
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 2
Page 1 of 2

WCRRF DRUM CLOSURE DATA SHEET

6.[3] Drum ID No.: 686666

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

M&TE No.: 036245
Cal. Expiration Date: 08/05/2014
Range: 16-80 ft-lb
Tolerance (+/-): +/- 3% CW and +/- 6% CCW

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

Performed By: Edward Martinez [signature] 1289711 11-14-13
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:	N/A	N/A
Range:	N/A in-lb	N/A ft-lb
Tolerance (+/-):	N/A	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: N/A / / /
Operator (print) Signature Z # Date

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

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

ATTACHMENT 2
Page 2 of 2

6.[3] Drum ID No.: 68666

6.[26] Scale File ID number: 0190605

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

6.[28] Drum gross weight: 305.2 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: Edward Martinez (Operator (print)) [signature] (Signature) 1239911 (Z #) 11-14-13 (Date)

7.1[4] Reviewed By: Jose Jocee (Supervisor or designee (print)) [signature] (Signature) 1221451 (Z #) 11/15/13 (Date)

Working Copy
11/14/13 HS

ATTACHMENT 3
Page 1 of 1

WCRRF PARENT 55-GAL DRUM PREPARATION DATA SHEET

6.3[21] Prepared Parent 55-Gal Drum Number: S845072

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): 388.8

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

Comments: N/A

8.1[1] Performed By: [illegible] / [signature] 122[illegible] 11-14-13
Waste Handling Technician (print) Signature Z # Date

8.1[7] Reviewed By: Jose Jerez / [signature] 122521 11/15/13
Supervisor or designee (print) Signature Z # Date

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

8.1[8][D] Approved by: [illegible] / [signature] 102105 11/18/13 1855
SOS/SOM or designee (print) Signature Z # Date Time

WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

No 2 SP12

Production Control

Container ID: S845072 Container Type: ~~55~~-GAL 85 11-4-13 Gross Weight (lbs): 409

Liner Seal #: 015340 Filter Prefix: LAVC Filter Serial #: 04045

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

TWSR Comments: LEACHED SOLIDS MST 12 RM 434

Total PE-Ci Activity: 1.15E+01 Equivalent Combustible PE-Ci: 4.31E+00 AM-241 PE-Ci: 1.20E+00

Total Fissile Gram Equivalents: 110.2 Total Surface Dose Rate (mrem/hr): 3

EPA Code(s): D007; D008; D009

NCR RTR/NDA Comment: None

RTR Pre-Screen Date: 5/29/2007 Comment: Liquids, Impenetrable Obj Liquid Location: 19"

Certified RTR Comment: None

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

Security Determination: ? ✓ Green ☐ Yellow

Remediation Determination: ☐ VE ☑ PID ☐ Split ☑ Repack

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

TRUCON Code: Production Control Comments: Ensure EPA Codes D007, D008, and D009 are on the label. A minimum of 1.2 volumes of kitty litter/zeolite must be mixed with 1.0 volume of nitrate salts.

Performed By: Susan Ramsey (Production Control (Print)) Signature: Susan B. Ramsey / 100681 (Z Number) / 12/20/12 (Date)

WDP Engineering

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

Processing Determination: ☒ Accept ☐ Reject

WDP Engineering Comments: Nitrate Salts
Net Wt: 344#. Generator TWSR shows leached solids from Room 434, indicating waste is likely nitrate salts. No individual items or weights are identified. No RTR BDR. Nitrate salts typically packaged in plastic bags, undocumented liquids &/or debris may be present. Presence of chemicals is unknown (no generator info). Applicable waste codes are for chromium, lead & mercury. Nitrate salts require repack w/ admixture. RTR PS shows prohibited liquids & impenetrable object(s).

Performed By: Valerie Rhodes (WDP Engineering (Print)) Signature: Valerie Rhodes / 112609 (Z Number) / 1/18/13 (Date)

TRU Remediation Operations

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

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

Processing Determination: ☒ Accept ☐ Reject

TRU Remediation Operations Comments: USE Proper PPE Mix Kitty

Performed By: G Mh (TRU Remediation Operations (Print)) Signature: [illegible] / 149235 (Z Number) / 6/18/13 (Date)

Jose Jerez Jose Jerez 221452 6/22/13

HS Reviews Johnny Friedland CSP, Mary Contreras Pb, Hg + Cr

1-29-13

Noncertified TRU Waste Drum Item Information

DrumID: 019567

Item No	ItemID	Process Status	Net Wt (kg)	Matrix	Meas Code	SNM (g)	MT	Auth (Pg/Ln)		Comments
1	10850X89FB		10.230	NITRATE SALTS		2.88	53	6/14	G468	
2	1088FA		7.050	NITRATE SALTS		3.05	52	6/14	G468	
3	10900X90FA		15.000	NITRATE SALTS		5.39	52	6/14	G468	
4	10930X91FA		11.360	NITRATE SALTSE		9.09	53	6/14	G468	
5	IXF1089FA		4.320	NITRATE SALTS		0.56	52	6/14	G468	
6	1091FA		5.680	NITRATE SALTS		6.86	52	6/14	G468	
7	10920X91FA		8.860	NITRATE SALTS		15.48	53	6/14	G468	
8	LR1094FA		3.690	NITRATE SALTS		6.35	52	6/14	G468	
9	LR-1096FA		14.320	NITRATE SALTS		26.87	52	6/14	G468	
10	RR1099FA		6.590	NITRATE SALTS		3.04	52	6/14	G468	
11	OX92FA		22.500	NITRATE SALTS		29.51	53	6/14	G468	

Noncertified Waste Drum Material Summary

Gross Wt (kg): 170.5

Material Type	SNM (grams)	Items Net Wt (kg)
52	52.12	56.65
53	56.96	52.95
Totals	109.08	109.60

ATTACHMENT 1
Page 1 of 1

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

5.[1] Sample Date: 4/11/18

Container No. (5.[1])	3845072					
Container type sampled (e.g., 55-gal, 85-gal, 110-gal, or SWB) (5.[1])	55-Gal					
Filtered Vent Type (5.[1])	072					
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: [illegible] (CCP (Print)) 237175 (Z #)

Reviewed By: Nathan Wiles (CCP (Print)) 238666 (Z #)

Comments:

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

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

6.1[3] Performed By: Susan Ramsey (Waste Handling Operator (print)), [signature] (Signature), 100681 (Z #), 5/20/13 (Date)

InstName . Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\130411c\
Data File : S845072.D
Acq On : 11 Apr 2013 12:30 pm (#1); 11-Apr-13, 12:29:50 (#2)
Operator : SA
Sample :
Misc : 55 GALLON LFL THROUGH UNOBSTRUCTED 072 (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 11 12:42:03 2013
Quant Method : C:\msdchem\1\METHODS\vocgas.m
Quant Title : Flammable Gas Analysis
QLast Update : Thu Jan 24 09:52:49 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
3) Fluorobenzene	3.548	96	4576830	201.25	ppmv	-0.02
15) Chlorobenzene-d5	5.884	117	3945747	177.00	ppmv	-0.02

Target Compounds	Qvalue

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

vocgas.m Thu Apr 11 12:42:19 2013

11-14-13

0607 ASSUMING OPERATIONS CENTER — H SMITH

0615 STARTED PRE-JOB BRIEFING AND SHIFT TURN-OVER

0645 PRE-JOB COMPLETED

0724 ~~06~~ 11/14/13 HS MODE CHANGE DECREASE TO WARM STANDBY IN TA50-69 AND TA50-194/75 FACILITY.

0817 PERMISSION GRANTED TO BEGIN SHIPMENT OF WASTE OUT OF WCRR TO AREA G.

0842 SHIPMENT OUT OF WCRR COMPLETED, VEHICLE ACCESS GATE RESTORED

0849 MAINTENANCE ENTERING BUILDING TO REPAIR LIGHT FIXURES IN GLOVEBOX

0941 MAINTENANCE CHECKED AND REPORTED LIGHT SWITCH WAS IN THE OFF POSITION, BUT WILL INSTALL NEW LAMPS

1011 MAINTENANCE EXIT BUILDING WORK COMPLETED.

1010 HS ~~1018~~ 11-13-13 OPERATORS ENTER TO BEGIN PROCESSING

1040 INSTALLED CAUTION TAG ON ROTO-GRIP DUE TO STATIC SPARKS DURING OPERATION

1218 BAGGING OFF 1 DAUGHTER, DENESTING, BAGGING ON 5845072

1315 OPERATOR NOTIFIED ~~HS~~ HS 11-14-13 OPS CENTER, HOT SPOT FOUND ON DRUM DURING BAG ON, WHICH WAS CONTAINED BY RCT.

1318 BAG ON - BAG OFF COMPLETE

1325 MODE CHANGE TA50-69 AND TA50-194/75 FACILITY IN WARM ~~TB~~ HS 11-14-13 MODE

1326 MAINTENANCE CRAFTS ENTER BUILDING TO WORK ON ROTO-GRIP.

1343 OPERATORS EXITING BUILDING ACTIVATED PCM ALARM.

1343 CRAFTS EXIT DID NOT ENTER DUE TO CONTAMINATION

1344 TECH 40 AND I.H. ALSO TECH 36 HAD CONTAMINATION ON HIS BOOT, FIXED CONTAMINATION FOUND ON BOLT ON PARENT DRUM, WHICH WAS TAPED TO CONTAIN AND OVERPACK, RCT CONDUCTING WHOLE ROOM ~~ROME~~ 11/14/13 HS

CONTINUED ON NEXT PAGE - H SMITH —

11-14-13 CONTINUE FROM LAST PAGE H SMITH

1344 SURVEYS.

1400 RCT SUPERVISION INFORM OPERATION CENTER DURING BAG OFF BOLT ON PARENT DRUM IS FOUND TO HAVE FIXED CONTAMINATION OF 2000 DPM WITH WAS COVERED WITH TAPE, CONTAINED & OVERPACKED, TECH 40 AND I-H ALSO WERE CONTAMINATED, RESPIRATORS WERE SMEARED; TECH 40 RESPIRATOR SMEARED 32 ALPHA, 48 BETA; I-H's RESPIRATOR'S SMEARS 5.4 ALPHA 18.4 BETA. BOTH RESPIRATORS WILL BE DISCARDED BECAUSE THEY ARE ABOVE NDA. TECH 36 ALARMED PCM, CHECK BY RCT WITH PORTABLE DETECTOR BUT DID ALARM, RCT CHECKED PCM, IT WAS NDA. TECH 36 AGAIN CHECKED AT PCM TWICE BUT DID NOT ALARM SO WAS RELEASED BY RCT'S. RCT ALSO PERFORMED WHOLE BODY FRISK WHICH WAS ALSO NEGATIVE. THE DRUM SLIDE WAS ALSO CHECKED AND FOUND TO BE CONTAMINATED.. THE CORDLESS DRILL USED TO SECURE THE CLAMP ON THE PARENT WAS ALSO CONTAMINATED AND WILL BE BAGGED. THE ~~FORK~~ 11-14-13 HS FORK LIFT LEFT INSIDE WILL ALSO NEED TO BE CHECKED FOR CONTAMINATION. RCT WILL ALSO PERFORM A WHOLE ROOM 200 COUNT SURVEY.

1513 STARTING ~~14~~ 11-14-13 HS OUTSIDE ROUNDS

1514 OPERATORS NASAL SMEARS FROM HPAL ARE NDA

1530 LATE ENTRY: RCT'S FOUND SMALL AREA ON FLOOR WITH 152 DPM ALPHA 0 DPM ~~BETA~~ HS 11/14/13, RCT'S WILL TAPE FLOOR. 1509 HS.

1535 OUTSIDE ROUNDS COMPLETED

1540 RP-1 TOLD OPS CENTER AREA AROUND STATION 1 WILL BE CLEANED AND RESMEARED

1637 11/14/13 ~~1649~~ HS RP-1 ADVISED OPS ~~AS~~ 11/14/13 HS ALL SMEARS NDA OKAY TO RESUME THE PROCESS

1649 STARTING INSIDE ROUNDS

1655 MAINTENANCE ENTERS BUILDING TO SERVICE ROTOGRIP

11-14-13 HS ~~11-15-13~~ 1720 COMPLETED INSIDE ROUNDS

11-15-13

CONTINUED ON NEXT PAGE H SMITH

11-14-13 CONTINUED FROM PREVIOUS PAGE H SMITH

1721 LATE ENTRY: ITEM #63 ON INSIDE ROUNDS. OOS PERMISSION GRANTED TO PROCEED, POD IN PLACE, PER CSE DOCUMENTATION 1507 HS

1730 INSIDE AND OUTSIDE ROUNDS REVIEWED BY SOS

1745 LATE ENTRY: RCT'S SUPERVISION INFORMS DIS CENTER ALL SMEAR COUNTS ON RESPIRATORS AND FLOOR ARE NOA 1637 HS

1803 PER SOM ROTO GRIP REPAIRS IN PROGRESS, ALMOST COMPLETE, CAUTION TAG MAY BE REMOVED IF COMPLETED

11-14-13/810 BEING RELIEVED BY OCO TERRI COLEMAN H SMITH

H9 JJ

NO FURTHER ENTRIES ON THIS PAGE H SMITH

11-14-13

1810 Assuming WCRR operations center - JColeman

1820 Shift turnover being conducted with dayshift.

1825 Late entry at 1819, mode changed from warm standby to operation in WCRRF yard and 50-69 (JC)

1826 Pre-job being conducted by 505. Safety topic - prepping your home for the winter.

1843 Pre-job concluded.

1926 Operators entering 50-69 to begin operations on drum #S845072.

1944 Caution tag #5013-0026 removed from the Roto Grip. Caution tag logbook updated.

2111 Bagging off 1 daughter, bagging on another daughter.

2112 Minor issue - SOM states that the mechanics ~~are~~ JC 11-14-13 need to inspect and repair the hydraulic leak on the vertecle lifting cylinder of the Roto grip. Path forward - To submit an FSR.

2121 Submitted FSR #114379 for the hydraulic leak on the Roto grip.

2127 Bagoff / on complete.

2129 Submitted FSR #114380 for the WCG overhead light fixtures needing to be relamped.

2245 Denesting S853492, bagging off, then bagging on S853492.

2323 Bagoff / on complete.

2338 Created posting #059 (WCRR office phone numbers) for the RCT's and operators inside 50-69.

11-15-13 0007 Operators out for lunch.

0020 Beginning outside rounds.

0115 Operators back from lunch.

0116 Late entry at 0047, outside rounds complete (JC)

0143 Bagging off 1 daughter, bagging on another daughter.

0155 Bagoff / on complete.

0246 Bagging off second daughter, bagging on another daughter.

0300 Bagoff / on complete.

0424 Initiating a drum movement from 50-69 to a transportainer.

0426 Bagging off final daughter of the day and covering ports.

0447 Bagoff complete.

0515 Beginning inside rounds.

0520 RCRA inspections being performed.

Continued on next page - JColeman

11-15-13 Continued from previous page. Coleman
0525 Item #63 is OBS, okay to proceed per CSE documentation.
0528 Drum movement out of 5069 complete. All inventory has been removed from the building.
0533 Inside rounds and RCRA complete.
0534 Late entry-at 0530, mode changed to Cold in 5069 and warm Standby in WCRRF Yard. (JC)
0540 Both rounds reviewed by SOS.
11-15-13 0550 Being relieved by OCO Howard Smith, Coleman

11-15-13

No further entries this page

11-14-13 DAYSHIFT

0610 Reviewed the shift turnover checklist and assumed the SOM position John Guadagnoli

0640 Completed attending the pre-job brief conducted by (Clarissa) the SOS. The safety topic was ladder safety and fall clean up. There is one transfer scheduled out and one scheduled in from AREA-G WCG light burned out above/on top of the WCG. Notification was made to the OM requesting electrical support. The RCT provided updates from attending the monthly glove box safety meeting. The current shift orders were briefed. Manual drum movements and Precautions to prevent bag tears.

0715 Complete the daily plan of the day phone call with AREA G.

0724 Mode Change: 50/69 and YARD transition from Operations/Operations to Warm/Warm

0800 PAT arrives to inspect drums and initiate transfer out to AREA G

0845 The transfer out is completed and personnel were observed wearing proper PPE. A total of 10 drums were transfered.

0850 Crafts arrive at WCRRF to replace the WCG light bulb/Relamp. WO# 479036-01 - 50-69 Relamp light above GB was reviewed and approved to conduct work. Crafts are briefed on RWP.

0955 Crafts exit the facility - relamp WCG and evaluate Roto Grip. Crafts recommend caution tag the roto grip until the package is ready to work - based upon static on spark Notification was made to the SM.

1000 Mode Change: 50-69 and Yard transition from Warm/Warm to Operations/Operations

1040 OCO/SOM initiate caution tag 50-13-0026 was placed on the Roto Grip

1218 Inside operators initiate bag off of 1 daughter, and bag on of Parent drum 5845072.

1235 Completed the daily Noon Facility status report with PM/OM/SOM and Others.

1305 Crafts arrive to work on Roto Grip. RWP brief initiated by RCTs

1307 Reviewed WO# 00479050-01 - Verify no stray voltage -

1318 Inside Operations complete the bag off and bag on of Parent 5845072

1325 Mode Change: 50/69 and Yard transition from Operations/Operations to Warm/Warm

1326 Crafts enter facility to work on the Roto Grip while Operators exit for lunch.

1343 Notification was made by RP-1 that an operator on ES-IM were identified with contamination on the respirators - nasal smears will be taken as precautionary. One technician was exiting the PCM-2 when it alarmed noting contamination on the boot. RP-1 initiated smears on the room to contain. RP-1 will report levels when he obtains them.

(Continued on Next Page)

11-14-13 Dayshift Continued.

1403 RP-1 currently reports 2000 dpm on the slide - it will be bagged and disposed of. One operators respirator had contamination of 32 dpm alpha removable, and 48 beta. The other respirator had 5.4 dpm alpha and 18.4 beta removable - The left boot of the operator (different operator) from respirator contamination, was noted with 872 alpha upon exiting PCM2 - Ø Beta. The operator did pass the Hand foot monitor prior to Doffing. 11-14-13 ~~[illegible]~~ [illegible]

1410 Additional information from RP-1 indicates the left boot was checked by RCT, and there was no detection of contamination. The PCM was checked, and additional surveys were taken of the boot - all were noted non detectable. A whole body frisk was conducted and he passed going thru PCM-2 twice

1425 RP-1 reports additional survey results of area and tool indicates the drill used to tighten the bands contained 21.4 alpha removable and 20 beta. The drill will be replaced with a new one Also, since the fork truck was in the area, a full survey will be conducted.

1513 RP-1 reports one spot on the floor was noted at 152 alpha and Ø Beta - the RCT will wipe and resurvey. This was noted with smear #96 out of 200. Also he reports that all nasals were NDA.

1620 RCT/RP-1 report the floor being NDA after wiping down and currently all other surveys are NDA for the floor. Also they are counting the last 20 surveys on the fork truck. Currently prior smears on the fork truck are NDA. Additional results forthcoming. Notification was made to crafts to return to WCRRF

1637 RP1 reports all final surveys are NDA. All noted within RWP limits - No RPO.

1643 Craft arrive and operations ensure the same events are assigned Operations will back out the fork truck to allow Room to manipulate the Roto Grip with craft.

1806 Operators and crafts indicate they could not find any wiring problems They indicated the battery system is just like a car - you could touch both terminals by hand - nothing will happen. But if you touch terminals with a wrench - sparks would occur - they indicated there was a small drip noticed on the vertical large ram, and eventually it should be changed out - no issues currently and requested FSR submittal -

1810 Night shift SOS indicated they would remove the caution tag. Som turnover initiated.

1819 Mode change: 50/69 and YARD transition from WARM/WARM to Operations/Operations

1820 Relieved by R. Aytell [signature]

No further entries this page

[signature]

11/14/13 Night Shift

1820 Reviewed shift turnover checklist, night shift operations watchbill is approved and posted. Assumed WCRR SOM position.

1847 Prejob brief conducted by SOS ended. HH safety topic was overhead hazards - notably being forklift forks during denesting operations. Watchbill is at minimum staffing w/ 3 operators calling in sick. Explained status of Roto-Grip and maintenance efforts conducted today. They did identify a drop of hydraulic fluid on the raise/lower ram but it is OK to operate - operators will make comment on inspection form. Discussed the WCG light switch issue and operators were not aware that switches controlled the WCG lights.

2100 Exited SO 69 after conducting MOU of processing operations, housekeeping of WCG. Items to note were good communication used between stations on WCG and w/ RCT's, operator @ station 1 noted to use good ALARA principles while backing out of gloves when other stations were catching up in processing waste. One operator was prompted to install/wear Hexarmor glove gauntlet (glove was in use) of the 2 piece gloves. Obtaining one piece gloves will remedy. WCG cleanliness can be improved between shift turnovers. Noted items to have OCO submit FSR's for are ① 2 middle WCG light fixtures do have some burned out bulbs - need relamp ② Roto Grip vertical raise/lower RAM has small leak.

2127 Completed bag off of 1 daughter - continuing to process

2323 Operators completed all bag offs for parent # S845072 - 2 daughters total Denested and bagged on drum # S853492. OCO had already sent out todays production report so totals will show on tomorrows report.

11/15/13 0007 Operators breaking for lunch.

0115 Resuming operations.

0155 Completed bagging off 1 daughter - continuing to process.

0300 Completed bag off of a second daughter - continuing to process.

0330 Completed monthly review of Temporary Modifications Binder

0415 Completed monthly review of Operator Aids binder.

continued on next page →

11/14/13 Night Shift continued

11/15/13 0447 Completed all bag offs for parent #5853492 - 3 daughters total. Port cover placed over drum port.

0528 Movements of all inventory out of 50-69 to transportainers (11 drum total) have been completed.

0530 Mode Change completed: WCRR Yard / Bldg 50-69 from Operations / Operations to Warm / Cold.

0542 Reviewed and signed off RCRA rounds for weekly SOM review

0549 Completed review of inside and outside round sheets.

0553 Reviewed compliance tracking worksheet and status board is updated.

11/15/13 0605 Relieved by J. Gandegnol as SOM.

No further entries this page

PROJECT NAME _____ NOTEBOOK NO. _____

0407 Assuming WCRRF SOS position - cleared
0415 Pre job being conducted, discussed why respirators have to stay on till rem levels are checked, PPE inside 50-69 and Rem levels, also discussed TSE's administrative controls surveillances and prior to's.
0645 Pre job concluded.
0724 mode change performed TA50-69 and WCRRF yard now in warm standby per electricians to trouble shoot lights on glovebox.
0935 minor issues resolved with lights on WCG, electricians notified that light switch was switched off that was reason for light outage. Electricians will still change out bulbs since they are here.
1000 mode change performed TA50-69 and WCRRF yard now in operations.
1004 Operators entering 50-69 to continue processing.
1217 Operators bagging off, denesting and bagging on 3845072
1318 Bag on, bag off complete.
1344 notified by RCT while operators were performing parent bag off 1000 dpm of contamination was found near bolt on the bag. contamination was contained while performing respirators smears 2 respirators reading high on ontars, Tick 40 and 1H, PCM alarm tick #36 with contamination on left boot. RCT's are lighting room, maintenance here to work on vessel left will not be able to enter building. RCT ~~[illegible]~~ will perform room survey and precautionary nasal smears.
1400 RCT notified that Tick 40 respirator reading at 32 dpm and 48 alpha, 1H reading at 5.4 dpm and 18.4 beta, PCM Tick #36 has cleared rem and whole body PRISK with no contamination, 2000 dpm was found on slide and will need to be discarded. RCTs will perform 800 smears inside room 102.
1425 RCTs have notified that drill used for bagging off will need to be discarded reading at 2120 dpm.
1430 late entry. SOM, SOS, CS OM have been notified and we are still within RWP's. 1346 - cleared
1433 late entry mode change performed TA50-69 and WCRRF yard in warm standby for ~~light~~ Rotoscope light repair @ 11-14-13 1325 CL
1514 ~~nasals from HPAL~~ @ 11-14-13 Results on nasals from HPAL are HOA. RCTs notified OPO center that a small area on the floor is at 15.2 dpm alpha.
1535 outside rounds completed.
1649 per RCTs all smears are HOA, maintenance entering - continued on next page - cleared

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

PROJECT NAME NOTEBOOK NO.

-continued from previous page CROSS

1649 TA50-69 to work on roto-grip. minor issue.

1730 Rounds signed off.

1803 Person maintenance on roto-grip to complete will need to have caution tag removed.

14-131809 Being released by SGT Clayton Mullins -CR Leader

1149

NO further details this page.

SIGNATURE DATE 20

READ AND UNDERSTOOD DATE 20

PROJECT NAME WCRRF SOS Log Book NOTEBOOK NO.

11/14/13
1810 Assuming SOS position. CA
1820 Starting Pre-Job with turnover from day shift. Discussed over head hazards
1822 Late entry @ 1819 WCRRF yard and 50-69 are now in Operations.
1845 Pre-Job complete.
11/14/13 2000 Turning over SOS to Jose Jerez. CA
2000 Assuming SOS position for the evening. [illegible]
2111 Bagging off one daughter, bagging on second daughter
2127 Bag off Bag on complete
2246 Starting to D-Nest one Parent then Bagging off and Bagging on Parent.
2352 D-Nesting, bag on bag off complete.
0015 ~~0015~~ Operators breaking for lunch
0115 ~~0015~~ Operators returning from lunch.
0141 Bagging off one daughter bagging on second daughter and continuing to process.
0154 Bag on Bag off complete
0217 Reviewed and signed outside rounds.
0246 Bagging off second daughter, bagging on third daughter.
0300 Bag off Bag on Complete.
0421 Starting Drum Movement from 50-69 to Transportainer 25 total of 11 Drums
0436 Starting Bag off of final daughter for the shift
0447 Bag off complete
0528 Movement Complete All waste out of 50-69
0530 Note change Complete 50-69 is in Cold WCRF yard is in WARM.
0540 Operators wiping down glovebox and doing house keeping inside of 50-69
11/15/13 0600 Securing SOS position for the evening turning over to Clarissa Velarde. [illegible]
MG

No further entries on this page

SIGNATURE DATE 20
READ AND UNDERSTOOD DATE 20

584501C

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0130
Examination Date:	11/19/2013
Waste Container ID:	68610
Video/Audio Recorded Media Number:	LA-RTR2-13-0130 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.: 164.5 kg Tare Wt.: 33.4 kg Net Wt.: 131.1 kg
Rigid Liner and Liner Vent Description:	Liner: [X] No [ ] Yes Lid: [X] No [ ] Yes Type: [ ] 30-mil [ ] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [ ] Yes [X] N/A Punctured: [X] No [ ] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [ ] No [X] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 2 layers
Volume Utilization Percentage:	90 %

CCP Radiography Data Sheet

Waste Container ID: 68610

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):	7.0
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	5.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	119.1
Soils (S):	
Total WMP Weight:	131.1

CCP Radiography Data Sheet

Waste Container ID: 68610

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		11/19/2013
Print Name	Signature	Date

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

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

Item ID:	68610	Count Sequence Number:	23885	
Operator:	D3PW2DK1\operator			
Assay Start:	11/21/2013 11:39:47 AM			
Description 1:	1LANDA1869			
Description 2:	N/A			
Location:	LANL TA-54			
Comment:	AK-6			
Matrix Type:	Homo Sol. S3000			
Container Type:	55 gallon drum			
Weight:	Net:	131.0 kg	Net:	131.0 kg
Container:	Volume:	208.0 l	Full:	90.0 %
Density:		0.700 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:	23885	Batch Number:	1LANDA1869
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:	68610	Analysis Date:	11/21/2013

Net Weight	131000.0 g		
Pu mass	5.51E+001	+- 1.59E+001	g
TRU Alpha Activity	8.87E+000	+- 3.25E+000	Ci
TRU Activity Concentration	6.77E+004	+- 2.48E+004	nCi/g
Pu-239 Equivalent Activity	9.10E+000	+- 3.25E+000	Ci
Pu-239 FGE	5.28E+001	+- 1.58E+001	g
Decay heat	2.87E-001	+- 1.07E-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	7.55E-007
U233	<LLD	<LLD	0.00E+000	6.56E-003
U234	4.61E-002	2.87E-004	7.10E-005	0.00E+000
U235	3.30E+000	7.12E-006	1.76E-006	3.32E-006
NP237	1.11E-001	7.85E-005	1.45E-005	3.16E-006
PU238	1.41E-002	2.41E-001	8.30E-002	4.48E-003
U238	1.00E+003	3.37E-004	6.55E-005	6.13E-005
PU239	5.03E+001	3.12E+000	9.80E-001	5.80E-002
PU240	4.59E+000	1.04E+000	3.59E-001	1.94E-002
AM241	1.30E+000	4.47E+000	3.08E+000	1.20E-001
PU241	1.23E-001	1.27E+001	4.37E+000	2.36E-001
PU242	4.36E-002	1.72E-004	5.93E-005	0.00E+000
AM243	7.51E-004	1.50E-004	2.83E-005	8.95E-006

Errors quoted at 1.000 sigma

Operator: Martha Eg Date: 11·27·13

ITR: R.C Date: 11·27·13

Automated Independent Technical Review

Count Sequence Number: 23885 Batch Number: 1LANDA1869
Counter ID: MCS HENC #1
Container ID: 68610
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 11/21/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis No Add-a-Source warnings.	Ok
Section 2 - Passive Neutron Analysis Analysis Status: No errors.	Ok
Ones Rate Analysis complete with warnings. - Error calculating the Ones Rate Pu-240 Effective MDA.	Not data affecting.
Section 3 - Data Combiner Analysis Override enabled; 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-53,52,54
Section 5 - Gamma Analysis Analysis Status: No errors.	Ok
Total U mass is greater than the upper limit of 500.0 g.	U235/U238 verified by gamma spectrum. Results valid.
Miscellaneous	No additional nuclides contributing to 95% of the radiological hazard identified.

Expert Review by: Sheri Chamberlin Date: 11-26-13

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **68610**

BDR Number: **LA13FG2122**

Sampling Date: **12/2/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	94.43	
74-82-8	Methane	142.14	U
67-56-1	Methanol	35.23	U
60-29-7	Ethyl Ether	0.96	U
75-35-4	1,1-Dichloroethylene	6.38	U
67-64-1	Acetone	18.08	U
75-34-3	1,1-Dichloroethane	4.08	U
156-59-2	cis-1,2-Dichloroethene	0.76	U
78-93-3	Methyl ethyl ketone	11.73	U
110-82-7	Cyclohexane	5.10	U
71-43-2	Benzene	1.77	U
107-06-2	1,2-Dichloroethane	3.66	U
71-36-3	1-Butanol	1.84	U
108-10-1	Methyl isobutyl ketone	9.82	U
108-88-3	Toluene	8.02	U
108-90-7	Chlorobenzene	4.10	U
100-41-4	Ethylbenzene	3.57	U
108-38-3/106-42-3	m- and p-Xylene	1.92	U
95-47-6	o-Xylene	2.10	U
108-67-8	1,3,5-Trimethylbenzene	1.96	U
95-63-6	1,2,4-Trimethylbenzene	2.13	U

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

InstName : Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\131202c\
Data File : 68610.D
Acq On : 2 Dec 2013 11:38 am (#1); 02-Dec-13, 11:38:14 (#2)
Operator : EL 12-5-13 EL
Sample :
Misc : 55 Gallon Drum Through Filter (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Dec 02 11:46:59 2013
Quant Method : C:\msdchem\1\METHODS\VOCGAS.M
Quant Title : Flammable Gas Analysis
QLast Update : Mon Aug 26 13:12:56 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
3) Fluorobenzene	3.578	96	4052547	205.75 ppmv	0.06
15) Chlorobenzene-d5	5.878	117	3171343	177.50 ppmv	0.02
Target Compounds					Qvalue
1) Hydrogen	1.611	GC1	710m	94.43 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-RTR2-13-0131
Examination Date:	11/21/2013
Waste Container ID:	68666
Video/Audio Recorded Media Number:	LA-RTR2-13-0131 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 14
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3110
Waste Stream I.D.:	LA-MIN02-V.001
Waste Container Weights:	Gross Wt.: 138.5 kg Tare Wt.: 33.4 kg Net Wt.: 105.1 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: 68666

Section 3: Container Inventory and Comments (Detailed descriptions)

IM:

AM:

OM: Scrap lead

OI:

C: Leather gloves

R:

XPM: Plastic bags, dust pan

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):	13.5
Other Inorganic Materials (OI)	
Cellulosics (C):	2.5
Rubber (R):	
Plastics (waste materials) (XPM):	6.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	83.1
Soils (S):	
Total WMP Weight:	105.1

CCP Radiography Data Sheet

Waste Container ID: 68666

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

Comments: N/A

RTR Operator:

Michael Simmons		11/21/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	68666	Count Sequence Number:	23920
Operator:	D3PW2DK1\operator		
Assay Start:	12/3/2013 1:59:43 PM		
Description 1:	1LANDA1871		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 105.0 kg	Net:	105.0 kg
Container:	Volume: 208.0 l	Full:	85.0 %
Density:	0.590 kg /l		

System Configuration

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

Errors quoted at 1.000 sigma

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number:	23920	Batch Number:	1LANDA1871
Assay Instrument:	MCS HENC #1	Location:	LANL TA-54
Analysis Method:	CCP-TP-063 v 15	Software Version:	NDA 2000 V.4.0
Item ID:	68666	Analysis Date:	12/3/2013

Net Weight	105000.0 g		
Pu mass	4.75E+001	+- 1.38E+001	g
TRU Alpha Activity	7.92E+000	+- 2.40E+000	Ci
TRU Activity Concentration	7.55E+004	+- 2.28E+004	nCi/g
Pu-239 Equivalent Activity	8.12E+000	+- 2.40E+000	Ci
Pu-239 FGE	4.38E+001	+- 1.37E+001	g
Decay heat	2.56E-001	+- 7.89E-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	6.84E-007
U233	<LLD	<LLD	0.00E+000	5.76E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	2.47E-006
NP237	8.97E-002	6.32E-005	1.06E-005	2.72E-006
PU238	1.22E-002	2.08E-001	7.21E-002	3.08E-003
U238	<LLD	<LLD	0.00E+000	2.67E-005
PU239	4.34E+001	2.69E+000	8.52E-001	3.98E-002
PU240	3.96E+000	8.99E-001	3.12E-001	1.33E-002
AM241	1.20E+000	4.12E+000	2.22E+000	5.49E-002
PU241	1.06E-001	1.09E+001	3.79E+000	1.62E-001
PU242	3.76E-002	1.49E-004	5.15E-005	0.00E+000
AM243	7.89E-004	1.58E-004	2.69E-005	7.74E-006

Errors quoted at 1.000 sigma

Operator: Sam Barton Date: 12/10/13

ITR: [signature] Date: 12·10·13

Automated Independent Technical Review

Count Sequence Number: 23920 Batch Number: 1LANDA1871
Counter ID: MCS HENC #1
Container ID: 68666
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 12/3/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis No Add-a-Source warnings.	Ok
Section 2 - Passive Neutron Analysis Analysis Status: No errors.	Ok
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 Results are marked as invalid.	MGA analysis failed. AK isotopics applied. The AK information utilized was provided by Steve Schafer, AKE, and consists of data from CCP-AK-LANL-006, AK Source Document M237. MT-53,52,54
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: 12-4-13

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **68666**

BDR Number: **LA13FG2124**

Sampling Date: **12/6/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	262.40	
74-82-8	Methane	142.14	U
67-56-1	Methanol	35.23	U
60-29-7	Ethyl Ether	0.96	U
75-35-4	1,1-Dichloroethylene	6.38	U
67-64-1	Acetone	18.08	U
75-34-3	1,1-Dichloroethane	4.08	U
156-59-2	cis-1,2-Dichloroethene	0.76	U
78-93-3	Methyl ethyl ketone	11.73	U
110-82-7	Cyclohexane	5.10	U
71-43-2	Benzene	1.77	U
107-06-2	1,2-Dichloroethane	3.66	U
71-36-3	1-Butanol	1.84	U
108-10-1	Methyl isobutyl ketone	9.82	U
108-88-3	Toluene	8.02	U
108-90-7	Chlorobenzene	4.10	U
100-41-4	Ethylbenzene	3.57	U
108-38-3/106-42-3	m- and p-Xylene	1.92	U
95-47-6	o-Xylene	2.10	U
108-67-8	1,3,5-Trimethylbenzene	1.96	U
95-63-6	1,2,4-Trimethylbenzene	2.13	U

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

InstName : Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\131206C\
Data File : 68666.D
Acq On : 6 Dec 2013 1:04 pm (#1); 06-Dec-13, 13:04:04 (#2)
Operator : SA
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Dec 06 13:21:08 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	3.526	96	3710386	205.75 ppmv	0.00
15) Chlorobenzene-d5	5.842	117	2940974	177.50 ppmv	-0.02
Target Compounds					Qvalue
1) Hydrogen	1.608	GC1	1973m	262.40 ppmv	

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

S845104

S845104

Container 747250

File Options Reports Help

S845104

747250	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

S845104

- S845104
  - LA00000068442 - EMPTY
  - LA00000068374

ATTACHMENT 1
Page 1 of 4

WCRRF WCG WASTE PROCESSING DATA SHEET 9/19/13 0845

4.1[6][B] Parent Waste Container No.: S845104

6.2[4] Date Processed: 9-19-13

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: Brandon Chavez [signature] 604742 9-19-13
Waste Handling Tech (print) Signature Z # Date

ATTACHMENT 1
Page 2 of 4

4.1[6][B] Parent Waste Container No.: 5845104

5.[18] Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable: 354.2 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) 354.2 lb

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

6.2[17][D] Drum lift hinge pin retaining clip replaced. N/A
Initials Z# Date

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

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

ATTACHMENT 1
Page 3 of 4

4.1[6][B] Parent Waste Container No.: 5845104

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	68374			
10.1[4]	Daughter Drum Filter No.	KL 541		N/A	
10.1[4]	Daughter Drum Bag Filter No.	L-6688			
10.1[4]	Daughter Drum Purchase Order No.	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	N/A			
10.2[5]	POC ID No			N/A	
10.2[7][B]/10.2[6]	POC Item Description				
10.2[13]	POC Assembly closed per Manufacturer's instructions. (Initial and ZB)				
10.2[14]	POC Assembly Gross Weight (lb)			N/A	
10.2[15]	POC Rad. Survey Results (mrem/hr)				
10.3[3][A]	Approx. Containerized Liquid Vol./Units	N/A			
10.3[5][A]	Free Liquid Volume/Units	3 GALLONS			
10.3[7][A]	Opaque/Non-penetrable Item Description:	Lead Shielding			
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		N/A	
10.3[13]/10.4[10]/10.5[4]/10.6[10]	Daughter Drum % Full (%)	100%			
10.5[3]/10.6[2]	Description Waste Added During Processing	Kitty Litter Stuff, cat bags			

ATTACHMENT 1
Page 4 of 4

4.1[6][B] Parent Waste Container No.: S845104

Comments: Nitrate salts, kitty litter, Steb-out Bags, Plastic, lead shielding

11.1[1] Performed By: Adam Segovia / [signature] / 276202 / 9-19-13
Waste Handling Tech (print) Signature Z # Date

11.1[8] Reviewed By: Joe Duce / [signature] / 122432 / 9-20-13 0-205
SOS or designee (print) Signature Z # Date/Time

ATTACHMENT 2
Page 1 of 1

9-18-13

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	0383269
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.: 012
Serial No.: JL908
Manufacture Date: 10/11

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

5.[11] Performed By: Ian Marquez [signature] 276208 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:

8.1[1] Performed By: Ian Marquez [signature] 276208 9-18-13
Waste Handling Technician (print) Signature Z # Date

8.1[6] Reviewed By: Jose Perez [signature] 221152 9-20-13
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 5
Page 1 of 1

9/19/13

WCRRF OVERPACK DRUM CLOSURE DATA SHEET

7.[17] Overpack Drum Unique Identifier No.: 68442

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: Adam Segovia [signature] 276702 9-19-13
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): 169.2 lb

Comments: N/C

8.1[1] Performed By: Adam Segovia [signature] 276702 9-19-13
Waste Handling Technician (print) Signature Z # Date

8.1[7] Reviewed By: Jose Sevez [signature] 221452 9/20/13
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 1
Page 1 of 2

date: 9-10-13

WCRRF DRUM PREPARATION DATA SHEET

5.[34][E] Drum ID No.: 68374

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.: GCPVC1.5-2.5PVC
Serial No.: L-6688
Manufacture Date: 01/13

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: [illegible] [signature] [illegible] 9-10-13
Operator (print) Signature Z # Date

5.[23] Filtered vent information:
Manufacturer: NUCFIL
Model No.: 01905
Serial No.: KL-541
Manufacture Date: 11/11

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

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

5.[30] Scale File ID number: 019065

ATTACHMENT 1
Page 2 of 2

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

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

5.[34][E] Drum ID No.: 68374

Comments: n/a

5.[35] Performed By: Fredericu Aulelek | [signature] | 122006 | 9-10-13
Operator (print) Signature Z # Date

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

WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Production Control

Container ID: S845104 Container Type: 55-GAL Gross Weight (lbs): 376
Inner Seal #: 019567 Filter Prefix: LAVC Filter Serial #: 04366
Waste Stream: LA-MHD01.001 Certified RTR BDR: No BDR
TWSR Comments: LEACHED SOLIDS MST 12 RM434
Total PE-Ci Activity: 1.01E+01 Equivalent Combustible PE-Ci: 3.78E+00 AM-241 PE-Ci: 9.51E-01
Total Fissile Gram Equivalents: 101.4 Total Surface Dose Rate (mrem/hr): 3
EPA Code(s): D007; D008; D009
NCR RTR/NDA Comment: None
RTR Pre-Screen Date: 6/13/2007 Comment: Liquids, Impenetrable Obj Liquid Location: 28
Certified RTR Comment: None
Prohibited Items: ☑ Sealed > 4 Liters ☒ Liquid ☐ Pressurized Container ☑ Impenetrable Item ☐ Other
Security Determination: ☑ Green ☐ Yellow
Remediation Determination: ☐ VE ☑ PID ☐ Split ☑ Repack
Estimated 30-cm Dose Rate (mrem/hr): ☐ <100 ☐ >100 and <1,000 ☑ >1,000 and <10,000 ☐ >10,000
TRUCON Code: Production Control Comments: Ensure EPA Codes D007, D008, and D009 are on the label. A minimum of 1.2 volumes of kitty litter/zeolite must be mixed with 1.0 volume of nitrate salts.

Performed By: Susan Ramsey (Production Control (Print)) Signature: [signature] Z Number: 100681 Date: 12/20/12

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
Net Wt: 316# Generator info shows 11 items of nitrate salts; weights range from 8-50# No RTR BDR. Nitrate salts are typically packaged in plastic bags; undocumented liquids &/or debris may be present. RTR PS shows liquids & impenetrable object(s). No chemicals identified. Applicable waste codes are for chromium, lead, & mercury. Nitrate salts require repack w/ admixture.

Performed By: [illegible] (WDP Engineering (Print)) Signature: [illegible] Z Number: [illegible] Date: [illegible]

TRU Remediation Operations

☒ Waste Container Information Evaluated GM 6/18/13 ☒ Less Than 170 lbs ☐ RTR Video Available
Other Specific Safety Concerns: Do not push or press on waste with hands. Use heavy duty gloves during processing.
Processing Determination: ☒ Accept ☐ Reject
TRU Remediation Operations Comments: USE Proper PPE Mix Ratio

Performed By: GMA (TRU Remediation Operations (Print)) Signature: [signature] Z Number: 149275 Date: 6/18/13
Jose Jerez Jose Jerez 221452 6/22/13

11H6 Reactive Galvanic Anodical CSP, May contain Pb, Hg, Cr
1-29-13

Noncertified TRU Waste Drum Item Information

DrumID: 019567

Item No	ItemID	Process Status	Net Wt (kg)	Matrix	Meas Code	SNM (g)	MT	Auth (Pg/Ln)		Comments
1	10850X89FB		10.230	NITRATE SALTS		2.88	53	6/14	G468	
2	1088FA		7.050	NITRATE SALTS		3.05	52	6/14	G468	
3	10900X90FA		15.000	NITRATE SALTS		5.39	52	6/14	G468	
4	10930X91FA		11.360	NITRATE SALTSE		9.09	53	6/14	G468	
5	IXF1089FA		4.320	NITRATE SALTS		0.56	52	6/14	G468	
6	1091FA		5.680	NITRATE SALTS		6.86	52	6/14	G468	
7	10920X91FA		8.860	NITRATE SALTS		15.48	53	6/14	G468	
8	LR1094FA		3.690	NITRATE SALTS		6.35	52	6/14	G468	
9	LR-1096FA		14.320	NITRATE SALTS		26.87	52	6/14	G468	
10	RR1099FA		6.590	NITRATE SALTS		3.04	52	6/14	G468	
11	OX92FA		22.500	NITRATE SALTS		29.51	53	6/14	G468	

Noncertified Waste Drum Material Summary

Gross Wt (kg): 170.5

Material Type	SNM (grams)	Items Net Wt (kg)
52	52.12	56.65
53	56.96	52.95
Totals	109.08	109.60

ATTACHMENT 1
Page 1 of 1

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

5.[1] Sample Date: 4/11/13

Container No. (5.[1])	S845104					
Container type sampled (e.g., 55-gal, 85-gal, 110-gal, or SWB) (5.[1])	55-Gal					
Filtered Vent Type (5.[1])	073					
Filtered Vent Unobstructed (5.[1])	☑ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☑ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT
WIPP-Approved Filtered Vent (5.[2])	☑ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT
Total CCP VOC value (< 7,000 ppm) (5.[4])	0 ppm	ppm	ppm	ppm	ppm	ppm
Hydrogen Reading (< 64,000 ppm) (5.[5])	375.94 ppm	ppm	ppm	ppm	ppm	ppm
Methane Reading (< 16,000 ppm) (5.[5])	0 ppm	ppm	ppm	ppm	ppm	ppm

5.[7] Certified CCP Technician:

Performed By: [illegible] Arrgen [illegible]
CCP (Print) Z #

Reviewed By: [illegible]
CCP (Print) 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, Susan B. Ramsey, 100681, 5/20/13
Waste Handling Operator (print) Signature Z # Date

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\130411c\
Data File : S845104.D
Acq On : 11 Apr 2013 1:16 pm (#1); 11 Apr 2013 1:15 pm (#2)
Operator : SA
Sample :
InstName : Unit 8
Misc : 55 GALLON LFL THROUGH UNOBSTRUCTED 073 (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 11 13:24:45 2013
Quant Method : C:\msdchem\1\METHODS\Vocgas m
Quant Title : Flammable Gas Analysis for Transportation
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
3) Fluorobenzene	3.253	96	1998454	206.00	ppm	0.00
15) Chlorobenzene-d5	5.940	117	1805687	179.50	ppm	0.00
Target Compounds						Qvalue
1) Hydrogen	5.224	GC1	92869m	375.94	ppm	

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

Vocgas m Thu Apr 11 13:24:54 2013

9-19-13

0600 Assuming WCRRF OCC position - Orlando.
0607 Stack monitoring personnel arriving for monitoring.
0615 Pre job briefing being performed by SOS.
0637 Pre job concluded.
0810 Bagging off 1 daughter, bagging on 1 daughter.
0818 Permission granted to turn ~~the~~ 9-19-13 vehicle access gates for movement out to area G.
0837 Bag on, bag off is complete.
0946 Bagging off 1 daughter and 1 POC, Bagging on 9851752.
0947 Vehicle access gates have been restored, movement out of WCRRF is complete.
1040 Mode change performed TASD-69 and WCRRF yard now in Dam standby.
1041 Late entry bag on, bag off is complete at 1038 - CP.
1045 Maintenance entering 50-69 to perform work on PCM2
1058 Work is complete on PCM2.
1100 Mode change performed TASD-69 and WCRRF yard now back in operations.
1324 Bagging off, Bagging on ~~9846660~~ 9-19-13 ~~9846660.~~ 9-19-13 9846660.
1352 Bag on, bag off is complete.
1428 Starting movement into 50-69
1439 Movement into 50-69 is complete.
1441 Starting movement out of 50-69.
1456 Starting inside rounds
1520 Item #43 is OOS, POD in place okay to proceed per CSE documentation
1524 Inside rounds have been completed.
1525 Starting outside rounds.
1530 Bagging off 1 daughter, Bagging on 1 daughter continuing to process.
1540 Item #19 is unused, FSE in place okay to proceed.
1543 Bag on, bag off complete.
1544 Outside rounds complete.
1650 Inside and outside rounds signed off by SOS.
1456 Bagging off 1 daughter, 1 POC, Bagging on 9845104
JJ

Continued on next page - Orlando

9-19-13 Continued from previous page - Ckeland.
1733 Bag on, Bag off complete.
HA 1744 Chlorebox reciptacle has been turned on.
9-19-13 1805 9-19-13 Relieved by ~~Terri Coleman Ckeland~~ OCO Terri Coleman - Ckeland

No further entries this page

9-19-13

1815 Assuming WCRR operations center. Coleman
1912 Pre-job being conducted by SOS. Pre-job began late JC 9-19-13 because of mandatory RCT meeting.
1935 Pre-job concluded.
JC 9-19-13 H2336 Bagging off 1 daughter to complete drum # 5845104.
2355 Bag off complete.
0005 Beginning outside rounds.
0019 Item #19 is unsat, okay to proceed, FSR in place.
0031 Outside rounds complete.
0055 Operators out for lunch.
JC 9-19-13 1435 Operators entering 50-69 to begin glove changes on stations 1 (L)+(R)
0355 2 (R) 7 (L)+(R) and 8 (L)+(R)
0256 Mode changed to Warm Standby in WCRRF yard and 50-69.
0335 Glove changes being performed. Initiating a drum movement from 50-69 to a transportainer.
0354 Drum movement out of 50-69 complete. All inventory has been removed from 50-69.
0438 Glove changes complete.
0447 Mode changed to Cold in 50-69 and Warm in ~~57~~ JC 9-20-13 WCRRF yard.
0503 Shutting down ventilation
0505 Ventilation is shut down.
0506 Acknowledged mixer alarm.
114 0510 Relieved by OCO, Gerald Espinoza - Coleman
0510 Assuming OCO position. G. Esp
12/30 0200 Securing OCO position. G. Esp

No Further entries this page.

9-19-13 DAYSHIFT

0615 Reviewed the turnover checklist and assumed the day shift SOM position John Gerardagnoli

0634 Completed attending the pre-job brief conducted by the SOS (Gilbert) The Safety topic was - do not take short cuts - The SOS provided an update on status of the drum bagged on. RPL requested coordination to get the PCM-2 repaired. Coordination after the first drum may be effective. There is one transfer scheduled out. Rainwater was noted in the ARCTIC, operators are to be cautious for slip hazards in 50/69. Current shift orders in affect - Manual Drum Movements WCRR-SH-13-003-R2, Precautions to Prevent Bag Tears WCRR-SH-13-005 R0. A level B walk thru was conducted and compliments were recieved from the quality group. Next week DOE may visit.

0710 Completed the daily AREA G

0712 late entry for 0653 - Operators enter 50/69 facility and initiate processing

0837 Inside Operations complete bag off of 1 daughter drum.

0929 Completed performing a spot check with the transfer from the transportainer to the transfer vehicle. Drums being moved were called out to Production Inventory. Production Inventory takes note - per task order of the drums transfering Out.

0946 Inside operations initiate bag offs

1020 PCM2 techs arrive and obtain brief (RWP) to support repair of PCM2 under IWD-RP-2-RIC-21 REV #2, they will enter to correct PCM2 after bag offs are completed

1038 Inside Operations report bag off and bag on of Parent S851752.

1040 Mode Change: 50/69 and Yard transition from Operations/Operations to WARM/WARM

1058 The PCM2 was repaired, Per techs dust is/could be shorting out the board.

1100 Mode Change: 50/69 and Yard transition from WARM/WARM to Operations/Operations

1215 Completed attending the daily MOON status meeting with the OM, PM, SOM, and the weekly project status meeting.

1226 Supported production Control, Susan Ramsey in obtaining proper procedure and attachment, to identify single layer of confinement to resolve an issue for six drums will not be sent back to WCRR.

1325 Inside Operations report initiating bag off of daughter drum and bag on of Parent drum S846660

1352 Inside Operations reported bag off of Parent S851752 of 1 daughter and bag on of the Parent S846660 was completed.

1427 The craft planner and carpenter arrived at WCRRF to scope the door leakage at the transportainer. Gasket material will require ordering

9-19-13 DAYshift (Continued)

1450 Operations completed a movement into the facility one drum and initiated drum movements out.

1530 Inside Operations report bagging off 1 daughter and Bagging on 1 daughter and continue to process

1543 Bag on and Bag off complete of daughter and continue to process.

1656 Inside Operations report of initiating bag off of 1 daughter and 1 POC and bagging off Parent S844660 and bagging on S845104.

1711 Late entry for 1600 - Completed walk through of the facility for housekeeping with LTP-DDD Project Manager, and Energy Solutions Production Manager A write up - will be forthcoming.

1731 Bag offs and Bag Ons are reported completed

1746 Conducted review of Rounds. Noted Items 19 and 63 unsat, FSR and POD are attached to the rounds noting corrective actions in place and to be conducted.

1805 Conducted shift turnover checklist with night shift SOM.

1815 Relieved of SOM position by R. Axtell - [illegible]

No further entries this Page
[illegible] 9-19-13

9/19/13 Night Shift

1815 Reviewed shift turnover checklist and assumed WCRR SOM position. Approved & posted operations watch bill.

1910 Due to RP-1 training conducting pre job brief later than normal. Discussed tonights work schedule and current conditions. Discussed maintenance to be conducted tomorrow and prep work to be completed on night shift to assist.
Safety topic was pedestrian safety w/ changing conditions during commute times (visibility)

2355 Completed bag off of parent # 3845104 w/ 1 daughter.

9/20/13 0000 Late Entry @ 2134 Reviewed IWD's for Energy Solutions Tenant Activities which are approaching expiration. All of the USQ's for these IWD's reference the old BIO/TSR revision. Sent E-mail to L. Platter w/ USQ to update.

0055 Operators breaking for lunch.

0215 Completed SOM review of work packages scheduled to work in October. Work package for Quarterly Forklift Maintenance references old BIO/TSR revision in USQ. Will bring to MSS for update.

0235 Operators have identified that gloves on stations #1 R+L, 2 R, 7 R+L and 8 R+L require changing

0256 Completed Mode change: WCRR Yard & 50-69 from ~~Warm~~ / KK 9/20/13 Operations / Operations to Warm / Warm

0335 Operators reported starting glove changes.

0354 Drum movements have been completed from 50-69 to transportainers

0438 All glove changes are completed

0447 Completed Mode Change: WCRR Yard / Bldg 50-69 from Warm / Warm to Warm / Cold.

0505 Ventillation is secured

0504 Mizer alarm was acknowledged by OCO.

9/20/13 0621 Relieved by J. Guadagnoli as SOM.

No further entries this page
KK 9

9/19/13 WCRR SOS LOG BOOK

0600 Assuming SOS Position

0615 Conducted shift brief Discussed status of facility. Current drum on Box and to not take shortcuts. Also discussed the use of Hex armors.

0637 Concluded shift brief

0810 Bagging off 1 daughter bagging on another

0815 shipment out started

0837 Bag on/off complete

0946 Bagging on 5851752 and bagging off

0947 shipment complete

1040 Mode change complete WCRRF In warm Lete entry bag on bag off complete @ 1038

1045 Maintenance entering 50-69 to work on PCM

1058 Work on PCM Complete.

1100 mode change complete WCRRF In operations.

1324 Bagging on/off 5846660

1352 Bag on/off complete

1458 Starting move In to 50-69

1479 Move in Complete.

1441 Starting Move out of 50-69

1456 Started Rounds

1530 Bagging off / daughter bagging on another

1543 Bag on/off Complete

1650 Bag off Reviewed Inside and outside Rounds

1656 Bag off daughter and Poc Bagging on 5845104

1733 Bag on/off complete.

1810 Relieved by Jose Jerez

no further entries on this page

9-19-13 WCRR SOS Log Book

1810 Assuming SOS position for the evening. Completed turnover with out going SOS Gilbert Martinez. Jesse Jy

1830 RCT's attending training, waiting for RCT's to complete their training. Approximately one hour.

1915 Starting Pre-Job brief. Safety Topic be EnergySolutions IH on Short Cuts when performing jobs and Pedestrian Safety. One Parent currently bagged on, will need to finish processing then bagging off and going to COID for maintenance work tomorrow. Operators will need to prep the area for drainage work to be performed and shutting down ventilation so that RCT's can perform their RWT's.

1935 Completed Pre-Job brief.

2356 Bagging off one daughter and Bagging off 5845104

2355 Bag off complete. Operators wiping down the glovebox and performing glove inspections.

0100 Operators exiting and breaking for lunch.

0230 Operators returning, glove inspections identified needing to change gloves on stations 1, 7 and 8 both left and right and station 2 right.

0256 Mode change. WCRR yard and 50-69 are in WAREA.

0335 Operators starting glove changes. Starting move out from 50-69

0354 Move out of daughter drums and 1 85 gallon Parent complete All inventory has been removed from 50-69.

0437 Glove changes complete.

0446 Mode change complete WCRR yard in WAREA 50-69 in COID.

0502 Operators shutting down ventilation.

0600 Securing SOS position for the day. Jesse Jy

HA

No further entries on this page.

5845104

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0114
Examination Date:	9/25/2013
Waste Container ID:	68374
Video/Audio Recorded Media Number:	LA-RTR2-13-0114 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 13
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3110
Waste Stream I.D.:	LA-MIN02-V.001
Waste Container Weights:	Gross Wt.: 222.0 kg Tare Wt.: 33.4 kg Net Wt.: 188.6 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:	100 %

CCP Radiography Data Sheet

Waste Container ID: 68374

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):	8.0
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	5.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	175.6
Soils (S):	
Total WMP Weight:	188.6

CCP Radiography Data Sheet

Waste Container ID: 68374

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		9/25/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	68374	Count Sequence Number:	16589
Operator:	DCLTD231\Operator		
Assay Start:	10/2/2013 3:49:49 PM		
Description 1:	2LANDA1229		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gal Drum		
Weight:	Net: 189.0 kg	Net:	189.0 kg
Container:	Volume: 208.0 l	Full:	100.0 %
Density:	0.910 kg /l		

System Configuration

Counter:	HENC #2
Count Type:	Item Count
Collimator/Geometry Setting:	All Banks on GEO - 0

Errors quoted at 1.000 sigma

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number:	16589	Batch Number:	2LANDA1229
Assay Instrument:	HENC #2	Location:	LANL TA-54
Analysis Method:	CCP-TP-063 v 15	Software Version:	NDA 2000 V.4.0
Item ID:	68374	Analysis Date:	10/2/2013

Net Weight	189000.0 g		
Pu mass	1.19E+002	+-	2.53E+001 g
TRU Alpha Activity	2.25E+001	+-	3.29E+000 Ci
TRU Activity Concentration	1.19E+005	+-	1.74E+004 nCi/g
Pu-239 Equivalent Activity	2.28E+001	+-	3.29E+000 Ci
Pu-239 FGE	1.15E+002	+-	2.52E+001 g
Decay heat	7.29E-001	+-	1.08E-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	1.52E-006
U233	<LLD	<LLD	0.00E+000	1.56E-002
U234	1.18E-001	7.34E-004	1.64E-004	0.00E+000
U235	8.41E+000	1.82E-005	4.06E-006	4.61E-006
NP237	3.11E-001	2.19E-004	4.73E-005	4.08E-006
PU238	1.99E-002	3.40E-001	1.92E-001	3.79E-003
U238	2.03E+003	6.81E-004	1.52E-004	1.23E-004
PU239	1.09E+002	6.75E+000	1.56E+000	7.51E-002
PU240	9.90E+000	2.25E+000	5.24E-001	2.50E-002
AM241	3.83E+000	1.31E+001	2.84E+000	1.20E-001
PU241	1.59E-001	1.64E+001	3.82E+000	1.83E-001
PU242	1.35E-001	5.35E-004	1.84E-004	0.00E+000
AM243	1.96E-003	3.92E-004	8.52E-005	3.37E-005

Errors quoted at 1.000 sigma

Operator: _____ Date: 10-3-13

ITR: _____ Date: 10-4-13

Automated Independent Technical Review

Count Sequence Number: 16589 Batch Number: 2LANDA1229
Counter ID: HENC #2
Container ID: 68374
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 10/2/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis No Add-a-Source warnings.	Ok
Section 2 - Passive Neutron Analysis Analysis Status: No errors.	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 Results are marked as invalid.	MGA analysis failed. FRAM results applied. FRAM results attached.
Section 5 - Gamma Analysis Analysis Status: No errors.	Ok
Total U mass is greater than the upper limit of 500.0 g.	U235/U238 verified by gamma spectrum. Results valid.
Miscellaneous	No additional nuclides contributing to 95% of the radiological hazard identified.

Expert Review by: Sheri Chandler Date: 10-3-13

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **68374**

BDR Number: **LA13FG2106**

Sampling Date: **10/24/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	633.58	
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\131024c\
Data File : 68374.D
Acq On : 24 Oct 2013 1:22 pm (#1); 24-Oct-13, 13:21:53 (#2)
Operator : NW
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Oct 24 13:30:24 2013
Quant Method : C:\msdchem\1\METHODS\VOCGAS.M
Quant Title : Flammable Gas Analysis
QLast Update : Mon Aug 26 13:12:56 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
3) Fluorobenzene	3.591	96	5507971	205.75 ppmv	0.07
15) Chlorobenzene-d5	5.891	117	4268607	177.50 ppmv	0.03
Target Compounds					Qvalue
1) Hydrogen	1.622	GC1	4764m	633.58 ppmv	

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