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Los Alamos
NATIONAL LABORATORY
EST 1943

Environmental Protection Division
Environmental Compliance Programs (ENV-CP)
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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 0 9 2014
Symbol: ENV-DO-14-0240
LAUR: 14-26622
Locates Action No.: Not Applicable

RECEIVED
SEP 9 2014
NMED
Hazardous Waste Bureau

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

Dear Mr. Kieling:

Subject: Transmittal of Remediation and Repackaging Documentation for Nitrate Salt-Bearing Waste Containers – Package 9

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

The June 10, 2014, email received from Tim Hall, NMED, included a request for additional information for 267 original nitrate salt-bearing waste containers generated by the Permittees and all resulting repackaged/remediated containers. This submittal includes remediation and repackaging documentation for daughter containers resulting from the repackaging and remeditation of the 267 original nitrate salt-bearing waste containers and is the ninth 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 six (6) of the original 267 parent waste containers and all associated daughter and granddaughter waste containers. The enclosed documentation for each parent waste container is separated by a tab and documentation for the daughter containers are highlighted within each tab by colored pages. These parent containers and their daughter and granddaughter containers were listed in the *Nitrate Salt Drums with Associated Waste Stream and Location Data for 267 Original Parent and 707 Current/Remediated Daughter Containers* table (as revised and submitted to the NMED on July 17, 2014).

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

Sincerely,

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

Sincerely,

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

AMD:GET:MPH:LVH/lm

Enclosures: (1) Remediation and Repacking Documentation for Nitrate Salt-Bearing Waste Containers – Package 9

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 9
ENV-DO-14-0240
LA-UR-14-26622

September 2014

Los Alamos
NATIONAL LABORATORY
EST. 1943

ENCLOSURE 1

Remediation and Repacking Documentation for Nitrate Salt-Bearing Waste Containers – Package 9

ENV-DO-14-0240

LAUR-14-26622

Date: SEP 0 9 2014

PKG_ID	Intermediate Daughters	ParentID	Overpacked Into2
68429		S832320	SB50017
68562		S832320	
68563		S832320	
90814		S832448	
92150	90820	S832448	SB01997
92156	90822	S832448	
92164	90821	S832448	SB02006
92171	90818	S832448	
92563	90823	S832448	SB02052
92565	90819	S832448	
92567	90817	S832448	SB02089
92142	90870	S832464	SB02005
92215	90865	S832464	
92216	90865	S832464	
92217	90865	S832464	
92296	90866	S832464	
92339	90869	S832464	SB01967
92341	90867	S832464	
92345	90868	S832464	SB02093
68635		S832499	
68636		S832499	
68400		S833037	
68458		S833037	
68469		S833037	
90883		S833261	
92355	90884	S833261	
92671	90886	S833261	SB02054
92672	90886	S833261	
92682	90885	S833261	

S832320

S832320

Container Pr 747081

File Options Reports Help

S832320

747081	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

S832320

- S832320
  - LA00000068563 } WIPP
  - LA00000068562 } WIPP
  - LA00000068429 – LANL
    - LASB50017
  - LA00000068365 – EMPTY

Working Copy
Date: 10-30-13 JL

ATTACHMENT 1
Page 1 of 4

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: S832320

6.2[4] Date Processed: 10-30-13

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: NONE

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

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

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

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

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

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

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

Performed By: BRIAN GALLEGOS / Bri Nolling / 267129 / 10-30-13
Waste Handling Tech (print) Signature Z # Date

ATTACHMENT 1
Page 2 of 4

4.1[6][B] Parent Waste Container No.: S832320

5.[18] Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable: 425.8 lb

6.2[5][A] Parent Drum Lead Blanket Weight (lb): 830 lb

6.2[5][B]/ 6.2[6] Total Parent Drum Weight (lb) 508.8 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.: 5832320

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	68563	68562		
10.1[4]	Daughter Drum Filter No.	KM-766	KM-828	N	
10.1[4]	Daughter Drum Bag Filter No.	L-6766	L-10322	A	
10.1[4]	Daughter Drum Purchase Order No.	501578	501578		
10.1[13][C]	WCG Fire Watch Stationed		☐ YES	☐ NO	☑ N/A
10.1[14][C][d]3/11.1[3]	WCG Fire Watch Secured		☐ YES	☐ NO	☑ N/A
10.2[4]	POC bag-on bag: Manufacturer	BOP			
	Model No.	KPAC15-25VC			
	Serial No.	L-6744			
	Date of Manufacture	1/13			
10.2[5]	POC ID No	68429	N		
10.2[7][B]/10.2[6]	POC Item Description	NITRATE SALT	A		
10.2[13]	POC Assembly closed per Manufacturer's instructions. (Initial and Z#)	BG 267129			
10.2[14]	POC Assembly Gross Weight (lb)	395.8			
10.2[15]	POC Rad. Survey Results (mrem/hr)	1000		N	
10.3[3][A]	Approx. Containerized Liquid Vol./Units	N A			
10.3[5][A]	Free Liquid Volume/Units	2 GALLONS	1 LITER		A
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 (%)	90%	50%		
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.: S832320

Comments: ROOM TRASH, PLASTICS, NITRATE AND LEACHED, SALTS
lead shielding, Hazy Alnor gloves pretty litter

11.1[1] Performed By: Adrian Segovia / [signature] / 276902 / 10-31-13
Waste Handling Tech (print) Signature Z # Date

11.1[8] Reviewed By: Clayton Mellis / CM / 240092 / 10/31/13 0357
SOS or designee (print) Signature Z # Date/Time

Working Copy
Date: 6-28-13 gc

ATTACHMENT 2
Page 1 of 1

WCRRF OVERPACK DRUM ASSEMBLY PREPARATION DATA SHEET

5.[3] Overpack drum information:

Purchase Order No.: 501323
Lot No.: 0238025
Manufacture Date: 13

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

	Filtered Vent	2-in. Bung
M&TE No.:	1002116	0388369
Cal. Expiration Date:	12.18.13	12.18.13
Tolerance:	40-200	10-80

Overpack filtered vent information:

Manufacturer: NUCFIL
Model No.: 013
Serial No.: JL-1958
Manufacture Date: 10-11

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

5. [11] Performed By: Gerald Espinosa / [signature] / 1287720 / 6-28-13
Waste Handling Technician (print) Signature Z # Date

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

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

Comments: N/C

8.1[1] Performed By: Gerald Espinosa / [signature] / 1287720 / 6-28-13
Waste Handling Technician (print) Signature Z # Date

8.1[6] Reviewed By: Clayton Mullins / [signature] / 1240924 / 10/31/13
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 5
Page 1 of 1

Working Copy
Date: 10-30-13

WCRRF OVERPACK DRUM CLOSURE DATA SHEET

7.[17] Overpack Drum Unique Identifier No.: 68365

7.[23] Overpack drum closure ring torque wrench information:
M&TE No.: 036245
Cal. Expiration Date: 8-05-14
Range in ft-lb: 16-80
Tolerance: ±3% cw ±6% ccw

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

Performed By: Brian Gallegos / Bri Gallegos / 267129 / 10.30.13
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): 175.4 lb

Comments: N/C

8.1[1] Performed By: Adam Segovia / Adam Segovia / 276702 / 10-31-13
Waste Handling Technician (print) Signature Z # Date

8.1[7] Reviewed By: Clayton Mullins / CM / 240092 / 10/31/13
Supervisor or designee (print) Signature Z # Date

Working Copy
Date: 10-24-13

ATTACHMENT 1
Page 1 of 2

WCRRF DRUM PREPARATION DATA SHEET

5.[34][E] Drum ID No.: 685162

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.: 6cpvc1.525pvc
Serial No.: L-10322
Manufacture Date: 05/13

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

	Filtered Vent	2 in. Bung
M&TE No.:	100216	038369
Cal. Expiration Date:	12/18/13	12/18/13
Range in ft-lb:	40 - 200 in/lbs	10 - 80
Tolerance:	± 4% ± 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 Gallogos / Brian Gallogos / 247124 / 10-30-13
Andrew H. Romero / Andrew H. Romero / 187006 / 10/24/13
Operator (print) Signature Z # Date

5.[23] Filtered vent information:
Manufacturer: NUCFIL
Model No.: 019DS
Serial No.: ~~AHR L-10322~~ LM-828
Manufacture Date: ~~AHR 05/13~~ 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.: 685162

Comments: N/C

5.[35] Performed By: BRIAN GALLEGOS / B. Gallegos / 261129 / 10·30·13
Operator (print) Signature Z # Date

7.1[4] Reviewed By: Clayton Mullins / CM / 240041 / 10/31/13
Supervisor or designee (print) Signature Z # Date

Working Copy
Date: 10-30-13

ATTACHMENT 2
Page 1 of 2

WCRRF DRUM CLOSURE DATA SHEET

6.[3] Drum ID No.: 68562

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

M&TE No.: 036245
Cal. Expiration Date: 8-05-13
Range in ft-lb: 16-80
Tolerance: ±3% cw ±6% ccw

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

Performed By: BRIAN GALLEGOS / Bri Gallegos / 261129 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:		
Tolerance:		

N/A

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

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

6.[17][C] 2 in. bung plug torque value: _____ 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.: 68562

6.[26] Scale File ID number: 019065

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

6.[28] Drum gross weight: 298.4 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: Adam Segovia (Operator (print)) | [signature] (Signature) | 2767021 (Z #) | 10-31-13 (Date)

7.1[4] Reviewed By: Clayton Mullins (Supervisor or designee (print)) | [signature] (Signature) | 1240021 (Z #) | 10/31/13 (Date)

Working Copy
Date: 10-24-13

ATTACHMENT 1
Page 1 of 2

WCRRF DRUM PREPARATION DATA SHEET

5.[34][E] Drum ID No.: 68563

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.: 6cpk.i.525pk
Serial No.: L-6766
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 in lbs	10-80
Tolerance:	±4% cw 6% ccw	±3% cw ±6% ccw

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

Performed By: Brian Gallegos / Andrew H. Romero — Br Gallegos / Andrew H. Romero — 247129 / V370061 — 10.24.13 / 10/24/13
Operator (print) — Signature — Z# — Date

5.[23] Filtered vent information:
Manufacturer: NUCFIL
Model No.: 019DS
Serial No.: KM-766
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.: 68563

Comments: N/C

5.[35] Performed By: Brian Gallegos / Bri Gallegos / 267129 / 10.24.13
Operator (print) Signature Z # Date

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

Working Copy
Date: 10-30-13

ATTACHMENT 2
Page 1 of 2

WCRRF DRUM CLOSURE DATA SHEET

6.[3] Drum ID No.: 68563

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

M&TE No.: 036245
Cal. Expiration Date: 8-05-14
Range in ft-lb: 16-80
Tolerance: ±3% cw ±6% ccw

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

Performed By: Brian Gallegos / [signature] / 267129 / 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:		
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.: 68563

6.[26] Scale File ID number: 019065

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

6.[28] Drum gross weight: 287.0 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: BRIAN GALLEGOS / Brian Gallegos / 267129 / 10 30 13
Operator (print) Signature Z # Date

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

SP1
NS
72
HR
6-10

WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Production Control

Container ID: S832320 Container Type: 55-GAL Gross Weight (lbs): 436
Inner Seal #: 012013 Filter Prefix: LAVC Filter Serial #: 02808
AK Waste Stream: LA-MHD01.001 Certified RTR BDR: No BDR
TWSR Comments: LEACHED SOLIDS MST 12
Total PE-Ci Activity: 3.51E+00 Equivalent Combustible PE-Ci: 1.32E+00 AM-241 PE-Ci: 2.85E-01
Total Fissile Gram Equivalents: 38.8 Total Surface Dose Rate (mrem/hr): 1
EPA Code(s): None
NCR RTR/NDA Comment: None
RTR Pre-Screen Date: 6/25/2007 Comment: Liquids, Impenetrable Obj, Liquid Location: 24
Certified RTR Comment: None
Prohibited Items: ☐ Sealed > 4 Liters ☑ Liquid ☐ Pressurized Container ☑ Impenetrable Item ☐ Other
Security Determination: ☑ Green ☐ Yellow
Remediation Determination: ☑ VE ☑ PID ☐ Split ☑ Repack
Estimated 30-cm Dose Rate (mrem/hr): ☐ <100 ☑ >100 and <1,000 ☐ >1,000 and <10,000 ☐ >10,000
TRUCON Code: LA125M Production Control Comments: Ensure EPA Codes D007, D008, and D009 are on the label. A minimum of 1.2 volumes of kitty litter/zeolite must be mixed with 1.0 volume of nitrate salt

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

WDP Engineering

SUSAN S RAMSEY / Susan S Ramsey / 100681 / 11/28/12

Chemicals Present (e.g., pyrophorics, acids, bases, shock sensitive, organic liquids, peroxides, crown ethers): ☐ Yes ☑ No ☐ Unknown
Processing Determination: ☑ Accept ☐ Reject
WDP Engineering Comments: Leached solids - nitrate salts
Net Wt: 376lb. Four items - heaviest item weighs ~ 208lb and three items below 35lb.

May require RWP for >100 and <1000 mrem/hr @ 30 cm

Nitrate salts may contain undocumented liquids

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

TRU Remediation Operations

☑ Waste Container Information Evaluated ☐ Less Than 170 lbs ☐ RTR Video Available
Other Specific Safety Concerns: Do not push or press on waste with hands. Use Heavyweight gloves during processing
Processing Determination: ☑ Accept ☐ Reject
TRU Remediation Operations Comments: Use proper ratio of kitty litter to waste in accordance with the procedure

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

Joe Zerez / Joe Zerez / 221452 / 1-8-13
IHS Review Julius Amalbame CSP, No IH Concerns 12/4/12
ROBIN SHUIT / RS / 272995 / 1-13-14

Noncertified TRU Waste Drum Item Information

DrumID: 012013

Item No	ItemID	Process Status	Net Wt (kg)	Matrix	Meas Code	SNM (g)	MT	Auth (Pg/Ln)	Comments
1	IXFS-705FA		94.330	NITRATE SALTS		28.14	52	6/11	G468
2	IXFS-708FA		15.910	NITRATE SALTS		11.85	52	6/11	G468
3	IXFS-710FA		13.640	NITRATE SALTS		0.88	52	6/11	G468
4	IXFS-706FD		4.090	NITRATE SALTS		0.34	52	6/11	G468

Noncertified Waste Drum Material Summary

Gross Wt (kg): 197.7

Material Type	SNM (grams)	Items Net Wt (kg)
52	41.21	127.97
Totals	41.21	127.97

ATTACHMENT 1
Page 1 of 1

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

5.[1] Sample Date: 3/29/12

Container No. (5.[1])	5872449	5793718	5839140	5833037	5832330	5842234
Filtered Vent Type (5.[1])	72	72	72	72	72	72
WIPP-Approved Filtered Vent (5.[2])	☑ SAT ☐ UNSAT	☑ SAT ☐ UNSAT	☑ SAT ☐ UNSAT	☑ SAT ☐ UNSAT	☑ SAT ☐ UNSAT	☑ SAT ☐ UNSAT
Total CCP VOC value (< 7,000 ppm) (5.[4])	Ø ppm	Ø ppm	Ø ppm	Ø ppm	Ø ppm	Ø ppm
Hydrogen Reading (< 64,000 ppm) (5.[5])	Ø ppm	Ø ppm	Ø ppm	Ø ppm	Ø ppm	282.85 ppm
Methane Reading (< 16,000 ppm) (5.[5])	Ø ppm	Ø ppm	Ø ppm	Ø ppm	Ø ppm	Ø ppm

5.[7] Certified CCP Technician:

Performed By: Erik Lockhell / 234183
CCP (Print) Z#

Reviewed By: Sara Aragon / 237975
CCP (Print) Z#

Comments: N/C

6.1[2][A] (S) WCRRF waste container satisfies the following criteria: ☑ SAT ☐ UNSAT

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

6.1[2][B]/ 6.1[3] Performed By: Alicia Herrera / [signature] / 198450 / 4/2/12
Waste Handling Operator (print) Signature Z# Date

InstName : Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\120329c\
Data File : S832320.D
Acq On : 29 Mar 2012 3:31 pm (#1); 29-Mar-12, 15:30:28 (#2)
Operator : SA
Sample :
Misc : 55 GALLON LFL DRUM THROUGH FILTER, 72 FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 29 15:41:36 2012
Quant Method : C:\msdchem\1\METHODS\vocgas.m
Quant Title : Flammable Gas Analysis
QLast Update : Tue Mar 06 12:05:15 2012
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
3) Fluorobenzene	3.632	96	3704325	209.00 ppmv	0.00
15) Chlorobenzene-d5	5.948	117	2523933	185.50 ppmv	0.00

Target Compounds Qvalue

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

vocgas.m Thu Mar 29 15:41:46 2012

10-30-13

0412 Assuming w CERF operations center - Orlando
0415 Pre-job being conducted by SOS.
0645 Pre job concluded by SOS
0715 going off site to attend mandatory safety meeting
0840 returning from safety meeting
0935 mode change performed TA50-69 and WCRRF yard now in operational.
0940 late entry at 845 operators can not enter change room due to work being performed on door. CK.
1115 Operators entering to continue processing.
1322 Bagging off, Bagging on S816837
1350 Bag on, Bag off complete
1455 Starting inside rounds.
1502 Starting outside rounds.
1510 Item 63 is OOS, PCD in place okay to proceed, Per CSE documentation.
1515 Inside rounds complete.
1518 Outside rounds complete
1540 Bagging off 2 daughters, Bagging on S832320
1620 Bag on, Bag off complete.
1629 Starting movement into 50-69
1645 Rounds signed off by SOS.
1647 Conditional ~~release~~ release hold tag place on vehicle barriers by CSE no additional controls required the septum is operable. @10-30-13
1654 movement into 50-69 is complete.
1712 Starting movement out of 50-69
1735 Bagging off 1 daughter, 1 PCD and bagging on 1 PCD, 1 daughter. 10/30
1740 movement out 50-69 complete.
1802 Bag on, Bag off is complete.
10-30-13 1803 Relieved by CCO Terri Colman - Orlando

no further entries this page

10-30-13 DAYSHIFT

0610 Reviewed the shift turnover checklist and assumed the WCRR SOM position [illegible]

0647 Completed attending the pre-job brief conducted by the SOS (Darrel) The safety topic was driving and be cautious of others. Facility status was discussed and Roles and responsibilities assigned. The facility is in warm mode 50/69 and yard. The WCG is in a safe configuration. There are no transfers going out or to be received. gamma spec is scheduled for today. The SOS discussed vehicle Barrier requirements and safety class vs safety significants. All personnel are required to attend the Safety Meeting Scheduled at 0730

0708 Completed daily call in for POD updates with AREA G

0850 All personnel returned from the safety meeting.

0915 Completed review of the watch bill and Operations Control Status Board.

0935 Mode Change: WCRR YARD and 50/69 Facility transition from

0940 Notification was made to the OM and PM in regards to Operators unable to access lockers to obtain safety shoes. Crafts from a different AREA had spread glue on the floor and were laying tile.

1030 Discussed tile work with craft and notified PM of status.

1105 Operators initiated dressing out

1115 Operators enter 50/69 Facility to process and will rotate thru lunch

1200 Conducted room facility call in with SOM, PM, and Security.

1202 Characterization team arrived to initiate gamma spec in the parking lot. Direction was provided to the team by the SOM on drums requiring assay.

1322 Inside Operations report bag off of daughter and parent, and bag on of Parent drum 5816837.

1354 Inside Operations report bag off and bag on completed

1500 Completed review of TEN AOPs and supported validation with OCO.

1530 Characterization team - stopped work for the day and will reschedule if additional drums require assay. Currently 12 drums were gamma spec'd.

1541 Inside Operations report bagging off 2 daughters and bagging on 1 Parent 5832320.

1636 CSE (R. Griffis) requested to place a conditional release hold tag on the Vehicle Barrier Connecting Cable - Noting: No additional controls required. The system operable - The CR expiration date is 4-30-14 - Copy provided to OCD.

1735 Operations report bagging off 1 daughter and 1 POC and bagging on another daughter and continue processing -

(Continued on next page)

10-30-13 DAYSHIFT

1802 Conducted shift turnover with oncoming SOM and reviewed turnover checklist. Current drum on glove box Parent generated 1 daughter and 1 PDC which is bagged off. The Parent drum is 5832320

1810 Relieved by the oncoming SOM. R. Axtell [illegible]

No further entries this page
[illegible] 10-30-13

PAGE ENTRY DA

42 10/30/13 WCRRF SOS Log Book
43 0600 Assumed SOS position D1B
44 0615 Pre job briefing. ~~Briefed~~ Briefed to job hazards
45 Slips, Trips, Falls, Pinch Points. Time change and how it can effect
46 you. Stay focused while working. Make sure the horsetail is tight
47 before it is cut. Proper wearing of your PPE and how important
48 that is. Reviewed TSR question on vehicle barrier. Briefed to shift orders
49 0635 Pre job brief completed.
50 0705 Turn over SOS position to Gilbert Martinez D1B
51 0706 Assuming SES Position [illegible] operators will be Attending All hands
52 meeting.
53 0835 All operators back from Mandatory meeting
54 0845 Operators noted unable to get their PPE due to Floor Crews
55 working In change Room will be accessible In about 1½ hour.
56 0935 Mode change Complete WCRRF In operations.
57 1045 Operators Able to Enter Change Room and dress out
58 1115 Operators Entering 50-69 Continuing to Process
59 1322 Bagging off/on 5816837
60 1350 Bag on/off complete
61 1455 Starting Rounds.
62 1540 Bagging off 2 daughters Bagging on 5832320
63 1620 Bag on/off complete
64 1624 Starting Move Into 50-69
65 1645 Reviewed Inside And outside Rounds
66 1647 Conditional Release tag Placed on Vehicle Barriers by
67 CSE System To operable
68 1654 Move In Complete
69 1712 Starting move out of 50-69
70 1735 bag of Daughter And PEC bagging on Another Daughter
71 1740 Movement out of 50-69 Complete
72 1802 Bag on/off complete.
73 1802 Relieved by Clayton Mullins [illegible]
74
75 no
76 further
77 entries
78
79 on
80 this
81
82 page
83
84
85
86
87

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0123
Examination Date:	11/5/2013
Waste Container ID:	68429
Video/Audio Recorded Media Number:	LA-RTR2-13-0123 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.: 179.5 kg Tare Wt.: 145.1 kg Net Wt.: 34.4 kg
Rigid Liner and Liner Vent Description:	Liner: [ ] No [X] Yes Lid: [ ] No [X] Yes Type: [ ] 30-mil [X] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [X] Yes [ ] N/A Punctured: [ ] No [X] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [X] No [ ] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 1 layer
Volume Utilization Percentage:	90 %

CCP Radiography Data Sheet

Waste Container ID: 68429

Section 3: Container Inventory and Comments (Detailed descriptions)

IM:

AM:

OM:

OI:

C:

R:

XPM:

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	109.0
Plastics (PP): Rigid Liner/Lid, Liner Bag (Inside POC)	8.1
Other: Fiberboard (CP), Liner/Sleeve (Inside POC)	28.0
Total Packaging Weight	145.1
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	
Organic Matrix (OR):	
Inorganic Matrix (IN):	34.4
Soils (S):	
Total WMP Weight:	34.4

CCP Radiography Data Sheet

Waste Container ID: 68429

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	11/5/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	68429	Count Sequence Number:	16681
Operator:	DCLTD231\Operator		
Assay Start:	11/6/2013 9:26:30 AM		
Description 1:	2LANDA1238		
Description 2:	POC 179.5		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gal Drum		
Weight:	Net: 34.4 kg	Net:	34.4 kg
Container:	Volume: 208.0 l	Full:	95.0 %
Density:	0.768 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:	16681	Batch Number:	2LANDA1238
Assay Instrument:	HENC #2	Location:	LANL TA-54
Analysis Method:	CCP-TP-063 v 15	Software Version:	NDA 2000 V.4.0
Item ID:	68429	Analysis Date:	11/6/2013

Net Weight	34400.0 g		
Pu mass	1.03E+001	+- 5.55E+000	g
TRU Alpha Activity	4.09E+000	+- 2.34E+000	Ci
TRU Activity Concentration	1.19E+005	+- 6.79E+004	nCi/g
Pu-239 Equivalent Activity	4.11E+000	+- 2.34E+000	Ci
Pu-239 FGE	9.70E+000	+- 5.54E+000	g
Decay heat	1.35E-001	+- 7.75E-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	4.53E-007
U233	<LLD	<LLD	0.00E+000	5.19E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	1.83E-006
NP237	4.70E-002	3.31E-005	6.47E-006	1.29E-006
PU238	9.39E-004	1.60E-002	9.49E-003	5.34E-004
U238	<LLD	<LLD	0.00E+000	1.23E-005
PU239	9.64E+000	5.98E-001	3.43E-001	1.99E-002
PU240	6.16E-001	1.40E-001	8.28E-002	4.65E-003
AM241	9.74E-001	3.34E+000	2.31E+000	6.57E-002
PU241	1.18E-002	1.21E+000	7.18E-001	4.04E-002
PU242	2.06E-003	8.12E-006	4.81E-006	0.00E+000
AM243	1.10E-003	2.19E-004	4.30E-005	7.98E-006

Errors quoted at 1.000 sigma

Operator: _____ Date: 11/11/13

ITR: Jim Sutton Date: 11/11/13

Automated Independent Technical Review

Count Sequence Number: 16681 Batch Number: 2LANDA1238
Counter ID: HENC #2
Container ID: 68429
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 11/6/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis	
Add-a-Source WARNINGS:	
Add-a-Source correction factor is less than one.	Ok
Section 2 - Passive Neutron Analysis	
Analysis Status: No errors.	Ok
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.
Analysis Status: Override enabled; data marked not available but were used.	
Results taken from Quantitative Gamma data.	
Results comparison test passed.	

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

Expert Review by: Sheri Chamberlin Date: 11-7-13

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **68429**

BDR Number: **LA13FG2130**

Sampling Date: **12/18/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	311.60	
74-82-8	Methane	142.14	U
67-56-1	Methanol	35.23	U
60-29-7	Ethyl Ether	0.96	U
75-35-4	1,1-Dichloroethylene	6.38	U
67-64-1	Acetone	18.08	U
75-34-3	1,1-Dichloroethane	4.08	U
156-59-2	cis-1,2-Dichloroethene	0.76	U
78-93-3	Methyl ethyl ketone	11.73	U
110-82-7	Cyclohexane	5.10	U
71-43-2	Benzene	1.77	U
107-06-2	1,2-Dichloroethane	3.66	U
71-36-3	1-Butanol	1.84	U
108-10-1	Methyl isobutyl ketone	9.82	U
108-88-3	Toluene	8.02	U
108-90-7	Chlorobenzene	4.10	U
100-41-4	Ethylbenzene	3.57	U
108-38-3/106-42-3	m- and p-Xylene	1.92	U
95-47-6	o-Xylene	2.10	U
108-67-8	1,3,5-Trimethylbenzene	1.96	U
95-63-6	1,2,4-Trimethylbenzene	2.13	U

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

InstName : Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\131218c\
Data File : 68429.D
Acq On : 18 Dec 2013 2:22 pm (#1); 18-Dec-13, 14:21:18 (#2)
Operator : EL
Sample :
Misc : POC Through Filter (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Dec 18 14:29:55 2013
Quant Method : C:\msdchem\1\METHODS\VOCGAS.M
Quant Title : Flammable Gas Analysis
QLast Update : Mon Aug 26 13:12:56 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
3) Fluorobenzene	3.555	96	3374328	205.75 ppmv	0.04
15) Chlorobenzene-d5	5.858	117	2676520	177.50 ppmv	0.00
Target Compounds					Qvalue
1) Hydrogen	1.618	GC1	2343m	311.60 ppmv	

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

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination	[ ] RTR Replicate Scan [ ] RTR Independent Observation
Site ID:	LANL
Batch Number:	LA-RTR2-13-0124
Examination Date:	11/6/2013
Waste Container ID:	68562
Video/Audio Recorded Media Number:	LA-RTR2-13-0124 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.: 135.5 kg Tare Wt.: 33.4 kg Net Wt.: 102.1 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: 68562

Section 3: Container Inventory and Comments (Detailed descriptions)

IM:

AM:

OM: Scrap lead

OI:

C: Leather gloves

R:

XPM: Plastic bags

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP): Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	10.0
Other Inorganic Materials (OI)	
Cellulosics (C):	2.0
Rubber (R):	
Plastics (waste materials) (XPM):	4.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	86.1
Soils (S):	
Total WMP Weight:	102.1

CCP Radiography Data Sheet

Waste Container ID: 68562

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

Comments: The scan of this drum was performed by in-training operator Eddie Rios under the supervision of qualified operator Benito Maestas.

RTR Operator:

Print Name	Signature	Date
Benito Maestas/ Eddie Rios		11/6/2013

NDA 2000 Assay Report

Item Information

Item ID:	68562	Count Sequence Number:	16684
Operator:	DCLTD231\Operator		
Assay Start:	11/6/2013 3:29:03 PM		
Description 1:	2LANDA1238		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gal Drum		
Weight:	Net: 102.0 kg	Net:	102.0 kg
Container:	Volume: 208.0 l	Full:	75.0 %
Density:	0.650 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:	16684	Batch Number:	2LANDA1238
Assay Instrument:	HENC #2	Location:	LANL TA-54
Analysis Method:	CCP-TP-063 v 15	Software Version:	NDA 2000 V.4.0
Item ID:	68562	Analysis Date:	11/6/2013

Net Weight	102000.0 g		
Pu mass	1.37E+001	+-	6.00E+000 g
TRU Alpha Activity	1.03E+001	+-	1.70E+000 Ci
TRU Activity Concentration	1.01E+005	+-	1.66E+004 nCi/g
Pu-239 Equivalent Activity	1.04E+001	+-	1.70E+000 Ci
Pu-239 FGE	1.30E+001	+-	5.99E+000 g
Decay heat	3.42E-001	+-	5.62E-002 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	1.03E-006
U233	<LLD	<LLD	0.00E+000	8.32E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	2.43E-006
NP237	1.26E-001	8.87E-005	1.57E-005	1.88E-006
PU238	1.26E-003	2.15E-002	1.04E-002	7.57E-004
U238	<LLD	<LLD	0.00E+000	2.13E-005
PU239	1.29E+001	8.00E-001	3.71E-001	2.82E-002
PU240	8.24E-001	1.87E-001	9.09E-002	6.60E-003
AM241	2.72E+000	9.33E+000	1.65E+000	1.24E-001
PU241	1.58E-002	1.62E+000	7.89E-001	5.73E-002
PU242	2.75E-003	1.09E-005	5.28E-006	0.00E+000
AM243	2.78E-003	5.55E-004	9.86E-005	1.17E-005

Errors quoted at 1.000 sigma

Operator: _____ Date: 11/11/13

ITR: Ami Barton Date: 11/11/13

Automated Independent Technical Review

Count Sequence Number: 16684 Batch Number: 2LANDA1238
Counter ID: HENC #2
Container ID: 68562
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 11/6/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis	
Add-a-Source WARNINGS:	
Add-a-Source correction factor is less than one.	Ok
Section 2 - Passive Neutron Analysis	
Analysis Status: No errors.	Ok
Ones Rate Analysis complete with warnings.	
- Error calculating the Ones Rate Pu-240 Effective MDA.	Not data affecting.
Curium/Californium Neutron Analysis complete with warnings.	
- The Cm/Cf Mass Variance is negative, Cm/Cf Mass Uncertainty set to zero so analysis could continue.	Ok
- The Pu-240 Eff. Mass Variance is negative, Pu-240 Eff. Mass Uncertainty set to zero so analysis could continue.	Ok
Cosmic Ray Rejection Analysis complete with warnings.	
- The CRR High-Z mass Mass Variance is negative, High-Z mass Uncertainty set to zero so analysis could continue.	Ok

Comments	Disposition
Section 3 - Data Combiner Analysis Override enabled; Gamma data specified as input. 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: 11-7-13

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **68562**

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 : 68562.D
Acq On : 15 Nov 2013 10:08 am (#1); 15-Nov-13, 10:07:34 (#2)
Operator : SA
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Nov 15 10:16:03 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	3.561	96	4442600	205.75 ppmv	0.04
15) Chlorobenzene-d5	5.868	117	3465926	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-RTR2-13-0123
Examination Date:	11/5/2013
Waste Container ID:	68563
Video/Audio Recorded Media Number:	LA-RTR2-13-0123 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.: 130.5 kg Tare Wt.: 33.4 kg Net Wt.: 97.1 kg
Rigid Liner and Liner Vent Description:	Liner: [X] No [ ] Yes Lid: [X] No [ ] Yes Type: [ ] 30-mil [ ] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [ ] Yes [X] N/A Punctured: [X] No [ ] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [ ] No [X] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 2 layers
Volume Utilization Percentage:	70 %

CCP Radiography Data Sheet

Waste Container ID: 68563

Section 3: Container Inventory and Comments (Detailed descriptions)

IM:

AM:

OM: Scrap lead

OI:

C: Leather gloves

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):	2.0
Other Inorganic Materials (OI)	
Cellulosics (C):	0.5
Rubber (R):	
Plastics (waste materials) (XPM):	6.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	88.6
Soils (S):	
Total WMP Weight:	97.1

CCP Radiography Data Sheet

Waste Container ID: 68563

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	11/5/2013

NDA 2000 Assay Report

Item Information

Item ID:	68563	Count Sequence Number:	16677
Operator:	DCLTD231\Operator		
Assay Start:	11/5/2013 3:54:12 PM		
Description 1:	2LANDA1237		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gal Drum		
Weight:	Net: 97.1 kg	Net:	97.1 kg
Container:	Volume: 208.0 l	Full:	70.0 %
Density:	0.670 kg /l		

System Configuration

Counter:	HENC #2
Count Type:	Item Count
Collimator/Geometry Setting:	All Banks on GEO - 0

Errors quoted at 1.000 sigma

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number:	16677	Batch Number:	2LANDA1237
Assay Instrument:	HENC #2	Location:	LANL TA-54
Analysis Method:	CCP-TP-063 v 15	Software Version:	NDA 2000 V.4.0
Item ID:	68563	Analysis Date:	11/5/2013

Net Weight	97100.0 g		
Pu mass	3.36E+001	+-	6.53E+000 g
TRU Alpha Activity	1.67E+001	+-	7.71E+000 Ci
TRU Activity Concentration	1.72E+005	+-	7.94E+004 nCi/g
Pu-239 Equivalent Activity	1.68E+001	+-	7.71E+000 Ci
Pu-239 FGE	3.18E+001	+-	6.51E+000 g
Decay heat	5.50E-001	+-	2.56E-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	1.94E-006
U233	<LLD	<LLD	0.00E+000	1.97E-002
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	6.58E-006
NP237	2.48E-001	1.75E-004	3.15E-005	4.94E-006
PU238	3.07E-003	5.25E-002	1.31E-002	2.15E-003
U238	<LLD	<LLD	0.00E+000	4.34E-005
PU239	3.16E+001	1.96E+000	4.04E-001	7.99E-002
PU240	2.02E+000	4.58E-001	1.15E-001	1.87E-002
AM241	4.15E+000	1.42E+001	7.70E+000	1.99E-001
PU241	3.86E-002	3.97E+000	9.94E-001	1.62E-001
PU242	6.73E-003	2.66E-005	6.65E-006	0.00E+000
AM243	5.84E-003	1.17E-003	2.11E-004	2.58E-005

Errors quoted at 1.000 sigma

Operator: _____ Date: 11/7/13

ITR: Ami Bruton Date: 11/11/13

Automated Independent Technical Review

Count Sequence Number: 16677 Batch Number: 2LANDA1237
Counter ID: HENC #2
Container ID: 68563
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 11/5/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis No Add-a-Source warnings.	OK
Section 2 - Passive Neutron Analysis Analysis Status: No errors. Ones Rate Analysis complete with warnings. - Error calculating the Ones Rate Pu-240 Effective MDA.	OK Not data affecting.
Section 3 - Data Combiner Analysis Override enabled; Gamma data specified as input. Analysis Status: Override enabled; data marked not available but were used. Results taken from Quantitative Gamma data. Results comparison test passed.	Results taken from quantitative gamma data.
Section 4 - MGA Analysis Results are marked as invalid.	Isotopic analysis failed. AK isotopics applied. The AK information utilized was provided by Steve Schafer, AKE, and consists of data from CCP-AK-LANL-006, AK Source Document M237. MT-52.
Section 5 - Gamma Analysis Analysis Status: No errors. MCA Deadtime greater than the upper limit of 50.0%.	OK No spectral distortion observed.

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

Expert Review by: [signature] Date: 11/7/13

Waste Container ID: **68563**

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 : 68563.D
Acq On : 15 Nov 2013 12:44 pm (#1); 15-Nov-13, 12:43:59 (#2)
Operator : SA
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Nov 15 12:52:24 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	3.558	96	4460526	205.75 ppmv	0.04
15) Chlorobenzene-d5	5.861	117	3506824	177.50 ppmv	0.00

Target Compounds	Qvalue

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

S832448

S832448

Container P 70609

File Options Reports Help

S832448

770609	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

S832448
- S832448
  - 90824 - EMPTY
  - 90823
    - 92564 - EMPTY
    - 92563
      - SB02052
  - 90822
    - 92157 - EMPTY
    - 92156
  - 90818
    - 92172 - EMPTY
    - 92171
  - 90817
    - 92568 - EMPTY
    - 92567
      - LASB02089
  - 90821
    - 92165 - EMPTY
    - 92164
      - SB02006
  - 90820
    - 92151 - EMPTY
    - 92150
      - SB01997
  - 90819
    - 92566 - EMPTY
    - 92565
  - 90814

Working Copy
Date: 1-30-12 jc

ATTACHMENT 1
Page 1 of 3

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: S832448

6.2[4] Date Processed: 1-30-12

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.: 019069
Cal. Due Date: 9-3-12

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

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

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

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

Performed By: Michael Romero (print) / Michael Romero (Signature) / 1182723 (Z #) / 1-30-12 (Date)
Waste Handling Tech (print) Signature Z # Date

5.[16] Prepared Parent Drum Weight (lb): 428.4 lb

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

ATTACHMENT 1
Page 2 of 3

4.1[6][B] Parent Waste Container No.: 5832448

6.2[5][B]/ 6.2[6] Total Parent Drum Weight (lb) 428.4 lb

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

	Daughter Drums				
10.1[4]/10.2[4]	Daughter Drum No.	90814			
10.1[4]	Daughter Drum Filter No.	CL-1423		N	
10.1[4]	Daughter Drum Bag Filter No.	WO-1138		A	
10.1[4]	Daughter Drum Purchase Order No.	414992			
10.1[13][C]	WCG Fire Watch Stationed		☐ YES	☐ NO	☑ N/A
10.1[14][C][d]3/11.1[3]	WCG Fire Watch Secured		☐ YES	☐ NO	☑ N/A
10.2[4]	POC bag-on bag: Manufacturer	BOP	BOP	BOP	BOP
	Model No.	3CPVC1.5-25PVC	3CPVC1.5-25PVC	3CPVC1.5-25PVC	3CPVC1.5-25PVC
	Serial No.	WO-1297	WO-1478	WO-1298	WO-1339
	Date of Manufacture	6/11	6/11	6/11	6/11
10.2[5]	POC ID No	90817	90818	90819	90820
10.2[7][B]/10.2[6]	POC Item Description	plastic salts	plastic salts	plastics 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)	380.8	396.0	365.0	381.0
10.2[15]	POC Rad. Survey Results (mrem/hr)	160.25	130.5	800.5	600.5
10.3[3][A]	Approx. Containerized Liquid Vol./Units	N/A			
10.3[7][A]	Opaque/Non-penetrable Item Description:	Lead shielding			
10.3[5][A]	Free Liquid Volume/Units	8 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 (%)	95%			
10.5[4]	Description Waste Added During Processing	Plastic			

ATTACHMENT 1
Page 2 of 3

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

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

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

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.				
10.1[4]	Daughter Drum Filter No.				
10.1[4]	Daughter Drum Bag Filter No.				
10.1[4]	Daughter Drum Purchase Order No.				
10.1[13][C]	WCG Fire Watch Stationed		☐ YES	☐ NO	☑ N/A
10.1[14][C][d]3/11.1[3]	WCG Fire Watch Secured		☐ YES	☐ NO	☑ N/A
10.2[4]	POC bag-on bag: Manufacturer	Bop	Bop	Bop	Bop
	Model No.	3CPVC1.5-25PK	3CPVC1.5-25PK	3CPVC1.5-25PK	3CPVC1.5-25PK
	Serial No.	WO-1333	WO-1312	WO 1314	WO 1313
	Date of Manufacture	6/11	6/11	6/11	
10.2[5]	POC ID No	90821	90822	90823	
10.2[7][B]/10.2[6]	POC Item Description	Plastic salts	plastic salts	Plastic salts	plastics 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)	369.4	368.8	371.8	
10.2[15]	POC Rad. Survey Results (mrem/hr)	500	500.5	160.5	
10.3[3][A]	Approx. Containerized Liquid Vol./Units				
10.3[7][A]	Opaque/Non-penetrable Item Description:				
10.3[5][A]	Free Liquid Volume/Units				
10.3[9][A]	PCB-contaminated Waste Description				
10.3[9][B]	PCB Item ID No.				
10.3[10]	Remaining Waste Description				
10.3[13]/10.4[12]/ 10.5[5]	Daughter Drum % Full (%)				
10.5[4]	Description Waste Added During Processing				

ATTACHMENT 1
Page 3 of 3

4.1[6][B] Parent Waste Container No.: S832448

Comments: Salts Lead, Liquids, plastic

11.1[1] Performed By: Michael Romero Michael Romero 182723 11-30-12
Waste Handling Tech (print) Signature Z # Date

11.1[7] Reviewed By: Gilbert Marko [signature] 149251 2-2-12
SOS/SOM (print) Signature Z # Date

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

85-Gallon Overpack ID Number 90824

RECORD Drum Filter information:	NUCFil-013
Filter ID Number:	HK-1448
Date of Manufacture:	8/10

TORQUE WRENCH INFORMATION			
Filter Torque Wrench		**Drum Lid Ring Bolt**	
M&TE ID#		M&TE ID#	032122
Cal Expiration Date		Cal Expiration Date	9-19-12
			33% cw
Tolerance	N/A	Tolerance	36% 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 N/A	
		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
Michael Romero	Michael Romero	MR	182723	1-30-12
Technician Name (print)	Signature	Initials	Z#	Date

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

Drum ID#: 90814

1. Drum/Lid Assembly

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

RECORD drum information:

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

2. Drum Liner Bag/Filter Assembly:

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

RECORD bag filter information:

Manufacturer: BOP
Model #: BCPVC-25PDL
Serial #: W 0-1138
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
- [x] Line up filter with drum seam
- [x] Place liner/bag/filter assembly into drum
- [x] Roll excess liner bag into cardboard liner/plastic liner

4. Install Lid/Drum Filter

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

RECORD drum filter information:

Manufacturer: NUCFIL
Model #: 01905
Serial #: CC-1423
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% or ±6 in-lbs	Tolerance:	±3% or ±6 in-lbs

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

[x] Yes [ ] No

Print Name: Eddie Rios Signature: [signature] Z#: 182822

5. Weigh Drum Assembly

RECORD weight information

Tare witght (lbs) 75.0
File ID #: 019065

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

6. Label Drum Assembly

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

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

Operator Print: Eddie Rios Operator Sign: [signature] Z#: 182822 Date: 1-3-12

Verifier Print: Michael Romero Verifier Sign: [signature] Z#: 182723 Date: 1-30-12

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

DRUM ID#: 90814

1. LID INSTALLATION

NOTE: Install lid per manufacturer's instructions.

✓ Mount lid with filter directly over drum seam.

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

✓ Engage bolt and nut and torque per manufactures instructions.

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

✓ Tighten jam nut.

Record torque wrench information:

MT&E #: 032122

Cal expiration date: 9-18-12

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

Tolerance ±3% cw ±6% ccw

2. DRUM LABELING

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

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

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

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

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

RCRA Label:

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

OR

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

NOTE: Check only one of the above two boxes.

3. WEIGH DRUM ASSEMBLY

Record weight information:

Gross Weight(lbs.): 196.6

Scale ID#: 019065

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

4. FINALIZE DOCUMENTATION

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

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

✓ Complete TWSR.

Operator Print/Sign: [illegible] Date: 1.30.12

Verifier Print/Sign: Michael Romero Date: 1-30-12

WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Production Control

Container ID: S832448 — Container Type: 55-GAL — Gross Weight (lbs): 437 —

Inner Seal #: 010995 — Filter Prefix: LAVC — Filter Serial #: 05701

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

TWSR Comments: LEACHED SOLIDS MST 12 NITRATE SALTS —

Total PE-Ci Activity: 5.68E+00 — Equivalent Combustible PE-Ci: 2.13E+00 — AM-241 PE-Ci: 4.82E-01

Total Fissile Gram Equivalents: 61.8 — Total Surface Dose Rate (mrem/hr): 18 —

EPA Code(s): None —

NCR RTR/NDA Comment: None

RTR Pre-Screen Date: 4/26/2007 Comment: Impenetrable Obj. —

Certified RTR Comment: None

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

Security Determination: ☑ Green ☐ Yellow

Remediation Determination: ☑ VE ☐ PID ☐ Split ☐ Repack

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

TRUCON Code: LA125M Production Control Comments: Roc

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

WDP Engineering

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

Processing Determination: ☑ Accept ☐ Reject

WDP Engineering Comments: Leached solids - nitrate salts
Net Wt: 377lb, Eight items w/ 5 items weighing less than 30lb each, 1 item weighing 50lb; 1 item weighing 66lb; and heaviest item weighing ~90lb.
May require RWP for >1,000 and <10,000 mrem/hr at 30cm

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

TRU Remediation Operations

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

Other Specific Safety Concerns:

Processing Determination: ☑ Accept ☐ Reject

TRU Remediation Operations Comments:

Performed By: Vanessa Velarde / Vanessa Velarde / 234679 / 12-1-11
TRU Remediation Operations (Print) Signature Z Number Date

Noncertified TRU Waste Drum Item Information

DrumID: 010995

Item No	ItemID	Process Status	Net Wt (kg)	Matrix	Meas Code	SNM (g)	MT	Auth (Pg/Ln)	Comments
1	IXFS-724FD		12.730	NITRATE SALTS		5.52	52	6/11	G468
2	IXFS-723F1		3.860	NITRATE SALTS		0.	52	6/11	G468
3	IXFS-721FA		30.460	NITRATE SALTS		43.56	52	6/11	G468
4	IXFS-720FA		40.450	NITRATE SALTS		14.04	52	6/11	G468
5	IXFS-722FA		5.000	NITRATE SALTS		0.61	52	6/11	G468
6	IXFS-725FA		3.180	NITRATE SALTS		0.99	56	6/11	G468
7	IXFS-726-FA		22.730	NITRATE SALTS		0.52	52	6/11	G468
8	IXFS-727FD		6.820	NITRATE SALTS		0.55	52	6/11	G468

Noncertified Waste Drum Material Summary

Gross Wt (kg): 198.2

Material Type	SNM (grams)	Items Net Wt (kg)
52	64.8	122.05
56	0.99	3.18
Totals	65.79	125.23

ATTACHMENT 1
Page 1 of 2

HYDROGEN/VOC SAMPLING USING GAS CHROMATOGRAPHY DATA SHEET

7.[1] Sample Date: 1-12-11

7.[7] Certified CCP Technician:

CCP (Print)	Signature	Z #	Date
Gabe Romero	[redacted]	286993	1-13-11
	/	/	/

Container No. (7.[1]):	S832448 LS	52919 OM	S853711 OM
Container Type (SWB, 110/85/55-gal) (7.[1]):	55gal	55gal	55gal
Current Filter Vent No. (7.[1]):	72	19DS	72
New Filter Vent No.: (7.[8][A]):	72	19DS	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]):	S832448	52919	S853711
Hydrogen Reading (ppm) (7.[10]):	75169 ppm	Ø ppm	Ø ppm
Methane Reading (ppm) (7.[10]):	Ø ppm	Ø ppm	Ø ppm
Total VOC Reading (ppm) (7.[11]):	Ø ppm	Ø ppm	Ø ppm
Filter Type (7.[9][F][c]/7.[9][G][a]):	72	19DS	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	038371	N/A
Torque Wrench Calibration Due Date (7.[9][F][a]/7.[9][G][a]):	N/A	5/6/11	N/A
Torque Wrench Tolerance (7.[9][F][a]/7.[9][G][a]):	N/A	±3%	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	10 ft lbs.	N/A

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

Comments:
NC

11.1[1] Performed By: Alicia Herrera [signature] 198450 / 1-13-11
Waste Handling Operator (print) Signature Z # Date

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

☑ No deficiencies

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

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

11.1[7][B]/ 11.1[8] Reviewed By: Kenny Romero [signature] 1178861 / 1-26-11
Waste Handling Supervisor (print) Signature Z # Date

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\110112c\
Data File : S832448.D
Acq On : 12 Jan 2011 2:05 pm (#1); 12 Jan 2011 2:04 pm (#2)
Operator : SA
Sample :
InstName : Unit 8
Misc : 55 GALLON LFL DRUM FROM UNDER DRUM LID (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jan 12 14:12:45 2011
Quant Method : C:\msdchem\1\METHODS\Vocgas m
Quant Title : Flammable Gas Analysis for Transportation
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
3) Fluorobenzene	3.246	96	4615410	209.00 ppm	0.00
15) Chlorobenzene-d5	5.933	117	3798505	184.00 ppm	0.00
Target Compounds					Qvalue
1) Hydrogen	5.356	GC1	190340	751.69 ppm	100

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

Vocgas.m Wed Jan 12 14:13:12 2011

309.19
1-30-12 PROJECT NAME NOTEBOOK NO.

0550 Assuming WCRR operations center. JColeman
0557 Beginning outside and inside rounds.
0620 Outside rounds complete.
0623 Item #61 is OOS on the rounds. Per CSE, we are Okay to proceed
0624 Pre-job brief being conducted by SOS.
0630 Inside rounds complete.
0730 Mode change complete. We are now in operations. (JC)
0731 Late entry, at 0655, the rounds were reviewed by SOS.
0815 Bagging on drum # S832448.
0856 Operators currently pausing until more absorbent is bagged up and sent inside.
0930 Currently at a standstill due to inventory issue. 2 drums currently in the transportainer do not have PE-Ci's assigned to them and they are not carried on the inventory spread sheet.
0950 Entering LCO's t. JC 1-30-12 3.0.1 and 3.1. (Inventory limits).
0955 Fire patrol being performed.
1022 Introducing absorbent through the introductory port. Per SOM, the operators will finish this drum and place everything in a safe configuration. They will not bag another drum on.
1040 Introduction of absorbent complete.
1050 Fire patrol being performed.
1132 Introducing bags, supplies through the introductory port.
1139 Per SOM, we are sending in camera to take pictures of the drum currently bagged on.
1225 Operators going to lunch.
1226 Late entry - at 1150, fire patrol performed. (JC)
1250 Fire patrol performed.
1313 Initiating a drum movement from transportainer to the transfer vehicle for a shipment to Area G.
1342 Permission granted to lower vehicle access gates.
1425 Vehicle barriers restored. Transportainer secured. Transfer vehicle loaded with shipment to Area G.
Late entry at 1345 Inventory control has assigned #65223 to 10136862 and assigned the isotopic value of 8 PECi. (JC)
Lunch 1350 ~~1425~~ JC 1-30-12 Fire patrol being performed.
1500 Beginning inside rounds.
1503 Bagging off #S832448
1504 Initiating a drum movement from SD 69 to a transportainer.
1514 Item #61 on the rounds is OOS. Per CSE, we are Okay to proceed.
1528 Late entry - at 1515 personnel arrived to perform sampling on 3 drums (65223, 10041051, 10041052) (JC)
Continued on next page. JColeman

SIGNATURE DATE 20
READ AND UNDERSTOOD DATE 20

PROJECT NAME WCCR SOS LOG BOOK NOTEBOOK NO

1.13.12

0602 Reviewed SOS Turnover Assuming SOS Position

0615 Conducted shit brief went over standing order EP-DIV-SO-20038, RO, EP-DIV-SO-20035, RO And EP-WCCR-WO-DOP-0233 R32

0650 Shift brief concluded

0700 Reviewed Inside And outside Rounds.

0715 Waiting on RCTs to perform Calibration on PCM

0856 notified by Inside personal Absorbent needed In Facility

0910 notified by operation center A Issue with Inventory limits pausing work momentarly

0950 Entering Apropiate LCO's for Inventory Limits In transportation

1135 Per Som ok to finish Drum on the Box.

1540 Exiting LCO's

1605 Reviewed INSIDE Rounds

1620 Reviewed Outside Rounds

1630 End of shift securing SOS Position

GWO 2/10/12

no further entries on this page

SIGNATURE _____ DATE _____ 20

READ AND UNDERSTOOD _____ DATE _____ 20

PROJECT NAME 1·30·12 NOTEBOOK NO.

0650 Reviewed turnover from previous shift and assuming WCRRF Sum position.

0730 WCRRF and TA-50-69 went from Warm Standby to Operations Mode

0735 Late Entry: 0715 RCT and Calibration personnel ~~[illegible]~~ 1/30/12 were checking into the Operations Center to perform calibration of instruments. I stopped them and told them to re-schedule when we are in Cold Standby. They were going to take in equipment that were not part of compatible loading.

0947 Notified by the Operations Center that we have two drums 55-1/30/12 65216 & 65211 that are not being carried on the inventory spreadsheet. I instructed the Operations Center enter the LCO for Inventory limits 3.0.1 and 3.1.2 Condition B and actions B.2.1, B.2.2, B.2.3. Inventory Control and LLW Gamma Spec team are working to resolve the issue to make a determination if they should be LLW or TRU.

1030 Notified Inventory Control that we are not going to exit LCOs 3.0.1 and 3.1.2 until we have 100% accountability and inventory limits.

1217 Notified by Inventory Control that we are missing paperwork on 10136862, 10041051, 10041052. They are confirmed not to have been gamma spec data nor was the 8 PE-Ci value assigned. DM notified & RDE

1255 DM notifying the project manager of the issue

1413 Per DM notification was. Categorization was Group 3 Sub-A

1414 Late Entry: 1340 8PE-Ci value was assigned to 10136862 and became 65223.

1433 Per Engineering manager and RDD not a DSR violation but it is a procedure violation. Per procedure the drum should have been assigned the administrative value of 8PE-Ci. Drum# 10041051 & 10041052 not 1/30/12 an issue.

1537 Exited LCO's 3.0.1 and 3.1.2 ~~with~~ with Engineering and DM.

1620 WCRRF and TA-50-69 went from Operations Mode to Warm Standby and securing the watch

SIGNATURE DATE 1·30· 20 12

READ AND UNDERSTOOD DATE 20

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-12-0123
Examination Date:	10/25/2012
Waste Container ID:	90814
Video/Audio Recorded Media Number:	LA-RTR2-12-0123 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 12
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA225
Waste Matrix Code:	S5400
Waste Stream I.D.:	LA-MHD01.001
Waste Container Weights:	Gross Wt.: 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 3 layers
Volume Utilization Percentage:	75 %

CCP Radiography Data Sheet

Waste Container ID: 90814

Section 3: Container Inventory and Comments (Detailed descriptions)

IM: Scrap metal, hardware

AM:

OM: Scrap lead

OI:

C: Tape roll

R: Rubber gloves

XPM: Plastic bags, PLASTIC LSO NW 10-26-12

OR:

IN: Absorbent

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP):Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	0.1
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	25.0
Other Inorganic Materials (OI)	
Cellulosics (C):	0.5
Rubber (R):	1.5
Plastics (waste materials) (XPM):	10.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	19.0
Soils (S):	
Total WMP Weight:	56.1

CCP Radiography Data Sheet

Waste Container ID: 90814

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~~ TJH 10-26-12
OPERATOR DID NOT CALL PLASTIC LID DURING SCAN. TJH 10-26-12

RTR Operator:		
	Thad Hasselstrom	10-26-12
Thad Hasselstrom	Thad Hasselstrom	10/25/2012
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	90814	Count Sequence Number:	21482
Operator:	D3PW2DK1\operator		
Assay Start:	10/26/2012 10:57:47 AM		
Description 1:	1LANDA1662		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6, Not Precision		
Matrix Type:	Debris S5000		
Container Type:	55 gallon drum		
Weight:	Net: 56.1 kg	Net:	56.1 kg
Container:	Volume: 208.0 l	Full:	75.0 %
Density:	0.360 kg /l		

System Configuration

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

Errors quoted at 1.000 sigma

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number:	21482	Batch Number:	1LANDA1662
Assay Instrument:	MCS HENC #1	Location:	LANL TA-54
Analysis Method:	CCP-TP-063 v 14	Software Version:	NDA 2000 V.4.0
Item ID:	90814	Analysis Date:	10/26/2012

Net Weight	56100.0 g			
Pu mass	6.82E+000	+-	2.22E+000	g
TRU Alpha Activity	4.21E+000	+-	4.98E-001	Ci
TRU Activity Concentration	7.50E+004	+-	8.88E+003	nCi/g
Pu-239 Equivalent Activity	4.23E+000	+-	4.98E-001	Ci
Pu-239 FGE	6.44E+000	+-	2.08E+000	g
Decay heat	1.39E-001	+-	1.66E-002	W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	6.28E-002	4.48E-005	5.74E-006	1.79E-006
PU238	6.28E-004	1.09E-002	3.55E-003	3.32E-005
PU239	6.39E+000	4.02E-001	1.31E-001	1.23E-003
PU240	4.20E-001	9.66E-002	3.15E-002	2.95E-004
AM241	1.07E+000	3.70E+000	4.79E-001	3.75E-002
PU241	8.64E-003	8.98E-001	2.93E-001	2.74E-003
PU242	1.37E-003	5.42E-006	1.77E-006	0.00E+000
SR90	7.80E-009	1.08E-006	6.56E-007	0.00E+000
CS137	1.23E-008	1.08E-006	6.56E-007	5.56E-007
U233	<LLD	<LLD	0.00E+000	3.73E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	1.02E-006
U238	<LLD	<LLD	0.00E+000	1.24E-005
AM243	7.76E-004	1.57E-004	2.05E-005	5.00E-006

Errors quoted at 1.000 sigma

Operator: [signature] Date: 10-30-12

ITR: Beverly Brown Date: 10/31/12

Automated Independent Technical Review

Count Sequence Number: 21482 Batch Number: 1LANDA1662
Counter ID: MCS HENC #1
Container ID: 90814
Waste Matrix Code: Debris S5000 Count Type:
Sequence Type: Assay Date: 10/26/2012

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

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

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

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **90814**

BDR Number: **LA12FG12048**

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

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	129.57	
74-82-8	Methane	9.63	U
67-56-1	Methanol	45.95	
60-29-7	Ethyl Ether	1.77	U
75-35-4	1,1-Dichloroethylene	5.36	U
67-64-1	Acetone	11.55	U
75-34-3	1,1-Dichloroethane	2.29	U
156-59-2	cis-1,2-Dichloroethene	0.36	U
78-93-3	Methyl ethyl ketone	2.55	U
110-82-7	Cyclohexane	2.09	U
71-43-2	Benzene	0.47	U
107-06-2	1,2-Dichloroethane	0.92	U
71-36-3	1-Butanol	0.54	U
108-10-1	Methyl isobutyl ketone	3.11	U
108-88-3	Toluene	2.73	U
108-90-7	Chlorobenzene	0.87	U
100-41-4	Ethylbenzene	1.15	U
108-38-3/106-42-3	m- and p-Xylene	0.59	U
95-47-6	o-Xylene	0.63	U
108-67-8	1,3,5-Trimethylbenzene	0.72	U
95-63-6	1,2,4-Trimethylbenzene	0.78	U

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

Quantitation Report (QT Reviewed)

InstName : FGA Unit 12

Data Path : C:\msdchem\1\DATA\121031C\
Data File : 90814.D
Acq On : 31 Oct 2012 2:36 pm
Operator : RJ
Sample :
Misc : 55 Gallon drum through filter (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Oct 31 14:44:54 2012
Quant Method : C:\msdchem\1\METHODS\VOCGAS.M
Quant Title : Flammable Gas Analysis for Transportation Only
QLast Update : Wed Oct 03 14:43:18 2012
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
3) Fluorobenzene	4.057	96	5991257	204.00	ppmv	0.00
15) Chlorobenzene-d5	6.636	117	6279425	179.25	ppmv	0.00
Target Compounds						Qvalue
1) Hydrogen	1.923	GC1	36595	129.57	ppmv	100
4) Methanol	0.827	31	32078	45.95	ppmv	100

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

UET Working Copy
Date: 1-12-13 OV

ATTACHMENT 1
Page 1 of 4

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: 90817

6.2[4] Date Processed: 1-12-13

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

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

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

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

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

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

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

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

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

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

Performed By: BRIAN GALLEGOS B. Gallegos / 247129 1-12-13
Waste Handling Tech (print) Signature Z # Date

ATTACHMENT 1
Page 2 of 4

4.1[6][B] Parent Waste Container No.: 90817

5.[18] Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable: 3860 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) 3860 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
	MH	/	/

ATTACHMENT 1

Page 3 of 4

4.1[6][B] Parent Waste Container No.: 90817

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	92567			
10.1[4]	Daughter Drum Filter No.	AM-1016		N	
10.1[4]	Daughter Drum Bag Filter No.	L-4417		A	
10.1[4]	Daughter Drum Purchase Order No.	501011			
10.1[13][C]	WCG Fire Watch Stationed		☐ YES	☐ NO	☑ N/A
10.1[14][C][d]3/11.1[3]	WCG Fire Watch Secured		☐ YES	☐ NO	☑ N/A
10.2[4]	POC bag-on bag: Manufacturer				
	Model No.				
	Serial No.				
	Date of Manufacture				
10.2[5]	POC ID No				
10.2[7][B]/10.2[6]	POC Item Description				
10.2[13]	POC Assembly closed per Manufacturer's instructions. (Initial and Z#)				
10.2[14]	POC Assembly Gross Weight (lb)				
10.2[15]	POC Rad. Survey Results (mrem/hr)		N		
10.3[3][A]	Approx. Containerized Liquid Vol./Units		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	BAG OUT STUBS		N	
10.3[13]/10.4[10]/ 10.5[4]/10.6[8]	Daughter Drum % Full (%)	100%		A	
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.: 90817

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

11.1[1] Performed By: BRIAN GALLEGOS, [signature] R67129 1-12-13
Waste Handling Tech (print) Signature Z# Date

11.1[7] Reviewed By: GMK, [signature] 1452311.13/3 0815
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-76
Manufacture Date: 9/11

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

	Filtered Vent	2 in. Bung
M&TE No.:	040694	038367
Cal. Expiration Date:	9-26-13	3-16-13
Tolerance:	40-200	10-80

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

Performed By: Gerald Espinoza / [signature] 128[illegible] 1-9-13
Waste Handling Technician (print) Signature Z # Date

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

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

Comments: N/C

8.1[1] Performed By: Gerald Espinoza / [signature] 128[illegible] 1-9-13
Waste Handling Technician (print) Signature Z # Date

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

8.1[7] Reviewed By: G[illegible] / [signature] 146[illegible] 1.13.13
Supervisor or designee (print) Signature Z # Date

Working Copy
Date: 1-12-13

ATTACHMENT 5
Page 1 of 1

WCRRF OVERPACK DRUM CLOSURE DATA SHEET

7.[19] Overpack Drum Unique Identifier No.: 92568

7.[25] Overpack drum closure ring torque wrench information:
M&TE No.: 021151
Cal. Expiration Date: 6-11-13
Range in ft-lb: 14-80
Tolerance: ±3% CW ± 6% CCW

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

Performed By: BRIAN GALLEGOS / [signature] 267129 1-12-13
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): 321.2 lb

Comments: N/C

8.1[1] Performed By: BRIAN GALLEGOS / [signature] 267129 1-12-13
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] 145235 1.13.13
Supervisor or designee (print) Signature Z# Date

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

Drum ID#: 92567

1. Drum/Lid Assembly

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

RECORD drum information:

Purchase Request #: 501011
Lot #: 0233370
Date of Manufacture: 12

2. Drum Liner Bag/Filter Assembly:

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

RECORD bag filter information:

Manufacturer: BOP
Model #: 6CPVC-1.5-2PVC
Serial #: L-4417
Date of Manufacture: 7-12

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

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

4. Install Lid/Drum Filter

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

RECORD drum filter information:

Manufacturer: NUCFIL
Model #: 019DS
Serial #: AM-1016
Date of Manufacture: 1-12

RECORD torque wrench information:

Filter torque wrench:		Jam Nut / Bung torque wrench:	
M&TE ID #:	040694	M&TE ID #:	038367
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:	±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: BRIAN GALLEGOS Signature: [signature] Z#: 267129

5. Weigh Drum Assembly

RECORD weight information

Tare wtght (lbs) 76.0
File ID #: 019065

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

6. Label Drum Assembly

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

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

Operator Print: Brandon Chavez Operator Sign: [signature] Z#: 204742 Date: 1-9-13

Verifier Print: BRIAN GALLEGOS Verifier Sign: [signature] Z#: 267129 Date: 1-12-13

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

DRUM ID#: 92567

1. LID INSTALLATION

NOTE: Install lid per manufacturer's instructions

✓ Mount lid with filter directly over drum seam.

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

✓ Engage bolt and nut and torque per manufactures instructions.

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

✓ Tighten jam nut.

Record torque wrench information:

MT&E #: 021151

Cal expiration date: 6-11-13

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

--- Tolerance ±3% cw ±6% ccw

2. DRUM LABELING

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

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

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

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

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

RCRA Label:

BG 1-12-13 — ✓ 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): 261.0

Scale ID#: 019025

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

4. FINALIZE DOCUMENTATION

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

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

✓ Complete TWSR.

Operator Print/Sign: [signature] Date 1-12-13

Verifier Print/Sign: [signature] Date: 1-12-13

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WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Production Control

Container ID: 90817 Container Type: POC Gross Weight (lbs): 381

Container Seal #: None Filter Prefix: None Filter Serial #: EL-220; EL-538

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

TWSR Comments: PARENT #S832448 WTS-12STD-718

Total PE-Ci Activity: 7.10E-01 Equivalent Combustible PE-Ci: 2.66E-01 AM-241 PE-Ci: 6.03E-02

Total Fissile Gram Equivalents: 7.7 Total Surface Dose Rate (mrem/hr): 1

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

NCR RTR/NDA Comment: None

RTR Pre-Screen Date: None Comment: None

Certified RTR Comment: None

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

Security Determination: ✓ Green ☐ Yellow

Remediation Determination: ☐ VE ☐ PID ☐ Split ☑ Repack

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

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

Nitrate salts mixed with 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 / Production Control (Print) Signature: Susan B. Ramsey Z Number: 100681 Date: 9/6/12

WDP Engineering

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

Processing Determination: ☑ Accept ☐ Reject

WDP Engineering Comments: Nitrate Salts – POC

Net Wt: 71 lb Parent drum (SEDS attached) was part of WCRR nitrate salt repack campaign using Waste Lock 770®. This resulting daughter POC is being repacked to adjust the admixture/nitrate salt ratio. Nitrate salts carry waste codes for [redacted] 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 proper PPE to process waste. Do not push or press on waste with hands. Utilize heavy duty gloves & tools to handle waste.

Processing Determination: ✓ Accept] Reject

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

Performed By: Jose Jerez / TRU Remediation Operations (Print) Signature: Jose Jerez Z Number: 221452 Date: 10-9-12

OK Z# 249250 10/18/12

IHS REVIEW: AB 206362 10.4.12

Noncertified TRU Waste Drum Item Information

DrumID: 010995

Item No	ItemID	Process Status	Net Wt (kg)	Matrix	Mass Code	SNM (g)	MT	Auth (Fg/Ln)		Comments
1	IXFS-724FD		12.730	NITRATE SALTS		5.52	52	6/11	G468	
2	IXFS-723F1		3.860	NITRATE SALTS		0.	52	6/11	G468	
3	IXFS-721FA		30.460	NITRATE SALTS		43.56	52	6/11	G468	
4	IXFS-720FA		40.450	NITRATE SALTS		14.04	52	6/11	G468	
5	IXFS-722FA		5.000	NITRATE SALTS		0.61	52	6/11	G468	
6	IXFS-725FA		3.180	NITRATE SALTS		0.99	56	6/11	G468	
7	IXFS-726-FA		22.730	NITRATE SALTS		0.52	52	6/11	G468	
8	IXFS-727FD		6.820	NITRATE SALTS		0.55	52	6/11	G468	

Noncertified Waste Drum Material Summary

Gross Wt (kg): 198.2

Material Type	SNM (grams)	Items Net Wt (kg)
52	64.8	122.05
56	0.99	3.18
Totals	65.79	125.23

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])	90817					
Container type sampled (e.g., 55-gal, 85-gal, 110-gal, or SWB) (5.[1])	55gal					
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: ~~NONE~~ Per attached email, container was verified as a POC. am 10.4.12

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 : 90817.D
Acq On : 3 Oct 2012 2:57 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 15:09:10 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	2162521	206.00 ppm	0.00
15) Chlorobenzene-d5	5.936	117	1948692	179.50 ppm	0.00

Target Compounds	Qvalue

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

Vocgas.m Wed Oct 03 15:09:23 2012

12-13
0600 Assuming WCRRF operations center - Orlando.
0611 SOS performing pre job briefing.
0643 pre job has been concluded.
0657 starting inside rounds.
0708 Starting outside rounds.
0715 Item #61 is OOS, PPD is in place, OK to continue.
0718 Inside rounds completed.
0736 outside rounds complete.
0738 Inventory control system is not working pete wide.
0745 Inside and Outside rounds signed off by SOS.
0830 Inventory control system is back up.
0833 Mode change performed TA50-69 and WCRRF yard now in Operations.
0906 bagging on 90805
0918 bag on complete. PPE check is SAT
0955 Starting movement into 50-69
1008 completed movement into 50-69
1012 PPE check is sat.
1019 bagging off 90805, bagging on 90812
1048 bag on, bag off is complete, PPE check is sat.
1122 starting movement out of TA50-69 to transportation
1147 bagging off 90812 and bagging on 90823
1213 bag on, bag off complete, PPE check is sat.
1230 Operators breaking for lunch.
1339 PPE Check is sat.
1433 bagging off 90823, bagging on 90819. PPE Check is sat
1500 bag off, bag on complete.
1527 Starting movement into 50-69
1532 Starting inside rounds.
1538 Completed movement out of transportation to 50-69
1556 starting outside rounds.
1557 Completed inside rounds, PPE check is sat.
1606 bagging off 90819, bagging on 90817.
1625 inside and outside rounds signed off by SOS.
1633 bag on, bag off complete PPE Check is sat.

Continued on next page - Orlando

92574
- Int Daughdr - 90859

1-12-13 Continued from previous page - Chlorade
1736 bagging off 70817. FFE check is out.
1758 bag off is complete.
1813 mode change performed TM 50-69 and WCRF
yard now on Dam standby.
1-12-13
1850 ~~1000~~ end of day WCRCF operations center secure Chlo

Continued on next page

1.12.13 WCRR SOS LOG Book

0600 Assuming SOS Position [illegible]

0610 Conducted shift brief discussed OSH weather issues

0643 Conducted shift brief

0645 Having issues with crane [illegible]

0647 Sam working Issue need to set Feed pump to [illegible]

0745 Reviewed Inside and outside Records

0750 Unable to process out a boat being down.

0830 Crane System has been repaired. Attempted Drawing out the new facility

0833 Mode change Complete WCRRF Inoperations

0906 Bagging on First drum 90805

0918 PPE check

1012 PPE check

1019 Bagging off and bagging on 90812

1045 PPE check

1147 Bagging off and bagging on 90823

339 PPE check off

1433 Bagging off and bagging on 90519 PPE check

1446 Bagging off and bagging on 90817

1625 Inside And outside Records reviewed

1635 Bagging off [illegible] drum off [illegible]

[illegible] [illegible] complete [illegible]

1[illegible] [illegible] et [illegible] [illegible] [illegible]

[illegible] continues on this page

Best Available Copy

1/12/13

0600 Reviewed WCRR SOM turnover checklist and assumed WCRR SOM position

0605 Notified by SOS that Oracle system is down and unable to print labels. Inventory control is trouble shooting.

0645 Attended pre job brief conducted by SOS. Discussed problem w/ Oracle and backup plan is to have operators complete training on-line, required reading, etc. Safety topic w/ cold weather is to dress in layers if conducting outside work and proper PPE/Operation of spotter during forklift movements.

0645 Determined Oracle is down both @ WCRR and TA-54. OM notified and contacting Waste services to bring in on call personnel to repair/reboot.

0830 Inventory control verified Oracle system back in operation

~~0833 0835~~ 0830 1/12/13 Completed mode change WCRR Yard/Blds 50-69 from Warm/Warm to Operations/Operations

0835 (Late Entry 0831) Notified OM and TA-54 SOM of WCRR Oracle status.

0905 Notified by Inventory Control that ability to print TWSR forms via SWOOSH database is not working - verified that TA-54 is having same problem. Will not prevent WCRR from operations (processing) but cannot prepare outgoing shipments w/out capability

0904 Bagging on first drum.

1300 Updated DDP PM of WCRR status.

1530 Toured inside WCRR yard w/ SSW to observe drum movements. While conducting tour a posting identified on door leading into respirator room had SOM signature/date faded from weather.

1813 Completed Mode Change: WCRR Yard/Blds 50-69 from Operations/Operations to Warm/Warm.

1830 Secured SOM position

No further entries this page

1/12 13

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0040
Examination Date:	3/8/2013
Waste Container ID:	92567
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.: 118.5 kg Tare Wt.: 33.4 kg Net Wt.: 85.1 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: 92567

Section 3: Container Inventory and Comments (Detailed descriptions)

IM: Metal hardware, pipe component lid

AM:

OM:

OI:

C: Fiberboard liner sleeve, fiberboard

R:

XPM: 90 mil plastic liner lid, plastic bags

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP): Plastic Liner Bag	2.0
Other: Fiberboard Liner (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	18.0
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	
Other Inorganic Materials (OI)	
Cellulosics (C):	8.0
Rubber (R):	
Plastics (waste materials) (XPM):	6.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	53.1
Soils (S):	
Total WMP Weight:	85.1

CCP Radiography Data Sheet

Waste Container ID: 92567

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:	92567	Count Sequence Number:	15281
Operator:	DCLTD231\Operator		
Assay Start:	3/14/2013 2:59:20 PM		
Description 1:	2LANDA1118		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gal Drum		
Weight:	Net: 85.1 kg	Net:	85.1 kg
Container:	Volume: 208.0 l	Full:	65.0 %
Density:	0.630 kg /l		

System Configuration

Counter:	HENC #2
Count Type:	Item Count
Collimator/Geometry Setting:	All Banks on GEO - 0

Errors quoted at 1.000 sigma

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number:	15281	Batch Number:	2LANDA1118
Assay Instrument:	HENC #2	Location:	LANL TA-54
Analysis Method:	CCP-TP-063 v 14	Software Version:	NDA 2000 V.4.0
Item ID:	92567	Analysis Date:	3/14/2013

Net Weight	85100.0 g		
Pu mass	6.73E+000	+-	2.41E+000 g
TRU Alpha Activity	6.86E+000	+-	3.43E+000 Ci
TRU Activity Concentration	8.06E+004	+-	4.03E+004 nCi/g
Pu-239 Equivalent Activity	6.87E+000	+-	3.43E+000 Ci
Pu-239 FGE	6.37E+000	+-	2.26E+000 g
Decay heat	2.28E-001	+-	1.15E-001 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	1.07E-001	7.67E-005	1.33E-005	1.79E-006
PU238	6.80E-004	1.18E-002	4.22E-003	3.89E-005
PU239	6.30E+000	3.96E-001	1.42E-001	1.31E-003
PU240	4.14E-001	9.53E-002	3.42E-002	3.15E-004
AM241	1.83E+000	6.35E+000	3.42E+000	6.82E-002
PU241	8.36E-003	8.69E-001	3.12E-001	2.88E-003
PU242	1.35E-003	5.35E-006	1.92E-006	0.00E+000
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	9.22E-007
U233	<LLD	<LLD	0.00E+000	7.82E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	2.53E-006
U238	<LLD	<LLD	0.00E+000	1.77E-005
AM243	1.80E-003	3.64E-004	6.32E-005	1.13E-005
CM243	5.00E-007	2.61E-005	1.28E-005	1.97E-005

Errors quoted at 1.000 sigma

Operator: _____ Date: 3-18-2013

ITR: _____ Date: 3.19.13

Automated Independent Technical Review

Count Sequence Number: 15281 Batch Number: 2LANDA1118
Counter ID: HENC #2
Container ID: 92567
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 3/14/2013

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-52,56.
Section 5 - Gamma Analysis Analysis Status: No errors.	Ok
Miscellaneous	No additional nuclides contributing to 95% of the radiological hazard identified.

Expert Review by: Sheri Chandler Date: 3-18-13

Waste Container ID: **92567**

BDR Number: **LA13FG2028**

Sampling Date: **3/21/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	206.12	
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\130321c\
Data File : 92567.D
Acq On : 21 Mar 2013 1:30 pm (#1); 21-Mar-13, 13:29:50 (#2)
Operator : NW
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 21 13:40:20 2013
Quant Method : C:\msdchem\1\METHODS\vocgas.m
Quant Title : Flammable Gas Analysis
QLast Update : Thu Jan 24 09:52:49 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
3) Fluorobenzene	3.532	96	3524528	201.25 ppmv	-0.04
15) Chlorobenzene-d5	5.871	117	3075511	177.00 ppmv	-0.03
Target Compounds					Qvalue
1) Hydrogen	1.616	GC1	1465	206.12 ppmv	100

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

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Working Copy
Date: 10-4-12

ATTACHMENT 1
Page 1 of 4

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: 90818

6.2[4] Date Processed: 10/9/12

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

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

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

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

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

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

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

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

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

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

Performed By: Clayton Mullins, CM 240091, 10/9/12
Waste Handling Tech (print) Signature Z# Date

ATTACHMENT 1
Page 2 of 4

4.1[6][B] Parent Waste Container No.: 90518

5.[18] Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable: 390.8 lb

6.2[5][A] Parent Drum Lead Blanket Weight (lb): 0 lb

6.2[5][B]/ 6.2[6] Total Parent Drum Weight (lb) 390.5 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.: 90818

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	92171			
10.1[4]	Daughter Drum Filter No.	AM-757		N/A	
10.1[4]	Daughter Drum Bag Filter No.	L-1762			
10.1[4]	Daughter Drum Purchase Order No.	416265			
10.1[13][C]	WCG Fire Watch Stationed		☐ YES	☐ NO	☑ N/A
10.1[14][C][d]3/11.1[3]	WCG Fire Watch Secured		☐ YES	☐ NO	☑ N/A
10.2[4]	POC bag-on bag: Manufacturer				
	Model No.				
	Serial No.				
	Date of Manufacture				
10.2[5]	POC ID No				
10.2[7][B]/10.2[6]	POC Item Description				
10.2[13]	POC Assembly closed per Manufacturer's instructions. (Initial and Z#)	N/A			
10.2[14]	POC Assembly Gross Weight (lb)				
10.2[15]	POC Rad. Survey Results (mrem/hr)				
10.3[3][A]	Approx. Containerized Liquid Vol./Units				
10.3[5][A]	Free Liquid Volume/Units			N/A	
10.3[7][A]	Opaque/Non-penetrable Item Description:				
10.3[9][A]	PCB-contaminated Waste Description				
10.3[9][B]	PCB Item ID No.				
10.3[10]	Remaining Waste Description	see comments			
10.3[13]/10.4[10]/10.5[4]/10.6[8]	Daughter Drum % Full (%)	95%			
10.5[3]/10.6[2]	Description Waste Added During Processing	bag-out stubs			

ATTACHMENT 1
Page 4 of 4

4.1[6][B] Parent Waste Container No.: 90818

Comments: stainless steel lid, card board, plastic, nitrate salts, kitty liter

11.1[1] Performed By: Clayton Mullins / [signature] 244091 10/4/12
Waste Handling Tech (print) Signature Z # Date

11.1[7] Reviewed By: Jose Perez / [signature] 221452 10-9-12 0815
SOS or designee (print) Signature Z # Date Time

Date: 10-3-12

ATTACHMENT 2
Page 1 of 1

WCRRF OVERPACK DRUM ASSEMBLY PREPARATION DATA SHEET

5.[3] Overpack drum information:

Purchase Order No.: 413954
Lot No.: 211466
Manufacture Date:

5.[8] Overpack filtered vent information:

Manufacturer: Nucfil
Model No.: 013
Serial No.: HL-739
Manufacture Date: 8-11

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

	Filtered Vent	2 in. Bung
M&TE No.:	040614	021151
Cal. Expiration Date:	10-16-12	6-11-13
Tolerance:	±4% cw ±6% ccw	±3% cw ±6% ccw

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

Performed By: Michael Romero Michael Romero [illegible] 10-3-12
Waste Handling Technician (print) Signature Z# Date

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

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

Comments: N/C

8.1[1] Performed By: Michael Romero Michael Romero [illegible] 10-3-12
Waste Handling Technician (print) Signature Z# Date

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

8.1[7] Reviewed By: Jose Jerez [illegible] 221452 10-9-12
Supervisor or designee (print) Signature Z# Date

Working Copy
Date: 10-4-12

ATTACHMENT 5
Page 1 of 1

WCRRF OVERPACK DRUM CLOSURE DATA SHEET

7.[19] Overpack Drum Unique Identifier No.: 92172

7.[25] Overpack drum closure ring torque wrench information:
M&TE No.: 040329
Cal. Expiration Date: 3/15/13
Range in ft-lb: 16-50
Tolerance: ±3% cw / ±6% ccw

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

Performed By: Clayton Mullins / CM 240081 / 10/4/12
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: 019069
Platform scale calibration expiration date: 7/31/13

7.[36][D] 85-gal overpack drum gross weight (lb): 323.0 lb

Comments: n/a

8.1[1] Performed By: Clayton Mullins / CM 240081 10/4/12
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 10-9-12
Supervisor or designee (print) Signature Z# Date

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

Drum ID#: 92171

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 #: 416265
Lot #: 125 125
Date of Manufacture: 12

2. Drum Liner Bag/Filter Assembly:

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

RECORD bag filter information:

Manufacturer: BOP
Model #: 16FPVC 1.5-2.5PVC
Serial #: L-7162
Date of Manufacture: 6-12

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

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

4. Install Lid/Drum Filter

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

RECORD drum filter information:

Manufacturer: MUCFIL
Model #: 09 DS
Serial #: AM-757
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:	10-11-13
Range (ft-lbs or in-lbs):	[illegible]	Range (ft-lbs or in-lbs):	10-80
Tolerance:	±4% cw ±6% ccw	Tolerance:	±3% cw ±6% ccw

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

☑ Yes ☐ No

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

5. Weigh Drum Assembly

RECORD weight information

Tare wight (lbs): 76.4
File ID #: 019065

☑ Write the tare weight on drum using permanent marker

6. Label Drum Assembly

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

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

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

Verifier Print: Clayton Mullins Verifier Sign: [signature] ID: 240092 Date: 10/4/12

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

DRUM ID#: 92171

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 #: 019065

Cal expiration date: 3/15/13

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

--- Tolerance ±3% cw / ±6% ccw

2. DRUM LABELING

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

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

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

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

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

RCRA Label:

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

OR

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

NOTE: Check only one of the above two boxes.

3. WEIGH DRUM ASSEMBLY

Record weight information:

Gross Weight(lbs) 266.2

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 10/4/12

JOE QUINTANA

Verifier Print/Sign: [illegible] Date: 10/4/12

WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Production Control

Container ID: 90818 Container Type: POC Gross Weight (lbs): 386

Container Seal #: None Filter Prefix: None Filter Serial #: EL-205; EL-234

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

TWSR Comments: PARENT #S832448 WTS-12STD-748

Total PE-Ci Activity: 7.10E-01 Equivalent Combustible PE-Ci: 2.66E-01 AM-241 PE-Ci: 6.03E-02

Total Fissile Gram Equivalents: 7.7 Total Surface Dose Rate (mrem/hr): 1

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

NCR RTR/NDA Comment: None

RTR Pre-Screen Date: None Comment: None

Certified RTR Comment: None

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

Security Determination: ☑ Green ☐ Yellow

Remediation Determination: ☐ VE ☐ PID ☐ Split ☑ Repack

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

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

Nitrate salts mixed with Wastelock 770® from previous repack campaign. A minimum of 1.2 volumes of Wastelock 770 must be mixed with 1.0 volume of nitrate salts

Performed By: Susan Ramsey (Production Control (Print)) Susan P. Ramsey (Signature) 100681 (Z Number) 9/26/12 (Date)

WDP Engineering

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

Processing Determination: ☑ Accept ☐ Reject

WDP Engineering Comments: Nitrate Salts – POC

Net Wt. 76lb. Parent drum (SEDs attached) was part of WCRR Nitrate salt repack campaign using Wastelock 770. This resulting daughter POC is being repacked to adjust admixture/nitrate salt ratio. Nitrate salts carry waste codes for chromium, lead & mercury. No hazardous chemicals present.

May require RWP for >100 & <1000 mrem/hr

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

TRU Remediation Operations

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

Other Specific Safety Concerns: Use tools to remote handle waste. Do not push or press on waste. Use Hexarmour gloves.

Processing Determination: ☑ Accept ☐ Reject

TRU Remediation Operations Comments: Use kitty litter to mix in with waste per Procedure

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

IHS Review July Smallwood GSD Contains lead, chromium, Hg 9-27-12,

Document No: RP-DIV-AP-0107 JJ 221452 - 10-1-12

Nonsertified TRU Waste Drum Item Information

DrumID: 010995

Item No	ItemID	Process Status	Net Wt (kg)	Matrix	Mass Code	SNM (g)	NT	Auth (Pg/Ln)	Comments
1	IXFS-724FD		12.790	NITRATE SALTS		5.52	52	6/11	OA68
2	IXFS-723FL		3.880	NITRATE SALTS		0.	52	6/11	OA68
3	IXFS-721FA		30.460	NITRATE SALTS		43.56	52	6/11	OA68
4	IXFS-720FA		40.490	NITRATE SALTS		16.04	52	6/11	OA68
5	IXFS-722FA		5.000	NITRATE SALTS		0.61	52	6/11	OA68
6	IXFS-725FA		3.180	NITRATE SALTS		0.99	56	6/11	OA68
7	IXFS-726-FA		22.790	NITRATE SALTS		0.52	52	6/11	OA68
8	IXFS-727FD		6.820	NITRATE SALTS		0.55	52	6/11	OA68

Nonsertified Waste Drum Material Summary

Gross Wt (kg): 196.2

Material Type	SNM (grams)	Items Net Wt (kg)
52	64.8	122.05
56	0.99	3.18
Totals	65.79	125.23

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])	90818					
Container type sampled (e.g., 55-gal, 85-gal, 110-gal, or SWB) (5.[1])	POC					
Filtered Vent Type (5.[1])	19DS					
Filtered Vent Unobstructed (5.[1])	☑ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT
WIPP-Approved Filtered Vent (5.[2])	☑ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT
Total CCP VOC value (< 7,000 ppm) (5.[4])	0 ppm	ppm	ppm	ppm	ppm	ppm
Hydrogen Reading (< 64,000 ppm) (5.[5])	0 ppm	ppm	ppm	ppm	ppm	ppm
Methane Reading (< 16,000 ppm) (5.[5])	0 ppm	ppm	ppm	ppm	ppm	ppm

5.[7] Certified CCP Technician:

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

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

Comments: 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 : 90818.D
Acq On : 21 Sep 2012 1:02 pm (#1); 21 Sep 2012 1:01 pm (#2)
Operator : SA
Sample :
InstName : Unit 8
Misc : LFL POC THROUGH FILTER (Sig #1); LFL POC THROUGH FILTER (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 21 13:14:36 2012
Quant Method : C:\msdchem\1\METHODS\Vocgas.m
Quant Title : Flammable Gas Analysis for Transportation
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
3) Fluorobenzene	3.262	96	2773622	206.00	ppm	0.00
15) Chlorobenzene-d5	5.936	117	2412272	179.50	ppm	0.00

Target Compounds	Qvalue

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

Vocgas.m Fri Sep 21 14:21:26 2012

PROJECT NAME NOTEBOOK NO

10-4-12

0600 Assuming WCRR operations center - JCleeman
0605 Beginning outside rounds.
0606 Air quality personnel arrived to perform weekly stack monitoring
0620 Beginning inside rounds. Pre job being conducted by SOS.
0632 Outside rounds complete.
0652 Inside rounds complete.
0654 Both rounds reviewed by SOS.
0700 Mode change complete. We are now in operations.
0743 Initiating a drum movement from 50-69 to a transportainer.
0752 Drum movement out of facility complete.
0754 Bagging on 90821.
0758 Bag on complete.
0815 Bagging off 90821, bagging on 91004.
0830 Permission granted to lower vehicle access gates to begin to load transfer vehicle for a shipment to Area G.
0834 Bag on complete.
0855 Bagging off 91004, bagging on 90808.
0905 Bag on complete.
0935 Bagging off 90808, bagging on 90818.
0955 Bag on complete.
1020 Initiating a drum movement from 50-69 to a transportainer.
1023 Bagging off 90818, bagging on 90807.
1043 Bag on complete.
1053 Drum movement out of facility complete.
1112 Bagging off 90807, bagging on 91008.
1124 Bag on complete.
1209 Bagging off 91008.
1225 Bag off complete.
1335 Initiating a drum movement from 50-69 to a transportainer.
1551 Drum movement out of facility complete. All inventory has been removed from the facility.
1352 Mode change complete. We are now in COLD in 50-69 and warm standby in WCRRF yard.
RM 1355 Beginning outside rounds.
1406 Beginning inside rounds.
1423 Inside rounds complete.
1428 Operators inside 50-69 beginning to paint where magenta is coming through.
1429 Late entry at 1422, outside rounds completed. (JC)
1512 Painting inside 50-69 completed.
1630 End of day. Operations secure. - JCleeman

No further entries this page

SIGNATURE DATE 20
READ AND UNDERSTOOD DATE 20

281 PROJECT NAME 10/4/12 NOTEBOOK NO.

0600 Assumed SOM position

0615 Attended pre job brief conducted by SOS. Discussing POD work items for day, requirement to be in Cold Mode in Bldg 50-69 @ COB, paint touchup on floor after processing complete, safety heading into long weekend.

0706 Completed Mode Change: WCRR yard / Bldg 50-69 from Warm / Warm to Operations / Operations.

0930 While reviewing SOS logbook identified page missing (torn out) ~~of~~ 10/4/12. Informed OM and ES field ops manager. Neither SOS had information on when or reason for removal.

1033 Met w/ Deputy FOD and OM over work release/authorization process as part of management assessment.

1042 (Late Entry 0940) Removed Operator Aid # 50-11-07 Rev 0 Combustible Loading Quarterly Report and replaced w/ current Report under Operator Aid # 50-11-07 Rev 1.

1340 Contacted WWC to emerge painting of floor in Bldg 50-69 - for touch up of areas where magenta colored paint is starting to show thru upper grey paints

1352 Completed Mode Change: WCRR ~~Op~~ 10/4/12 Yard / Bldg 50-69 from Operations / Operations to Warm / Cold.

1605 SOS reported all maintenance activities completed.

1615 Secured SOM position

No further entries this page

SIGNATURE DATE 10/4 20 12

READ AND UNDERSTOOD DATE 20

10-4-12 WCRR SOS Log Book

0600 Assuming SOS position for the day

0615 Pre Job brief, started. Needing to be in COLD MODE by the end of the day. Six Parent drums inside of 50-69 to process. Planning on processing those all from Solution Package #72. Once those six are processed we will change MODE so that the areas on the floor where the Magenta paint is starting to show can be painted. Also performing Glove Box maintenance, performing a good inspection on all the gloves, changing out the Tape on the bottom of the glove box and general housekeeping

0630 Pre-Job brief completed.

0654 Inside and outside rounds have been completed.

0706 MODE change from WARM MODE to Operations in 50-69 and in the Yard

0756 Bag on complete of first drum.

0945 Late Entry. On October 1, 2012 I noticed that a page had been torn out of the WCRR SOS log book prior to entries being made on that day. [illegible]

0815 Bagging on Second drum for the day

0815 Bagging on third drum

0935 Bagging on fourth drum

1023 Bagging on fifth drum

1112 Bagging on sixth drum

1225 Bagging off last drum for the day

1352 Mode change Complete WARM in WCRR Yard, Cold in 50-69

1428 Operators inside 50-69 starting to paint areas where magenta is showing through.

1517 Painting inside 50-69 has been Completed.

1600 Securing SOS position for the day. [illegible]

No further entries on this page

CCP Radiography Data Sheet

CCP-TP-053 Attachment 2

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0001
Examination Date:	1/7/2013
Waste Container ID:	92171
Video/Audio Recorded Media Number:	LA-RTR2-13-0001 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.: 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 2 layers
Volume Utilization Percentage:	90 %

CCP Radiography Data Sheet

Waste Container ID: 92171

Section 3: Container Inventory and Comments (Detailed descriptions)

IM: Metal hardware, metal lids

AM:

OM: Scrap lead

OI:

C: Fiberboard packing material, fiberboard insert sleeve

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):	6.0
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	1.0
Other Inorganic Materials (OI)	
Cellulosics (C):	6.0
Rubber (R):	
Plastics (waste materials) (XPM):	4.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	70.1
Soils (S):	
Total WMP Weight:	87.1

CCP Radiography Data Sheet

Waste Container ID: 92171

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

RTR Operator:

Benito Maestas	[signature]	1/7/2013
Print Name	Signature	Date

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

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

Item ID:            92171              Count Sequence Number:  21795
Operator:           D3PW2DK1\operator
Assay Start:        1/8/2013   11:40:48 AM
Description 1:      1LANDA1693
Description 2:      N/A
Location:           LANL TA-54
Comment:            AK-6
Matrix Type:        Homo Sol. S3000
Container Type:     55 gallon 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:                        MCS HENC #1
Count Type:                     Item Count
Collimator/Geometry Setting:    All Banks On (GE -  0

Errors quoted at  1.000 sigma
```

010
CS 6/9/14

Radioassay Data Sheet

Engine Version: MMRes. Cmb. v1.2

Count Sequence Number: 21795
Assay Instrument: MCS HENC #1
Analysis Method: CCP-TP-063 v 15
Item ID: 92171

Batch Number: 1LANDA1693
Location: LANL TA-54
Software Version: NDA 2000 V.4.0
Analysis Date: 1/8/2013

Net Weight	87100.0 g		
Pu mass	1.30E+001	+-	3.44E+000 g
TRU Alpha Activity	6.27E+000	+-	1.42E+000 Ci
TRU Activity Concentration	7.20E+004	+-	1.63E+004 nCi/g
Pu-239 Equivalent Activity	6.30E+000	+-	1.42E+000 Ci
Pu-239 FGE	1.23E+001	+-	3.22E+000 g
Decay heat	2.07E-001	+-	4.71E-002 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	9.18E-002	6.55E-005	9.68E-006	2.85E-006
PU238	1.20E-003	2.04E-002	5.41E-003	3.45E-005
PU239	1.22E+001	7.55E-001	2.00E-001	1.27E-003
PU240	8.01E-001	1.82E-001	4.81E-002	3.06E-004
AM241	1.55E+000	5.31E+000	1.41E+000	8.96E-003
PU241	1.63E-002	1.68E+000	4.44E-001	2.83E-003
PU242	2.60E-003	1.03E-005	2.72E-006	0.00E+000
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	7.87E-007
U233	<LLD	<LLD	0.00E+000	6.06E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	1.80E-006
U238	<LLD	<LLD	0.00E+000	1.62E-005
AM243	1.44E-003	2.88E-004	4.32E-005	8.31E-006

Errors quoted at 1.000 sigma

Operator: _____ Date: 6·6·14

ITR: _____ Date: 6-6-14

011
CJ 6/9/14

Automated Independent Technical Review

Count Sequence Number: 21795 Batch Number: 1LANDA1693
Counter ID: MCS HENC #1
Container ID: 92171
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 1/8/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis	
No Add-a-Source warnings.	Ok
Section 2 - Passive Neutron Analysis	
Analysis Status: No errors.	Ok
Ones Rate Analysis complete with warnings.	
- Error calculating the Ones Rate Pu-240 Effective MDA.	Not data affecting.
Curium/Californium Neutron Analysis complete with warnings.	
- The Pu-240 Eff. Mass Variance is negative, Pu-240 Eff. Mass Uncertainty set to zero so analysis could continue.	Ok
Section 3 - Data Combiner Analysis	
Override enabled; Passive Neutron Pu and Gamma U data specified as input.	Passive Neutron Pu and Gamma U data specified as input.
Pu results taken from Passive Neutron data, U from Quantitative Gamma data.	
Results comparison test passed.	
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-52,56.
Results are marked as invalid.	

012
CSd9/14

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. Am-241 direct reported from gamma analysis.

Expert Review by: Bart B. Marak Date: 6/5/14

013
CJ 6/9/14

5832448

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **92171**

BDR Number: **LA13FG8001**

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

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

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\130115c\
Data File : 92171.D
Acq On : 15 Jan 2013 2:05 pm (#1); 15 Jan 2013 2:04 pm (#2)
Operator : SA
Sample :
InstName : Unit 8
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jan 15 14:53:22 2013
Quant Method : C:\msdchem\1\METHODS\Vocgas.m
Quant Title : Flammable Gas Analysis for Transportation
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
3) Fluorobenzene	3.253	96	2436998	206.00 ppm	0.00
15) Chlorobenzene-d5	5.936	117	2169237	179.50 ppm	0.00

Target Compounds	Qvalue

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

UET ~~Hing~~ Copy
Working Copy
Date: 1-12-13w

ATTACHMENT 1
Page 1 of 4

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: 90819

6.2[4] Date Processed: 1-12-13

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 / [signature] / 267129 1-12-13
Waste Handling Tech (print) Signature Z # Date

ATTACHMENT 1
Page 2 of 4

4.1[6][B]	Parent Waste Container No.: 96319	
5.[18]	Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable:	3694 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)	3694 lb
6.2[7]	**($)** Total Parent Drum Weight < 624 lb (SR 4.5.1):	☑ SAT ☐ UNSAT
6.2[28]	Approval to leave a parent drum attached to the WCG overnight:	

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

ATTACHMENT 1
Page 3 of 4

4.1[6][B] Parent Waste Container No.: 90819

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	92565			
10.1[4]	Daughter Drum Filter No.	JL-1234		N	
10.1[4]	Daughter Drum Bag Filter No.	L-4334		A	
10.1[4]	Daughter Drum Purchase Order No.	501011			
10.1[13][C]	WCG Fire Watch Stationed		☐ YES	☐ NO	☑ N/A
10.1[14][C][d]3/11.1[3]	WCG Fire Watch Secured		☐ YES	☐ NO	☑ N/A
10.2[4]	POC bag-on bag: Manufacturer				
	Model No.				
	Serial No.				
	Date of Manufacture				
10.2[5]	POC ID No				
10.2[7][B]/10.2[6]	POC Item Description				
10.2[13]	POC Assembly closed per Manufacturer's instructions. (Initial and Z#)				
10.2[14]	POC Assembly Gross Weight (lb)		N		
10.2[15]	POC Rad. Survey Results (mrem/hr)			A	
10.3[3][A]	Approx. Containerized Liquid Vol./Units				
10.3[5][A]	Free Liquid Volume/Units				
10.3[7][A]	Opaque/Non-penetrable Item Description:				
10.3[9][A]	PCB-contaminated Waste Description				
10.3[9][B]	PCB Item ID No.				
10.3[10]	Remaining Waste Description	BAG OUT STUBS			
10.3[13]/10.4[10]/ 10.5[4]/10.6[8]	Daughter Drum % Full (%)	100%		N	
10.5[3]/10.6[2]	Description Waste Added During Processing	SEE COMMENTS		A	

ATTACHMENT 1
Page 4 of 4

4.1[6][B] Parent Waste Container No.: 90819

Comments: POCLIDS, PLASTIC, CARDBOARD, SALTS, KITTY LITTER

11.1[1] Performed By: BRIAN GALLEGOS [signature] 267129 1-12-13
Waste Handling Tech (print) Signature Z # Date

11.1[7] Reviewed By: Gilbert Martinez [signature] 149835 1-13-13 0800
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-89
Manufacture Date:	9/11

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

	Filtered Vent	2 in. Bung
M&TE No.:	040694	038367
Cal. Expiration Date:	9-26-13	3-16-13
Tolerance:	40-200	10-80

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

Performed By: Gerald Espinoza / [signature] 237729 1-9-13
Waste Handling Technician (print) Signature Z # Date

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

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

Comments: N/C

8.1[1] Performed By: Gerald Espinoza / [signature] 237729 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: [signature] / [signature] 149235 1-13-13
Supervisor or designee (print) Signature Z # Date

Working Copy
Date: 1-12-13

ATTACHMENT 5
Page 1 of 1

WCRRF OVERPACK DRUM CLOSURE DATA SHEET

7.[19] Overpack Drum Unique Identifier No.: 92566

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

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

Performed By: BRIAN GALLEGOS / [signature] R67129 1-12-13
Waste Handling Technician (print) Signature Z# Date

7.[28] Overpack drum closure ring torque value: BG 1-12-13 ~~30-30~~ 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): 320.0 lb

Comments: N/C

8.1[1] Performed By: BRIAN GALLEGOS / [signature] R67129 1-12-13
Waste Handling Technician (print) Signature Z# Date

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

8.1[7] Reviewed By: Gilbert Martinez / [signature] 149235 1.13.13
Supervisor or designee (print) Signature Z# Date

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

Drum ID#: 92565

1. Drum/Lid Assembly

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

RECORD drum information:

Purchase Request #: 501011
Lot #: 0233370
Date of Manufacture: 12

2. Drum Liner Bag/Filter Assembly:

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

RECORD bag filter information:

Manufacturer: BGP
Model #: 66PVC-1.5-5PVC
Serial #: L-4334
Date of Manufacture: 7-12

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

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

4. Install Lid/Drum Filter

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

RECORD drum filter information:

Manufacturer: NUCFIL
Model #: D19DS
Serial #: JL-1236
Date of Manufacture: 10-11

RECORD torque wrench information:

Filter torque wrench:		Jam Nut / Bung torque wrench:	
M&TE ID #:	040694	M&TE ID #:	038367
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 Espinoza Signature: [signature] Z#: 237720

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: Brandon Chavez Operator Sign: [signature] Z#: 204742 Date: 1-9-13

Verifier Print: Brian Gallegos Verifier Sign: [signature] Z#: 267129 Date: 1-12-13

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

DRUM ID#: 92565

1. LID INSTALLATION

NOTE: Install lid per manufacturer's instructions

✓ Mount lid with filter directly over drum seam.

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

✓ Engage bolt and nut and torque per manufactures instructions

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

✓ Tighten jam nut.

Record torque wrench information:

MT&E #: 021151

Cal expiration date: 6-11-13

Range/ Value (ft-lbs): 120-80

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): 253.4

Scale ID#: 019065

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

4. FINALIZE DOCUMENTATION

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

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

✓ Complete TWSR.

Operator Print/Sign: [illegible] Date 1-12-13

Verifier Print/Sign: [illegible] Date: 1-12-13

WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

72

Production Control

Container ID: 90819 Container Type: POC Gross Weight (lbs): 365

[redacted]ner Seal #: None Filter Prefix: None Filter Serial #: EL-212; EL-539

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

TWSR Comments: PARENT #S832448 WTS-12STD-719

Total PE-Ci Activity: 7.10E-01 Equivalent Combustible PE-Ci: 2.66E-01 AM-241 PE-Ci: 6.03E-02

Total Fissile Gram Equivalents: 7.7 Total Surface Dose Rate (mrem/hr): 1

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

NCR RTR/NDA Comment: None

RTR Pre-Screen Date: None Comment: None

Certified RTR Comment: None

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

Security Determination: ✓ Green ☐ Yellow

Remediation Determination: ☐ VE ☐ PID ☐ Split ☑ Repack

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

TRUCON Code: TBD Production Control Comments: Need to add EPA Codes D007 & D009.
Nitrate salts mixed with Waste Lock 770® from previous repack campaign. A minimum of 1:2 volumes of kitty litter/zeolite must be mixed with 1:0 volume of nitrate salts.

Performed By: Susan Ramsey / Production Control (Print) | Signature: Susan B. Ramsey | Z Number: 100681 | Date: 9/6/12

WDP Engineering

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

[redacted]rocessing Determination: ☑ Accept Reject

[redacted]VDP Engineering Comments: Nitrate Salts – POC

Net Wt: 55 lb. Parent drum (SEDS attached) was part of WCRR nitrate salt repack campaign using Waste Lock 770®. This resulting daughter POC is being repacked to adjust the admixture/nitrate salt ratio. Nitrate salts carry waste codes for [redacted], 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 proper PPE when processing waste. Do not push or press on waste with hands. Utilize hexarmor gloves & tools to handle waste.

Processing Determination: ✓ Accept Reject

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

Performed By: Jose Jerez / TRU Remediation Operations (Print) | Signature: Jose Jerez | Z Number: 221452 | Date: 10-9-12.

AR Z# 249750 10/18/12

HS Review: RS 206362 10.4.12

Noncertified TRU Waste Drum Item Information

DrumID: 010995

Item No	ItemID	Process Status	Net Wt (kg)	Matrix	Mass Code	SNM (g)	HT	Auth (Pg/Ln)	Comments
1	IXFS-724FD		12.730	NITRATE SALTS		5.52	52	6/11	G468
2	IXFS-723F2		3.860	NITRATE SALTS		0.	52	6/11	G468
3	IXFS-721FA		30.460	NITRATE SALTS		43.56	52	6/11	G468
4	IXFS-720FA		40.450	NITRATE SALTS		14.04	52	6/11	G468
5	IXFS-722FA		5.000	NITRATE SALTS		0.61	52	6/11	G468
6	IXFS-725FA		3.180	NITRATE SALTS		0.99	56	6/11	G468
7	IXFS-726-FA		22.730	NITRATE SALTS		0.52	52	6/11	G468
8	IXFS-727FD		6.820	NITRATE SALTS		0.55	52	6/11	G468

Noncertified Waste Drum Material Summary

Gross Wt (kg): 198.2

Material Type	SNM (grams)	Items Net Wt (kg)
52	64.8	122.05
56	0.99	3.18
Totals	65.79	125.23

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])	90819					
Container type sampled (e.g., 55-gal, 85-gal, 110-gal, or SWB) (5.[1])	55gal					
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: ~~None~~ Comments 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 : 90819.D
Acq On : 3 Oct 2012 1:40 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 13:48:40 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	2230447	206.00 ppm	0.00
15) Chlorobenzene-d5	5.936	117	1990092	179.50 ppm	0.00

Target Compounds	Qvalue

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

Vocgas.m Wed Oct 03 13:48:52 2012

1-12-13
0600 Assuming WCRRF operations center - Orlando.
0611 SCS performing pre job briefing.
0643 pre job has been concluded.
0650 starting inside rounds.
0708 starting outside rounds.
0715 Item #61 is OOS, PDD is in place, OK to continue.
0718 Inside rounds completed.
0730 outside rounds complete.
0738 Inventory control system is not working site wide.
0745 Inside and Outside rounds signed off by SOS.
0830 Inventory control system is back up.
0833 Mode change performed TA50-69 and WCRRF yard now in operations.
0906 bagging on 90805
0918 bag on complete. PPE check is SAT
0955 Starting movement into 50-69
1008 completed movement into 50-69.
1012 PPE check is sat.
1019 bagging off 90805, bagging on 90812
1048 bag on, bag off is complete, PPE check is sat.
1122 starting movement out of TA50-69 to transportainer
1147 bagging off 90812 and bagging on 90823
1213 bag on, bag off complete, PPE check is sat.
1230 Operators breaking for lunch.
1339 PPE check is sat.
1433 bagging off 90823, bagging on 90819. PPE Check is sat
1500 bag off, bag on complete.
1527 starting movement into 50-69
1532 Starting inside rounds.
1538 completed movement out of transportainers to 50-69
1556 starting outside rounds.
1557 Completed inside rounds, PPE check is sat.
1606 bagging off 90819, bagging on 90817.
1625 inside and outside rounds signed off by SOS.
1633 bag on, bag off complete PPE Check is sat.
Continued on next page

92574
Tot Dosage - 90851

1-12-13 Continued from previous page - Chlorade
1736 bagging off 90817. FPE Check is out.
1758 bag off job complete.
1813 Mode change performed TN 50-69 and WCRRF
yard now in Warm standby.
1-12-13
1830 ~~10~~ 1830 end of day WCRRF operations center secure Chlor

No further entries this page.

1.12.13 WCRR SOS LOG Book

0600 Assuming SOS Position [illegible]

0610 Conducted shift brief discussed [illegible] weather issues

0643 Concluded shift brief

0645 Having Issues with oracle labeling system.

0647 Some working Issue need to be fixed prior to operating

0745 Reviewed Inside And outside Records

0750 Unable to process due to oracle being down.

0830 Oracle System has been repaired. Operators Dressing out to enter facility

0833 Made change Complete WCRRF in operations

0900 Bagging on First drum 90805

0918 PPE Check

1012 PPE Check

1019 Bagging off and bagging on 90812

1048 PPE Check

1147 Bagging off and bagging on 90823

1339 PPE Check staff

1433 Bagging off and bagging on 90819 PPE Check

1606 Bagging off and bagging on 90817

1625 Inside And outside Records Reviewed

1633 bagging off Final drum of day.

1813 Made Change Complete WCRRF Inventory

1.12.13 1830 end of shift securing Position [illegible]

no further entries on this Page

PROJECT NAME 1/12/13 NOTEBOOK NO.

0600 Reviewed WCRR SOM turnover checklist and assumed WCRR SOM position

0605 Notified by SOS that Oracle system is down and unable to print labels. Inventory control is trouble shooting.

0615 Attended pre job brief conducted by SOS. Discussed problem w/ Oracle and backup plan is to have operators complete training on-line, required reading, etc. Safety topic w/ cold weather is to dress in layers of conducting outside work and proper PPE/Operation of spotter during forklift movements.

0645 Determined Oracle is down both @ WCRR and TA-54. OM notified and contacting Waste services to bring in on call personnel to repair/reboots

0830 Inventory control verified Oracle system back in operation

~~0833-0835~~ 1/12/13 Completed mode change: WCRR yard/Blds 50-69 from Warm/Warm to Operations/Operations.

0835 (Late Entry 0831) Notified OM and TA-54 SOM of WCRR Oracle status.

0905 Notified by Inventory Control that ability to print TWSR forms via SWOOSH database is not working - verified that TA-54 is having same problem. Will not prevent WCRR from operations (processing) but cannot prepare outgoing shipments w/out capability

0906 Bagging on first drum.

1300 Updated DDP PM of WCRR status.

1530 Toured inside WCRR yard w/ SSW to observe drum movements. While conducting tour a posting identified on door leading into respirator room had SOM signature/date faded from weather.

1813 Completed Mode Change: WCRR Yard/Blds 50-69 from Operations/Operations to Warm/Warm.

1830 Secured SOM position

No further entries this page

SIGNATURE DATE 1/12 20 13

READ AND UNDERSTOOD DATE 20

CCP Radiography Data Sheet

S832448

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:	92565
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.: 114.5 kg Tare Wt.: 33.4 kg Net Wt.: 81.1 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: 92565

Section 3: Container Inventory and Comments (Detailed descriptions)

IM: Metal hardware, pipe component lid

AM:

OM:

OI:

C: Fiberboard liner sleeve, fiberboard

R:

XPM: 90 mil plastic liner lid, plastic bags

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP): Plastic Liner Bag	2.0
Other: Fiberboard Liner (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	18.0
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	
Other Inorganic Materials (OI)	
Cellulosics (C):	8.0
Rubber (R):	
Plastics (waste materials) (XPM):	6.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	49.1
Soils (S):	
Total WMP Weight:	81.1

CCP Radiography Data Sheet

Waste Container ID: 92565

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:	92565	Count Sequence Number:	15239
Operator:	DCLTD231\Operator		
Assay Start:	3/11/2013 10:12:41 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: 81.1 kg	Net:	81.1 kg
Container:	Volume: 208.0 l	Full:	65.0 %
Density:	0.600 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:	15239	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:	92565	Analysis Date:	3/11/2013

Net Weight	81100.0 g			
Pu mass	6.15E+000	+-	1.53E+000	g
TRU Alpha Activity	3.44E+000	+-	1.60E+000	Ci
TRU Activity Concentration	4.24E+004	+-	1.98E+004	nCi/g
Pu-239 Equivalent Activity	3.45E+000	+-	1.60E+000	Ci
Pu-239 FGE	5.80E+000	+-	1.43E+000	g
Decay heat	1.14E-001	+-	5.35E-002	W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	4.93E-002	3.52E-005	5.94E-006	1.03E-006
PU238	5.65E-004	9.77E-003	2.43E-003	3.52E-005
PU239	5.76E+000	3.62E-001	9.00E-002	1.30E-003
PU240	3.79E-001	8.71E-002	2.16E-002	3.14E-004
AM241	8.57E-001	2.98E+000	1.60E+000	3.84E-002
PU241	7.65E-003	7.95E-001	1.98E-001	2.86E-003
PU242	1.23E-003	4.89E-006	1.21E-006	0.00E+000
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	3.56E-007
U233	<LLD	<LLD	0.00E+000	4.28E-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	1.13E-005
AM243	6.68E-004	1.35E-004	2.28E-005	6.11E-006
CM243	2.06E-007	1.07E-005	5.40E-006	9.58E-006

Errors quoted at 1.000 sigma

Operator: _____ Date: 3-15-13

ITR: _____ Date: 3-18-13

Automated Independent Technical Review

Count Sequence Number: 15239 Batch Number: 2LANDA1115
Counter ID: HENC #2
Container ID: 92565
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.	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

Comments	Disposition
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-52,56.
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: **92565**

BDR Number: **LA13FG8018**

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

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	101.91	
74-82-8	Methane	213.40	U
67-56-1	Methanol	27.87	U
60-29-7	Ethyl Ether	1.25	U
75-35-4	1,1-Dichloroethylene	5.71	U
67-64-1	Acetone	16.90	U
75-34-3	1,1-Dichloroethane	4.24	U
156-59-2	cis-1,2-Dichloroethene	0.55	U
78-93-3	Methyl ethyl ketone	9.86	U
110-82-7	Cyclohexane	5.84	U
71-43-2	Benzene	0.71	U
107-06-2	1,2-Dichloroethane	1.51	U
71-36-3	1-Butanol	1.36	U
108-10-1	Methyl isobutyl ketone	9.34	U
108-88-3	Toluene	4.17	
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 : 92565.D
Acq On : 14 Mar 2013 1:08 pm (#1); 14 Mar 2013 1:07 pm (#2)
Operator : SA
Sample :
InstName : Unit 8
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 14 13:23:03 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	2238994	206.00	ppm	0.00
15) Chlorobenzene-d5	5.936	117	2049428	179.50	ppm	0.00
Target Compounds						Qvalue
1) Hydrogen	5.312	GC1	25179m	101.91	ppm	
17) Toluene	4.779	92	19770	4.17	ppm	99

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

33

Working Copy
Date: 10-3-12

ATTACHMENT 1
Page 1 of 4

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: 90820

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

4.1[6][B] Processing Activity (EP-DIV-AP-0107):
CP 10-3-12 ~~N/A~~ ☐ > 190 mrem/hr ☐ PID ☐ Split ☑ Repack

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

4.1[6][B] Parent Waste Container RCRA Designations: 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] (S) TA-50-69 is in the OPERATION or WARM STANDBY MODE (TSR 1.2) ☑ OPERATIONS ☐ WARM STANDBY ☐ N/A

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

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

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

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

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

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

ATTACHMENT I
Page 2 of 4

4.1[6][B] Parent Waste Container No : 90820

5.[18] Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable: 385.6 lb

6.2[5][A] Parent Drum Lead Blanket Weight (lb): 0 lb

6.2[5][B]/ 6.2[6] Total Parent Drum Weight (lb) 385.6 lb

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

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

FWMO-FOD (print) NA Signature / / Date

ATTACHMENT 1
Page 3 of 4

4.1[6][B] Parent Waste Container No.: 90820

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	92150			
10.1[4]	Daughter Drum Filter No.	AM-877		N	
10.1[4]	Daughter Drum Bag Filter No.	WO 1814		A	
10.1[4]	Daughter Drum Purchase Order No.	416 265			
10.1[13][C]	WCG Fire Watch Stationed		☐ YES	☐ NO	☑ N/A
10.1[14][C][d]3/11.1[3]	WCG Fire Watch Secured		☐ YES	☐ NO	☑ N/A
10.2[4]	POC bag-on bag: Manufacturer				
	Model No.				
	Serial No.				
	Date of Manufacture				
10.2[5]	POC ID No				
10.2[7][B]/10.2[6]	POC Item Description				
10.2[13]	POC Assembly closed per Manufacturer's instructions. (Initial and Z#)				
10.2[14]	POC Assembly Gross Weight (lb)	N/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				
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 (%)	95%			
10.5[3]/10.6[2]	Description Waste Added During Processing	bag-out stubs			

ATTACHMENT 1
Page 4 of 4

4.1[6][B] Parent Waste Container No.: 908 20

Comments: stainless steel lid, card board, plastic, nitrate ~~st~~ cm 10-3-12
salts, kitty liter

11.1[1] Performed By: Clayta Mullins / C/t 246092 10/3/12
Waste Handling Tech (print) Signature Z # Date

11.1[7] Reviewed By: Jose Jerez / Jose J 221452 10-3-12 1430
SOS or designee (print) Signature Z # Date Time

Working Copy
Date: 10-2-12

ATTACHMENT 2
Page 1 of 1

WCRRF OVERPACK DRUM ASSEMBLY PREPARATION DATA SHEET

5.[3] Overpack drum information:

Purchase Order No.: 10-2-12 414945 414954
Lot No.: 21426
Manufacture Date: 2016

5.[8] Overpack filtered vent information:

Manufacturer: NUCFIL
Model No.: 013
Serial No.: HL-951
Manufacture Date: 8/11

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

	Filtered Vent	2 in. Bung
M&TE No.:	020614	021151
Cal. Expiration Date:	10-19-12	06/11/13
Tolerance:	+/- 4% CW +/- 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 Mandragon / Steven Mandragon 100741 10-2-12
Waste Handling Technician (print) Signature Z # Date

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

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

Comments: N/C

8.1[1] Performed By: Steven Mandragon / Steven Mandragon 100741 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 Juarez / Jose Juarez 221452 10-3-12
Supervisor or designee (print) Signature Z # Date

Working Copy
Date: 10-3-12

ATTACHMENT 5
Page 1 of 1

WCRRF OVERPACK DRUM CLOSURE DATA SHEET

7.[19] Overpack Drum Unique Identifier No.: 92151

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: Clayte Mullins, CM — Z# 240092 — 10/3/12
Waste Handling Technician (print) Signature Z# Date

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

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

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

7.[36][D] 85-gal overpack drum gross weight (lb): 322.4 lb

Comments: N/C

8.1[1] Performed By: Clayte Mullins, CM — Z# 240092 — 10/3/12
Waste Handling Technician (print) Signature Z# Date

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

8.1[7] Reviewed By: Jose Perez, [signature] — Z# 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#: 92150

1. Drum/Lid Assembly

- [x] Remove and discard ½" 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: 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 #: 6CPVC1.5-2.5SPVC
Serial #: WO 1914
Date of Manufacture: 7/11

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

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

4. Install Lid/Drum Filter

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

RECORD drum filter information:
Manufacturer: NUCFIL
Model #: 01905
Serial #: AM 877
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:	10-5-12	Cal Expiration Date:	6/11/2015
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: Eddie Rios Signature: [signature] ZI#: 187822

5. Weigh Drum Assembly

RECORD weight information
Tare wight (lbs) 76.4
File ID #: 019065

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

6. Label Drum Assembly

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

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

Operator Print: Eddie Rios Operator Sign: [signature] ZI: 187822 Date: 9-26-12
Verifier Print: Clayton Mullins Verifier Sign: [signature] ZI: 240092 Date: 10/3/12

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

DRUM ID#: 92150

1. LID INSTALLATION

NOTE: Install lid per manufacturer's instructions

✓ Mount lid with filter directly over drum seam.

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

✓ Engage bolt and nut and torque per manufactures instructions.

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

✓ Tighten jam nut.

Record torque wrench information:

MT&E #: 040329

Cal expiration date: 3/15/13

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

-- Tolerance ±3% cw / ±6% ccw

2. DRUM LABELING

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

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

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

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

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

RCRA Label:

✓ 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): 243.9

Scale ID#: 019065

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

4. FINALIZE DOCUMENTATION

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

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

✓ Complete TWSR.

Operator Print/Sign: [illegible] Date 10/3/12

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

WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Production Control

Container ID: 90820 Container Type: POC Gross Weight (lbs): 381

Container Seal #: None Filter Prefix: None Filter Serial #: BL-1677; BL-1787

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

TWSR Comments: PARENT #5832448 WTS-12STD-339

Total PE-Ci Activity: 7.10E-01 Equivalent Combustible PE-Ci: 2.66E-01 AM-241 PE-Ci: 6.08E-02

Total Fissile Gram Equivalents: 7.7 Total Surface Dose Rate (mrem/hr): 1

EPA Code(s): D008 D007 D009 WC 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 Wastelok 770® from previous repack campaign. A minimum of 1.7 volumes of nitrate salt must be mixed with 1.0 volume of nitrate salts

Performed By: Susan Ramsey / Susan S. Ramsey / 100681 / 9/26/12

Production Control (Print) Signature Z Number Date

WDP Engineering

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

Processing Determination: ☑ Accept ☐ Reject

WDP Engineering Comments: Nitrate Salts - POC

Net Wt: 71lb. Parent drum (SEDs attached) was part of WCRR nitrate salt repack campaign using Wastelok 770. This resulting daughter POC is being repacked to adjust admixture/nitrate salt ratio. Nitrate Salts carry waste codes for chromium (D007), lead (D008), and mercury (D009). No hazardous chemicals present.

May require RWP for > 100 and < 1000 mrem/hr

Performed By: Valerie Rhodes / Valerie Rhodes / 112609 / 9/25/12

WDP Engineering (Print) Signature Z Number Date

TRU Remediation Operations

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

Other Specific Safety Concerns:

Processing Determination: ☑ Accept ☐ Reject

TRU Remediation Operations Comments: Ensure kitty litter is bagged.

Performed By: Gilbert Mh / [signature] / 149235 / 9.26.12

TRU Remediation Operations (Print) Signature Z Number Date

HS Review. [signature] CSP Contains lead, chromium, & Hg 9-26-12.

Document No: EP-DIV-AP-0107 JJ - 221452 - 9-26-12

Noncertified TRU Waste Drum Item Information

DrumID: 010985

Item No	ItemID	Process Status	Net Wt (kg)	Matrix	Meas Code	SNM (g)	HT	Auth (Pg/Ln)	Comments
1	IXFS-724FD		12.730	NITRATE SALTS		5.52	52	6/11	G468
2	IXFS-723F1		3.860	NITRATE SALTS		0.	52	6/11	G468
3	IXFS-721FA		30.460	NITRATE SALTS		43.56	52	6/11	G468
4	IXFS-720FA		40.450	NITRATE SALTS		14.04	52	6/11	G468
5	IXFS-722FA		5.000	NITRATE SALTS		0.61	52	6/11	G468
6	IXFS-725FA		3.180	NITRATE SALTS		0.99	56	6/11	G468
7	IXFS-726-FA		22.730	NITRATE SALTS		0.52	52	6/11	G468
8	IXFS-727FD		6.820	NITRATE SALTS		0.55	52	6/11	G468

Noncertified Waste Drum Material Summary

Gross Wt (kg): 198.2

Materiel Type	SNM (grams)	Items Net Wt (kg)
52	64.6	122.05
56	0.99	3.18
Totals	65.79	125.23

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])	90820					
Container type sampled (e.g., 55-gal, 85-gal, 110-gal, or SWB) (5.[1])	POC					
Filtered Vent Type (5.[1])	19DS					
Filtered Vent Unobstructed (5.[1])	☑ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT
WIPP-Approved Filtered Vent (5.[2])	☑ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT
Total CCP VOC value (< 7,000 ppm) (5.[4])	0 ppm	ppm	ppm	ppm	ppm	ppm
Hydrogen Reading (< 64,000 ppm) (5.[5])	0 ppm	ppm	ppm	ppm	ppm	ppm
Methane Reading (< 16,000 ppm) (5.[5])	0 ppm	ppm	ppm	ppm	ppm	ppm

N/A

5.[7] Certified CCP Technician:

Performed By: _____ / _____
CCP (Print) Z #

Reviewed By: _____ / _____
CCP (Print) Z #

Comments: N/A

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

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

6.1[3] Performed By: Colleen Martinez Colleen Martinez 190298, 9.24.12
Waste Handling Operator (print) Signature Z # Date

InstName : Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\120921c\
Data File : 90820.D
Acq On : 21 Sep 2012 1:32 pm (#1); 21-Sep-12, 13:31:34 (#2)
Operator : NW
Sample :
Misc : LFL POC THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 21 13:42:10 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	ev(Min)
Internal Standards						
3) Fluorobenzene	3.535	96	6640615	201.25	ppmv	0.00
15) Chlorobenzene-d5	5.868	117	5904672	177.00	ppmv	0.00

Target Compounds	Qvalue

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

10-3-12

0600 Assuming WCRR operations center - Tapleman
0615 Morning stand down to address issues.
0652 All issues regarding procedural compliance, etc. have been addressed. SOS performing the pre-job for today.
0711 Beginning outside rounds.
0714 Inside rounds complete.
0742 Outside rounds complete.
0743 Rounds reviewed by SOS.
0754 Mode change complete. We are now in operations.
0803 RCT's performing a CAM check. An audible alarm will sound
0819 Bagging on 90820.
0823 Permission granted to lower vehicle access gates to perform radiological survey for the shipment to Area G.
0831 Bag on complete.
0902 Bagging off 90820, bagging on 90916e.
0903 David Royal received an OKay from the SOM to scope the furnace.
0920 Vehicle access gates restored. Transportainers secured.
0928 Bag on complete.
0929 Initiating a drum movement from 50-69 to a transportainer.
0934 Drum movement out of facility complete.
1013 Bagging off 90916e, bagging on 90760.
1035 Bag on complete.
1058 Bagging off 90760, bagging on 90822
1109 Initiating a drum movement from transportainer to 50-69.
1133 Drum movement into facility complete.
1146 Late entry - 1118 bag on complete. (JC)
1150 Bagging off 90822, bagging on 90755.
1217 Bag off complete.
1352 Bagging off 90755, bagging on 90806.
1412 Bag on complete.
1436 Beginning outside rounds.
1450 Bagging off 90806, bagging on 90759.
1505 Outside rounds complete.
1506 Initiating a drum movement from transportainer to 50-69
1507 Bag on complete.
1517 Drum movement into facility complete.
1518 Late entry - at 1515, began inside rounds. (JC)
1527 Bagging off 90759.
1550 Bag off complete.
1553 Initiating a drum movement from 50-69 to a transportainer
1600 Inside rounds complete.
1601 Drum movement out of facility complete.
1607 Rounds reviewed by SOS.

Continued on next page - Tapleman

SIGNATURE DATE 20
READ AND UNDERSTOOD DATE 20

PROJECT NAME NOTEBOOK NO.

continued from previous page

11/13 Made change complete. We are now in warm standby.

11/14 11:30 End of day. Operations secure. - [illegible]

No further entries this page

0600 Assumed SOM position

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

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

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

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

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

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

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

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

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

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

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

1630 Secured SOM position

No further entries this page

SIGNATURE DATE 10/3 20 12

READ AND UNDERSTOOD DATE 20

10-3-12 WCRR 505 Log Book

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

No Further Entries on this Page.

CCP Radiography Data Sheet

S832448

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0058
Examination Date:	4/18/2013
Waste Container ID:	92150
Video/Audio Recorded Media Number:	LA-RTR2-13-0058 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.: 110.5 kg Tare Wt.: 33.4 kg Net Wt.: 77.1 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: 92150

Section 3: Container Inventory and Comments (Detailed descriptions)

IM: Metal lid, hardware

AM:

OM: Scrap lead

OI:

C: Fiberboard insert sleeve, fiberboard packing material

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):	15.0
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	1.0
Other Inorganic Materials (OI)	
Cellulosics (C):	8.0
Rubber (R):	
Plastics (waste materials) (XPM):	7.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	46.1
Soils (S):	
Total WMP Weight:	77.1

CCP Radiography Data Sheet

Waste Container ID: 92150

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		4/18/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	92150	Count Sequence Number:	15565
Operator:	DCLTD231\Operator		
Assay Start:	4/19/2013 10:28:13 AM		
Description 1:	2LANDA1142		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6, Not Precision		
Matrix Type:	Debris S5000		
Container Type:	55 gal Drum		
Weight:	Net: 77.1 kg	Net:	77.1 kg
Container:	Volume: 208.0 l	Full:	90.0 %
Density:	0.410 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: 15565
Assay Instrument: HENC #2
Analysis Method: CCP-TP-063 v 14
Item ID: 92150

Batch Number: 2LANDA1142
Location: LANL TA-54
Software Version: NDA 2000 V.4.0
Analysis Date: 4/19/2013

Net Weight	77100.0 g		
Pu mass	1.71E+001	+-	3.43E+000 g
TRU Alpha Activity	6.66E+000	+-	2.85E+000 Ci
TRU Activity Concentration	8.63E+004	+-	3.69E+004 nCi/g
Pu-239 Equivalent Activity	6.73E+000	+-	2.85E+000 Ci
Pu-239 FGE	1.62E+001	+-	3.21E+000 g
Decay heat	2.20E-001	+-	9.51E-002 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	8.47E-002	6.05E-005	8.23E-006	1.28E-006
PU238	1.88E-003	3.26E-002	6.54E-003	4.24E-005
PU239	1.60E+001	1.01E+000	2.02E-001	1.31E-003
PU240	1.05E+000	2.42E-001	4.86E-002	3.15E-004
AM241	1.55E+000	5.37E+000	2.84E+000	4.27E-002
PU241	3.68E-002	3.83E+000	7.68E-001	4.98E-003
PU242	4.28E-003	1.70E-005	3.41E-006	0.00E+000
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	4.78E-007
U233	<LLD	<LLD	0.00E+000	5.18E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	1.58E-006
U238	<LLD	<LLD	0.00E+000	1.43E-005
AM243	1.11E-003	2.25E-004	3.09E-005	7.69E-006

Errors quoted at 1.000 sigma

Operator: _____ Date: 4/24/13

ITR: _____ Date: 4.30.13

Automated Independent Technical Review

Count Sequence Number: 15565
Batch Number: 2LANDA1142
Counter ID: HENC #2
Container ID: 92150
Waste Matrix Code: Debris S5000
Count Type:
Sequence Type:
Assay Date: 4/19/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis Add-a-Source WARNINGS: Add-a-Source correction factor is less than one.	OK
Section 2 - Passive Neutron Analysis Analysis Status: No errors. 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.	Pu results taken from Passive Neutron data, U from Quantitative Gamma data.
Section 4 - MGA Analysis Results are marked as invalid.	Isotopic analysis failed. AK isotopics applied. The AK information utilized was provided by Steve Schafer, AKE, and consists of data from CCP-AK-LANL-006, AK Source Document M237. MT-52,56.
Section 5 - Gamma Analysis Analysis Status: No errors.	OK
Miscellaneous	No additional nuclides contributing to 95% of the radiological hazard identified.

Expert Review by: [signature] Date: 4/24/13

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **92150**

BDR Number: **LA13FG2046**

Sampling Date: **4/30/2013**

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\130430c\
Data File : 92150.D
Acq On : 30 Apr 2013 3:58 pm (#1); 30-Apr-13, 15:58:02 (#2)
Operator : NW
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 30 16:06:49 2013
Quant Method : C:\msdchem\1\METHODS\vocgas.m
Quant Title : Flammable Gas Analysis
QLast Update : Thu Jan 24 09:52:49 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
3) Fluorobenzene	3.535	96	4146373	201.25	ppmv	-0.03
15) Chlorobenzene-d5	5.871	117	3535931	177.00	ppmv	-0.03

Target Compounds	Qvalue

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

Working Copy
Date: 10-4-12

ATTACHMENT 1
Page 1 of 4

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: 90821

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

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

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

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

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

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

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

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

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

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

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

Performed By: Clayton Mullins, CH 240092 10/4/12
Waste Handling Tech (print) Signature Z# Date

ATTACHMENT 1
Page 2 of 4

4.1[6][B] Parent Waste Container No.: 901321

5.[18] Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable: 374.6 lb

6.2[5][A] Parent Drum Lead Blanket Weight (lb): 0 lb

6.2[5][B]/ 6.2[6] Total Parent Drum Weight (lb) 374.6 lb

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

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

NA

EWMO-FOD (print) Signature / # Date

ATTACHMENT 1
Page 3 of 4

4.1[6][B] Parent Waste Container No.: 90821

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	92164			
10.1[4]	Daughter Drum Filter No.	AN-776		N	
10.1[4]	Daughter Drum Bag Filter No.	L-3662		A	
10.1[4]	Daughter Drum Purchase Order No.	416265			
10.1[13][C]	WCG Fire Watch Stationed		☐ YES	☐ NO	☑ N/A
10.1[14][C][d]3/11.1[3]	WCG Fire Watch Secured		☐ YES	☐ NO	☑ N/A
10.2[4]	POC bag-on bag: Manufacturer				
	Model No.				
	Serial No.				
	Date of Manufacture				
10.2[5]	POC ID No				
10.2[7][B]/10.2[6]	POC Item Description				
10.2[13]	POC Assembly closed per Manufacturer's instructions. (Initial and Z#)	N/A			
10.2[14]	POC Assembly Gross Weight (lb)				
10.2[15]	POC Rad. Survey Results (mrem/hr)				
10.3[3][A]	Approx. Containerized Liquid Vol./Units				
10.3[5][A]	Free Liquid Volume/Units				
10.3[7][A]	Opaque/Non-penetrable Item Description:			N/A	
10.3[9][A]	PCB-contaminated Waste Description				
10.3[9][B]	PCB Item ID No.				
10.3[10]	Remaining Waste Description	see comments			
10.3[13]/10.4[10]/ 10.5[4]/10.6[8]	Daughter Drum % Full (%)	90%			
10.5[3]/10.6[2]	Description Waste Added During Processing	bag-out stubs			

ATTACHMENT 1
Page 4 of 4

4.1[6][B] Parent Waste Container No.: 90821

Comments: stainless steel lid, card board, plastic, nitrate salts, kitty litter

11.1[1] Performed By: Clayton Mullins, Cliff 240376 10/4/12
Waste Handling Tech (print) Signature Z # Date

11.1[7] Reviewed By: Jose Perez, Jose Perez 221452 10-9-12 0805
SOS or designee (print) Signature I # Date Time

Working Copy
Date: 10-2-12

ATTACHMENT 2
Page 1 of 1

WCRRF OVERPACK DRUM ASSEMBLY PREPARATION DATA SHEET

5.[3] Overpack drum information:

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

5.[8] Overpack filtered vent information:

Manufacturer: Nucfil
Model No.: 013
Serial No.: HL-738
Manufacture Date: 8-11

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

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

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

Performed By: Michael Romero / Michael Romero [illegible] 10-2-12
Waste Handling Technician (print) Signature Z # Date

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

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

Comments: n/c

8.1[1] Performed By: Michael Romero / Michael Romero [illegible] 10-2-12
Waste Handling Technician (print) Signature Z # Date

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

8.1[7] Reviewed By: Jose Jerez / [illegible] 221452 10-9-12
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.: 92165

7.[25] Overpack drum closure ring torque wrench information:
M&TE No.: 040329
Cal. Expiration Date: 3/15/13
Range in ft-lb: 16-80
Tolerance: ±3% cw / ±6% ccw

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

Performed By: Clayton Mullins CM 240092 10/4/12
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): 322.4 lb

Comments: N/C

8.1[1] Performed By: Clayton Mullins CM 240092 10/4/12
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 Ferrer Jose Ferrer 221452 ~~10-9-12~~ 10-9-12
Supervisor or designee (print) Signature Z# Date
10-9-12

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

Drum [redacted]: 92164

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 #: 4162265
Lot #: 0327225
Date of Manufacture: 2012

2. Drum Liner Bag/Filter Assembly:

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

RECORD bag filter information:
Manufacturer: BOP
Model #: SOCRVC 1.5-2 SPNC
Serial #: L-21662
Date of Manufacture: 6-12

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

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

4. Install Lid/Drum Filter

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

RECORD drum filter information:
Manufacturer: NUCFIL
Model #: 01905
Serial #: AM-T76
Date of Manufacture: 6-12

RECORD torque wrench information:

Filter torque wrench:		Jam Nut / Bung torque wrench:	
M&TE ID #:	020414	M&TE ID #:	02-1151
Cal Expiration Date:	10-19-12	Cal Expiration Date:	4-11-13
Range (ft-lbs or in-lbs):	40-200	Range (ft-lbs or in-lbs):	16-80
Tolerance:	±1% CW ±3% CCW	Tolerance:	±3% CW ±6% CCW

Torque wrenches listed above are within the acceptable ranges as displayed on the calibration certificate.
☑ Yes ☐ No
Print Name: BRIAN GALLEGOS Signature: [signature] Z#: 2467129

5. Weigh Drum Assembly

RECORD weight information
Tare wight (lbs) 76.4
File ID #: 019065
☑ Write the tare weight on drum using permanent marker

6. Label Drum Assembly

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

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

Operator Print: BRIAN GALLEGOS Operator Sign: [signature] Z#: 2467129 Date: 10-02-12
Verifier Print: Clyde Mullins Verifier Sign: [signature] Z#: 240092 Date: 10/4/12

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

DRUM ID#: 92164

1. LID INSTALLATION

NOTE: Install lid per manufacturer's instructions

✓ Mount lid with filter directly over drum seam.

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

✓ Engage bolt and nut and torque per manufactures instructions.

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

✓ Tighten jam nut.

Record torque wrench information:

MT&E #: 040329

Cal expiration date: 3/15/13

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

-- Tolerance ±3% cw / ±6% ccw

2. DRUM LABELING

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

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

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

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

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

RCRA Label.

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

OR

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

NOTE: Check only one of the above two boxes.

3. WEIGH DRUM ASSEMBLY

Record weight information:

Gross Weight(lbs.): 227.0

Scale ID#: 019005

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

4. FINALIZE DOCUMENTATION

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

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

✓ Complete TWSR.

Operator Print/Sign: Clyde Hellins CH Date: 10/4/12
Brandon Alonzo

Verifier Print/Sign: [illegible] Date: 10-4-12

WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Production Control

Container ID: 90821 Container Type: POC Gross Weight (lbs): 369

ner Seal #: None Filter Prefix: None Filter Serial #: EL-208; EL-229

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

TWSR Comments: PARENT #S832448 WTS-12STD-749

Total PE-Ci Activity: 7.10E-01 Equivalent Combustible PE-Ci: 2.66E-01 AM-241 PE-Ci: 6.03E-02

Total Fissile Gram Equivalents: 7.7 Total Surface Dose Rate (mrem/hr): 1

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

NCR RTR/NDA Comment: None

RTR Pre-Screen Date: None Comment: None

Certified RTR Comment: None

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

Security Determination: ☑ Green ☐ Yellow

Remediation Determination: ☐ VE ☐ PID ☐ Split ☑ Repack

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

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

Nitrate salts mixed with Wastelock 770® from previous repack campaign. A minimum of 1.2 volume of kitty litter/320 lite must be mixed with 1.0 volume of nitrate salts.

Performed By: Susan Ramsey / Susan Ramsey / 100681 / 9/6/12
Production Control (Print) Signature Z Number Date

WDP Engineering

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

Processing Determination: ☒ Accept ☐ Reject

WDP Engineering Comments: Nitrate Salts - POC

Net Wt: 59lb Parent drum (SEDs attached) was part of WCRR nitrate salt repack campaign using Wastelock 770. This resulting daughter POC is being repacked to adjust the admixture/nitrate salt ratio. Nitrate salts carry waste codes for chromium, lead, + mercury. No chemicals present.

May require RWP for >100 and <1000 mrem/hr

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

TRU Remediation Operations

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

Other Specific Safety Concerns: Use tools to remote handle tools. Do not push or press on waste. Use Heavy duty gloves

Processing Determination: ☑ Accept ☐ Reject

TRU Remediation Operations Comments: Use kitty litter to mix in with waste per procedure.

Performed By: Gilbert Martinez / Gilbert M. G / 149235 / 10-1-12
TRU Remediation Operations (Print) Signature Z Number Date

IHS Review [illegible] CSP Contains lead, Chromium & Hg
9-27-12.

Document No: EP-DIV-AP-0107 JJ 221452 - 10-1-12

Noncertified TRU Waste Drum Item Information

DrumID: 010995

Item No	ItemID	Process Status	Net Wt (kg)	Matrix	Mass Code	SNM (g)	NT	Auth (Pg/Lm)	Comments
1	IXPS-724PD		12.750	NITRATE SALTS		5.52	52	6/11	G468
2	IXPS-723PL		3.860	NITRATE SALTS		0.	52	6/11	G468
3	IXPS-721PA		30.460	NITRATE SALTS		43.56	52	6/11	G468
4	IXPS-720PA		40.450	NITRATE SALTS		14.04	52	6/11	G468
5	IXPS-722PA		5.000	NITRATE SALTS		0.61	52	6/11	G468
6	IXPS-725PA		3.180	NITRATE SALTS		0.99	56	6/11	G468
7	IXPS-726-PA		21.730	NITRATE SALTS		0.32	52	6/11	G468
8	IXPS-727PD		6.820	NITRATE SALTS		0.55	52	6/11	G468

Noncertified Waste Drum Material Summary

Gross Wt (kg): 198.2

Material Type	SNM (grams)	Items Net Wt (kg)
52	64.8	122.05
56	0.99	3.18
Totals	65.79	125.23

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])	90821					
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 A	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT
WIPP-Approved Filtered Vent (5.[2])	☑ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT
Total CCP VOC value (< 7,000 ppm) (5.[4])	0 ppm	ppm	ppm	ppm	ppm	ppm
Hydrogen Reading (< 64,000 ppm) (5.[5])	0 ppm	ppm	ppm	ppm	ppm	ppm
Methane Reading (< 16,000 ppm) (5.[5])	0 ppm	ppm	ppm	ppm	ppm	ppm

5.[7] Certified CCP Technician:

Performed By: 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 : 90821.D
Acq On : 21 Sep 2012 1:48 pm (#1); 21 Sep 2012 1:47 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 14:17:16 2012
Quant Method : C:\msdchem\1\METHODS\Vocgas.m
Quant Title : Flammable Gas Analysis for Transportation
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
3) Fluorobenzene	3.259	96	2628908	206.00 ppm	0.00
15) Chlorobenzene-d5	5.936	117	2311194	179.50 ppm	0.00

Target Compounds	Qvalue

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

Vocgas.m Fri Sep 21 14:17:30 2012

PROJECT NAME _____ NOTEBOOK NO _____

10-4-12

0600 Assuming WCRR operations center - JCleeman
0605 Beginning outside rounds.
0606 Air quality personnel arrived to perform weekly stack monitorin
0620 Beginning inside rounds. Pre job being conducted by SOS.
0632 Outside rounds complete.
0652 Inside rounds complete.
0654 Both rounds reviewed by SOS.
0706 Mode change complete. We are now in operations.
0743 Initiating a drum movement from 50-69 to a transportainer.
0752 Drum movement out of facility complete.
0754 Bagging on 90821.
0758 Bag on complete.
0815 Bagging off 90821, bagging on 91004.
0830 Permission granted to lower vehicle access gates to begin to load transfer vehicle for a shipment to Area G.
0834 Bag on complete.
0855 Bagging off 91004, bagging on 90808.
0905 Bag on complete.
0935 Bagging off 90808, bagging on 90818.
0955 Bag on complete.
1020 Initiating a drum movement from 50-69 to a transportainer.
1023 Bagging off 90818, bagging on 90807.
1043 Bag on complete.
1053 Drum movement out of facility complete.
1112 Bagging off 90807, bagging on 91008.
1124 Bag on complete.
1209 Bagging off 91008.
1225 Bag off complete.
1335 Initiating a drum movement from 50-69 to a transportainer.
1551 Drum movement out of facility complete. All inventory has been removed from the facility.
1352 Mode change complete. We are now in COLD in 50-69 and warm standby in WCRRF yard.
1355 Beginning outside rounds.
1406 Beginning inside rounds.
1423 Inside rounds complete.
1428 Operators inside 50-69 beginning to paint where magenta is coming through.
1429 Late entry at 1422, outside rounds completed. JC
1512 Painting inside 50-69 completed.
1630 End of day. Operations secure. - JCleeman

No further entries this page

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

0600 Assumed SOM position

0615 Attended pre job brief conducted by SOS. Discussed POD work items for day, requirement to be in Cold Mode in Bldg 50-69 @ COB, paint touchup on floor after processing complete, safety heading into long weekend.

0704 Completed Mode Change: WCRR Yard / Bldg 50-69 from Warm / Warm to Operations / Operations.

0930 While reviewing SOS logbook identified page missing (torn out) ~~of~~ 10/4/12. Informed OM and ES field ops manager. Neither SOS had information on when or reason for removal.

1033 Met w/ Deputy FOD and OM over Work release/authorization process as part of management assessment.

1042 (Late Entry 0940) Removed Operator Aid # 50-11-07 Rev 0 Combustible Loading Quarterly Report and replaced w/ current Report under Operator Aid # 50-11-07 Rev 1.

1340 Contacted WWC to emerge painting of floor in Bldg 50-69 - for touch up of areas where magenta colored paint is starting to show thru upper grey paints

1352 Completed Mode Change: WCRR ~~Op~~ 10/4/12 Yard / Bldg 50-69 from Operations / Operations to Warm / Cold.

1605 SOS reported all maintenance activities completed.

1615 Secured SOM position

No further entries this page

SIGNATURE DATE 10/4 20 12
READ AND UNDERSTOOD DATE 20

10-4-12 WCRR SOS Log Book

0600 Assuming SOS position for the day

0615 Pre Job brief, started. Needing to be in COLD MODE by the end of the day. Six Parent drums inside of 50-69 to process. Planning on processing those all from Solution Package #72. Once those six are processed we will change MODE so that the areas on the floor where the Magenta paint is starting to show can be painted. Also performing Glove Box maintenance, performing a good inspection on all the gloves, changing out the Tape on the bottom of the glove box and general housekeeping

0630 Pre-Job brief completed.

0654 Inside and outside rounds have been completed.

0706 MODE change from WARM MODE to Operations in 50-69 and in the Yard

0756 Bag on complete of first drum.

0945 Late Entry. On October 1, 2012 I noticed that a page had been torn out of the WCRR SOS log book prior to entries being made on that day. [illegible]

0815 Bagging on Second drum for the day

0835 Bagging on third drum

0935 Bagging on fourth drum

1023 Bagging on fifth drum

1112 Bagging on sixth drum

1225 Bagging off last drum for the day

1352 Mode change Complete WARM in WCRR Yard, Cold in 50-69

1428 Operators inside 50-69 starting to paint areas where magenta is showing through.

1517 Painting inside 50-69 has been Completed.

1600 Securing SOS position for the day. [illegible]

No further entries on this page

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0064
Examination Date:	4/29/2013
Waste Container ID:	92164
Video/Audio Recorded Media Number:	LA-RTR2-13-0064 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 12
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA225
Waste Matrix Code:	S5400
Waste Stream I.D.:	LA-MHD01.001
Waste Container Weights:	Gross Wt.: 103.0 kg Tare Wt.: 33.4 kg Net Wt.: 69.6 kg
Rigid Liner and Liner Vent Description:	Liner: [X] No [ ] Yes Lid: [X] No [ ] Yes Type: [ ] 30-mil [ ] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [ ] Yes [X] N/A Punctured: [X] No [ ] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [ ] No [X] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 2 layers
Volume Utilization Percentage:	95 %

CCP Radiography Data Sheet

Waste Container ID: 92164

Section 3: Container Inventory and Comments (Detailed descriptions)

IM: Hardware, metal lid

AM:

OM: Scrap lead

OI:

C: Fiberboard insert sleeve, fiberboard

R:

XPM: Liner lid, plastic bags

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP): Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	20.0
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	1.0
Other Inorganic Materials (OI)	
Cellulosics (C):	10.0
Rubber (R):	
Plastics (waste materials) (XPM):	8.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	30.6
Soils (S):	
Total WMP Weight:	69.6

CCP Radiography Data Sheet

Waste Container ID: 92164

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		4/29/2013
Print Name	Signature	Date

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

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

Item ID:            92164              Count Sequence Number:  22677
Operator:           D3PW2DK1\operator
Assay Start:        5/1/2013   12:43:01 PM
Description 1:      1LANDA1762
Description 2:      N/A
Location:           LANL TA-54
Comment:            AK-6
Matrix Type:        Debris S5000
Container Type:     55 gallon drum
Weight:             Net:        69.6   kg        Net:    69.6 kg
Container:          Volume:    208.0   l        Full:    95.0 %
Density:                         0.350 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:	22677	Batch Number:	1LANDA1762
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:	92164	Analysis Date:	5/1/2013

Net Weight	69600.0 g		
Pu mass	1.04E+001	+-	2.46E+000 g
TRU Alpha Activity	4.51E+000	+-	1.97E+000 Ci
TRU Activity Concentration	6.47E+004	+-	2.83E+004 nCi/g
Pu-239 Equivalent Activity	4.53E+000	+-	1.97E+000 Ci
Pu-239 FGE	9.82E+000	+-	2.31E+000 g
Decay heat	1.49E-001	+-	6.57E-002 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	6.38E-002	4.56E-005	5.77E-006	1.94E-006
PU238	9.55E-004	1.65E-002	3.91E-003	3.53E-005
PU239	9.75E+000	6.13E-001	1.45E-001	1.31E-003
PU240	6.38E-001	1.47E-001	3.47E-002	3.13E-004
AM241	1.07E+000	3.73E+000	1.96E+000	4.07E-002
PU241	1.29E-002	1.34E+000	3.16E-001	2.86E-003
PU242	2.08E-003	8.27E-006	1.96E-006	0.00E+000
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	5.78E-007
U233	<LLD	<LLD	0.00E+000	4.14E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	1.13E-006
U238	<LLD	<LLD	0.00E+000	1.23E-005
AM243	8.57E-004	1.73E-004	2.23E-005	5.49E-006

Errors quoted at 1.000 sigma

Operator: _____ Date: 5-6-13

ITR: _____ Date: 5-7-13

Automated Independent Technical Review

Count Sequence Number: 22677
Batch Number: 1LANDA1762
Counter ID: MCS HENC #1
Container ID: 92164
Waste Matrix Code: Debris S5000
Count Type:
Sequence Type:
Assay Date: 5/1/2013

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
Ones Rate Analysis complete with warnings.	
- Error calculating the Ones Rate Pu-240 Effective MDA.	Not data affecting.
Section 3 - Data Combiner Analysis	
Override enabled; Passive Neutron Pu and Gamma U data specified as input.	Passive Neutron Pu and Gamma U data specified as input.
Pu results taken from Passive Neutron data, U from Quantitative Gamma data.	
Results comparison test passed.	
Section 4 - MGA Analysis	MGA analysis failed. AK isotopics applied. The AK information utilized was provided by Steve Schafer, AKE, and consists of data from CCP-AK-LANL-006, AK Source Document M237. MT-52,56.
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 Chamberlain Date: 5-2-13

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **92164**

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 : 92164.D
Acq On : 9 May 2013 2:31 pm (#1); 09-May-13, 14:30:47 (#2)
Operator : SA
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 09 14:39:37 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	3.503	96	3518599	201.25 ppmv	-0.07
15) Chlorobenzene-d5	5.848	117	3025307	177.00 ppmv	-0.05

Target Compounds	Qvalue

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

Working Copy
10-3-12

ATTACHMENT 1
Page 1 of 4

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: 90822

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

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

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

4.1[6][B] Parent Waste Container RCRA Designations: D007, 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: Clayte Mullins CM 240092 10/3/12
Waste Handling Tech (print) Signature: Z # Date

ATTACHMENT 1
Page 2 of 4

4.1[6][B] Parent Waste Container No.: 90822

5.[18] Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable: 373.8 lb

6.2[5][A] Parent Drum Lead Blanket Weight (lb): 0 lb

6.2[5][B]/ 6.2[6] Total Parent Drum Weight (lb) 373.8 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
	LA		

ATTACHMENT 1
Page 3 of 4

4.1[6][B] Parent Waste Container No.: 90822

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	92156			
10.1[4]	Daughter Drum Filter No.	AM-773		N/A	
10.1[4]	Daughter Drum Bag Filter No.	L-3656			
10.1[4]	Daughter Drum Purchase Order No.	416245			
10.1[13][C]	WCG Fire Watch Stationed		☐ YES	☐ NO	☑ N/A
10.1[14][C][d]3/11.1[3]	WCG Fire Watch Secured		☐ YES	☐ NO	☑ N/A
10.2[4]	POC bag-on bag: Manufacturer				
	Model No.				
	Serial No.				
	Date of Manufacture				
10.2[5]	POC ID No				
10.2[7][B]/10.2[6]	POC Item Description				
10.2[13]	POC Assembly closed per Manufacturer's instructions. (Initial and Z#)				
10.2[14]	POC Assembly Gross Weight (lb)	N/A			
10.2[15]	POC Rad. Survey Results (mrem/hr)			N/A	
10.3[3][A]	Approx. Containerized Liquid Vol./Units				
10.3[5][A]	Free Liquid Volume/Units				
10.3[7][A]	Opaque/Non-penetrable Item Description:				
10.3[9][A]	PCB-contaminated Waste Description				
10.3[9][B]	PCB Item ID No.				
10.3[10]	Remaining Waste Description	see comments			
10.3[13]/10.4[10]/10.5[4]/10.6[8]	Daughter Drum % Full (%)	90%			
10.5[3]/10.6[2]	Description Waste Added During Processing	bag-out stabs			

ATTACHMENT 1
Page 4 of 4

4.1[6][B] Parent Waste Container No.: 90822

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

11.1[1] Performed By: Clayte Mullins / C/T 240098 10/3/12
Waste Handling Tech (print) Signature Z # Date

11.1[7] Reviewed By: Jose Perez / [signature] 221452 10-3-12 1445
SOS or designee (print) Signature Z # Date Time

~~Working Copy~~ UET
Date: 10-2-12

ATTACHMENT 2
Page 1 of 1

WCRRF OVERPACK DRUM ASSEMBLY PREPARATION DATA SHEET

5.[3] Overpack drum information:

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

5.[8] Overpack filtered vent information:

Manufacturer: nucfil
Model No.: 013
Serial No.: HL-965
Manufacture Date: 8/11

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

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

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

Performed By: Michael Romero [signature] [illegible] 10-2-12
Waste Handling Technician (print) Signature Z # Date

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

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

Comments: N/C

8.1[1] Performed By: Michael Romero [signature] [illegible] 10-2-12
Waste Handling Technician (print) Signature Z # Date

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

8.1[7] Reviewed By: Jose Jerez [signature] 22452 10-3-12
Supervisor or designee (print) Signature Z # Date

Working Copy
Date: 10 3 12

ATTACHMENT 5
Page 1 of 1

WCRRF OVERPACK DRUM CLOSURE DATA SHEET

7.[19] Overpack Drum Unique Identifier No.: 92157

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: Clayte Mullins / CM 24097 10/3/12
Waste Handling Technician (print) Signature Z # Date

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

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

7.[36][B] Platform scale serial number: 019065
Platform scale calibration expiration date: 7/3/13

7.[36][D] 85-gal overpack drum gross weight (lb): 321.0 lb

Comments: N/C

8.1[1] Performed By: Clayte Mullins / CM 24097 10/3/12
Waste Handling Technician (print) Signature Z # Date

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

8.1[7] Reviewed By: Jose Perez / Jose Perez 22452 10-3-12
Supervisor or designee (print) Signature Z # Date

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

Drum ID#: 92154

1. Drum/Lid Assembly

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

RECORD drum information:

Purchase Request #: 4162165
Lot #: 239225
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 #: 6CPVC1.5-25P+C
Serial #: L-3656
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: Overfil
Model #: 015 D9
Serial #: Am-223
Date of Manufacture: 7/12

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):	40-200	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 ZI#: 182723

5. Weigh Drum Assembly

RECORD weight information

Tare weight (lbs) 76.2
File ID #: 019065

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

6. Label Drum Assembly

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

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

Operator Print: Michael Romero Operator Sign: Michael Romero ZI#: 182723 Date: 10-2-12
Verifier Print: Clayton Mullins Verifier Sign: [illegible] ZI#: 240097 Date: 10/3/12

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

DRUM ID#: 92156

1. LID INSTALLATION

NOTE: Install lid per manufacturer's instructions

✓ Mount lid with filter directly over drum seam.

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

✓ Engage bolt and nut and torque per manufactures instructions.

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

✓ Tighten jam nut.

Record torque wrench information:

MT&E #: 040329

Cal expiration date: 3/15/13

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

--- Tolerance ±3% cw / ±6% ccw

2. DRUM LABELING

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

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

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

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

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

RCRA Label:

✓/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): 234.8

Scale ID#: 019065

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

4. FINALIZE DOCUMENTATION

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

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

✓ Complete TWSR.

Operator Print/Sign: [illegible] Date: 10/3/11

Verifier Print/Sign: [illegible] Date: 10-3-11

WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Production Control

Container ID: 90822 Container Type: POC Gross Weight (lbs): 368

Container Seal #: None Filter Prefix: None Filter Serial #: EL-525; EL-560

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

TWSR Comments: PARENT #S832448 WTS-12STD-762

Total PE-Ci Activity: 7.10E-01 Equivalent Combustible PE-Ci: 2.66E-01 AM-241 PE-Ci: 6.03E-02

Total Fissile Gram Equivalents: 7.7 Total Surface Dose Rate (mrem/hr): 1

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

NCR RTR/NDA Comment: None

RTR Pre-Screen Date: None Comment: None

Certified RTR Comment: None

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

Security Determination: ✓ Green ☐ Yellow

Remediation Determination: VE ☐ PID Split ☑ Repack

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

TRUCON Code: TBD Production Control Comments: Need to add EPA Codes D007 & D009. Nitrate salts mixed with WasteLoc 770 from previous repack campaign. A minimum of 1.2 volumes of WasteLoc 770 must be mixed with 1.0 volume of nitrate salts.

Performed By: Susan Ramsey / Tom L. Ramsey / 100681 / 9/6/12
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: Nitrate Salts - POC ✓ Accept Reject

WDP Engineering Comments: Net Wt: 581lb. Parent drum (SEPs attached) was part of WCRF nitrate salt repack campaign using WasteLoc 770. This resulting daughter POC is being repacked to adjust admixture/nitrate salt ratio. Nitrate salts carry waste codes for chromium (D007), lead (D008), + mercury (D009). No hazardous chemicals present. May require RWP for >100 and <1000 mrem/hr

Performed By: Valerie Rhodes / Valerie Rhodes / 112609 / 9/25/12
WDP Engineering (Print) Signature Z Number Date

TRU Remediation Operations

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

Other Specific Safety Concerns:

Processing Determination: ☑ Accept ☐ Reject

TRU Remediation Operations Comments: Ensure kitty litter is bagged in

Performed By: Gilbert Martinez / G. M. / 149235 / 9.26.12
TRU Remediation Operations (Print) Signature Z Number Date

IHS Review. July Amendment ESP. Contains lead, chromium, Hg
9/26/12

Document No: EP-DIV-AP-0107

JJ - 221452 - 9-26-12

Noncertified TRU Waste Drum Item Information

DrumID: 010995

Item No	ItemID	Process Status	Net Wt (kg)	Matrix	Hazs Code	SNM (g)	HT	Auth (Pg/Ln)	Comments
1	IXPS-724PD		12.730	NITRATE SALTS		5.32	52	6/11	G468
2	IXPS-723PL		3.860	NITRATE SALTS		0.	52	6/11	G468
3	IXPS-721PA		30.460	NITRATE SALTS		43.56	52	6/11	G468
4	IXPS-720PA		40.450	NITRATE SALTS		14.04	52	6/11	G468
5	IXPS-722PA		5.000	NITRATE SALTS		0.61	52	6/11	G468
6	IXPS-725PA		3.180	NITRATE SALTS		0.99	56	6/11	G468
7	IXPS-726-PA		22.730	NITRATE SALTS		0.52	52	6/11	G468
8	IXPS-727PD		6.820	NITRATE SALTS		0.55	52	6/11	G468

Noncertified Waste Drum Material Summary

Gross Wt (kg): 198.2

Material Type	SNM (grams)	Items Net Wt (kg)
52	64.8	122.05
56	0.99	3.18
Totals	65.79	125.23

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])	90822					
Container type sampled (e.g., 55-gal, 85-gal, 110-gal, or SWB) (5.[1])	POC					
Filtered Vent Type (5.[1])	19DS					
Filtered Vent Unobstructed (5.[1])	☑ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT
WIPP-Approved Filtered Vent (5.[2])	☑ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT
Total CCP VOC value (< 7,000 ppm) (5.[4])	0 ppm	ppm	ppm	ppm	ppm	ppm
Hydrogen Reading (< 64,000 ppm) (5.[5])	0 ppm	ppm	ppm	ppm	ppm	ppm
Methane Reading (< 16,000 ppm) (5.[5])	0 ppm	ppm	ppm	ppm	ppm	ppm

N/A

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 : 90822.D
Acq On : 21 Sep 2012 2:17 pm (#1); 21-Sep-12, 14:16:36 (#2)
Operator : NW
Sample :
Misc : LFL POC THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 21 14:25:05 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	3.526	96	6598018	201.25	ppmv	-0.01
15) Chlorobenzene-d5	5.865	117	5837047	177.10	ppmv	-0.01

Target Compounds	Qvalue

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

10-3-12
0600 Assuming WCER operations center - JBleeman
0615 Morning stand down to address issues.
0652 All issues regarding procedural compliance, etc. have been addressed. SOS performing the pre-job for today.
0711 Beginning outside rounds.
0714 Inside rounds complete.
0742 Outside rounds complete.
0743 Rounds reviewed by SOS.
0754 Mode change complete. We are now in operations.
0803 RCT's performing a CAM check. An audible alarm will sound
0819 Bagging on 90820.
0823 Permission granted to lower vehicle access gates to perform radiological survey for the shipment to Area G.
0831 Bag on complete.
0902 Bagging off 90820, bagging on 90916.
0903 David Reifel received an okay from the SOM to scope the furnace.
0920 Vehicle access gates restored. Transportainers secured.
0928 Bag on complete.
0929 Initiating a drum movement from 50169 to a transportainer.
0934 Drum movement out of facility complete.
1013 Bagging off 90916, bagging on 90760.
1035 Bag on complete.
1058 Bagging off 90760, bagging on 90822
1109 Initiating a drum movement from transportainer to 50169.
1133 Drum movement into facility complete.
1146 Late entry - 1118, bag on complete. (JC)
1150 Bagging off 90822, bagging on 90755.
1217 Bag off complete.
1352 Bagging off 90755, bagging on 90806.
1412 Bag on complete.
1436 Beginning outside rounds.
1450 Bagging off 90806, bagging on 90759.
1505 Outside rounds complete.
1506 Initiating a drum movement from transportainer to 50169
1507 Bag on complete.
1517 Drum movement into facility complete.
1518 Late entry - at 1515, began inside rounds. (JC)
1527 Bagging off 90759.
1550 Bag off complete.
1553 Initiating a drum movement from 50169 to a transportain
1600 Inside rounds complete.
1601 Drum movement out of facility complete.
1607 Rounds reviewed by SOS.

Continued on next page - JBleeman

PROJECT NAME

NOTEBOOK NO.

continued from previous page

11e13 Mode change complete - We are now in warm standby.

11e30 End of day. Operations secure - Closeout

No further entries this page

SIGNATURE _____ DATE _____ 20__

READ AND UNDERSTOOD _____ DATE _____ 20__

0600 Assumed SOM position.

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

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

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

0827 Released W.O # 445 656-01 50-54(M) Wet Auto Sprinkler Sys.

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

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

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

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

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

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

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

1630 Secured SOM position

No further entries this page

SIGNATURE DATE 10/3 20 12
READ AND UNDERSTOOD DATE 20

10-3-12 WCRR 505 Log Book

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

No Further Entries on this Page.

CCP Radiography Data Sheet

CCP-TP-053 Attachment 2

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0001
Examination Date:	1/7/2013
Waste Container ID:	92156
Video/Audio Recorded Media Number:	LA-RTR2-13-0001 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.: 106.5 kg Tare Wt.: 33.4 kg Net Wt.: 73.1 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: 92156

Section 3: Container Inventory and Comments (Detailed descriptions)

IM: Metal hardware, metal lid, scrap metal

AM:

OM:

OI:

C: Fiberboard insert sleeve

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):	6.0
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	
Other Inorganic Materials (OI)	
Cellulosics (C):	4.0
Rubber (R):	
Plastics (waste materials) (XPM):	3.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	60.1
Soils (S):	
Total WMP Weight:	73.1

CCP Radiography Data Sheet

Waste Container ID: 92156

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

RTR Operator:

Benito Maestas		1/7/2013
Print Name	Signature	Date

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

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

Item ID:            92156              Count Sequence Number:  21797
Operator:           D3PW2DK1\operator
Assay Start:        1/8/2013    1:09:00 PM
Description 1:      1LANDA1693
Description 2:      N/A
Location:           LANL TA-54
Comment:            AK-6
Matrix Type:        Homo Sol. S3000
Container Type:     55 gallon drum
Weight:             Net:        73.1   kg        Net:    73.1 kg
Container:          Volume:    208.0   l        Full:    80.0 %
Density:                        0.440 kg /l


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

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

Errors quoted at  1.000 sigma
```

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number:	21797	Batch Number:	1LANDA1693
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:	92156	Analysis Date:	1/8/2013

Net Weight	73100.0 g		
Pu mass	1.48E+001	+-	3.04E+000 g
TRU Alpha Activity	4.41E+000	+-	1.76E+000 Ci
TRU Activity Concentration	6.04E+004	+-	2.41E+004 nCi/g
Pu-239 Equivalent Activity	4.45E+000	+-	1.76E+000 Ci
Pu-239 FGE	1.40E+001	+-	2.85E+000 g
Decay heat	1.45E-001	+-	5.88E-002 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	5.60E-002	4.00E-005	5.70E-006	1.87E-006
PU238	1.36E-003	2.36E-002	4.84E-003	3.49E-005
PU239	1.39E+001	8.73E-001	1.79E-001	1.29E-003
PU240	9.13E-001	2.10E-001	4.30E-002	3.10E-004
AM241	9.52E-001	3.31E+000	1.75E+000	4.04E-002
PU241	1.86E-002	1.93E+000	3.96E-001	2.86E-003
PU242	2.97E-003	1.18E-005	2.42E-006	0.00E+000
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	5.34E-007
U233	<LLD	<LLD	0.00E+000	3.87E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	1.11E-006
U238	<LLD	<LLD	0.00E+000	1.34E-005
AM243	7.34E-004	1.48E-004	2.15E-005	5.30E-006

Errors quoted at 1.000 sigma

Operator: _____ Date: 1-14-13

ITR: _____ Date: 1-14-13

Automated Independent Technical Review

Count Sequence Number: 21797
Batch Number: 1LANDA1693
Counter ID: MCS HENC #1
Container ID: 92156
Waste Matrix Code: Homo Sol. S3000
Count Type:
Sequence Type:
Assay Date: 1/8/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis No Add-a-Source warnings.	Ok
Section 2 - Passive Neutron Analysis Analysis Status: No errors. Ones Rate Analysis complete with warnings. - Error calculating the Ones Rate Pu-240 Effective MDA.	Ok Not data affecting.
Section 3 - Data Combiner Analysis Override enabled; Passive Neutron Pu and Gamma U data specified as input. Pu results taken from Passive Neutron data, U from Quantitative Gamma data. Results comparison test passed.	Passive Neutron Pu and Gamma U data specified as input.
Section 4 - MGA Analysis Results are marked as invalid.	MGA analysis failed. AK isotopics applied. The AK information utilized was provided by Steve Schafer, AKE, and consists of data from CCP-AK-LANL-006, AK Source Document M237. MT-52,56.
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: 1-9-13

S 832448

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **92156**

BDR Number: **LA13FG8001**

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

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	102.76	
74-82-8	Methane	213.40	U
67-56-1	Methanol	27.87	U
60-29-7	Ethyl Ether	1.25	U
75-35-4	1,1-Dichloroethylene	5.71	U
67-64-1	Acetone	16.90	U
75-34-3	1,1-Dichloroethane	4.24	U
156-59-2	cis-1,2-Dichloroethene	0.55	U
78-93-3	Methyl ethyl ketone	9.86	U
110-82-7	Cyclohexane	5.84	U
71-43-2	Benzene	0.71	U
107-06-2	1,2-Dichloroethane	1.51	U
71-36-3	1-Butanol	1.36	U
108-10-1	Methyl isobutyl ketone	9.34	U
108-88-3	Toluene	3.09	U
108-90-7	Chlorobenzene	1.69	U
100-41-4	Ethylbenzene	2.62	U
108-38-3/106-42-3	m- and p-Xylene	1.48	U
95-47-6	o-Xylene	1.76	U
108-67-8	1,3,5-Trimethylbenzene	3.14	U
95-63-6	1,2,4-Trimethylbenzene	3.92	U

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\130115c\
Data File : 92156.D
Acq On : 15 Jan 2013 3:27 pm
Operator : SA
Sample :
InstName : Unit 8
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jan 15 15:36:03 2013
Quant Method : C:\msdchem\1\METHODS\Vocgas.m
Quant Title : Flammable Gas Analysis for Transportation
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
3) Fluorobenzene	3.259	96	2372157	206.00 ppm	0.00
15) Chlorobenzene-d5	5.936	117	2119640	179.50 ppm	0.00
Target Compounds					Qvalue
1) Hydrogen	8.982	GC1	25391m	102.76 ppm	

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

Working Copy
Date: 1-12-13

ATTACHMENT 1
Page 1 of 4

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: 90823

6.2[4] Date Processed: 1-12-13

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: Baron Gallegos [signature] 261129 1-12-13
Waste Handling Tech (print) Signature Z # Date

ATTACHMENT 1
Page 2 of 4

4.1[6][B] Parent Waste Container No.: 95373

5.[18] Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable: 3776 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) 3776 lb

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

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

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

ATTACHMENT 1
Page 3 of 4

4.1[6][B] Parent Waste Container No.: 90823

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	92563			
10.1[4]	Daughter Drum Filter No.	JL-1243		N	
10.1[4]	Daughter Drum Bag Filter No.	L-4335		A	
10.1[4]	Daughter Drum Purchase Order No.	501011			
10.1[13][C]	WCG Fire Watch Stationed		☐ YES	☐ NO	☑ N/A
10.1[14][C][d]3/11.1[3]	WCG Fire Watch Secured		☐ YES	☐ NO	☑ N/A
10.2[4]	POC bag-on bag: Manufacturer				
	Model No.				
	Serial No.				
	Date of Manufacture				
10.2[5]	POC ID No				
10.2[7][B]/10.2[6]	POC Item Description				
10.2[13]	POC Assembly closed per Manufacturer's instructions. (Initial and Z#)				
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			
10.3[5][A]	Free Liquid Volume/Units				
10.3[7][A]	Opaque/Non-penetrable Item Description:		N		
10.3[9][A]	PCB-contaminated Waste Description				
10.3[9][B]	PCB Item ID No.				
10.3[10]	Remaining Waste Description	STUB OUT BAGS			
10.3[13]/10.4[10]/ 10.5[4]/10.6[8]	Daughter Drum % Full (%)	100%	N		
10.5[3]/10.6[2]	Description Waste Added During Processing	SEE COMMENTS		A	

ATTACHMENT 1
Page 4 of 4

4.1[6][B] Parent Waste Container No.: 90823

Comments: PER LIDS, ROOM TRASH, PLASTIC, CARDBOARD, SALTS, KITTY-LITTER

11.1[1] Performed By: BRIAN GALLEGOS / [signature] / 1267129 / 1-12-13
Waste Handling Tech (print) Signature Z # Date

11.1[7] Reviewed By: G Mk / [signature] / 14225 / 1-13-13 0105
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-81
Manufacture Date:	9/11

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

	Filtered Vent	2 in. Bung
M&TE No.:	040094	038367
Cal. Expiration Date:	9-26-13	3-16-13
Tolerance:	40-200	10-80

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

Performed By: Gerald Espinoza / [signature] 1-9-13
Waste Handling Technician (print) Signature Z # Date

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

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

Comments: N/C

8.1[1] Performed By: Gerald Espinoza / [signature] 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: [signature] / [signature] 1-13-13
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 5
Page 1 of 1

WCRRF OVERPACK DRUM CLOSURE DATA SHEET

7.[19] Overpack Drum Unique Identifier No.: 92564

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

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

Performed By: BRIAN GALLEGOS [signature] 1267129 1-12-13
Waste Handling Technician (print) Signature Z# Date

7.[28] Overpack drum closure ring torque value: BG 1-12-13 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): 324.6 lb

Comments: N/C

8.1[1] Performed By: BRIAN GALLEGOS [signature] 1267129 1-12-13
Waste Handling Technician (print) Signature Z# Date

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

8.1[7] Reviewed By: [signature] [signature] 149375 1-13-13
Supervisor or designee (print) Signature Z# Date

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

Drum ID#: 92563

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 #: 501011
Lot #: 0233370
Date of Manufacture: 12

2. Drum Liner Bag/Filter Assembly:

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

RECORD bag filter information:

Manufacturer: BOP
Model #: 6CPVC-1.5-5PVC
Serial #: L-3335
Date of Manufacture: 7-12

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

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

4. Install Lid/Drum Filter

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

RECORD drum filter information:

Manufacturer: NUCFIL
Model #: 019DS
Serial #: JL-1243
Date of Manufacture: 10-11

RECORD torque wrench information:

Filter torque wrench:		Jam Nut / Bung torque wrench:	
M&TE ID #:	040694	M&TE ID #:	038767
Cal Expiration Date:	9-26-13	Cal Expiration Date:	9-16-13
Range (ft-lbs or in-lbs):	40-200	Range (ft-lbs or in-lbs):	10-80
Tolerance:	±4% cw/ccw	Tolerance:	±3% cw ±6% ccw

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

5. Weigh Drum Assembly

RECORD weight information
Tare witght (lbs) 76.0
File ID #: 019065

- ☑ Write the tare weight on drum using permanent marker

6. Label Drum Assembly

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

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

Operator Print: Brandon Chavez Operator Sign: [signature] Z#: 204742 Date: 1-9-13
Verifier Print: Brian Gallegos Verifier Sign: [signature] Z#: 267129 Date: 1-12-13

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

DRUM ID#: 92563

1. LID INSTALLATION

NOTE: Install lid per manufacturer's instructions

✓ Mount lid with filter directly over drum seam.

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

✓ Engage bolt and nut and torque per manufactures instructions.

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

✓ Tighten jam nut.

Record torque wrench information:

MT&E #: 021151

Cal expiration date: 6-11-2013

Range/ Value (ft-lbs): 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): 227.6

Scale ID#: 019065

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

4. FINALIZE DOCUMENTATION

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

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

✓ Complete TWSR.

Operator Print/Sign: [illegible] Date 1-12-13

Verifier Print/Sign: [illegible] Date: 1-12-13

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WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Production Control

Container ID: 90823 Container Type: PGC Gross Weight (lbs): 372

Container Seal #: None Filter Prefix: None Filter Serial #: EL-270; EL-54

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

TWSR Comments: PARENT #S832448 WTS-12STD-772

Total PE-Ci Activity: 7.10E-01 Equivalent Combustible PE-Ci: 2.66E-01 AM-241 PE-Ci: 6.03E-02

Total Fissile Gram Equivalents: 7.7 Total Surface Dose Rate (mrem/hr): 1

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

NCR RTR/NDA Comment: None 9/25/12

RTR Pre-Screen Date: None Comment: None

Certified RTR Comment: None

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

Security Determination: ✓ Green | Yellow

Remediation Determination: VE | PID | Split | ☑ Repack

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

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

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

Performed By: Susan Ramsey / Susan Ramsey / 100681 / 9/6/12

Production Control (Print) Signature Z Number Date

WDP Engineering

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

Processing Determination: ☑ Accept Reject

WDP Engineering Comments: Nitrate Salts - POC

Net Wt: 62 lb. Parent drum (SEDs attached) was part of WCRR nitrate salt repack campaign using WasteLoc 770. This resulting daughter POC is being repacked to adjust admixture/nitrate salt ratio. Nitrate salts carry waste codes for chromium (D007), lead (D008), and mercury (D009). No hazardous chemicals present.

May require RWP for >100 and <1000 mrem/hr

Performed By: Valerie Rhodes / Valerie Rhodes / 112609 / 9/25/12

WDP Engineering (Print) Signature Z Number Date

TRU Remediation Operations

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

Other Specific Safety Concerns: Wear proper PPE when processing waste in the glove box. Do not push or press on the waste with hands.

Processing Determination: ☑ Accept Reject

TRU Remediation Operations Comments: Use proper ratio of kitty litter to waste per the procedure

Performed By: Jose Jerez / [signature] / 221452 / 10-9-12

TRU Remediation Operations (Print) Signature Z Number Date

LL Z# 249750 10/17/12 * Potential Sharps* Utilize hexardor gloves & tools to handle waste.

HS REVIEW: RB 206362 10.3.12

Noncertified TRU Waste Drum Item Information

DrumID: 010995

Item No	ItemID	Process Status	Net Wt (kg)	Matrix	Mass Code	SNM (g)	MT	Auth (Pg/Ln)	Comments
1	IXFS-724FD		12.730	NITRATE SALTS		5.52	52	6/11	G468
2	IXFS-723FL		3.860	NITRATE SALTS		0.	52	6/11	G468
3	IXFS-721FA		30.460	NITRATE SALTS		43.56	52	6/11	G468
4	IXFS-720FA		40.450	NITRATE SALTS		14.04	52	6/11	G468
5	IXFS-722FA		5.000	NITRATE SALTS		0.61	52	6/11	G468
6	IXFS-725FA		3.180	NITRATE SALTS		0.99	56	6/11	G468
7	IXFS-726-FA		22.730	NITRATE SALTS		0.52	52	6/11	G468
8	IXFS-727FD		6.820	NITRATE SALTS		0.55	52	6/11	G468

Noncertified Waste Drum Material Summary

Gross Wt (kg): 198.2

Material Type	SNM (grams)	Items Net Wt (kg)
52	64.8	122.05
56	0.99	3.18
Totals	65.79	125.23

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])	90823					
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: ~~None~~ 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 : 90823.D
Acq On : 3 Oct 2012 2:02 pm (#1); 3 Oct 2012 2:01 pm (#2)
Operator : SA
Sample :
InstName : Unit 8
Misc : 55 GALLON LFL DRUM THROUGH FILTER-19DS FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Oct 03 14:09:42 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	2210192	206.00 ppm	0.00
15) Chlorobenzene-d5	5.936	117	1986757	179.50 ppm	0.00
Target Compounds					Qvalue

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

Vocgas.m Wed Oct 03 14:10:02 2012

12-13
0000 Assuming WCRFF operations center - Orlando.
0011 SOS performing pre job briefing.
0043 pre job has been concluded.
0050 Starting inside rounds.
0708 Starting outside rounds.
0715 Item #61 is OOS, PCD is in place, OK to continue.
0718 Inside rounds completed.
0730 outside rounds complete.
0738 Inventory control system is not working site wide
0745 Inside and Outside rounds signed off by SOS
0800 Inventory control system is back up.
0833 Mode change performed TA50-69 and WCRFF yard now in Operations.
0906 bagging on 90805
0918 bag on complete. PPE check is SAT
0955 Starting movement into 50-69
1008 completed movement into 50-69
1012 PPE check is sat.
1019 bagging off 90805, bagging on 90812
1048 bag on, bag off is complete, PPE check is sat.
1122 starting movement out of TA50-69 to transportainers
1147 bagging off 90812 and bagging on 90823
1213 bag on, bag off complete, PPE check is sat.
1230 Operators breaking for lunch.
1339 PPE check is sat.
1433 bagging off 90823, bagging on 90819. PPE Check is sat
1500 bag off, bag on complete.
1527 Starting movement into 50-69
1532 Starting inside rounds.
1538 completed movement out of transportainers to 50-69
1556 starting outside rounds
1557 Completed inside rounds, PPE check is sat.
1606 bagging off 90819, bagging on 90817.
1625 inside and outside rounds signed off by SOS.
1633 bag on, bag off complete PPE Check is sat.
Continued on next page - Orlando

92574
- Int Daughtry - 90851

1-12-13 Continued from previous page - Chlarde
1736 bagging off 90817. FFE check is out.
1758 bag job complete.
1813 Mode change performed TA 50-69 and WCRRF
yard now in warm standby.
1-12-13
1850 ~~1000~~ end of day WCRRF operations center secure Chlo

no further entries this page.

1/12/13

0600 Reviewed WCRR SOM turnover checklist and assumed WCRR SOM position

0605 Notified by SOS that Oracle system is down and unable to print labels. Inventory control is trouble shooting.

0615 Attended pre job brief conducted by SOS. Discussed problem w/ Oracle and backup plan is to have operators complete training on-line, required reading, etc. Safety topic w/ cold weather is to dress in layers if conducting outside work and proper PPE/Operation of spotter during forklift movements.

0645 Determined Oracle is down both @ WCRR and TA-54. OM notified and contacting Waste services to bring in on call personnel to repair/reboot.

0830 Inventory control verified Oracle system back in operation

~~0833~~ ~~0835~~ pta 1/12/13 Completed mode change WCRR Yard/Blds 50-69 from Warm/Warm to Operations/Operations

0835 (Late Entry 0831) Notified OM and TA-54 SOM of WCRR Oracle status.

0905 Notified by Inventory Control that ability to print TWSR forms via SWOOSH database is not working - verified that TA-54 is having same problem. Will not prevent WCRR from operations (processing) but cannot prepare outgoing shipments w/out capability

0904 Bagging on first drum.

1300 Updated DDP PM of WCRR Status.

1530 Toured inside WCRR yard w/ SSW to observe drum movements. While conducting tour a posting identified on door leading into respirator room had SOM signature/date faded from weather.

1813 Completed Mode Change: WCRR Yard/Blds 50-69 from Operations/Operations to Warm/Warm.

1830 Secured SOM position

No further entries this page

1/12 13

1.12.13 WCRR SOS LOG Book

0600 Assuming SOS Position [illegible]

0610 Conducted shift brief discussed [illegible] weather issues

0643 Conducted shift brief

0645 Having issues with grade stacking [illegible]

0647 Sam working [illegible] to get feed prior to unstacking

0745 Reviewed Inside And outside Records

0750 Unable to process due to [illegible] being down.

0830 Oracle system has been [illegible] Discussed to [illegible] facility

0833 Made change complete WCRRF In operations

0900 Logging on First drum 90805

0918 PPE check

1012 PPE check

1019 Logging off and logging on 90812

1045 PPE check

1147 Logging off and logging on 90823

339 PPE check shift

1433 Logging off and logging on 90579 PPE check

1600 Logging off and logging on 90817

1625 Inside And outside Records reviewed

1635 Logging off [illegible] drum off [illegible]

1[illegible] [illegible] complete [illegible]

1[illegible] [illegible] shift [illegible]

The truth follows on this page

Best Available Copy

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0084
Examination Date:	6/19/2013
Waste Container ID:	92563
Video/Audio Recorded Media Number:	LA-RTR2-13-0084 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:	LA225
Waste Matrix Code:	S5400
Waste Stream I.D.:	LA-MHD01.001
Waste Container Weights:	Gross Wt.: 103.0 kg Tare Wt.: 33.4 kg Net Wt.: 69.6 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: 92563

Section 3: Container Inventory and Comments (Detailed descriptions)

IM: Metal hardware, pipe component lid

AM:

OM:

OI:

C: Fiberboard insert sleeve, fiberboard, cloth material

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):	19.0
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	
Other Inorganic Materials (OI)	
Cellulosics (C):	10.0
Rubber (R):	
Plastics (waste materials) (XPM):	8.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	32.6
Soils (S):	
Total WMP Weight:	69.6

CCP Radiography Data Sheet

Waste Container ID: 92563

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		6/19/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	92563	Count Sequence Number:	23055
Operator:	D3PW2DK1\operator		
Assay Start:	6/20/2013 3:47:15 PM		
Description 1:	1LANDA1794		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6, Not Precision		
Matrix Type:	Debris S5000		
Container Type:	55 gallon drum		
Weight:	Net: 69.6 kg	Net:	69.6 kg
Container:	Volume: 208.0 l	Full:	65.0 %
Density:	0.520 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:	23055	Batch Number:	1LANDA1794
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:	92563	Analysis Date:	6/20/2013

Net Weight	69600.0 g		
Pu mass	8.53E+000	+-	2.20E+000 g
TRU Alpha Activity	3.67E+000	+-	1.62E+000 Ci
TRU Activity Concentration	5.27E+004	+-	2.33E+004 nCi/g
Pu-239 Equivalent Activity	3.69E+000	+-	1.62E+000 Ci
Pu-239 FGE	8.04E+000	+-	2.06E+000 g
Decay heat	1.21E-001	+-	5.42E-002 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	5.51E-002	3.94E-005	6.15E-006	1.97E-006
PU238	7.82E-004	1.35E-002	3.49E-003	3.38E-005
PU239	7.99E+000	5.02E-001	1.30E-001	1.26E-003
PU240	5.25E-001	1.21E-001	3.11E-002	3.02E-004
AM241	8.73E-001	3.03E+000	1.62E+000	4.28E-002
PU241	9.97E-003	1.04E+000	2.67E-001	2.59E-003
PU242	2.13E-003	8.47E-006	2.18E-006	0.00E+000
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	5.59E-007
U233	<LLD	<LLD	0.00E+000	4.25E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	1.19E-006
U238	<LLD	<LLD	0.00E+000	1.20E-005
AM243	7.61E-004	1.54E-004	2.44E-005	5.54E-006

Errors quoted at 1.000 sigma

Operator: D. R. [illegible] Date: 6-27-13

ITR: Amy Barton Date: 6/28/13

Automated Independent Technical Review

Count Sequence Number: 23055 Batch Number: 1LANDA1794
Counter ID: MCS HENC #1
Container ID: 92563
Waste Matrix Code: Debris S5000 Count Type:
Sequence Type: Assay Date: 6/20/2013

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

Comments	Disposition
Section 4 - MGA Analysis Results are marked as invalid.	MGA analysis failed. AK isotopics applied. The AK information utilized was provided by Steve Schafer, AKE, and consists of data from CCP-AK-LANL-006, AK Source Document M237. MT-52,56.
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: 6-26-13

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **92563**

BDR Number: **LA13FG12054**

Sampling Date: **6/24/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	124.67	
74-82-8	Methane	82.02	
67-56-1	Methanol	65.67	
60-29-7	Ethyl Ether	1.77	U
75-35-4	1,1-Dichloroethylene	5.36	U
67-64-1	Acetone	17.73	
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	12.27	
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\130624c\
Data File : 92563.D
Acq On : 24 Jun 2013 10:23 am (#1); 24 Jun 2013 10:22 am (#2)
Operator : GR
Sample :
Misc : 55 GALLON DRUM THOUGH FILTER. (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jun 24 10:35:14 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	7602404	207.75	ppmv	0.00
15) Chlorobenzene-d5	6.639	117	6000993	178.75	ppmv	0.00
Target Compounds						Qvalue
1) Hydrogen	1.900	GC1	35561m	124.67	ppmv	
2) Methane	3.767	GC1	10934m	82.02	ppmv	
4) Methanol	0.824	31	26381	65.67	ppmv	100
7) Acetone	1.360	58	35862	17.73	ppmv	99
17) Toluene	5.580	92	297443	12.27	ppmv	97

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

S832464

S832464

Container Profile 752816

File Options Reports Help

S832464

752816	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

S832464

- S832464
  - 90871 – EMPTY
  - 90870
    - 92143 – EMPTY
    - 92142
      - SB02005
  - 90869
    - 92340 – EMPTY
    - 92339
      - SB01967
  - 90868
    - 92346 – EMPTY
    - 92345
      - LASB02093
  - 90867
    - 92341
    - 92342 – EMPTY
  - 90866
    - 92297 – EMPTY
    - 92296
  - 90865
    - 92218 – EMPTY
    - 92217
    - 92216
    - 92215

Task History

Transfer Details

Transfer Amount	Transfer Unit	Item	Measured Weight	Measured Weight Unit

Working Copy
Date: 2-7-12 cw

ATTACHMENT 1
Page 1 of 3

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: S832464

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 182723 / 2-7-12
Waste Handling Tech (print) Signature Z # Date

5.[16] Prepared Parent Drum Weight (lb): 417.2 lb

6.2[5][A] Parent Drum Lead Blanket Weight (lb): 120 ~~537.2~~ lb
MR
2-7-12

ATTACHMENT 1
Page 2 of 3

4.1[6][B] Parent Waste Container No.: S832464

6.2[5][B]/ 6.2[6] Total Parent Drum Weight (lb) 537.2 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.	90865			
10.1[4]	Daughter Drum Filter No.	CL-1415		N/A	
10.1[4]	Daughter Drum Bag Filter No.	WO 1147			
10.1[4]	Daughter Drum Purchase Order No.	414992			
10.1[13][C]	WCG Fire Watch Stationed		☐ YES	☐ NO	☑ N/A
10.1[14][C][d]3/11.1[3]	WCG Fire Watch Secured		☐ YES	☐ NO	☑ N/A
10.2[4]	POC bag-on bag: Manufacturer	BOP	BOP	BOP	NUCFil
	Model No.	3-1.5-2	3-1.5-2	3-1.5-2	036 DA
	Serial No.	WO 2512	WO 2509	WO 2505	CL-227
	Date of Manufacture	10/11	10/11	10/11	12/11
10.2[5]	POC ID No	90866	90867	90868	90869
10.2[7][B]/10.2[6]	POC Item Description	Salts Plastic	Salts Plastic	Salts Plastic	Salts Plastic
10.2[7][D]/10.2[8][D]	Bag-out Bag Filter No.	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)	389.6	375.8		
10.2[15]	POC Rad. Survey Results (mrem/hr)	702	200	201	181
10.3[3][A]	Approx. Containerized Liquid Vol./Units	N/A			
10.3[7][A]	Opaque/Non-penetrable Item Description:	LEAD shielding LEAD			
10.3[5][A]	Free Liquid Volume/Units				
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 (%)	100%			
10.5[4]	Description Waste Added During Processing	Plastic			

ATTACHMENT 1
Page 2 of 3

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

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

6.2[7] **($)** Total Parent Drum Weight < 624 lb (SR 4.3.1): ☐ SAT ☐ UNSAT

N/A

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.				
10.1[4]	Daughter Drum Filter No.				
10.1[4]	Daughter Drum Bag Filter No.				
10.1[4]	Daughter Drum Purchase Order No.				
10.1[13][C]	WCG Fire Watch Stationed		☐ YES	☐ NO	☑ N/A
10.1[14][C][d]3/11.1[3]	WCG Fire Watch Secured		☐ YES	☐ NO	☑ N/A
10.2[4]	POC bag-on bag: Manufacturer	BOP			
	Model No.	3-1.5-2			
	Serial No.	W02524			
	Date of Manufacture	10/11			
10.2[5]	POC ID No	90870			
10.2[7][B]/10.2[6]	POC Item Description	SAHS plastic			
10.2[7][D]/10.2[8][D]	Bag-out Bag Filter No.	N/A			
10.2[13]	POC Assembly closed per Manufacturer's instructions. (Initial and Z#)	MZ 182723			
10.2[14]	POC Assembly Gross Weight (lb)	380.2			
10.2[15]	POC Rad. Survey Results (mrem/hr)	151			
10.3[3][A]	Approx. Containerized Liquid Vol./Units				
10.3[7][A]	Opaque/Non-penetrable Item Description:				
10.3[5][A]	Free Liquid Volume/Units				
10.3[9][A]	PCB-contaminated Waste Description				
10.3[9][B]	PCB Item ID No.				
10.3[10]	Remaining Waste Description				
10.3[13]/10.4[12]/ 10.5[5]	Daughter Drum % Full (%)				
10.5[4]	Description Waste Added During Processing				

N/A

ATTACHMENT 1
Page 3 of 3

4.1[6][B] Parent Waste Container No.: S832464

Comments: Lead Lined poly/ Linen, Liquids, Salts

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

11.1[7] Reviewed By: Gilbert Mirtle Gilbert Mirtle 149255 2-9-12
SOS/SOM (print) Signature Z # Date/Time

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

85-Gallon Overpack ID Number 90871

RECORD Drum Filter information: NUCF:1-013	
Filter ID Number: FJ-479	
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	N/A	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#	N/A
		Cal Expiration Date	
		Tolerance	
		Torque wrench is within acceptable range as displayed on Calibration Certificate	☐ Yes ☐ No ☐ N/A

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

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

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

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

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

Drum lid ring ends touching: ☐ YES ☑ NO

Technician Name (print)	Signature	Initials	Z#	Date
Edward Rios	[signature]	ER	187822	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#: 90865

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

2. Drum Liner Bag/Filter Assembly:

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

RECORD bag filter information:

Manufacturer: BOP
Model #: 3.0x1.5-25PUL
Serial #: WO1147
Date of Manufacture: 5/11

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 #: 019DS
Serial #: CL-1415
Date of Manufacture: 3/11

RECORD torque wrench information:

Filter torque wrench:		Jam Nut / Bung torque wrench:	
M&TE ID #:	0401099	M&TE ID #:	040691
Cal Expiration Date:	9-12-12	Cal Expiration Date:	5-2-12
Range (ft-lbs or in-lbs):	40-200	Range (ft-lbs or in-lbs):	10-80
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.
☑ Yes ☐ No
Print Name: Timmy Romero Signature: [signature] Z#: 234253

5. Weigh Drum Assembly

RECORD weight information
Tare witght (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: Timmy Romero Operator Sign: [signature] Z#: 234253 Date: 1-4-12
Verifier Print: Michael Romero Verifier Sign: [signature] Z#: 182723 Date: 2-7-12

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

DRUM ID#: 90865

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.): 299.6

Scale ID#: 019065

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

4. FINALIZE DOCUMENTATION

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

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

✓ Complete TWSR.

Operator Print/Sign: [illegible] Date: 2-7-12

Verifier Print/Sign: [illegible] Date: 2-7-12

ATTACHMENT 1

WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Production Control

Container ID: S832464 Container Type: 85-GAL Gross Weight (lbs): 431
Inner Seal #: 010990 Filter Prefix: LAVC Filter Serial #: 02405; 03881
AK Waste Stream: LA-MHD01.001 Certified RTR BDR: No BDR
TWSR Comments: LEACHED SOLIDS MST-12 ROOM 434 NITRATE SALTS
Total PE-Ci Activity: 8.78E+00 Equivalent Combustible PE-Ci: 3.29E+00 AM-241 PE-Ci: 9.52E-01
Total Fissile Gram Equivalents: 83.4 Total Surface Dose Rate (mrem/hr): 6
EPA Code(s): None
NCR RTR/NDA Comment: None
RTR Pre-Screen Date: 1/16/2007 Comment: Impenetrable Obj,
Certified RTR Comment: None

Prohibited Items: ☐ Sealed > 4 Liters ☐ Liquid ☐ Pressurized Container ☑ Impenetrable Item ☐ Other
Security Determination: ☑ Green ☐ Yellow
Remediation Determination: ☑ VE ☐ PID ☐ Split ☐ Repack
Estimated 30-cm Dose Rate (mrem/hr): ☐ <100 ☐ >100 and <1,000 ☑ >1,000 and <10,000 ☐ >10,000
TRUCON Code: LA125M Production Control Comments:

Performed By: R. W. Jones / R. W. Jones / 117434 / 10-6-10
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. NET WASTE WT = 264 LBS IN 7 ITEMS. MAX ITEM WT = 27.73 KG (61 LBS). NO CERT RTR DATA. FAILED RTR PRE-SCREEN. MAY REQUIRE RWP FOR > 1000 MREM/HR. ONE ITEM TREATED WITH 16 GRAMS PUSL. NOTE: NITRATE SALTS HAVE PREVIOUSLY CONTAINED SIGNIFICANT UNDOCUMENTED LIQUID.
Performed By: ROBERT L. GRIFFIS / Robert L. Griffis / 130352 / 11-17-10
WDP Engineering (Print) Signature Z Number Date

TRU Remediation Operations

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

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

Performed By: C. Velarde / C. Velarde / 234079 / 12/8/10
TRU Remediation Operations (Print) Signature Z Number Date

Noncertified TRU Waste Drum Item Information

DrumID: 010990

Item No	ItemID	Process Status	Net Wt (kg)	Matrix	Meas Code	SNM (g)	MT	Auth (Pg/Ln)		Comments
1	IXFS729FB		23.860	NITRATE SALTS		17.05	53	6/11	G468	
2	IXFS-728FA		13.640	NITRATE SALTS		5.64	56	6/11	G468	
3	IXFS-717FA		8.860	NITRATE SALTS		8.42	53	6/11	G468	
4	IXFS-719FA		17.730	NITRATE SALTS		5.74	53	6/11	G468	
5	IXFS-730-0X32		27.730	NITRATE SALTS		14.75	53	6/11	G468	
6	IXFS-718FB		15.450	NITRATE SALTS		8.22	52	6/11	G468	
7	IXFS-732-FA		12.270	NITRATE SALTS		29.8	52	6/11	G468	

Noncertified Waste Drum Material Summary

Gross Wt (kg): 195.5

Material Type	SNM (grams)	Items Net Wt (kg)
52	38.02	27.72
53	45.96	78.18
56	5.64	13.64
Totals	89.62	119.54

ATTACHMENT 1
Page 1 of 2

HYDROGEN/VOC SAMPLING USING GAS CHROMATOGRAPHY DATA SHEET

7.[1] Sample Date: 10.12.10

7.[7] Certified CCP Technician:

CCP (Print)	Signature	Z #	Date
Gabe Romero	[signature]	236973	10-2010
	/	/	/

Container No. (7.[1]):	S883193	S832464	S884604
Container Type (SWB, 110/85/55-gal) (7.[1]):	55gal	55gal	55gal
Current Filter Vent No. (7.[1]):	72	72	72
New Filter Vent No.: (7.[8][A]):	72	72	72
WIPP-Approved Filter Vent (7.[8][B]):	☑ SAT ☐ UNSAT	☑ SAT ☐ UNSAT	☑ SAT ☐ UNSAT
VOC	Value (ppm) (7.[10])		
Benzene			
Chlorobenzene			
Cyclohexane			
1,1-Dichloroethane			
1,2-Dichloroethane			
1,1-Dichloroethylene			
cis-1,2-Dichloroethylene			
Ethyl benzene			
Ethyl ether			
Toluene			
1,2,4-Trimethylbenzene			
1,3,5-Trimethylbenzene			
m- and p-Xylene			
o-Xylene			
Acetone			
1-Butanol			
Methanol			
Methyl ethyl ketone			
Methyl isobutyl ketone			
Total CCP VOC value (ppm) (7.[11]):	Ø	Ø	Ø

ATTACHMENT 1
Page 2 of 2

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

Container Number (7.[1]):	S823193	S832464	S824604
Hydrogen Reading (ppm) (7.[10]):	Ø ppm	611.21 ppm	Ø ppm
Methane Reading (ppm) (7.[10]):	Ø ppm	Ø ppm	Ø ppm
Total VOC Reading (ppm) (7.[11]):	Ø ppm	Ø ppm	Ø ppm
Filter Type (7.[9][F][c]/7.[9][G][a]):	72	72	72
WIPP Approved (SAT/UNSAT) (7.[9][F][c]/7.[9][G][a]):	SAT	SAT	SAT
Torque Wrench M&TE/ID Number (7.[9][F][a]/7.[9][G][a]):	N/A	N/A	N/A
Torque Wrench Calibration Due Date (7.[9][F][a]/7.[9][G][a]):	N/A	N/A	N/A
Torque Wrench Tolerance (7.[9][F][a]/7.[9][G][a]):	N/A	N/A	N/A
VERIFY Torque Wrench is within acceptable range as specified on Cal Certificate. (7.[9][F][a]/7.[9][G][b])	☐ YES ☐ NO ☑ N/A	☐ YES ☐ NO ☑ N/A	☐ YES ☐ NO ☑ N/A
Filter Torque Value (7.[9][F][a]/7.[9][G][d]) *	N/A	N/A	N/A

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

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

11.1[1] Performed By: Alicia Herrera / [signature] 198450 / 10-13-10
Waste Handling Operator (print) Signature Z # Date

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

☑ No deficiencies

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

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

11.1[7][B]/ 11.1[8] Reviewed By: Kenny Romero [signature] 117886 / 10-27-10
Waste Handling Supervisor (print) Signature Z # Date

InstName : Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\101012c\
Data File : S832464.D
Acq On : 12 Oct 2010 1:38 pm (#1); 12-Oct-10, 13:37:40 (#2)
Operator : SA
Sample :
Misc : 55 GALLON SAMPLED FROM 85 GALLON OVERPACKED (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Oct 12 13:46:31 2010
Quant Method : C:\msdchem\1\METHODS\vocgas.m
Quant Title : Flammable Gas Analysis
QLast Update : Wed Aug 18 13:26:05 2010
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
3) Fluorobenzene	3.642	96	2612026	207.75 ppmv	0.00
15) Chlorobenzene-d5	5.965	117	1837723	180.75 ppmv	0.00
Target Compounds					Qvalue
1) Hydrogen	1.649	GC1	4684m	611.21 ppmv	

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

vocgas.m Tue Oct 12 13:46:39 2010

PROJECT NAME _____ NOTEBOOK NO. _____

2-7-12

0600 Assuming WCRRF Operations center - C Velarde
0600 Starting inside rounds
0603 Item #169 is DOS per CSE documentation OK to proceed.
0605 SOS conducting pre job briefing.
0620 Starting outside rounds.
0623 Completed inside rounds
0710 Inside and outside rounds signed off by SOS.
0715 Mode change performed we are now in Operations
0754 Bagging on 3832464
0802 Starting movement out of 50-69
0812 Bag on complete.
0816 movement complete out of 50-69
0911 introducing absorbant through introductory port.
0925 introduction port introduction complete.
0929 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 3844213 and 3832464 and PCM's bagging on 3844213
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
1432 being relieved by OCO Teri Coleman - C Velarde
1438 Assuming WCRR operations cntr. - T Coleman
1439 Late until at 1300 SOS notified op center that the top cable on the vehicle barrier access was sagging. SOM notified, SOM notified CSE. (JC)
1505 Bagging off drum #5832 JC 2-7-12 3844213,
1506 Being relieved by OCO Clarissa Velarde. - T Coleman
1510 Assuming WCRRF Operations Center - C Velarde.
1519 Bagging on 3843962 and bagging off 3844213 and PCM's. CV 2-7-12
1605 movement ~~of~~ 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 _____

0600 Received previous shift turnover and assumed the WCRR SOM position. Genaro S Hernandez
0640 Logged in on morning call in. Area 9 is experiencing MAR conflicts in their data base. 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 DOP-0208 WCRRF and Loading TA50-69 MAR Inventory Control.
1200 Notified by Shift Operations Supervisor that vehicle dumpers (wheelpool) 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 ~~and~~ (wire rope) are loose (sag) on vehicle dumpers. CSE stated that as long as sag isn't greater than six inches then vehicle dumpers are OK and operable. CSE will be making that determination.
1455 CSE came by to WCRR and looked at cables (wire ropes) on vehicle loaders. 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 absorbant. SOM notified Energy Solutions Manager via voice and phone.
1615 Notified by Energy Solutions Manager that the absorbant will be delivered on 2-8-12 prior to processing drums containing liquid.
1646 Mode change complete. WCRR YARD and 50-69 from OPERATIONS to WARM mode.
1700 Leaving the watch. Genaro S Hernandez

No further Entries

SIGNATURE Genaro S Hernandez DATE 2-7 20
READ AND UNDERSTOOD DATE 20

PROJECT NAME _____ NOTEBOOK NO. _____

2-7-12

0600 Reviewed SOS Turnover ASSUMING WCRR SOS POSITION ~~[illegible]~~

0645 Beginning PRE-JOB

0645 Pre-Job Concluded

0710 Reviewed 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 REVIEWED INSIDE & Outside Rounds

1646 MODE CHANGE COMPLETE

1651 END OF SHIFT SECURING SOS POSITION. [illegible]

GW 2/8/12

No Further Entries On This Page

SIGNATURE _____ DATE _____ 20 _____

READ AND UNDERSTOOD _____ DATE _____ 20 _____

Working Copy
Date: 10/8/12

ATTACHMENT 1
Page 1 of 4

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: 90865

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 - 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: JOE QUINTANA / Joe Q / 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.: 90865

5.[18] Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable: 304.0 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) 304.0 lb

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

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

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

ATTACHMENT 1
Page 3 of 4

4.1[6][B] Parent Waste Container No.: 90865

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	92215	92216	92217	
10.1[4]	Daughter Drum Filter No.	AM-838	AM-774	AM-827	N/A
10.1[4]	Daughter Drum Bag Filter No.	L 3701	L-3761	L-3680	
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.				
	Date of Manufacture				
10.2[5]	POC ID No				
10.2[7][B]/10.2[6]	POC Item Description				
10.2[13]	POC Assembly closed per Manufacturer's instructions. (Initial and Z#)		N/A		
10.2[14]	POC Assembly Gross Weight (lb)				
10.2[15]	POC Rad. Survey Results (mrem/hr)				
10.3[3][A]	Approx. Containerized Liquid Vol./Units				
10.3[5][A]	Free Liquid Volume/Units				
10.3[7][A]	Opaque/Non-penetrable Item Description:				
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	
10.3[13]/10.4[10]/10.5[4]/10.6[8]	Daughter Drum % Full (%)	90%	70%	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.: 90865

Comments: SALTS, KITTY LITTER, PLASTIC, LEAD

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

11.1[7] Reviewed By: JOSE JUAREZ
SOS or designee (print) Signature Z# 221452 Date/Time 10-19-12 1000

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-230
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 Mandrayon / Steven Mandrayon 1104741 / 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 Mandrayon / Steven Mandrayon 1104741 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 / Jose Jerez 221521 10-9-12
Supervisor or designee (print) Signature Z # Date

Working Copy
Date: 10-18-12

ATTACHMENT 5
Page 1 of 1

WCRRF OVERPACK DRUM CLOSURE DATA SHEET

7.[19] Overpack Drum Unique Identifier No.: 92218

7.[25] Overpack drum closure ring torque wrench information:
M&TE No.: 04032 9
Cal. Expiration Date: 3/13/13
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 / 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): 165.6 lb

Comments: N/C

8.1[1] Performed By: JOE QUINTANA / Joe Q 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 / 10-19-12
Supervisor or designee (print) Signature Z# Date

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

Drum ID#: 92215

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 #: 4116214.5
Lot #: 6229225
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 #: QCPV1.5-2.5PVC
Serial #: 1-3701
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: NUCPEL
Model #: 01505
Serial #: Am-938
Date of Manufacture: 1/12

RECORD torque wrench information:

Filter torque wrench:		Jam Nut / Bung torque wrench:	
M&TE ID #:	020014	M&TE ID #:	021151
Cal Expiration Date:	10-19-12	Cal Expiration Date:	10-11-13
Range (ft-lbs or in-lbs):	40-200	Range (ft-lbs or in-lbs):	11.6-80
Tolerance:	±4% cw ±10% ccw	Tolerance:	±2% 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#: 182223

5. Weight Drum Assembly

RECORD weight information

Tare weight (lbs) 77.1
File ID #: 019065

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

6. Label Drum Assembly

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

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

Operator Print: Michael Romero Operator Sign: Michael Romero ZI#: 182223 Date: 10-11-12

Verifier Print: _____ Verifier Sign: _____ ZI#: _____ Date: _____

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

DRUM ID#: 92215

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 +OR- 3%, CW +OR- 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): 229.0

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: Joe Quintana Joe Q Date: 10/18/12

Verifier Print/Sign: Brandon Chew Date: 10-18-12

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

Drum ID#: 92216

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 #: 235235
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 #: GLPRC 1.5-2 SPRC
Serial #: L-3761
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-774
Date of Manufacture: 1-12

RECORD torque wrench information:

Filter torque wrench:		Jam Nut / Bung torque wrench:	
M&TE ID #:	020614	M&TE ID #:	021151
Cal Expiration Date:	10-19-12	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 ID: 182743

5. Weigh Drum Assembly

RECORD weight information

Tare wtight (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: Steven Mondragon Operator Sign: Steven Mondragon ID: 104741 Date: 10-3-12

Verifier Print: Brada Shaver Verifier Sign: [signature] ID: 204112 Date: 10-18-12

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

DRUM ID#: 92216

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% ccw & ±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): 157.8

Scale ID#: 008665

✓ 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: Brandon Chavez Date: 10-18-12

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

Drum ID#: 92217

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 #: 4110765
Lot #: 0273225
Date of Manufacture: 17

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 #: 16.0V 1.5-2 SAVE
Serial #: 6-[illegible]80
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 827
Date of Manufacture: 1-12

RECORD torque wrench information:

Filter torque wrench:		Jam Nut / Bung torque wrench:	
M&TE ID #:	020014	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):	15-80
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: [signature] ZR: 182723

5. Weigh Drum Assembly

RECORD weight information

Tare wight (lbs) 76.4
File ID #: 019 065

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

6. Label Drum Assembly

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

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

Operator Print: Michael Romero Operator Sign: [signature] ZR: 182723 Date: 10-11-12

Verifier Print: Brandon Chavez Verifier Sign: [signature] ZR: 204772 Date: 10-18-12

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

DRUM ID#: 92217

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) 195.4

Scale ID#: 018065

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

4. FINALIZE DOCUMENTATION

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

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

✓Complete TWSR.

Operator Print/Sign: Joe Quintana Date 10/18/12

Verifier Print/Sign: Brandon Chacon Date: 10-18-12

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WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Production Control

Container ID: 90865 Container Type: 55-GAL Gross Weight (lbs): 300
Inner Seal #: None Filter Prefix: None Filter Serial #: CL-1415
AK Waste Stream: LA-MHD01.001 Certified RTR BDR: No BDR
TWSR Comments: PARENT #S832464
Total PE-Ci Activity: 1.46E+00 Equivalent Combustible PE-Ci: 5.49E-01 AM-241 PE-Ci: 1.59E-01
Total Fissile Gram Equivalents: 13.9 Total Surface Dose Rate (mrem/hr): 14
EPA Code(s): D008 D007 D009 Vk 10/2/12
NCR RTR/NDA Comment: None
RTR Pre-Screen Date: 6/27/2012 Comment: Impenetrable, S3000
Certified RTR Comment: None
Prohibited Items: ☐ Sealed > 4 Liters ☐ Liquid ☐ Pressurized Container ☑ Impenetrable Item: ☐ Other
Security Determination: ☑ Green ☐ Yellow
Remediation Determination: ☐ VE ☐ PID ☐ Split ☑ Repack
Estimated 30-cm Dose Rate (mrem/hr): ☐ <100 ☑ >100 and <1,000 ☐ >1,000 and <10,000 ☐ >10,000
TRUCON Code: TBD Production Control Comments: Need to add EPA Codes D007 & D009. Nitrate salts mixed with 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 (Production Control (Print)) Signature: Susan B. Ramsey Z Number: 100681 Date: 9/14/12

WDP Engineering

Chemicals Present (e.g., pyrophorics, acids, bases, shock sensitive, organic liquids, peroxides, crown ethers): ☐ Yes ☑ No ☐ Unknown
Processing Determination: ☑ Accept ☐ Reject
WDP Engineering Comments: Nitrate Salts/debris
Net Wt: 231 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). Nitrate salts may contain undocumented 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 & < 1000 mrem/hr
Performed By: Valerie Rhodes (WDP Engineering (Print)) Signature: Valerie Rhodes Z Number: 112609 Date: 10/10/12

TRU Remediation Operations

☑ Waste Container Information Evaluated ☐ Less Than 1 ☐ RTR Video Available
Valerie Rhodes
Other Specific Safety Concerns: Use Hexavalent glove
Do not push or press on waste.
Processing Determination:
TRU Remediation Operations Comments: Use proper ratio in accordance with the procedure
Performed By: Jose Perez (TRU Remediation Operations (Print)) Signature: [illegible]
~~JP 10/15/12 JP Z# 249750 10/15/12~~
JP Z# 249750 10/18/12

Document No: EP-DIV-AP-0107

HS Review: AS 206362 10.11.12

Nonmertified TRU Waste Drum Item Information

DrumID: 010990

Item No	ItemID	Process Status	Net Wt (kg)	Matrix	Hmm Code	SNM (g)	HT	Auth (Pg/In)	Comments
1	IXFB729FB		21.880	NITRATE SALTS		17.05	53	6/11	G468
2	IXFB-728VA		13.640	NITRATE SALTS		5.64	56	6/11	G468
3	IXFB-717FA		8.880	NITRATE SALTS		8.42	53	6/11	G468
4	IXFB-719FA		17.730	NITRATE SALTS		5.74	53	6/11	G468
5	IXFB-730-OE32		27.730	NITRATE SALTS		14.75	53	6/11	G468
6	IXFB-719FB		15.450	NITRATE SALTS		8.22	52	6/11	G468
7	IXFB-732-VA		12.270	NITRATE SALTS		29.8	52	6/11	G468

Nonmertified Waste Drum Material Summary

Gross Wt (kg): 195.5

Material Type	SNM (grams)	Items Net Wt (kg)
52	38.02	27.72
53	45.94	78.18
56	5.64	13.64
Totals	89.62	119.54

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])	408605					
Container type sampled (e.g., 55-gal, 85-gal, 110-gal, or SWB) (5.[1])	55-gal					
Filtered Vent Type (5.[1])	19DX					
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])	209.4 ppm	ppm	ppm	ppm	ppm	ppm
Hydrogen Reading (< 64,000 ppm) (5.[5])	114.3 ppm	ppm	ppm	ppm	ppm	ppm
Methane Reading (< 16,000 ppm) (5.[5])	E ppm	ppm	ppm	ppm	ppm	ppm

5.[7] Certified CCP Technician:

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

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

Comments: None

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

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

6.1[3] Performed By: SUSAN RAMSEY, [signature] 100681 10/10/12
Waste Handling Operator (print) Signature Z # Date

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\121005c\
Data File : 90865.D
Acq On : 5 Oct 2012 1:43 pm
Operator : SA
Sample :
InstName : Unit 8
Misc : 55 GAL LFL DRUM THROUGH 19DS-UNOBSTRUCTED (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Oct 05 13:51:33 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	2409208	206.00 ppm		0.00
15) Chlorobenzene-d5	5.936	117	2166393	179.50 ppm		0.00
Target Compounds						Qvalue
1) Hydrogen	5.312	GC1	28257m	114.36 ppm		
4) Methanol	0.788	31	42655	187.87 ppm		100
12) Benzene	2.880	78	6445	1.06 ppm	#	14
17) Toluene	4.776	92	102502	20.48 ppm		100

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

Vocgas.m Fri Oct 05 13:51:44 2012

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PROJECT NAME _____ NOTEBOOK NO. _____

10-18-12

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 SC
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.
1530 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 SHA / standing order ~~to~~ the 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. Jim Fry

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 WCRR 50-69 is in Cold.

10-18-12 1630 Securing SOS position for the day. Jim Fry

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See Next Entries on Next Page

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0063
Examination Date:	4/26/2013
Waste Container ID:	92215
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.: 104.0 kg Tare Wt.: 33.4 kg Net Wt.: 70.6 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:	50 %

CCP Radiography Data Sheet

Waste Container ID: 92215

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):	3.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	59.6
Soils (S):	
Total WMP Weight:	70.6

CCP Radiography Data Sheet

Waste Container ID: 92215

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		4/26/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	92215	Count Sequence Number:	22663
Operator:	D3PW2DK1\operator		
Assay Start:	4/30/2013 12:50:11 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: 70.6 kg	Net:	70.6 kg
Container:	Volume: 208.0 l	Full:	50.0 %
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:	22663	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:	92215	Analysis Date:	4/30/2013

Net Weight	70600.0 g		
Pu mass	6.30E+000	+-	1.03E+000 g
TRU Alpha Activity	1.74E+000	+-	6.36E-001 Ci
TRU Activity Concentration	2.46E+004	+-	9.01E+003 nCi/g
Pu-239 Equivalent Activity	1.77E+000	+-	6.36E-001 Ci
Pu-239 FGE	5.67E+000	+-	1.02E+000 g
Decay heat	5.69E-002	+-	2.12E-002 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	3.57E-007
U233	<LLD	<LLD	0.00E+000	3.01E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	8.72E-007
NP237	2.46E-002	1.76E-005	3.23E-006	1.46E-006
PU238	4.03E-003	6.97E-002	2.34E-002	5.19E-003
U238	<LLD	<LLD	0.00E+000	9.81E-006
PU239	5.61E+000	3.53E-001	6.41E-002	2.63E-002
PU240	6.59E-001	1.51E-001	3.23E-002	1.13E-002
AM241	3.35E-001	1.16E+000	6.31E-001	3.24E-002
PU241	2.01E-002	2.09E+000	4.16E-001	1.55E-001
PU242	1.35E-002	5.36E-005	1.14E-005	0.00E+000
AM243	1.39E-004	2.80E-005	5.28E-006	3.93E-006

Errors quoted at 1.000 sigma

Operator: _____ Date: 5-2-13

ITR: _____ Date: 5-3-13

Automated Independent Technical Review

Count Sequence Number: 22663
Batch Number: 1LANDA1761
Counter ID: MCS HENC #1
Container ID: 92215
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; Gamma data specified as input. Results taken from Quantitative Gamma data. Results comparison test passed.	Results taken from quantitative gamma data.
Section 4 - MGA Analysis Expert review is recommended; the following validity tests failed: Pu239 weight percent is outside limits [92.5, 95.0].	MGA valid. Pu239 percent consistent with AK. Mix of MT-53,52,56.
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: **92215**

BDR Number: **LA13FG2048**

Sampling Date: **5/3/2013**

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\130503c\
Data File : 92215.D
Acq On : 3 May 2013 2:17 pm (#1); 03-May-13, 14:16:41 (#2)
Operator : SA
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 03 14:25:12 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	3.551	96	4077936	201.25 ppmv	-0.02
15) Chlorobenzene-d5	5.884	117	3479943	177.00 ppmv	-0.02

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:	92216
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.: 71.5 kg Tare Wt.: 33.4 kg Net Wt.: 38.1 kg
Rigid Liner and Liner Vent Description:	Liner: [X] No [ ] Yes Lid: [X] No [ ] Yes Type: [ ] 30-mil [ ] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [ ] Yes [X] N/A Punctured: [X] No [ ] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [ ] No [X] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 2 layers
Volume Utilization Percentage:	40 %

CCP Radiography Data Sheet

Waste Container ID: 92216

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):	29.1
Soils (S):	
Total WMP Weight:	38.1

CCP Radiography Data Sheet

Waste Container ID: 92216

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:	92216	Count Sequence Number:	22654
Operator:	D3PW2DK1\operator		
Assay Start:	4/29/2013 3:01:23 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: 38.1 kg	Net:	38.1 kg
Container:	Volume: 208.0 l	Full:	40.0 %
Density:	0.460 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:	22654	Batch Number:	1LANDA1760
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:	92216	Analysis Date:	4/29/2013

Net Weight	38100.0 g		
Pu mass	3.46E+000	+- 6.73E-001	g
TRU Alpha Activity	1.02E+000	+- 3.99E-001	Ci
TRU Activity Concentration	2.69E+004	+- 1.05E+004	nCi/g
Pu-239 Equivalent Activity	1.04E+000	+- 3.99E-001	Ci
Pu-239 FGE	3.19E+000	+- 6.15E-001	g
Decay heat	3.36E-002	+- 1.33E-002	W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	1.35E-002	9.66E-006	1.43E-006	8.75E-007
PU238	8.44E-004	1.46E-002	2.84E-003	6.77E-005
PU239	3.17E+000	1.99E-001	3.87E-002	9.22E-004
PU240	2.82E-001	6.48E-002	1.26E-002	3.00E-004
AM241	2.15E-001	7.46E-001	3.97E-001	1.91E-002
PU241	6.30E-003	6.55E-001	1.27E-001	3.04E-003
PU242	5.20E-003	2.06E-005	4.01E-006	0.00E+000
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	2.63E-007
U233	<LLD	<LLD	0.00E+000	1.84E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	5.28E-007
U238	<LLD	<LLD	0.00E+000	6.55E-006
AM243	8.54E-005	1.73E-005	2.64E-006	2.44E-006

Errors quoted at 1.000 sigma

Operator: _____ Date: 5-1-13

ITR: _____ Date: 5-2-13

Automated Independent Technical Review

Count Sequence Number: 22654 Batch Number: 1LANDA1760
Counter ID: MCS HENC #1
Container ID: 92216
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. 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 Chamber Date: 5-1-13

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **92216**

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	8.12	
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 : 92216.D
Acq On : 9 May 2013 1:56 pm (#1); 09-May-13, 13:55:36 (#2)
Operator : SA
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 09 14:04:17 2013
Quant Method : C:\msdchem\1\METHODS\vocgas.m
Quant Title : Flammable Gas Analysis
QLast Update : Thu Jan 24 09:52:49 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
3) Fluorobenzene	3.581	96	3828344	201.25	ppmv	0.01
15) Chlorobenzene-d5	5.907	117	3306479	177.00	ppmv	0.00
Target Compounds						Qvalue
17) Toluene	4.873	92	95198	8.12	ppmv	94

(#) = 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:	92217
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.: 89.0 kg Tare Wt.: 33.4 kg Net Wt.: 55.6 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:	55 %

CCP Radiography Data Sheet

Waste Container ID: 92217

Section 3: Container Inventory and Comments (Detailed descriptions)

IM: Scrap metal

AM:

OM: Scrap lead

OI:

C: Tape roll

R:

XPM: Plastic bag, plastic sheeting

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):	2.0
Other Inorganic Materials (OI)	
Cellulosics (C):	0.2
Rubber (R):	
Plastics (waste materials) (XPM):	7.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	45.9
Soils (S):	
Total WMP Weight:	55.6

CCP Radiography Data Sheet

Waste Container ID: 92217

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:            92217              Count Sequence Number:  22661
Operator:           D3PW2DK1\operator
Assay Start:        4/30/2013  11:17:58 AM
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:        55.6   kg        Net:    55.6 kg
Container:          Volume:    208.0   l        Full:    55.0 %
Density:                        0.490 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:	22661	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:	92217	Analysis Date:	4/30/2013

Net Weight	55600.0 g		
Pu mass	1.71E+000	+- 2.96E-001	g
TRU Alpha Activity	8.54E-001	+- 3.84E-001	Ci
TRU Activity Concentration	1.54E+004	+- 6.91E+003	nCi/g
Pu-239 Equivalent Activity	8.60E-001	+- 3.84E-001	Ci
Pu-239 FGE	1.58E+000	+- 2.94E-001	g
Decay heat	2.82E-002	+- 1.28E-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	2.83E-007
U233	<LLD	<LLD	0.00E+000	1.88E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	7.52E-007
NP237	1.48E-002	1.06E-005	1.62E-006	9.20E-007
PU238	3.60E-004	6.23E-003	1.46E-003	5.91E-004
U238	<LLD	<LLD	0.00E+000	6.70E-006
PU239	1.57E+000	9.85E-002	1.35E-002	9.33E-003
PU240	1.35E-001	3.11E-002	7.29E-003	2.94E-003
AM241	2.07E-001	7.18E-001	3.84E-001	1.98E-002
PU241	3.52E-003	3.65E-001	8.58E-002	3.46E-002
PU242	1.15E-003	4.54E-006	1.07E-006	0.00E+000
AM243	1.08E-004	2.18E-005	3.41E-006	2.46E-006

Errors quoted at 1.000 sigma

Operator: _____ Date: 5-2-13

ITR: _____ Date: 5-3-13

Automated Independent Technical Review

Count Sequence Number: 22661 Batch Number: 1LANDA1761
Counter ID: MCS HENC #1
Container ID: 92217
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.	Ok
Cosmic Ray Rejection Analysis complete with warnings. - The CRR High-Z mass Mass Variance is negative, High-Z mass Uncertainty set to zero so analysis could continue.	Ok
Section 3 - Data Combiner Analysis Override enabled; Gamma data specified as input. Results taken from Quantitative Gamma data. Results comparison test passed.	Results taken from quantitative gamma data.
Section 4 - MGA Analysis Results are marked as invalid.	MGA analysis failed. AK isotopics applied. The AK information utilized was provided by Steve Schafer, AKE, and consists of data from CCP-AK-LANL-006, AK Source Document M237. MT-53,52,56
Section 5 - Gamma Analysis Analysis Status: No errors.	Ok
Miscellaneous	No additional nuclides contributing to 95% of the radiological hazard identified.

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

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **92217**

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	8.94	
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 : 92217.D
Acq On : 9 May 2013 1:45 pm (#1); 09-May-13, 13:44:22 (#2)
Operator : SA
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 09 13:52:58 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	3.535	96	3667649	201.25	ppmv	-0.03
15) Chlorobenzene-d5	5.868	117	3150297	177.00	ppmv	-0.03
Target Compounds						Qvalue
17) Toluene	4.834	92	99867	8.94	ppmv	97

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

Working Copy
Date: 11-1-12

ATTACHMENT 1
Page 1 of 4

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: 90866

6.2[4] Date Processed: 11/1/12

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] (S) TA-50-69 is in the OPERATION or WARM STANDBY MODE (TSR 1.2) ☑ OPERATIONS ☐ WARM STANDBY ☐ N/A

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

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

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

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

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

Performed By: Joe Quintana Joe Q 239987 11/1/12
Waste Handling Tech (print) Signature Z # Date

ATTACHMENT 1
Page 2 of 4

4.1[6][B] Parent Waste Container No.: 90866

5.[18] Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable: 393.4 lb

6.2[5][A] Parent Drum Lead Blanket Weight (lb): 0 lb

6.2[5][B]/ 6.2[6] Total Parent Drum Weight (lb) 393.4 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
	AM	/	/

ATTACHMENT 1
Page 3 of 4

4.1[6][B] Parent Waste Container No.: G0866

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	42296			
10.1[4]	Daughter Drum Filter No.	AM797		N/A	
10.1[4]	Daughter Drum Bag Filter No.	L 3766			
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		N/A		
10.2[13]	POC Assembly closed per Manufacturer's instructions. (Initial and Z#)	N			
10.2[14]	POC Assembly Gross Weight (lb)				
10.2[15]	POC Rad. Survey Results (mrem/hr)				
10.3[3][A]	Approx. Containerized Liquid Vol./Units				
10.3[5][A]	Free Liquid Volume/Units				
10.3[7][A]	Opaque/Non-penetrable Item Description:				
10.3[9][A]	PCB-contaminated Waste Description				
10.3[9][B]	PCB Item ID No.				
10.3[10]	Remaining Waste Description				
10.3[13]/10.4[10]/ 10.5[4]/10.6[8]	Daughter Drum % Full (%)	100 %		N/A	
10.5[3]/10.6[2]	Description Waste Added During Processing	Kitty Litter			

ATTACHMENT 1
Page 4 of 4

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

Comments: PLASTICS, KITTY LITTER, SALTS, CARDBOARD LINER

11.1[1] Performed By: JOE QUINTANA [signature] 739987, 11/1/12
Waste Handling Tech (print) Signature Z # Date

11.1[7] Reviewed By: JOSE JUAREZ [signature] 1224521
SOS or designee (print) Signature Z # Date/Time

ATTACHMENT 2
Page 1 of 1

WCRRF OVERPACK DRUM ASSEMBLY PREPARATION DATA SHEET

5.[3] Overpack drum information:

Purchase Order No.: 413954
Lot No.: 211426
Manufacture Date: 10

5.[8] Overpack filtered vent information:

Manufacturer: NuCFil
Model No.: 013
Serial No.: EJ-362
Manufacture Date: 5-09

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 Mandragon / Steven Mandragon / 10-23-12
Waste Handling Technician (print) Signature Z# Date

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

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

Comments: N/C

8.1[1] Performed By: Steven Mandragon / Steven Mandragon / 10-23-12
Waste Handling Technician (print) Signature Z# Date

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

8.1[7] Reviewed By: Jose Perez / 221421 / 11-5-12
Supervisor or designee (print) Signature Z# Date

Working Copy
Date: 11-1-12

ATTACHMENT 5
Page 1 of 1

WCRRF OVERPACK DRUM CLOSURE DATA SHEET

7.[19] Overpack Drum Unique Identifier No.: 92297

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 Z39987 11/1/12
Waste Handling Technician (print) Signature Z # Date

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

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

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

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

Comments: SLING SERIAL # 3006973-1-95, 3006973-1-123,

8.1[1] Performed By: JOE QUINTANA Joe Q Z39987 11/01/12
Waste Handling Technician (print) Signature Z # Date

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

8.1[7] Reviewed By: Jose Perez [signature] Z21452 11-5-12
Supervisor or designee (print) Signature Z # Date

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

Drum ID#: 92296

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 #: 02229224
Date of Manufacture: 2012

2. Drum Liner Bag/Filter Assembly:

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

RECORD bag filter information:
Manufacturer: BOP
Model #: 6CPVC 1.5-2.5PVC
Serial #: L3766
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 #: 01905
Serial #: AM797
Date of Manufacture: 1/12

RECORD torque wrench information:

Filter torque wrench:		Jam Nut / Bung torque wrench:	
M&TE ID #:	040694	M&TE ID #:	021151
Cal Expiration Date:	9-26-13	Cal Expiration Date:	6-11-13
Range (ft-lbs or in-lbs):	40-200	Range (ft-lbs or in-lbs):	16-80
Tolerance:	+ -4% CW + - 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: JOE QUINTANA Signature: Joe Q Z#: 239987

5. Weigh Drum Assembly

RECORD weight information
Tare wtght (lbs) 75.6
File ID #: 019065

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

6. Label Drum Assembly

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

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

Operator Print: JOE QUINTANA Operator Sign: Joe Q Z#: 239987 Date: 10/30/12
Verifier Print: Brandon Chaser Verifier Sign: [illegible] Z#: 201782 Date: 11-1-12

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

DRUM ID#: 92296

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 ~5" from the bottom of the drum ~12)" 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.): 302.2

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: Joe Quintana Date: 11/01/12

Verifier Print/Sign: Brandon Chavez Date: 11-1-12

WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Production Control

Container ID: 90866 Container Type: POC Gross Weight (lbs): 389

Container Seal #: None Filter Prefix: None Filter Serial #: EL-6; EL-67

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

TWSR Comments: PARENT #S852464 WTS-12STD-774

Total PE-Ci Activity: 1.46E+00 Equivalent Combustible PE-Ci: 5.49E-01 AM-241 PE-Ci: 1.59E-01

Total Fissile Gram Equivalents: 13.9 Total Surface Dose Rate (mrem/hr): 1

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

NCR RTR/NDA Comment: None

RTR Pre-Screen Date: None Comment: None

Certified RTR Comment: None

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

Security Determination: ☑ Green ☐ Yellow

Remediation Determination: ☐ VE ☐ PID ☐ Split ☑ Repack

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

TRUCON Code: TBD Production Control Comments: Need to add EPA Codes D007, D009
Nitrate salts mixed with Wasteloc 770 from previous repack campaign. A minimum of 1.2 volumes of nitrate salts must be mixed with 1.0 volume of nitrate salts

Performed By: Susan Ramsey (Production Control (Print)) Signature: Susan B. Ramsey Z Number: 100681 Date: 9/10/12

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: 791lb Parent drum (SEDs attached) was part of WCRR 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 hazardous chemicals present

May require RWP for >100 and <1000 mrem/hr.

Performed By: Valerie Rhodes (WDP Engineering (Print)) Signature: Valerie Rhodes Z Number: 112609 Date: 9/25/12

TRU Remediation Operations

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

Other Specific Safety Concerns:

Processing Determination: ☑ Accept ☐ Reject

TRU Remediation Operations Comments:

Performed By: Gilbert Martinez (TRU Remediation Operations (Print)) Signature: [signature] Z Number: 148235 Date: 9.27.12

HS Review. [signature] CSP, Contains lead, chromium + Hg. 9-26-12.

Document No: EP-DIV-AP-0107 JJ - 221452 - 9-28-12

Nonsertified TRU Waste Drum Item Information

DrumID: 010990

Item No	ItemID	Process Status	Net Wt (kg)	Matrix	Meas Code	SNM (g)	HT	Auth (Pg/Ln)	Comments
1	IXFS729FB		23.860	NITRATE SALTS		17.05	53	6/11	G468
2	IXFS-728FA		13.640	NITRATE SALTS		5.64	56	6/11	G468
3	IXFS-717FA		8.860	NITRATE SALTS		8.42	53	6/11	G468
4	IXFS-719FA		17.730	NITRATE SALTS		5.74	53	6/11	G468
5	IXFS-730-DX32		27.730	NITRATE SALTS		14.75	53	6/11	G468
6	IXFS-718FB		13.450	NITRATE SALTS		8.22	52	6/11	G468
7	IXFS-732-FA		12.270	NITRATE SALTS		29.8	52	6/11	G468

Nonsertified Waste Drum Material Summary

Gross Wt (kg): 195.5

Material Type	SNM (grams)	Items Net Wt (kg)
52	38.02	27.72
53	45.84	78.18
56	5.64	13.64
Totals	89.62	119.54

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])	90866					
Container type sampled (e.g., 55-gal, 85-gal, 110-gal, or SWB) (5.[1])	POC					
Filtered Vent Type (5.[1])	19DS					
Filtered Vent Unobstructed (5.[1])	☑ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT
WIPP-Approved Filtered Vent (5.[2])	☑ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☑ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT
Total CCP VOC value (< 7,000 ppm) (5.[4])	Ø ppm	ppm	ppm	ppm	ppm	ppm
Hydrogen Reading (< 64,000 ppm) (5.[5])	102.41 ppm	ppm	ppm	ppm	ppm	ppm
Methane Reading (< 16,000 ppm) (5.[5])	Ø ppm	ppm	ppm	ppm	ppm	ppm

5.[7] Certified CCP Technician:

Performed By: Nathan Wales (CCP (Print)) 239866 (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 : 90866.D
Acq On : 21 Sep 2012 3:36 pm (#1); 21-Sep-12, 15:35:54 (#2)
Operator : NW
Sample :
Misc : LFL POC THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 21 15:44:33 2012
Quant Method : C:\msdchem\1\METHODS\vocgas.m
Quant Title : Flammable Gas Analysis
QLast Update : Wed Sep 05 10:53:25 2012
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
3) Fluorobenzene	3.542	96	6307998	201.25	ppmv	0.00
15) Chlorobenzene-d5	5.871	117	5653419	177.00	ppmv	0.00
Target Compounds						Qvalue
1) Hydrogen	1.608	GC1	724	102.41	ppmv	100

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

PROJECT NAME NOTEBOOK NO

11-1-12

0510 Assuming WCRR operations entry: JC Coleman
0544 Beginning outside rounds.
0603 Outside rounds complete.
0604 Air quality has arrived to perform weekly stack monitoring.
0608 Air quality stack sampling complete.
0615 Pre-job being conducted by SCS. Beginning inside rounds.
0638 Inside rounds complete.
0701 Both rounds reviewed by SCS.
0715 Mode change complete. We are now in operations.
0810 Initiating drum movement from SC-69 to a transportainer
0842 Bagging on 90850. Drum movement complete.
0853 Bag on complete
~~1025~~ Bagging off 90850, bagging on 90858.
1020 Bag on complete.
1105 Bagging off 90858, bagging on 90853.
1130 Bag on complete.
1158 Bagging off 90853, bagging on 90866.
1215 Bag off + on complete.
1333 Bagging off 90866.
1404 Bag off complete.
1415 Mode changing to warm standby so that maintenance can perform relamping inside SC-69. WO#416885-01. Initiating a drum movement from SC-69 to a transportainer
1433 Drum movement complete. All inventory has been removed from the facility.
1442 Mode changed back to operations. Relamping complete. Operators will begin to test empty ESIS in room SCB.
1455 Beginning inside rounds.
1520 Beginning outside rounds
1525 Inside rounds complete.
1530 Outside rounds complete.
1537 ~~Bot~~ JC 11-1-12 Both rounds reviewed by SCS.
1600 Mode change complete. We are now in warm standby in WCRRF vault and CELD in SC-69.
1630 End of day. Operations secure. JC Coleman

No further entries this page

SIGNATURE DATE 20
READ AND UNDERSTOOD DATE 20

Intermediate Drawer 192351

Intermediate Drawer - 90937

300 PROJECT NAME 11/1/12 NOTEBOOK NO.

0600 Assumed WCRR SOM position.
0615 Attended pre-job brief conducted by SOS. Discussed production plan for day - will work remaining drums that are already in 50-69 (SP. 72 POC's) 4 of them. Work the empty SWB's to repack w/ Empty 85's.
0715 Completed Mode Change: WCRR Yard / Bldg 50-69 from Warm / Warm to Operations / Operations.
0830 Per O/M and OSP&T are cancelling today's incoming shipment due to potential storage space available being insufficient over weekend. Rescheduling for Monday.
0845 Released W.O. # 447598-01 50-69 TSR/FSF Daily & Weekly Rounds.
1038 WMC reported that matching WCRR inventory w/ gamma spec reports yield some discrepancies. He is working on clearing these up and will be on site this afternoon.
1230 RP-1 supervisor reported that 2 ES Technicians did not have proper biossay's for processing RWP - with further investigation it was found that they were in fact current - exit biossays from other worksites counted as baseline for WCRR. RP-1 supervisor will obtain report monthly to verify workers are current on biossay.
1248 Released W.O. 416885-06 54-WCRRF FY12 Relamping. Worker is scoping out what bulbs are required to be replaced but no work will commence until 50-69 is in Warm or Cold per W.O.
1355 Per CSE for TSR requirements to work empty SWB's w/ repacking 85's (Empty) proper mode is operations.
1415 Completed Mode Change: WCRR Yard / Bldg 50-69 from Operations / Operations to Warm / Warm to support relamping.
1442 Completed Mode Change. WCRR Yard / Bldg 50-69 from Warm / Warm to Operations / Operations. Maint is complete (Relamp) and SWB packing will commence.
1500 Attended meeting concerning maintenance activities Nov 9/10 and 15th — 19/20. Need to get w/ SOS to schedule workers for those dates (No work Sunday 18th)
1555 Notified by SOS that 2 SWB's are completed - found water in both and needed to be emptied and dried out.
1620 Completed Mode Change WCRR Yard / Bldg 50-69 from Operations / Operations to Warm / Cold.
1640 Secured SOM position

11-5-12

No further entries this page

SIGNATURE
READ AND UNDERSTOOD

DATE 11/1 20 12
DATE 20

11-1-12 WCRR SOS LOG Book

0600 Assuming SOS Position [illegible]

0615 Started Pre Job brief went over Monthly RWP 2012-2015

0650 Concluded Pre Job

0701 Reviewed Inside And outside Rounds.

0715 Mode change Complete WCRRF In operations

1415 Mode Change Complete for Elect. could change out bulbs on WCG.

1442 Mode Change Complete WCRRF In operations.

1537 Reviewed Inside And outside Rounds.

1620 Mode Change Complete WCRR Yard In warm 50-69 In Cold.

11-1-12 1630 End of shift Securing SOS Position. [illegible]

no further entries on this Pg.

CCP Radiography Data Sheet

=X324464

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0105
Examination Date:	9/4/2013
Waste Container ID:	92296
Video/Audio Recorded Media Number:	LA-RTR2-13-0105 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 13
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3110
Waste Stream I.D.:	LA-MIN02-V.001
Waste Container Weights:	Gross Wt.: 137.0 kg Tare Wt.: 33.4 kg Net Wt.: 103.6 kg
Rigid Liner and Liner Vent Description:	Liner: [X] No [ ] Yes Lid: [X] No [ ] Yes Type: [ ] 30-mil [ ] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [ ] Yes [X] N/A Punctured: [X] No [ ] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [ ] No [X] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 2 layers
Volume Utilization Percentage:	80 %

CCP Radiography Data Sheet

Waste Container ID: 92296

Section 3: Container Inventory and Comments (Detailed descriptions)

IM: Metal lid, hardware

AM:

OM: Scrap lead

OI:

C: Fiberboard packing material

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):	15.0
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	2.0
Other Inorganic Materials (OI)	
Cellulosics (C):	3.0
Rubber (R):	
Plastics (waste materials) (XPM):	6.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	77.6
Soils (S):	
Total WMP Weight:	103.6

CCP Radiography Data Sheet

Waste Container ID: 92296

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

Comments: N/A

RTR Operator:

Benito Maestas		9/4/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	92296	Count Sequence Number:	23547
Operator:	D3PW2DK1\operator		
Assay Start:	9/6/2013 10:20:36 AM		
Description 1:	1LANDA1837		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 104.0 kg	Net:	104.0 kg
Container:	Volume: 208.0 l	Full:	80.0 %
Density:	0.630 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:	23547	Batch Number:	1LANDA1837
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:	92296	Analysis Date:	9/6/2013

Net Weight	104000.0 g		
Pu mass	7.75E+000	+- 1.23E+000	g
TRU Alpha Activity	2.31E+000	+- 9.00E-001	Ci
TRU Activity Concentration	2.22E+004	+- 8.65E+003	nCi/g
Pu-239 Equivalent Activity	2.40E+000	+- 9.00E-001	Ci
Pu-239 FGE	7.15E+000	+- 1.22E+000	g
Decay heat	7.58E-002	+- 2.99E-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	4.22E-007
U233	<LLD	<LLD	0.00E+000	3.62E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	1.07E-006
NP237	4.03E-002	2.84E-005	4.95E-006	1.77E-006
PU238	3.94E-003	6.74E-002	2.26E-002	4.88E-003
U238	<LLD	<LLD	0.00E+000	8.19E-006
PU239	7.02E+000	4.35E-001	7.56E-002	3.15E-002
PU240	6.62E-001	1.50E-001	3.14E-002	1.09E-002
AM241	4.84E-001	1.66E+000	8.96E-001	4.13E-002
PU241	4.79E-002	4.94E+000	8.84E-001	3.58E-001
PU242	1.85E-002	7.33E-005	1.51E-005	0.00E+000
AM243	3.03E-004	6.06E-005	1.08E-005	4.97E-006

Errors quoted at 1.000 sigma

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

ITR: Jim Barton Date: 9/10/13

Automated Independent Technical Review

Count Sequence Number: 23547 Batch Number: 1LANDA1837
Counter ID: MCS HENC #1
Container ID: 92296
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 9/6/2013

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 Expert review is recommended; the following validity tests failed: Pu239 weight percent is outside limits [92.5, 95.0].	MGA valid. Pu239 percent consistent with AK. Mix of MT-53,52,56.
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: 9-9-13

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **92296**

BDR Number: **LA13FG12093**

Sampling Date: **9/13/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	64.52	
74-82-8	Methane	9.63	U
67-56-1	Methanol	49.94	
60-29-7	Ethyl Ether	1.77	U
75-35-4	1,1-Dichloroethylene	5.36	U
67-64-1	Acetone	11.55	U
75-34-3	1,1-Dichloroethane	2.29	U
156-59-2	cis-1,2-Dichloroethene	0.36	U
78-93-3	Methyl ethyl ketone	2.55	U
110-82-7	Cyclohexane	2.09	U
71-43-2	Benzene	0.47	U
107-06-2	1,2-Dichloroethane	0.92	U
71-36-3	1-Butanol	0.54	U
108-10-1	Methyl isobutyl ketone	3.11	U
108-88-3	Toluene	3.85	
108-90-7	Chlorobenzene	0.87	U
100-41-4	Ethylbenzene	1.15	U
108-38-3/106-42-3	m- and p-Xylene	0.59	U
95-47-6	o-Xylene	0.63	U
108-67-8	1,3,5-Trimethylbenzene	0.72	U
95-63-6	1,2,4-Trimethylbenzene	0.78	U

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

Quantitation Report (QT Reviewed)

InstName : FGA Unit 12

Data Path : C:\msdchem\1\DATA\130913c\
Data File : 92296.D
Acq On : 13 Sep 2013 2:40 pm (#1); 13 Sep 2013 2:39 pm (#2)
Operator : SA
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 13 14:49:11 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	7756176	207.75	ppmv	0.00
15) Chlorobenzene-d5	6.636	117	5898034	178.75	ppmv	0.00
Target Compounds						Qvalue
1) Hydrogen	1.897	GC1	18403m	64.52	ppmv	
4) Methanol	0.824	31	20466m	49.94	ppmv	
17) Toluene	5.577	92	91728	3.85	ppmv	96

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

11/8/12 cm

ATTACHMENT 1
Page 1 of 4

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: 90867

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, D001, 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 for 25 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.. 00867

5.[18] Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable: 380 8 lb

6.2[5][A] Parent Drum Lead Blanket Weight (lb): 0 lb

6.2[5][B]/ 6.2[6] Total Parent Drum Weight (lb) 380 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.: 90867

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	92541			
10.1[4]	Daughter Drum Filter No.	JL1323			
10.1[4]	Daughter Drum Bag Filter No.	L1734			
10.1[4]	Daughter Drum Purchase Order No.	416184			
10.1[13][C]	WCG Fire Watch Stationed		☐ YES	☐ NO	☑ N/A
10.1[14][C][d]3/11.1[3]	WCG Fire Watch Secured		☐ YES	☐ NO	☑ N/A
10.2[4]	POC bag-on bag: Manufacturer				
	Model No.				
	Serial No.				
	Date of Manufacture				
10.2[5]	POC ID No				
10.2[7][B]/10.2[6]	POC Item Description				
10.2[13]	POC Assembly closed per Manufacturer's instructions. (Initial and Z#)		N/A		
10.2[14]	POC Assembly Gross Weight (lb)		N		
10.2[15]	POC Rad. Survey Results (mrem/hr)				
10.3[3][A]	Approx. Containerized Liquid Vol./Units				
10.3[5][A]	Free Liquid Volume/Units				
10.3[7][A]	Opaque/Non-penetrable Item Description				
10.3[9][A]	PCB-contaminated Waste Description				
10.3[9][B]	PCB Item ID No.				
10.3[10]	Remaining Waste Description	See Comments		N/A	
10.3[13]/10.4[10]/ 10.5[4]/10.6[8]	Daughter Drum % Full (%)		N		
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.: 90867

Comments: KITTY LITTER, SALTS, PLASTIC, CARDBOARD LINER, METAL LID

11.1[1] Performed By: JOE QUINTANA, [signature] 239487, 11/8/12
Waste Handling Tech (print) Signature Z.# Date

11.1[7] Reviewed By: JOE JEREZ, [signature] 221452, 11/10/12 0853
SOS or designee (print) Signature Z.# Date/Time

11-7-12 AV

ATTACHMENT 2
Page 1 of 1

WCRRF OVERPACK DRUM ASSEMBLY PREPARATION DATA SHEET

5.[3] Overpack drum information:

Purchase Order No.: 413954
Lot No.: 21426
Manufacture Date: 10

5.[8] Overpack filtered vent information:

Manufacturer: Nucfil
Model No.: 013
Serial No.: I2-272
Manufacture Date: 9-11

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

	Filtered Vent	2 in. Bung
M&TE No.:	086694	021151
Cal. Expiration Date:	9-26-13	6-11-13
Tolerance:	±4% rdg ±6% rdg	±3% rdg ±6% rdg

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

Performed By: Michael Romero Michael Romero 19272 11-7-12
Waste Handling Technician (print) Signature Z # Date

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

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

Comments: N/C

8.1[1] Performed By: Michael Romero Michael Romero 19272 11-7-12
Waste Handling Technician (print) Signature Z # Date

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

8.1[7] Reviewed By: Jose Perez Jose Perez 14452 11-10-12
Supervisor or designee (print) Signature Z # Date

Working Copy
11/8/12 cm

ATTACHMENT 5
Page 1 of 1

WCRRF OVERPACK DRUM CLOSURE DATA SHEET

7.[19] Overpack Drum Unique Identifier No.: 92342

7.[25] Overpack drum closure ring torque wrench information:
M&TE No.: 04032-9
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, 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): 321.8 lb

Comments: N/A

8.1[1] Performed By: JOE QUINTANA [signature] 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 Perez [signature] 221423 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#: 92341

1. Drum/Lid Assembly

- [x] Remove and discard ½" 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 #: 2229224
Date of Manufacture: 12

2. Drum Liner Bag/Filter Assembly:

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

RECORD bag filter information:

Manufacturer: BOP
Model #: 6CDVC 1.5-2 SPVC
Serial #: L-1734
Date of Manufacture: 2-12

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

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

4. 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 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: Nucleu
Model #: 919 PS
Serial #: SL-1323
Date of Manufacture: 10/11

RECORD torque wrench information:

Filter torque wrench:		Jam Nut / Bung torque wrench:	
M&TE ID #:	040694	M&TE ID #:	021151
Cal Expiration Date:	5-26-13	Cal Expiration Date:	6-11-13
Range (ft-lbs or in-lbs):	40-200	Range (ft-lbs or in-lbs):	16-80
Tolerance:	±4% cw ±6% ccw	Tolerance:	±3% cw ±4% ccw

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

[x] Yes [ ] No

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

5. Weigh Drum Assembly

RECORD weight information

Tare wight (lbs) 76.2
File ID # 019065

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

6. Label Drum Assembly

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

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

Operator Print: Michael Romero Operator Sign: [signature] ID#: 182723 Date: 11-7-12

Verifier Print: Joe Quintana Verifier Sign: [signature] ID#: 239981 Date: 11/8/12

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

DRUM ID#: 92341

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.): 259.2

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: Joe Bruntana Date: 11/8/12

Verifier Print/Sign: Brandon Bauer Date: 11-8-12

WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Production Control

Container ID: 90867 Container Type: POC Gross Weight (lbs): 376

Container Seal #: None Filter Prefix: None Filter Serial #: EL-530; EL-599

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

TWSR Comments: PARENT #S832464 WTS-12STD-742

Total PE-Ci Activity: 1.46E+00 Equivalent Combustible PE-Ci: 5.49E-01 AM-241 PE-Ci: 1.59E-01

Total Fissile Gram Equivalents: 13.9 Total Surface Dose Rate (mrem/hr): 1

EPA Code(s): D008 D007 D009 NL 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 volumes of kitty litter/zeolite must be mixed with 1:0 volume of nitrate salts

Performed By: Susan Ramsey (Production Control (Print)) Signature: Susan B. Ramsey Z Number: 100681 Date: 9/10/12

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: 1[illegible] lb. Parent drum (SCDs attached) was part of WRRF nitrate salt repack campaign using Waste Loc 770. This cutting coupon/filter POC is being repacked to adjust the admixture/nitrate salt ratio. Nitrate salts carry waste codes for chromium (D007), lead (D008), & mercury (D009). No hazardous chemicals present.

May require RWP for >100 and <1000 mrem/hr

Performed By: Valerie Rhodes (WDP Engineering (Print)) Signature: Valerie Rhodes Z Number: 112609 Date: 9/25/12

TRU Remediation Operations

Waste Container Information Evaluated Less Than 170 lbs RTR Video Available

Other Specific Safety Concerns: Use Kevlar gloves when processing waste. Do not push or press on waste.

Processing Determination: Accept Reject

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

Performed By: Jose Jerez (TRU Remediation Operations (Print)) Signature: Jose Jerez Z Number: 221452 Date: 10-4-12

OK Z# 249750 10/9/12

HS Review: LS 206362 10.2.12

Noncertified TRU Waste Drum Item Information

DrumID: D10990

Item No	ItemID	Process Status	Net Wt (kg)	Matrix	Mass Code	SNM (g)	MT	Auth (Pg/1a)	Comments
1	IXPS729FB		23.860	NITRATE SALTS		17.05	52	6/11	G468
2	IXPS-728FA		13.640	NITRATE SALTS		5.64	56	6/11	G468
3	IXPS-717FA		8.860	NITRATE SALTS		8.42	53	6/11	G468
4	IXPS-719FA		17.730	NITRATE SALTS		5.74	53	6/11	G468
5	IXPS-730-0x32		27.730	NITRATE SALTS		14.75	53	6/11	G468
6	IXPS-716FB		15.450	NITRATE SALTS		8.22	52	6/11	G468
7	IXPS-732-FA		12.270	NITRATE SALTS		29.8	52	6/11	G468

Noncertified Waste Drum Material Summary

Gross Wt (kg): 195.5

Material Type	SNM (grams)	Items Net Wt (kg)
52	38.02	27.72
53	45.96	78.18
56	5.64	13.64
Totals	89.62	119.54

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])	90867					
Container type sampled (e.g., 55-gal, 85-gal, 110-gal, or SWB) (5.[1])	POC					
Filtered Vent Type (5.[1])	1908					
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)) 239975 (Z #)

Reviewed By: NATHAN WALES (CCP (Print)) 238566 (Z #)

Comments: None

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

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

6.1[3] Performed By: SUSAN S. RAMSEY (Waste Handling Operator (print)) [signature] (Signature) 100681 (Z #) 10/2/12 (Date)

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\120928C\
Data File : 90867.D
Acq On : 28 Sep 2012 1:28 pm (#1); 28 Sep 2012 1:27 pm (#2)
Operator : SA
Sample :
InstName : Unit 8
Misc : LFL POC THROUGH FILTER-19DS FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 28 13:40:46 2012
Quant Method : C:\msdchem\1\METHODS\Vocgas.m
Quant Title : Flammable Gas Analysis for Transportation
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
3) Fluorobenzene	3.262	96	2297704	206.00 ppm	0.00
15) Chlorobenzene-d5	5.943	117	2111700	179.50 ppm	0.00

Target Compounds	Qvalue

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

Vocgas.m Fri Sep 28 13:41:30 2012

11-8-12

PROJECT NAME _____ NOTEBOOK NO. _____

0700 Assuming WCRRF operations center - Cole Davis
0601 Started outside rounds, stack sampling being performed.
0638 performing shift turnover with Teri Coleman - Cole Davis.
0639 Assuming WCRRF operations center. Coleman Durell have Clayton Mullens in training under my direction. (JC)
0650 Assuming WCRR Operations Center training under Terri Coleman.
0651 Late entry at 0605 stack sampling was completed. (CM)
0651 Late entry at 0610 Outside Rounds completed. (CM)
0651 Late entry at 0642 Inside Rounds completed. (CM)
0651 Late entry at 0645 both rounds reviewed by SOS. (CM)
0702 Mode change performed TA-50-69 and WCRRF yard in Operations.
0722 Starting movement out of 50-69.
0737 Completed movement out of 50-69.
0738 Starting shipment out of WCRRF. Permission granted to lower vehicle access gate.
0741 bagging on 90869.
0755 bag on complete.
0831 baggin off 90869 and bagging on 90867.
0900 Shipment complete, vehicle access gate restored, and transportainers 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. (CM)
1504 Late entry at 1440 Completed Inside Rounds. (CM)
1505 Bagging off 90937.
1510 Both rounds reviewed by SOS.

SIGNATURE continued on next page. (CM) DATE _____ 20 ____
READ AND UNDERSTOOD _____ DATE _____ 20 ____

11-8-12

0600 Assumed the WCRR SOM position. [signature] 2
0615 Attended pre-job briefing conducted by SOS. Discussed RCRA concerns brought up on 11-7-12 with operators. Discussed upcoming maintenance. Discussed SP#57 and going into SP#72.
0702 Mode change complete. WCRR YARD | 50-69 from WARM | WARM to OPERATIONS | OPERATIONS.
0741 Just drum of the day logged on.
0742 Walked down OC steps last of 50-84 with OM and Energy Solutions 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. 123
1200 WCRR/DVS DDP Daily Call in to discuss goals, work being performed and any issues encountered.
1335 Notified by RP-1 that two waste coordinators were inside the LLW storage area without requesting RCT support. RP-1 verified that at least one of the individuals had FERPER training, therefore it is not an RPO. RP-1 will brief operations on 11-13-12 on the importance of ensuring other support groups have proper training before entering rad areas. SOM and SSW will also follow up on how other support groups, such as janitors 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 [signature]

0615 Conducted shift brief

0638 Concluded shift brief

0645 Reviewed Inside And outside Rounds

0702 Made Change Complete WERF In operations

1510 ~~Made Chg~~ Gm 11-8-12 Reviewed Inside And outside Rounds

1550 Made Change Complete WERR Yard In warm 50-69 In Cold.

11-8-12 1630 End of shift Securing SOS Position [signature]

SHIFT MGR

No further entries on this page

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0005
Examination Date:	1/15/2013
Waste Container ID:	92341
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.: 117.5 kg Tare Wt.: 33.4 kg Net Wt.: 84.1 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: 92341

Section 3: Container Inventory and Comments (Detailed descriptions)

IM: Metal hardware, metal lid

AM:

OM: Scrap lead

OI:

C: Fiberboard insert sleeve, fiberboard material

R:

XPM: 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):	16.0
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	23.1
Other Inorganic Materials (OI)	
Cellulosics (C):	10.0
Rubber (R):	
Plastics (waste materials) (XPM):	10.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	25.0
Soils (S):	
Total WMP Weight:	84.1

CCP Radiography Data Sheet

Waste Container ID: 92341

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 Eric Lyles	1-15-13 1/15/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	92341	Count Sequence Number:	14855
Operator:	DCLTD231\Operator		
Assay Start:	1/17/2013 1:50:28 PM		
Description 1:	2LANDA1080		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Debris S5000		
Container Type:	55 gal Drum		
Weight:	Net: 84.1 kg	Net:	84.1 kg
Container:	Volume: 208.0 l	Full:	90.0 %
Density:	0.450 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: 14855
Assay Instrument: HENC #2
Analysis Method: CCP-TP-063 v 14
Item ID: 92341

Batch Number: 2LANDA1080
Location: LANL TA-54
Software Version: NDA 2000 V.4.0
Analysis Date: 1/17/2013

Net Weight	84100.0 g		
Pu mass	6.05E+000	+-	1.69E+000 g
TRU Alpha Activity	3.13E+000	+-	1.41E+000 Ci
TRU Activity Concentration	3.72E+004	+-	1.67E+004 nCi/g
Pu-239 Equivalent Activity	3.17E+000	+-	1.41E+000 Ci
Pu-239 FGE	5.61E+000	+-	1.55E+000 g
Decay heat	1.04E-001	+-	4.70E-002 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	3.69E-002	2.63E-005	3.77E-006	7.76E-007
PU238	1.42E-003	2.46E-002	6.89E-003	6.85E-005
PU239	5.54E+000	3.49E-001	9.76E-002	9.71E-004
PU240	4.79E-001	1.10E-001	3.08E-002	3.06E-004
AM241	7.62E-001	2.65E+000	1.40E+000	2.69E-002
PU241	2.10E-002	2.18E+000	6.10E-001	6.07E-003
PU242	4.06E-003	1.61E-005	4.51E-006	0.00E+000
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	4.56E-007
U233	<LLD	<LLD	0.00E+000	3.25E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	9.80E-007
U238	<LLD	<LLD	0.00E+000	9.84E-006
AM243	2.99E-004	6.03E-005	8.81E-006	4.75E-006

Errors quoted at 1.000 sigma

Operator: _____ Date: 1-22-13

ITR: _____ Date: 1-28-13

Automated Independent Technical Review

Count Sequence Number: 14855
Batch Number: 2LANDA1080
Counter ID: HENC #2
Container ID: 92341
Waste Matrix Code: Debris S5000
Count Type:
Sequence Type:
Assay Date: 1/17/2013

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.	Pu results taken from Passive Neutron data, U from Quantitative Gamma data.
Section 4 - MGA Analysis Results are marked as invalid.	Isotopic analysis failed. AK isotopics applied. The AK information utilized was provided by Steve Schafer, AKE, and consists of data from CCP-AK-LANL-006, AK Source Document M237. MT-52,53,56.
Section 5 - Gamma Analysis Analysis Status: No errors.	OK
Miscellaneous	No additional nuclides contributing to 95% of the radiological hazard identified.

Expert Review by: [signature] Date: 1/22/13

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **92341**

BDR Number: **LA13FG2008**

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

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	90.37	U
74-82-8	Methane	142.14	U
67-56-1	Methanol	35.23	U
60-29-7	Ethyl Ether	0.96	U
75-35-4	1,1-Dichloroethylene	6.38	U
67-64-1	Acetone	18.08	U
75-34-3	1,1-Dichloroethane	4.08	U
156-59-2	cis-1,2-Dichloroethene	0.76	U
78-93-3	Methyl ethyl ketone	11.73	U
110-82-7	Cyclohexane	5.10	U
71-43-2	Benzene	1.77	U
107-06-2	1,2-Dichloroethane	3.66	U
71-36-3	1-Butanol	1.84	U
108-10-1	Methyl isobutyl ketone	9.82	U
108-88-3	Toluene	8.02	U
108-90-7	Chlorobenzene	4.10	U
100-41-4	Ethylbenzene	3.57	U
108-38-3/106-42-3	m- and p-Xylene	1.92	U
95-47-6	o-Xylene	2.10	U
108-67-8	1,3,5-Trimethylbenzene	1.96	U
95-63-6	1,2,4-Trimethylbenzene	2.13	U

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

InstName : Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\130201c\
Data File : 92341.D
Acq On : 1 Feb 2013 3:07 pm (#1); 01-Feb-13, 15:06:45 (#2)
Operator : NW
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Feb 01 15:16:22 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	3.499	96	4139485	201.25	ppmv	-0.07
15) Chlorobenzene-d5	5.845	117	3629781	177.00	ppmv	-0.06

Target Compounds	Qvalue

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

UET
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.: 90868

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.: 90868

5.[18] Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable: 396.5 lb

6.2[5][A] Parent Drum Lead Blanket Weight (lb): 0 lb

6.2[5][B]/ 6.2[6] Total Parent Drum Weight (lb) 396.5 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.: 90868

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	92345			
10.1[4]	Daughter Drum Filter No.	JL 1321			
10.1[4]	Daughter Drum Bag Filter No.	L 3737			
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.: 90868

Comments: SALTS, METAL LID, CARDBOARD LINER, PLASTIC

11.1[1] Performed By: JOE QUINTANA, [signature] 239987, 11/8/12
Waste Handling Tech (print) Signature Z# Date

11.1[7] Reviewed By: Jose Jerez, [signature] 122452, 11/10/12 0900
SOS or designee (print) Signature Z# Date/Time

Working Copy
Date: 11-8-12

ATTACHMENT 2
Page 1 of 1

WCRRF OVERPACK DRUM ASSEMBLY PREPARATION DATA SHEET

5.[3] Overpack drum information:

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

5.[8] Overpack filtered vent information:

Manufacturer: NUCFIL
Model No.: 013
Serial No.: EJ-351
Manufacture Date: 5/09

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	10-11-13
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 Mandragon / Steven Mandragon V0[illegible] 11/8/12
Waste Handling Technician (print) Signature Z# Date

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

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

Comments: N/C

8.1[1] Performed By: Steven Mandragon / Steven Mandragon V0[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] 224521 11-10-12
Supervisor or designee (print) Signature Z# 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.: 92346

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 Z / 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): 320.2 lb

Comments: N/C

8.1[1] Performed By: JOE QUINTANA / Joe Z / 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: Joe Perez / [illegible] / 222421 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#: 92345

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 #: 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 #: 6CPVC1.5-2 SPVC
Serial #: 2-13737
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 #: 01205
Serial #: JL-1321
Date of Manufacture: 11/10

RECORD torque wrench information:

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

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

[x] Yes [ ] No

Print Name: Michael Romero Signature: [signature] Z#: 182723

5. Weigh Drum Assembly

RECORD weight information

Tare wight (lbs) 76.2 LBS
File ID #: 019065

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

6. Label Drum Assembly

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

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

Operator Print: Michael Romero Operator Sign: [signature] Z#: 182723 Date: 11-7-12

Verifier Print: JOE QUINTANA Verifier Sign: [signature] Z#: 239987 Date: 11/8/12

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

DRUM ID#: 92345

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): 269.0

Scale ID#: 019005

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

4. FINALIZE DOCUMENTATION

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

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

✓ Complete TWSR.

Operator Print/Sign: Joe Quinonez Joe Q Date: 11/8/12

Verifier Print/Sign: Kevin Bolosciak Kevin B Date: 11/8/12

WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Production Control

Container ID: 90868 Container Type: POC Gross Weight (lbs): 386
Container Seal #: None Filter Prefix: None Filter Serial #: EL-217; EL-527
Waste Stream: LA-MHD01.001 Certified RTR BDR: No BDR
TWSR Comments: PARENT #S832464 WTS-12STD-737
Total PE-Ci Activity: 1.46E+00 Equivalent Combustible PE-Ci: 5.49E-01 AM-241 PE-Ci: 1.59E-01
Total Fissile Gram Equivalents: 13.9 Total Surface Dose Rate (mrem/hr): 1
EPA Code(s): D008 D007 D009 we 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 Wastelok 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 S. Ramsey / 100681 / 9/10/12
Production Control (Print) Signature Z Number Date

WDP Engineering

Chemicals Present (e.g., pyrophorics, acids, bases, shock sensitive, organic liquids, peroxides, crown ethers): ☐ Yes ☒ No ☐ Unknown
Processing Determination: ☒ Accept ☐ Reject
WDP Engineering Comments: Nitrate Salts – POC
Net Wt = 76 lb. Parent drum was part of WCRR nitrate salt repack campaign using Wastelok 770 (SEDs attached). 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 haz. chemicals present.

May require RWP for >100 and <1000 mrem/hr

Performed By: Valerie Rhodes / Valerie Rhodes / [redacted] / 9/25/12
WDP Engineering (Print) Signature Z Number Date

TRU Remediation Operations

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

Processing Determination: ☒ Accept ☐ Reject
TRU Remediation Operations Comments: Need to mix in kitty litter on a 1½ kitty litter 2 part salt
Performed By: Gilbert Martinez / Gilbert Martinez / 149235 / 9.27.12
TRU Remediation Operations (Print) Signature Z Number Date

HTS Review: [illegible] CSP. Contains Chromium, lead, and Hg
9-26-12

Document No: EP-DIV-AP-0107 ff - 221452 - 9-28-12

Noncertified TRU Waste Drum Item Information

DrumID: 010990

Item No	ItemID	Process Status	Net Wt (kg)	Matrix	Meas Code	SNM (g)	HT	Auth (Pg/Ln)	Comments
1	LXFS729FB		23.860	NITRATE SALTS		17.05	53	6/11	G468
2	LXFS-728FA		13.640	NITRATE SALTS		5.64	56	6/11	G468
3	LXFS-717FA		8.860	NITRATE SALTS		8.42	53	6/11	G468
4	LXFS-719FA		17.730	NITRATE SALTS		5.74	53	6/11	G468
5	LXFS-730-OXJ2		27.730	NITRATE SALTS		14.75	53	6/11	G468
6	LXFS-718FB		15.450	NITRATE SALTS		8.22	52	6/11	G468
7	LXFS-732-FA		12.270	NITRATE SALTS		29.8	52	6/11	G468

Noncertified Waste Drum Material Summary

Gross Wt (kg): 195.3

Material Type	SNM (grams)	Items Net Wt (kg)
52	38.02	27.72
53	45.96	78.18
56	5.64	13.64
Totals	89.62	119.54

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])	90868					
Container type sampled (e.g., 55-gal, 85-gal, 110-gal, or SWB) (5.[1])	PDC					
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])	9364.6 ppm	ppm	ppm	ppm	ppm	ppm
Methane Reading (< 16,000 ppm) (5.[5])	0 ppm	ppm	ppm	ppm	ppm	ppm

N/A

5.[7] Certified CCP Technician:

Performed By: 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 / Colleen Martinez (Waste Handling Operator (print) / Signature) 190298 (Z #) 9.24.12 (Date)

InstName : Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\120921c\
Data File : 90868.D
Acq On : 21 Sep 2012 3:58 pm (#1); 21-Sep-12, 15:58:13 (#2
Operator : NW
Sample :
Misc : LFL POC THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 21 16:07:14 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	3.562	96	6422797	201.25	ppmv	0.02
15) Chlorobenzene-d5	5.888	117	5763494	177.00	ppmv	0.01
Target Compounds						Qvalue
1) Hydrogen	1.556	GC1	66201	9364.16	ppmv	100

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

12-8-17

0000 Assuming WCRRF Operations Center - Overload.
0001 Started outside rounds; stack sampling being performed.
0033 performing shift turnover with Terri Coleman - Overload.
0634 Assuming WCRRF Operations Center - Volume Dwell have Clayton Mullen 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 ~~[illegible]~~ 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 broom off 90869 and bagging on 90867.
0900 Shipment complete, vehicle access gate restored, and transportation 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 ~~on~~ 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~~ 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)

Best Available Copy

11-8-12

0600 Assumed the WCRR SOM position. [illegible]
0615 Attended pre-job briefing conducted by SOS. Discussed RCRA 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 steps last of 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. 12
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 TWSFs for TRU drums lightning 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]

0615 Conducted Shift brief.

0638 Concluded Shift brief

0645 Reviewed Inside And outside Rounds

0702 Mode Change Complete WCRK In operations.

1510 ~~Mode Chg~~ (in 11-8-12) Reviewed Inside And outside Rounds

1550 Mode Change Complete WCRK 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

583246 4

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0007
Examination Date:	1/17/2013
Waste Container ID:	92345
Video/Audio Recorded Media Number:	LA-RTR2-13-0007 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 12
NCR(s) associated with the container? (e.g., Prohibited Items)	[ ] No [X] Yes NCR No.: NCR-LANL-0028-13 NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA225
Waste Matrix Code:	S5400
Waste Stream I.D.:	LA-MHD01.001
Waste Container Weights:	Gross Wt.: 122.0 kg Tare Wt.: 33.4 kg Net Wt.: 88.6 kg
Rigid Liner and Liner Vent Description:	Liner: [X] No [ ] Yes Lid: [X] No [ ] Yes Type: [ ] 30-mil [ ] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [ ] Yes [X] N/A Punctured: [X] No [ ] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [ ] No [X] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 2 layers
Volume Utilization Percentage:	95 %

CCP Radiography Data Sheet

Waste Container ID: 92345

Section 3: Container Inventory and Comments (Detailed descriptions)

IM: Metal hardware, metal lid

AM:

OM: Scrap lead

OI:

C: Fiberboard insert sleeve, fiberboard material

R:

XPM: Plastic bags, liner lid

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP): Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	10.0
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	10.0
Other Inorganic Materials (OI)	
Cellulosics (C):	10.0
Rubber (R):	
Plastics (waste materials) (XPM):	5.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	53.6
Soils (S):	
Total WMP Weight:	88.6

CCP Radiography Data Sheet

Waste Container ID: 92345

Section 5: RTR Summary (Questions answered "Yes" will be explained in the Comment block, except for Question 1)	
Is there observable liquid?	☐ Yes ☒ No
Is there any observable liquid in internal containers, more than 60 milliliters or 3 percent by volume, whichever is greater?	☐ Yes ☒ No
Is the total volume of observable liquid in the outermost container GREATER than 1% of the container?	☐ Yes ☒ No
Is there observable liquid in payload containers with an EPA Hazardous Waste Number of U134?	☐ Yes ☒ No
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐ Yes ☒ No
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐ Yes ☒ No
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does NOT match TRUCON Code[s])?	☐ Yes ☒ No
Is there an indication of wastes containing explosives or compressed gases?	☐ Yes ☒ No
Is there an indication of PCBs liquids?	☐ Yes ☒ No
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐ Yes ☒ No
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☒ Yes ☐ No
CH or RH TRAMPAC	
Are there heat-sealed bags (unvented) GREATER than 4 liters and LESS than 390 square inches in the waste, or heat sealed bags not authorized in the RH TRUCON Code?	☐ Yes ☒ No
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐ Yes ☒ No
Are there sealed containers GREATER than 4 liters?	☐ Yes ☒ No
Are there indications of inadequate protection for heavy and/or sharp objects?	☐ Yes ☒ No
Comments: NCR-LANL-0028-13	

RTR Operator:

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

NDA 2000 Assay Report

Item Information

Item ID:	92345	Count Sequence Number:	23536
Operator:	D3PW2DK1\operator		
Assay Start:	9/5/2013 11:48:34 AM		
Description 1:	1LANDA1836		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 88.6 kg	Net:	88.6 kg
Container:	Volume: 208.0 l	Full:	95.0 %
Density:	0.450 kg /l		

System Configuration

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

Errors quoted at 1.000 sigma

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CS 6/12/14

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number:	23536	Batch Number:	1LANDA1836
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:	92345	Analysis Date:	9/5/2013

Net Weight	88600.0 g		
Pu mass	1.07E+001	+-	1.92E+000 g
TRU Alpha Activity	4.01E+000	+-	5.80E-001 Ci
TRU Activity Concentration	4.52E+004	+-	6.55E+003 nCi/g
Pu-239 Equivalent Activity	4.04E+000	+-	5.80E-001 Ci
Pu-239 FGE	9.88E+000	+-	1.76E+000 g
Decay heat	1.32E-001	+-	1.92E-002 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	6.20E-002	4.37E-005	6.31E-006	2.17E-006
PU238	2.25E-003	3.84E-002	6.90E-003	5.60E-005
PU239	9.79E+000	6.07E-001	1.09E-001	8.84E-004
PU240	8.46E-001	1.92E-001	3.45E-002	2.80E-004
AM241	9.24E-001	3.17E+000	5.69E-001	4.61E-003
PU241	2.10E-002	2.16E+000	3.88E-001	3.15E-003
PU242	7.16E-003	2.83E-005	5.08E-006	0.00E+000
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	5.56E-007
U233	<LLD	<LLD	0.00E+000	4.41E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	1.29E-006
U238	<LLD	<LLD	0.00E+000	1.40E-005
AM243	4.58E-004	9.17E-005	1.35E-005	6.02E-006

Errors quoted at 1.000 sigma

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

ITR: [signature] Date: 6.10.14

033
CS 6/10/14

Automated Independent Technical Review

Count Sequence Number: 23536 Batch Number: 1LANDA1836
Counter ID: MCS HENC #1
Container ID: 92345
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 9/5/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis No Add-a-Source warnings.	Ok
Section 2 - Passive Neutron Analysis Analysis Status: No errors.	Ok
Ones Rate Analysis complete with warnings. - Error calculating the Ones Rate Pu-240 Effective MDA.	Not data affecting.
Section 3 - Data Combiner Analysis Override enabled; Passive Neutron Pu and Gamma U data specified as input. Pu results taken from Passive Neutron data, U from Quantitative Gamma data. Results comparison test passed.	Passive Neutron Pu and Gamma U data specified as input.
Section 4 - MGA Analysis Results are marked as invalid.	MGA analysis failed. AK isotopics applied. The AK information utilized was provided by Steve Schafer, AKE, and consists of data from CCP-AK-LANL-006, AK Source Document M237. MT-53,52,56
Section 5 - Gamma Analysis Analysis Status: No errors.	Ok
Spectrum Validity Check engine has suggested data review.	After EA review, spectrum valid.

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CS 6/12/14

Comments	Disposition
Miscellaneous	No additional nuclides contributing to 95% of the radiological hazard identified. Am-241 direct reported from gamma results.

Expert Review by: Bart B. Marak Date: 6/5/14

34A
CS 6/12/14

Waste Container ID: **92345**

BDR Number: **LA13FG2098**

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

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	108.39	
74-82-8	Methane	142.14	U
67-56-1	Methanol	46.41	
60-29-7	Ethyl Ether	0.96	U
75-35-4	1,1-Dichloroethylene	6.38	U
67-64-1	Acetone	19.15	
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\130909c\
Data File : 92345.D
Acq On : 9 Sep 2013 12:40 pm (#1); 09-Sep-13, 12:40:00 (#2)
Operator : RJ
Sample :
Misc : 55 Gallon drum through filter. (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 09 12:48:48 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	4796167	205.75	ppmv	0.02
15) Chlorobenzene-d5	5.848	117	3718697	177.50	ppmv	-0.01
Target Compounds						Qvalue
1) Hydrogen	1.620	GC1	815	108.39	ppmv	100
4) Methanol	0.883	31	17785	46.41	ppmv	100
7) Acetone	1.408	58	27246	19.15	ppmv	82

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

UET
1/8/12 cm

ATTACHMENT 1
Page 1 of 4

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: 90869

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, D011

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

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

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

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, Joe Q 23987 11/8/12
Waste Handling Tech (print) Signature Z # Date

ATTACHMENT 1
Page 2 of 4

4.1[6][B]	Parent Waste Container No.:	90869
5.[18]	Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable.	365.8 lb
6.2[5][A]	Parent Drum Lead Blanket Weight (lb):	0 lb
6.2[5][B]/ 6.2[6]	Total Parent Drum Weight (lb)	365.8 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	Date
	NA	7/11

ATTACHMENT 1
Page 3 of 4

4.1[6][B] Parent Waste Container No.: 90869

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	92339			
10.1[4]	Daughter Drum Filter No. JD 11/8/12	~~JL 1398~~	JL 1316		
10.1[4]	Daughter Drum Bag Filter No. JD 11/8/12	~~L 3751~~	JL 3691		
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#)		NA		
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	See Comments			
10.3[13]/10.4[10]/ 10.5[4]/10.6[8]	Daughter Drum % Full (%)		N	NA	
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.: 90869

Comments: SALTS, PLASTIC, CARDBOARD LINER, KITTY LITTER

11.1[1] Performed By: JOE QUINTANA, Joe 25 — 239983, 11/8/12
Waste Handling Tech (print) Signature Z # Date

11.1[7] Reviewed By: Joe Jerez, [signature] — EZ1452, 11/10/12 0857
SOS or designee (print) Signature Z # Date/Time

11-7-12 RV

ATTACHMENT 2
Page 1 of 1

WCRRF OVERPACK DRUM ASSEMBLY PREPARATION DATA SHEET

5.[3] Overpack drum information:

Purchase Order No.: 413954
Lot No.: 211426
Manufacture Date: 10

5.[8] Overpack filtered vent information:

Manufacturer: Nucfil
Model No.: 013
Serial No.: IL-261
Manufacture Date: 9-11

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

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

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

Performed By: Michael Romero [signature] [redacted] 11-7-12
Waste Handling Technician (print) Signature Z # Date

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

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

Comments: N/C

8.1[1] Performed By: Michael Romero [signature] [redacted] 11-7-12
Waste Handling Technician (print) Signature Z # Date

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

8.1[7] Reviewed By: Jose Perez [signature] 221452 11-10-12
Supervisor or designee (print) Signature Z # Date

UET Working Copy

11/8/12 cm

ATTACHMENT 5
Page 1 of 1

WCRRF OVERPACK DRUM CLOSURE DATA SHEET

7.[19] Overpack Drum Unique Identifier No.: 91340

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): 320 2 lb

Comments: N/C

8.1[1] Performed By: Joe Quintana, Joe Q 239987, 11/7/12
Waste Handling Technician (print) Signature Z # Date

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

8.1[7] Reviewed By: Jose Perez, [signature] 224521, 11-10-12
Supervisor or designee (print) Signature Z # Date

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

Drum ID#: 92339

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 #: 416189
Lot #: 02259228
Date of Manufacture: 7012

2. Drum Liner Bag/Filter Assembly:

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

RECORD bag filter information:

Manufacturer: BOP
Model #: GCPW 1.5-25DE
Serial #: L-13691
Date of Manufacture: 6-12

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

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

4. Install Lid/Drum Filter

- [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: Acme Fil
Model #: 219DS
Serial #: 56-1516
Date of Manufacture: 10-11

RECORD torque wrench information:

Filter torque wrench:		Jam Nut / Bung torque wrench:	
M&TE ID #:	040094	M&TE ID #:	021151
Cal Expiration Date:	9/26/13	Cal Expiration Date:	06-11-13
Range (ft-lbs or in-lbs):	45-300	Range (ft-lbs or in-lbs):	6-80
Tolerance:	+/- 4.5 or +/- 6 [illegible]	Tolerance:	+/- 3.6 or +/- 6 [illegible]

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

[x] Yes [ ] No

Print Name: Brian Foreman Signature: [illegible] ZI#: 235235

5. Weigh Drum Assembly

RECORD weight information

Tare wight (lbs) 26.2163
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 Foreman Operator Sign: [illegible] ZI: 235235 Date: 11-07-12

Verifier Print: Joe Quintanar Verifier Sign: [illegible] ZI: 239987 Date: 11/8/12

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

DRUM ID#: 92339

1. LID INSTALLATION	3. WEIGH DRUM ASSEMBLY
NOTE: Install lid per manufacturer's instructions ✓ Mount lid with filter directly over drum seam. ✓ Install ring with bolt positioned downward and directly over drum seam. ✓ Engage bolt and nut and torque per manufactures instructions NOTE Seal the ring while tightening using a rubber hammer or dead-blow mallet or a drum lid press. ✓ Tighten jam nut Record torque wrench information MT&E #: 040329 Cal expiration date: 3/15/13 Range/ Value (ft-lbs): 16 - 80 Tolerance: +/- 3% CW +/- 6% CCW	Record weight information Gross Weight(lbs): 247.4 Scale ID#: 019065 ✓ Using a permanent marker, write the gross weight on the drum lid.
2. DRUM LABELING	**4. FINALIZE DOCUMENTATION**
NOTE: Do not cover the drum seam with any labels. ✓ Place two barcode drum ID labels ~6" from the bottom of the drum ~120° from previously placed ID label ✓ Place one barcode drum ID label to the right of drum seam between the top two rolling hoops. ✓ Place one yellow radioactive waste label between the top two rolling hoops ✓ Place one yellow radioactive waste label in the center of the drum lid RCRA Label: Place one blue NON-RCRA Regulated Waste label between the top two rolling hoops. OR ✓ Place one yellow HAZARDOUS Waste label between the top two rolling hoops left of the drum seam. (Ensure EPA waste number and accumulation start date are documented.) NOTE: Check only one of the above two boxes.	✓ Have RCT monitor drum prior to moving to storage area. ✓ Place attachment 1 and 2 and HMPT Tag into a protective sleeve. ✓ Complete TWSR.

Operator Print/Sign: Joe Guarnaccia / Joe Guarnaccia Date: 11/8/12

Verifier Print/Sign: B. F[illegible] Date: 11-8-12

WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Production Control

Container ID: 90869 Container Type: POC Gross Weight (lbs): 361

Liner Seal #: None Filter Prefix: None Filter Serial #: EL-216; EL-526

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

TWSR Comments: PARENT #S832464 WTS-12STD-736

Total PE-Ci Activity: 1.46E+00 Equivalent Combustible PE-Ci: 5.49E-01 AM-241 PE-Ci: 1.59E-01

Total Fissile Gram Equivalents: 13.9 Total Surface Dose Rate (mrem/hr): 1

EPA Code(s): D008 D007 D009 W. 9/10/12

NCR RTR/NDA Comment: None

RTR Pre-Screen Date: None Comment: None

Certified RTR Comment: None

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

Security Determination: ✓ Green Yellow

Remediation Determination: VE ☐ PID Split ✓ Repack

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

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

Nitrate salts mixed with Waste Lock 770® from previous repack campaign. A minimum of 1:2 volumes of kitty litter to salt must be mixed with 1a volume of nitrate salts

Performed By: Susan Ramsey 100681 9/10/12

Production Control (Print) Signature Z Number Date

WDP Engineering

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

Processing Determination. ✓ Accept Reject

WDP Engineering Comments: Nitrate Salts – POC

Net Wt: 51lb Parent drum (SEDS attached) was part of WCRR nitrate salt repack campaign using Waste Lock 770®. This resulting daughter POC is being reparked to adjust the admixture/nitrate salt ratio. Nitrate salts carry waste codes for [redacted] and mercury. No chemicals present. May require RWP for > 100 + < 1000 mrem/hr.

Performed By: Valerie Rhodes

WDP Engineering (Print) Signature Z Number Date

TRU Remediation Operations

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

Other Specific Safety Concerns: Use Hexarmour gloves during processing of waste inside of the glove box. Do not push on press on waste

Processing Determination: ✓ Accept Reject

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

Performed By: Jose Perez 221452 10-4-12

TRU Remediation Operations (Print) Signature Z Number Date

Lot # 249750 10/4/12

IHS Review: AB 206362 10.3.12

Nonvertified TRU Waste Drum Item Information

DrumID: 010990

Item No	ItemID	Process Status	Net Wt (kg)	Matrix	Mass Code	SNM (g)	HT	Auth (Pg/La)	Comments
1	IXF5729FB		23.860	NITRATE SALTS		17.05	53	6/11	G468
2	IXFB-728FA		13.640	NITRATE SALTS		5.64	56	6/11	G468
3	IXFB-717FA		6.860	NITRATE SALTS		8.42	53	6/11	G468
4	IXFB-719FA		17.730	NITRATE SALTS		5.74	53	6/11	G468
5	IXFB-730-Ox32		27.730	NITRATE SALTS		14.75	53	6/11	G468
6	IXFB-718FA		15.450	NITRATE SALTS		8.22	52	6/11	G468
7	IXFB 732 FA		17.270	NITRATE SALTS		29.8	52	6/11	G468

Nonvertified Waste Drum Material Summary

Gross Wt (kg): 195.5

Material Type	SNM (grams)	Items Net Wt (kg)
52	38.02	37.72
53	43.95	78.18
56	5.64	13.64
Totals	89.62	119.54

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])	908669					
Container type sampled (e.g., 55-gal, 85-gal, 110-gal, or SWB) (5.[1])	PDC					
Filtered Vent Type (5.[1])	1905					
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, 287975
CCP (Print) Z #

Reviewed By: NATHAN WALES, 238566
CCP (Print) Z #

Comments: None

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

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

6.1[3] Performed By: SUSAN S. RAMSEY, Susan S. Ramsey, 100681, 10/2/12
Waste Handling Operator (print) Signature Z # Date

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\120928C\
Data File : 90869.D
Acq On : 28 Sep 2012 2:39 pm (#1); 28 Sep 2012 2:38 pm (#2)
Operator : SA
Sample :
InstName : Unit 8
Misc LFL POC THROUGH FILTER-19DS FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 28 14:46:31 2012
Quant Method : C:\msdchem\1\METHODS\Vocgas.m
Quant Title : Flammable Gas Analysis for Transportation
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
3) Fluorobenzene	3.256	96	2444757	206.00 ppm	0.00
15) Chlorobenzene-d5	5.936	117	2168034	179.50 ppm	0.00

Target Compounds	Qvalue

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

Vocgas.m Fri Sep 28 14:46:46 2012

PROJECT NAME _____ NOTEBOOK NO. _____

0700 Assuming WCRRF Operations center - Overlands
0601 Started outside rounds; stack sampling being performed.
0638 performing shift turnover with Terri Coleman - Overlands.
0639 Assuming WCRR operations center. Coleman
Duell have Clayton Mullins in training under my direction. (JC)
0650 Assuming WCRR Operations Center training under Terri Coleman.
JT
0651 Late entry at 0605 stack sampling was completed. (EM)
0651 Late entry at 0610 Outside Rounds completed. (EM)
0651 Late entry at 0642 Inside Rounds completed. (EM)
0651 Late entry at 0645 both rounds reviewed by SOS. (EM)
0702 Mode change performed TA-50-69 and WCRRF yard in Operations.
0722 Starting movement out of 50-69.
0737 Completed movement ~~out of~~ Late entry 11-8-12 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 baggin off 90869 and bagging on 90867.
0900 Shipment complete, vehicle access gate restored, and transportainers 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 ~~in~~ 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 ~~I~~ Late entry 11-8-12 Inside Rounds. (EM)
1504 Late entry at 1440 Completed Inside Rounds. (EM)
1505 Bagging off 90937.
1510 Both rounds reviewed by SOS.

SIGNATURE continued on next page. (EM) DATE _____ 20 _____
READ AND UNDERSTOOD _____ DATE _____ 20 _____

PROJECT NAME _____ NOTEBOOK NO. _____

Continued from previous page. (cm)

1521 Bag off complete.

1530 Movement out of 50-69 started.

1540 Movement out of 50-69 complete.

1550 Made change performed 50-69 in Cold Standby and WCRRF yard in Warm Standby.

JJ 1630 WCRRF Operations secure. JColeman

MS

No further entries this page

SIGNATURE _____ DATE _____ 20__

READ AND UNDERSTOOD _____ DATE _____ 20__

11-8-12

0600 Assumed the WCRR SOM position. Genevieve Martinez
0615 Attended pre-job briefing conducted by SOS. Discussed RCRA concerns brought up on 11-7-12 with operators. Discussed upcoming maintenance. Discussed SP#57 and going into SP#72.
0702 Mode change complete. WCRR YARD | 50-69 from WARM | WARM to OPERATIONS | OPERATIONS.
0741 Just drum of the day logged on.
0742 Walked down OC steps last of 50-84 with OM and Energy Solutions JH. Caution tape was placed around problem 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 WCRR/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 FERPEN 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 10 parent drums producing 7 daughters.
1550 Mode change complete. WCRR YARD | 50-69 from OPERATIONS | OPERATIONS to WARM | COLD.
1630 Securing the SOM position. Genevieve Martinez

No further entries this page.

Genevieve Martinez 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 WCRRF In operations.

1510 ~~Made Chg~~ Gm 11-8-12 Reviewed Inside And outside Rounds

1550 Made 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

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0041
Examination Date:	3/9/2013
Waste Container ID:	92339
Video/Audio Recorded Media Number:	LA-RTR2-13-0041 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.: 112.0 kg Tare Wt.: 33.4 kg Net Wt.: 78.6 kg
Rigid Liner and Liner Vent Description:	Liner: [X] No [ ] Yes Lid: [X] No [ ] Yes Type: [ ] 30-mil [ ] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [ ] Yes [X] N/A Punctured: [X] No [ ] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [ ] No [X] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 2 layers
Volume Utilization Percentage:	80 %

CCP Radiography Data Sheet

Waste Container ID: 92339

Section 3: Container Inventory and Comments	(Detailed descriptions)
IM:	Metal hardware, pipe component lid
AM:	
OM:	
OI:	
C:	Fiberboard liner sleeve, fiberboard
R:	
XPM:	90 mil plastic liner lid, plastic bags
OR:	
IN:	Homogeneous solids
S:	

Section 4: Packaging Material and Waste Material Parameters	
Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP): Plastic Liner Bag	2.0
Other: Fiberboard Liner (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	18.0
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	
Other Inorganic Materials (OI)	
Cellulosics (C):	8.0
Rubber (R):	
Plastics (waste materials) (XPM):	10.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	42.6
Soils (S):	
Total WMP Weight:	78.6

CCP Radiography Data Sheet

Waste Container ID: 92339

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		3/9/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	92339	Count Sequence Number:	22277
Operator:	D3PW2DK1\operator		
Assay Start:	3/14/2013 9:46:20 AM		
Description 1:	1LANDA1731		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Debris S5000		
Container Type:	55 gallon drum		
Weight:	Net: 78.6 kg	Net:	78.6 kg
Container:	Volume: 208.0 l	Full:	80.0 %
Density:	0.470 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:	22277	Batch Number:	1LANDA1731
Assay Instrument:	MCS HENC #1	Location:	LANL TA-54
Analysis Method:	CCP-TP-063 v 14	Software Version:	NDA 2000 V.4.0
Item ID:	92339	Analysis Date:	3/14/2013

Net Weight	78600.0 g		
Pu mass	2.19E+000	+- 6.59E-001	g
TRU Alpha Activity	1.02E+000	+- 4.50E-001	Ci
TRU Activity Concentration	1.29E+004	+- 5.72E+003	nCi/g
Pu-239 Equivalent Activity	1.02E+000	+- 4.50E-001	Ci
Pu-239 FGE	2.02E+000	+- 6.05E-001	g
Decay heat	3.35E-002	+- 1.50E-002	W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	1.53E-002	1.09E-005	1.61E-006	5.31E-007
PU238	4.62E-004	7.99E-003	2.41E-003	6.00E-005
PU239	2.01E+000	1.26E-001	3.80E-002	9.46E-004
PU240	1.73E-001	3.98E-002	1.20E-002	2.99E-004
AM241	2.42E-001	8.41E-001	4.48E-001	1.99E-002
PU241	4.40E-003	4.58E-001	1.38E-001	3.43E-003
PU242	1.47E-003	5.82E-006	1.75E-006	0.00E+000
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	2.75E-007
U233	<LLD	<LLD	0.00E+000	1.88E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	5.50E-007
U238	<LLD	<LLD	0.00E+000	7.29E-006
AM243	1.11E-004	2.25E-005	3.44E-006	2.55E-006

Errors quoted at 1.000 sigma

Operator: Ami Baxton Date: 3/18/13

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

Automated Independent Technical Review

Count Sequence Number: 22277 Batch Number: 1LANDA1731
Counter ID: MCS HENC #1
Container ID: 92339
Waste Matrix Code: Debris S5000 Count Type:
Sequence Type: Assay Date: 3/14/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis No Add-a-Source warnings.	Ok
Section 2 - Passive Neutron Analysis Analysis Status: No errors. No Warnings Reported.	Ok
Section 3 - Data Combiner Analysis Override enabled; Passive Neutron Pu and Gamma U data specified as input. Pu results taken from Passive Neutron data, U from Quantitative Gamma data. Results comparison test passed.	Passive Neutron Pu and Gamma U data specified as input.
Section 4 - MGA Analysis Results are marked as invalid.	MGA analysis failed. AK isotopics applied. The AK information utilized was provided by Steve Schafer, AKE, and consists of data from CCP-AK-LANL-006, AK Source Document M237. MT-53,52,56
Section 5 - Gamma Analysis Analysis Status: No errors.	Ok
Miscellaneous	No additional nuclides contributing to 95% of the radiological hazard identified.

Expert Review by: Shari Chambers Date: 3-18-13

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **92339**

BDR Number: **LA13FG2028**

Sampling Date: **3/21/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	90.37	U
74-82-8	Methane	142.14	U
67-56-1	Methanol	35.23	U
60-29-7	Ethyl Ether	0.96	U
75-35-4	1,1-Dichloroethylene	6.38	U
67-64-1	Acetone	18.08	U
75-34-3	1,1-Dichloroethane	4.08	U
156-59-2	cis-1,2-Dichloroethene	0.76	U
78-93-3	Methyl ethyl ketone	11.73	U
110-82-7	Cyclohexane	5.10	U
71-43-2	Benzene	1.77	U
107-06-2	1,2-Dichloroethane	3.66	U
71-36-3	1-Butanol	1.84	U
108-10-1	Methyl isobutyl ketone	9.82	U
108-88-3	Toluene	8.02	U
108-90-7	Chlorobenzene	4.10	U
100-41-4	Ethylbenzene	3.57	U
108-38-3/106-42-3	m- and p-Xylene	1.92	U
95-47-6	o-Xylene	2.10	U
108-67-8	1,3,5-Trimethylbenzene	1.96	U
95-63-6	1,2,4-Trimethylbenzene	2.13	U

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

InstName : Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\130321c\
Data File : 92339.D
Acq On : 21 Mar 2013 12:38 pm (#1); 21-Mar-13, 12:37:19 (#2)
Operator : NW
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 21 12:45:39 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	3.539	96	3708841	201.25 ppmv	-0.03
15) Chlorobenzene-d5	5.874	117	3270747	177.00 ppmv	-0.03

Target Compounds	Qvalue

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

Working Copy
Date: 10-2-12

ATTACHMENT 1
Page 1 of 4

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: 90870

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

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

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

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

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

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

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

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

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

4.3[7 [A] Parent Waste Container degraded, loss of integrity, or weighs greater than 468 lb but less than or equal to 624 lb:
DC 10-3-12 ~~☐ YES~~ ☑ NO ☐ N/A

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

Performed By: Brandon Chavez / [signature] 120470 10-2-12
Waste Handling Tech (print) Signature Z # Date

ATTACHMENT 1
Page 2 of 4

4.1[6][B] Parent Waste Container No.: 90870

5.[18] Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable: 386.8 lb
3 6 2 1

6.2[5][A] Parent Drum Lead Blanket Weight (lb): ~~386.8~~ Ø lb

6.2[5][B]/ 6.2[6] Total Parent Drum Weight (lb) 386.8 lb

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

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

NA / /

EWMO-FOD (print) Signature Z # Date

ATTACHMENT 1
Page 3 of 4

4.1[6][B] Parent Waste Container No.: 90870

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	92142	N		
10.1[4]	Daughter Drum Filter No.	AM-751		A	
10.1[4]	Daughter Drum Bag Filter No.	WS-1759			
10.1[4]	Daughter Drum Purchase Order No.	416265			
10.1[13][C]	WCG Fire Watch Stationed		☐ YES	☐ NO	☑ N/A
10.1[14][C][d]3/11.1[3]	WCG Fire Watch Secured		☐ YES	☐ NO	☑ N/A
10.2[4]	POC bag-on bag: Manufacturer				
	Model No.				
	Serial No.				
	Date of Manufacture				
10.2[5]	POC ID No				
10.2[7][B]/10.2[6]	POC Item Description				
10.2[13]	POC Assembly closed per Manufacturer's instructions. (Initial and Z#)		N		
10.2[14]	POC Assembly Gross Weight (lb)			A	
10.2[15]	POC Rad. Survey Results (mrem/hr)				
10.3[3][A]	Approx. Containerized Liquid Vol./Units				
10.3[5][A]	Free Liquid Volume/Units				
10.3[7][A]	Opaque/Non-penetrable Item Description:				
10.3[9][A]	PCB-contaminated Waste Description				
10.3[9][B]	PCB Item ID No.				
10.3[10]	Remaining Waste Description	see comments			
10.3[13]/10.4[10]/10.5[4]/10.6[8]	Daughter Drum % Full (%)	90%			
10.5[3]/10.6[2]	Description Waste Added During Processing	plastic white balls			

ATTACHMENT 1
Page 4 of 4

4.1[6][B] Parent Waste Container No.: 90870

Comments: cardboard, tape, plastic, absorbent sticks

11.1[1] Performed By: Brandon Chavez / [signature] 124742 / 10 2-12
Waste Handling Tech (print) Signature Z # Date

11.1[7] Reviewed By: Jose Perez / [signature] 122452 10-3-12 1140
SOS or designee (print) Signature Z # Date/Time

Working Copy
Date: 10-12-12 aw

ATTACHMENT 2
Page 1 of 1

WCRRF OVERPACK DRUM ASSEMBLY PREPARATION DATA SHEET

5.[3] Overpack drum information:

Purchase Order No.: 414945
Lot No.: 217366
Manufacture Date: 2011

5.[8] Overpack filtered vent information:

Manufacturer: Nucfil
Model No.: 013
Serial No.: HL-960
Manufacture Date: 8/11

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

	Filtered Vent	2 in. Bung
M&TE No.:	020614	021151
Cal. Expiration Date:	10-19-12	06/11/13
Tolerance:	+/- 4% cw +/- 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 Mandragon / Steven Mandragon 104711 10-2-12
Waste Handling Technician (print) Signature Z# Date

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

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

Comments: N/C

8.1[1] Performed By: Steven Mandragon / Steven Mandragon 104711 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

Working Copy
Date: 10-2-12

ATTACHMENT 5
Page 1 of 1

WCRRF OVERPACK DRUM CLOSURE DATA SHEET

7.[19] Overpack Drum Unique Identifier No.: 92143

7.[25] Overpack drum closure ring torque wrench information:
M&TE No.: 04329
Cal. Expiration Date: 3-15-13
Range in ft-lb: 16-80
Tolerance: ±3% cw & ±6% ccw

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

Performed By: Brandon Chavez / [signature] [redacted] 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: 018065
Platform scale calibration expiration date: 7-13-13

7.[36][D] 85-gal overpack drum gross weight (lb): 319.6 lb

Comments: N/C

8.1[1] Performed By: Brandon Chavez / [signature] [redacted] 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: Gilbert Martin / [signature] 14125 10-2-12
Supervisor or designee (print) Signature Z# Date

Working Copy

Date: 9-27-12 Working C

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

Drum ID#: 92142

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 #: 0229 225
Date of Manufacture: 2012

2. Drum Liner Bag/Filter Assembly:

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

RECORD bag filter information:
Manufacturer: BOP
Model #: 6CPVC 1.5-2.5 SPVC
Serial #: WO 1769
Date of Manufacture: 7/11

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

- [x] Inspect cardboard liner/plastic liner (circle type of liner used)
  NOTE: Reject any damaged liners
- [x] Place cardboard/plastic liner into drum liner bag/filter assembly
- [x] Line up filter with drum seam
- [x] Place liner/bag/filter assembly into drum
- [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: NMEFI
Model #: 01905
Serial #: Am 781
Date of Manufacture: 412

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.
☐ Yes ☐ No
Print Name: _____ Signature _____ Z#: _____

5. Weigh Drum Assembly

RECORD weight information
Tare wtght (lbs) 76.0
File ID #: 019065

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

6. Label Drum Assembly

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

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

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

Verifier Print: [illegible] Verifier Sign: [signature] Z#: [illegible] Date: [illegible]

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

DRUM ID#: 92142

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): 238.8 lbs

Scale ID#: 019016

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

4. FINALIZE DOCUMENTATION

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

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

✓ Complete TWSR.

Operator Print/Sign: Brandon Chavez Date 10-2-12

Verifier Print/Sign: Henry Cranson Date: 10-2-12

WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Production Control

Container ID: 90870 Container Type: POC Gross Weight (lbs): 380

Liner Seal #: None Filter Prefix: None Filter Serial #: EL-238; EL-576

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

TWSR Comments: PARENT #8832464 WTS-12STD-732

Total PE-Ci Activity: 1.46E-00 Equivalent Combustible PE-Ci: 5.49E-01 AM-241 PE-Ci: 1.59E-01

Total Fissile Gram Equivalents: 13.9 Total Surface Dose Rate (mrem/hr): 55

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

NCR RTR/NDA Comment: None

RTR Pre-Screen Date: None Comment: None

Certified RTR Comment: None

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

Security Determination: ✓ Green ☐ Yellow

Remediation Determination: ☐ VE ☐ PID ☐ Split ☑ Repack

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

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

Nitrate salts mixed with Waste Log 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 B. Ramsey / 100681 / Date: 9/10/12

Production Control (Print) / Z Number

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: 70lbs. Parent drum (SEDs attached) was part of WCRF nitrate salt repack campaign using Waste Log 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 haz chemicals present

May require RWP for >100 and <1000 mrem/hr

Performed By: Valerie Rhodes / Signature: Valerie Rhodes / 112609 / 9/25/12

WDP Engineering (Print) / Z Number / Date

TRU Remediation Operations

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

Other Specific Safety Concerns:

Processing Determination: ☑ Accept ☐ Reject

TRU Remediation Operations Comments: Ensure kitty litter is bagged in

Performed By: Gilbert Martinez / Signature: [illegible] / 149235 / 9.26.12

TRU Remediation Operations (Print) / Z Number / Date

IHS Review. [illegible] CSP, Contains Chromium, lead, & Hg. 9/26/12

Document No: EP-DIV-AP-0107 [illegible] - 22452 - 9-26-12

Nonsertified TRU Waste Drum Item Information

DrumID: 010990

Item No	ItemID	Process Status	Net Wt (kg)	Matrix	Mass Code	SNM (g)	MT	Auch (Pg/Lm)	Comments
1	IXFS729FB		23.860	NITRATE SALTS		17.05	53	6/11	G468
2	IXFS-728FA		13.660	NITRATE SALTS		5.64	56	6/11	G468
3	IXFS-717FA		8.860	NITRATE SALTS		8.42	53	6/11	G468
4	IXFS-719FA		17.730	NITRATE SALTS		5.74	53	6/11	G468
5	IXFS-730-OX32		27.730	NITRATE SALTS		14.75	53	6/11	G468
6	IXFS-718FB		15.450	NITRATE SALTS		8.22	52	6/11	G468
7	IXFS-732-FA		12.270	NITRATE SALTS		29.8	52	6/11	G468

Nonsertified Waste Drum Material Summary

Gross Wt (kg): 195.5

Material Type	SNM (grams)	Items Net Wt (kg)
52	38.02	27.72
53	45.96	78.18
56	5.64	13.64
Totals	89.62	119.54

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])	90870					
Container type sampled (e.g., 55-gal, 85-gal, 110-gal, or SWB) (5.[1])	POC					
Filtered Vent Type (5.[1])	19DS					
Filtered Vent Unobstructed (5.[1])	☑ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT
WIPP-Approved Filtered Vent (5.[2])	☑ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT
Total CCP VOC value (< 7,000 ppm) (5.[4])	0 ppm	ppm	ppm	ppm	ppm	ppm
Hydrogen Reading (< 64,000 ppm) (5.[5])	0 ppm	ppm	ppm	ppm	ppm	ppm
Methane Reading (< 16,000 ppm) (5.[5])	0 ppm	ppm	ppm	ppm	ppm	ppm

N/A

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 #) 9.21.12 (Date)

InstName : Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\120921c\
Data File : 90870.D
Acq On : 21 Sep 2012 4:21 pm (#1); 21-Sep-12, 16:21:13 (#2)
Operator : NW
Sample :
Misc : LFL POC THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 21 16:29:40 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	6625515	201.25 ppmv	0.06
15) Chlorobenzene-d5	5.923	117	5921520	177.00 ppmv	0.05

Target Compounds	Qvalue

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

10-2-12
0545 Assuming WCRR operations center. TColeman
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 90855.
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-TColeman.
0937 Assuming WCRRF operations center-Cvelarde.
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 - Cvelarde.
1001 Assuming WCRR operations center. TColeman.
1033 Bag on Complete.
1041 Initiating a drum movement from 50-69 to a transportainer.
1105 Drum movement out of facility complete.
1110 Bagging off, bagging on 90843
1130 Bag on complete.
1153 Bagging off 90843 and 1 POC, bagging on 90870.
1216 Bag on complete.
1226 Permission granted to lower the vehicle access gates to begin receipt of drums from Area 6.
1309 Bagging off 90870, bagging on 90810.
1326 Bag on complete.
1400 Initiating a drum movement from 50-69 to a transportainer.
1404 Bagging off 90810, bagging on 90875
1405 Late entry, at 1320, vehicle access gates restored. Transportainers secured. TC
1406 Drum movement out of the TC 10-2-12 facility complete.
1432 Initiating a drum movement from transportainer to 50-69.
1433 Bag off complete, Starting outside rounds.
1442 Move into facility, complete.
1453 Outside rounds complete.
1511 Bagging off 90875 and 1 POC, TC 10-2-12
Continued on next page. TColeman

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

PROJECT NAME NOTEBOOK NO

continued from previous page. JColeman
1550 Bag off complete. Begarding Inside sounds.
1616 Inside rounds complete.
1622 Rounds reviewed by SOS.
1624 Mode chang complete. We are now in warm stand
1630 End of day. Operations secure - JColeman

JF 119

No further entries this page.

SIGNATURE DATE
READ AND UNDERSTOOD DATE

PROJECT NAME 10/2/12 NOTEBOOK NO

0600 ~~Reviewed 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 # 425964-01 Standing / Expedited WO released to Cut holes in walls in Bldg 50-84 to investigate Rodent infestation.

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

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

1545 Notified by OM that WCRR needs to be in a stand down 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.

ES 10-2-12

No further entries this page

SIGNATURE DATE 10/2 20 12

READ AND UNDERSTOOD DATE 20

10-2-12 WCRR SOS Log Book

0600 Assuming SOS position for the day. Jon Jy

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 off fifth drum, Baggin on sixth drum
10-2-12

1216 Bag on Complete

1226 Initiating drum movement from Transport vehicle to Transportainers

1309 Bagging off sixth drum, Bagging on seventh

1326 Bag on Complete

1400 Drum movement from 50-69 to Transport Vehicle

1404 Bagging off seventh drum, Bagging on eight

1406 Drum movement out of 50-69 Complete.

1550 Bag off of last drum complete

1622 Signed off on rounds

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

1630 Securing SOS position for the day. Jon Jy

No Further Entries on this Page

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0064
Examination Date:	4/29/2013
Waste Container ID:	92142
Video/Audio Recorded Media Number:	LA-RTR2-13-0064 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.: 108.0 kg Tare Wt.: 33.4 kg Net Wt.: 74.6 kg
Rigid Liner and Liner Vent Description:	Liner: [X] No [ ] Yes Lid: [X] No [ ] Yes Type: [ ] 30-mil [ ] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [ ] Yes [X] N/A Punctured: [X] No [ ] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [ ] No [X] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 2 layers
Volume Utilization Percentage:	90 %

CCP Radiography Data Sheet

Waste Container ID: 92142

Section 3: Container Inventory and Comments (Detailed descriptions)

IM: Hardware, metal lid

AM:

OM: Scrap lead

OI:

C: Fiberboard insert sleeve, fiberboard

R:

XPM: Liner lid, plastic bags

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP): Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	20.0
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	1.0
Other Inorganic Materials (OI)	
Cellulosics (C):	10.0
Rubber (R):	
Plastics (waste materials) (XPM):	8.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	35.6
Soils (S):	
Total WMP Weight:	74.6

CCP Radiography Data Sheet

Waste Container ID: 92142

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

Comments: N/A

RTR Operator:

Benito Maestas		4/29/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	92142	Count Sequence Number:	22671
Operator:	D3PW2DK1\operator		
Assay Start:	5/1/2013 8:54:25 AM		
Description 1:	1LANDA1762		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Debris S5000		
Container Type:	55 gallon drum		
Weight:	Net: 74.6 kg	Net:	74.6 kg
Container:	Volume: 208.0 l	Full:	90.0 %
Density:	0.400 kg /l		

System Configuration

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

Errors quoted at 1.000 sigma

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number:	22671	Batch Number:	1LANDA1762
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:	92142	Analysis Date:	5/1/2013

Net Weight	74600.0 g		
Pu mass	9.38E+000	+-	2.04E+000 g
TRU Alpha Activity	2.71E+000	+-	1.04E+000 Ci
TRU Activity Concentration	3.63E+004	+-	1.40E+004 nCi/g
Pu-239 Equivalent Activity	2.74E+000	+-	1.04E+000 Ci
Pu-239 FGE	8.68E+000	+-	1.88E+000 g
Decay heat	8.89E-002	+-	3.49E-002 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	3.10E-002	2.21E-005	3.01E-006	1.34E-006
PU238	1.98E-003	3.43E-002	7.47E-003	6.37E-005
PU239	8.61E+000	5.41E-001	1.18E-001	1.01E-003
PU240	7.43E-001	1.71E-001	3.73E-002	3.18E-004
AM241	5.65E-001	1.96E+000	1.04E+000	2.61E-002
PU241	1.93E-002	2.01E+000	4.38E-001	3.74E-003
PU242	6.29E-003	2.50E-005	5.45E-006	0.00E+000
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	3.98E-007
U233	<LLD	<LLD	0.00E+000	2.71E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	7.56E-007
U238	<LLD	<LLD	0.00E+000	1.01E-005
AM243	2.59E-004	5.22E-005	7.26E-006	3.56E-006

Errors quoted at 1.000 sigma

Operator: _____ Date: 5-6-13

ITR: _____ Date: 5-7-13

Automated Independent Technical Review

Count Sequence Number: 22671 Batch Number: 1LANDA1762
Counter ID: MCS HENC #1
Container ID: 92142
Waste Matrix Code: Debris S5000 Count Type:
Sequence Type: Assay Date: 5/1/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis No Add-a-Source warnings.	Ok
Section 2 - Passive Neutron Analysis Analysis Status: No errors.	Ok
Ones Rate Analysis complete with warnings. - Error calculating the Ones Rate Pu-240 Effective MDA.	Not data affecting.
Section 3 - Data Combiner Analysis Override enabled; Passive Neutron Pu and Gamma U data specified as input. Pu results taken from Passive Neutron data, U from Quantitative Gamma data. Results comparison test passed.	Passive Neutron Pu and Gamma U data specified as input. .
Section 4 - MGA Analysis Results are marked as invalid.	MGA analysis failed. AK isotopics applied. The AK information utilized was provided by Steve Schafer, AKE, and consists of data from CCP-AK-LANL-006, AK Source Document M237. MT-53,52,56
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: 5-2-13

Waste Container ID: **92142**

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 : 92142.D
Acq On : 9 May 2013 2:53 pm (#1); 09-May-13, 14:52:59 (#2)
Operator : SA
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 09 15:01:43 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	3.575	96	3799452	201.25	ppmv	0.00
15) Chlorobenzene-d5	5.904	117	3216996	177.00	ppmv	0.00

Target Compounds	Qvalue

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

S832499

S832499

Container Profile 747385

File Options Reports Help

S832499

747385	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

S832499

- S832499
  - LA00000068636
  - LA00000068635
  - LA00000068590 – Empty

ATTACHMENT 1
Page 1 of 4

Working Copy
Date: 11/7/13 ~~+3~~

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: 5832499

6.2[4] Date Processed: 11-07-13

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

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

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

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

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

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

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

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

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

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

Performed By: BRIAN GALLEGOS / B. Gallegos / 267129 11-07-13
Waste Handling Tech (print) Signature Z # Date

ATTACHMENT 1
Page 2 of 4

4.1[6][B] Parent Waste Container No.: 5832499

5.[18] Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable: 389.4 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) 389.4 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.: 5832499

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	68636	68635	N	
10.1[4]	Daughter Drum Filter No.	LH-872	LH-875		A
10.1[4]	Daughter Drum Bag Filter No.	L-10353	L-6790		
10.1[4]	Daughter Drum Purchase Order No.	501578	501578		
10.1[13][C]	WCG Fire Watch Stationed		☐ YES	☐ NO	☑ N/A
10.1[14][C][d]3/11.1[3]	WCG Fire Watch Secured		☐ YES	☐ NO	☑ N/A
10.2[4]	POC bag-on bag: Manufacturer				
	Model No.				
	Serial No.				
	Date of Manufacture				
10.2[5]	POC ID No				
10.2[7][B]/10.2[6]	POC Item Description	N A	N A		
10.2[13]	POC Assembly closed per Manufacturer's instructions. (Initial and Z#)				
10.2[14]	POC Assembly Gross Weight (lb)				
10.2[15]	POC Rad. Survey Results (mrem/hr)			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:	LEAD SHIELDING	LEAD SHIELDING		A
10.3[9][A]	PCB-contaminated Waste Description	N A	N A		
10.3[9][B]	PCB Item ID No.				
10.3[10]	Remaining Waste Description	SEE COMMENTS	SEE COMMENTS		
10.3[13]/10.4[10]/ 10.5[4]/10.6[10]	Daughter Drum % Full (%)	70%	70%		
10.5[3]/10.6[2]	Description Waste Added During Processing	KITTY LITTER BAG OUT STUBS	KITTY LITTER, STUB OUT BAG		

ATTACHMENT 1
Page 4 of 4

4.1[6][B] Parent Waste Container No.: S832499

Comments: ROOM TRASH, PLASTICS, NITRATE SALTS, KITTY LITTER, LEAD SHIELDING, LEAD WINDOWS, GLOVE EXPANDERS

11.1[1] Performed By: BRIAN GAMBEGOS / [signature] / 267129 / 11-07-13
Waste Handling Tech (print) Signature Z # Date

11.1[8] Reviewed By: Clayton Mullins / [signature] / 240092 / 11/8/13 0451
SOS or designee (print) Signature Z # Date/Time

Working Copy
Date: 10-31-13

ATTACHMENT 2
Page 1 of 1

WCRRF OVERPACK DRUM ASSEMBLY PREPARATION DATA SHEET

5.[3] Overpack drum information:

Purchase Order No.: 601563
Lot No.: 0238366-1
Manufacture Date: 2013

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

	Filtered Vent	2-in. Bung
M&TE No.:	100216	036245
Cal. Expiration Date:	12-18-2013	08-05-2014
Tolerance:	±4% cw/±6% ccw	±3% cw/±6% ccw

Overpack filtered vent information:

Manufacturer: Nactil
Model No.: 013
Serial No.: JL-1901
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: GERARD ESPINOZA [signature] 1237720 10/31/13
Waste Handling Technician (print) Signature Z # Date

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

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

Comments: N/C

8.1[1] Performed By: GERARD ESPINOZA [signature] 1237720 10/31/13
Waste Handling Technician (print) Signature Z # Date

8.1[6] Reviewed By: Clayton Mullins [signature] 1240096 11/8/13
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 5
Page 1 of 1

Working Copy
Date: 11/7/13 HS

WCRRF OVERPACK DRUM CLOSURE DATA SHEET

7.[17] Overpack Drum Unique Identifier No.: 68590

7.[23] Overpack drum closure ring torque wrench information:
M&TE No.: 038369
Cal. Expiration Date: 12-18-13
Range in ft-lb: 16-80
Tolerance: ±3% cw & 6% ccw

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

Performed By: Brian Gallegos / Bri Gallegos / 267129 11-07-13
Waste Handling Technician (print) Signature Z# Date

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

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

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

7.[34][D] 85-gal overpack drum gross weight (lb): 166.6 lb

Comments: N/c

8.1[1] Performed By: Brian Gallegos / Bri Gallegos / 267129 11-07-13
Waste Handling Technician (print) Signature Z# Date

8.1[7] Reviewed By: Clayton Mullins / CM / 248096 11/8/13
Supervisor or designee (print) Signature Z# Date

11 7-13 gc

ATTACHMENT 1
Page 1 of 2

WCRRF DRUM PREPARATION DATA SHEET

5.[34][E] Drum ID No.: 68635

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.: 6cpvc1.5zspvc
Serial No.: L-6790
Manufacture Date: 1-13

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

	Filtered Vent	2 in. Bung
M&TE No.:	100216	036245
Cal. Expiration Date:	12-18-13	8-5-14
Range in ft-lb:	40-200	10-80
Tolerance:	±4%cw ±6%ccw	±3%cw ±6%ccw

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

Performed By: Brandon Chavez / [signature] 2474211 11-7-13
Operator (print) Signature Z # Date

5.[23] Filtered vent information:
Manufacturer: NUCFI
Model No.: 019DS
Serial No.: LM-875
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.: 68635

Comments: N/C

5.[35] Performed By: Brandon Chavez / [signature] 2417821 11-7-13
Operator (print) Signature Z # Date

7.1[4] Reviewed By: Clayton Mullins / [signature] 1240091 11/8/13
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 2
Page 1 of 2

WCRRF DRUM CLOSURE DATA SHEET

6.[3] Drum ID No.: 68635

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

M&TE No.: 038369
Cal. Expiration Date: 12-18-13
Range in ft-lb: 16-80
Tolerance: ±3% cw ±6% ccw

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

Performed By: BRIAN GALLEGOS / [signature] / 1267179 / 11-07-13
Operator (print) / Signature / Z # / Date

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

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

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

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

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

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

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

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

ATTACHMENT 2
Page 2 of 2

6.[3] Drum ID No.: 68635

6.[26] Scale File ID number: 019065

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

6.[28] Drum gross weight: BG 11-07-13 ~~4885.2~~ 3442 lbs

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

Comments: N/C

6.[32] Performed By: BRIAN GALLEGOS / [signature] / 267129 11-06-13
Operator (print) Signature Z # Date

7.1[4] Reviewed By: Clayton Mullins / [signature] 240091 11/8/13
Supervisor or designee (print) Signature Z # Date

11-7-13

ATTACHMENT 1
Page 1 of 2

WCRRF DRUM PREPARATION DATA SHEET

5.[34][E] Drum ID No.: 686636

5.[3] Drum information:
Purchase Order No.: 501578
Lot No.: 0240119
Manufacture Date: 13

5.[17] Drum Liner Bag/Filter Assembly:
Manufacturer: BOP
Model No.: 6cpvc1.52spvc
Serial No.: L-10353
Manufacture Date: 1-13

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

	Filtered Vent	2 in. Bung
M&TE No.:	1002116	036245
Cal. Expiration Date:	12-18-13	8-5-14
Range in ft-lb:	40-200	10-80
Tolerance:	±4%cw ±6%can	±3%cw ±6%can

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

Performed By: Brandon Chavez / [signature] 2017212 / 11-7-13
Operator (print) Signature Z # Date

5.[23] Filtered vent information:
Manufacturer: NUCFIL
Model No.: 019DS
Serial No.: LM-872
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.: 686636

Comments: N/C

5.[35] Performed By: Brandon Chavez / [signature] 2017121 11-7-13
Operator (print) Signature Z # Date

7.1[4] Reviewed By: Clayton Mullins / [signature] 240091 11/8/13
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 2
Page 1 of 2

WCRRF DRUM CLOSURE DATA SHEET

6.[3] Drum ID No.: 686636

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

M&TE No.: 038369
Cal. Expiration Date: 12-18-13
Range in ft-lb: 16-80
Tolerance: ±3% cw ±6% ccw

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

Performed By: BRIAN GALLEGOS / [signature] / 267129 / 11-07-13
Operator (print) Signature Z # Date

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

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

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

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

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

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

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

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

ATTACHMENT 2
Page 2 of 2

6.[3] Drum ID No.: 686336

6.[26] Scale File ID number: 019065

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

6.[28] Drum gross weight: 339.4 lbs

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

Comments: N/C

6.[32] Performed By: BRIAN GALLEGOS / Bri Gallegos / 267179 / 11-07-13
Operator (print) / Signature / Z # / Date

7.1[4] Reviewed By: Clayton Mullins / CM / 1241091 / 11/8/13
Supervisor or designee (print) / Signature / Z # / Date

ATTACHMENT 3
Page 1 of 1

Working Copy

WCRRF PARENT 55-GAL DRUM PREPARATION DATA SHEET 11-7-13

6.3[21] Prepared Parent 55-Gal Drum Number: S832499

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): 389.4

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

Comments: N/C

8.1[1] Performed By: BRIAN GALLEGOS / Bri Gallegos / 267129 / 11-07-13
Waste Handling Technician (print) Signature Z # Date

8.1[7] Reviewed By: Clayton Mullins / CM / 240092 / 11/8/13
Supervisor or designee (print) Signature Z # Date

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

8.1[8][D] Approved by: Randy Axtell / RA / 102085 / 11/8/13 / 0450
SOS/SOM or designee (print) Signature Z # Date Time

WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Production Control 05 11-4138

Container ID: S832499 Container Type: 55-GAL Gross Weight (lbs): 398

Inner Seal #: 010959 Filter Prefix: LAVC Filter Serial #: 02188

AK Waste Stream: LA-MHD01.001 Certified RTR BDR: LA-RTR2-11-0147

TWSR Comments: LEACHED SOLIDS MST 12

Total PE-Ci Activity: 6.05E+00 Equivalent Combustible PE-Ci: 2.27E+00 AM-241 PE-Ci: 5.35E-01

Total Fissile Gram Equivalents: 64.2 Total Surface Dose Rate (mrem/hr): 1

EPA Code(s): None

NCR RTR/NDA Comment: None

RTR Pre-Screen Date: 4/26/2007 Comment: Liquids, Impenetrable Obj, Liquid Location: 22

Certified RTR Comment: Impenetrable Items, Liquid greater than 1% by volume

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

Security Determination: ☑ Green ☐ Yellow

Remediation Determination: ☐ ~~[illegible]~~ ☑ PID ☐ Split ☑ Repack

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

TRUCON Code: LA125M Production Control Comments: Ensure EPA Codes D007, D008, and D009 are on the label. A minimum of 1.2 volumes of kitty litter/zeolite must be mixed with 1.0 volume of nitrate salts

Performed By: R. W. Jones (Production Control (Print)) R. W. Jones (Signature) 117434 (Z Number) 1-25-12 (Date)

WDP Engineering SUSAN RAMSEY (Signature) 100481 11/28/12

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

Processing Determination: ☒ Accept ☐ Reject

WDP Engineering Comments: Nitrate salts
Net Wt: 338 lb. Historical information shows 8 items of nitrate salts, ranging from 6 lb to 81 lb. RTR inventory shows 55-gal drum has 90-mil liner + contains scrap lead, plastic bags, + homogeneous solid material. Nitrate salts may contain undocumented liquids

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

Performed By: Valerie Rhodes (WDP Engineering (Print)) Valerie Rhodes (Signature) 112609 (Z Number) 2/6/12 (Date)

TRU Remediation Operations

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

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

Processing Determination: ☑ Accept ☐ Reject

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

Performed By: Vanessa Velarde (TRU Remediation Operations (Print)) C. Velarde (Signature) 234079 (Z Number) 2/8/12 (Date)

Darrel L. Blain (Signature) 218069 10/29/13

IHS Review [illegible] CSP, No IH Concerns 12/4/12

Jose Jerez [illegible] 22 1452 10/29/13

Noncertified TRU Waste Drum Item Information

DrumID: 010959

Item No	ItemID	Process Status	Net Wt (kg)	Matrix	Meas Code	SNM (g)	MT	Auth (Pg/Ln)		Comments
1	IXFS-718FD		36.820	NITRATE SALTS		18.81	52	6/11	G468	
2	IXFS-733FA		15.000	NITRATE SALTS		6.37	52	6/11	G468	
3	IX-738-OX33		13.640	NITRATE SALTS		8.02	52	6/11	G468	
4	IXFS-737F1		2.500	NITRATE SALTS		0.25	42	6/11	G468	
5	IXFS-739FA		9.550	NITRATE SALTS		5.74	52	6/11	G468	
6	IXFS-741FA		10.000	NITRATE SALTS		13.24	52	6/11	G468	
7	IXFS-743FA		8.860	NITRATE SALTS		10.3	53	6/11	G468	
8	IXFS-744FC		14.090	NITRATE SALTS		5.49	52	6/11	G468	

Noncertified Waste Drum Material Summary

Gross Wt (kg): 180.5

Material Type	SNM (grams)	Items Net Wt (kg)
42	0.25	2.50
52	57.67	99.10
53	10.3	8.86
Totals	68.22	110.46

Attachment 2 – CCP Radiography Data Sheet

Section 1: General Information	
☑ RTR Examination ☐ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-11-0147
Examination Date:	11/15/2011
Waste Container ID:	S832499
Video/Audio Recorded Media Number:	LA-RTR2-11-0147 A
Procedure and Revision No.:	CCP-TP-053 Rev. 11
NCR(s) associated with the container? (e.g., Prohibited Items)	☐ NO ☑ YES NCR No.: NCR-LANL-3837-11 NCR No.: NCR-LANL-3840-11

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: 175.0 kg. Tare Wt: 35.1 kg. Net Wt: 139.9 kg.
Rigid Liner and Liner Vent Description: (e.g., "90 mil liner – NO Lid" or "NO Liner")	90mil Liner - Mechanical Vent
Number of Layers of Confinement:	~~Appears to be 1 layer~~ can not verify CO 12/1/11 PO 12/1/11
Volume Utilization Percentage:	95 %

Attachment 2 – CCP Radiography Data Sheet (Continued)

Page 2 of 3

Waste Container ID: S832499

Section 3: Container Inventory and Comments (Detailed descriptions)
Scrap lead
Plastic bags, horsetail
homogeneous solid material

Section 4: Packaging Material and Waste Material Parameters	
Packaging Material:	Estimated Weight (kg)
Steel (ST):	27.7
Plastics (PP): Rigid Liner	7.4
Others:	0.0
Total Packaging Weight:	35.1
Waste Material Parameter:	Estimated Weight (kg)
Iron-based Metal / Alloys (IM):	70.5
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):	67.4
Soils (S):	
Total WMP Weight:	139.9

Can not verify RD 12/1/11

Attachment 2 – CCP Radiography Data Sheet (Continued)

Page 3 of 3

Waste Container ID: S832499

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

Comments: NCR-LANL-3837-11
NCR-LANL-3840-11

RTR Operator:

Print Name	Signature	Date
Philip Dillard		11/15/11

12/1/11

DP1

ATTACHMENT 1
Page 1 of 1

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

5.[1] Sample Date: 1/25/12

Container No. (5.[1])	5910170	66472	5832499			
Filtered Vent Type (5.[1])	72	72	72			
WIPP-Approved Filtered Vent (5.[2])	☑ SAT ☐ UNSAT	☑ SAT ☐ UNSAT	☑ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT
Total CCP VOC value (< 7,000 ppm) (5.[4])	Ø ppm	Ø ppm	Ø ppm	ppm	ppm	ppm
Hydrogen Reading (< 64,000 ppm) (5.[5])	318.12 ppm	1268.67 ppm	194.12 ppm	ppm	ppm	ppm
Methane Reading (< 16,000 ppm) (5.[5])	Ø ppm	Ø ppm	Ø ppm	ppm	ppm	ppm

No Further Entries GR 1/30/12

5.[7] Certified CCP Technician:

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

Reviewed By: Gabe Romero / 236973
CCP (Print) Z#

Comments: N/C

6.1[2][A] (S) WCRRF waste container satisfies the following criteria: ☑ SAT ☐ UNSAT

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

6.1[2][B]/ 6.1[3]: Performed By: Alicia Herrera — 198450 / 1/30/12
Waste Handling Operator (print) Signature Z# Date

Instrumente : Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\120125c\
Data File : S832499.D
Acq On : 25 Jan 2012 4:50 pm (#1); 25-Jan-12, 16:50:21 (#2)
Operator : GR
Sample :
Misc : 55 GALLON LFL FROM UNDER DRUM LID (72) (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jan 25 16:59:15 2012
Quant Method : C:\msdchem\1\METHODS\vocgas.m
Quant Title : Flammable Gas Analysis
QLast Update : Tue Oct 18 13:58:45 2011
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
3) Fluorobenzene	3.641	96	6979511	209.00 ppmv	0.00
15) Chlorobenzene-d5	5.950	117	5790399	185.50 ppmv	0.00
Target Compounds					Qvalue
1) Hydrogen	1.605	GC1	1528	194.12 ppmv	100

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

vocgas.m Wed Jan 25 16:59:24 2012

11-7-13

0603 ASSUMING WCRR OPERATIONS CENTER H.SMITH

0615 STARTING PRE-JOB BRIEFING

0645 PRE JOB BRIEFING COMPLETED

0762 OPERATORS ENTERING BUILDING TO PROCESS

0820 BAGGING OFF DAUGHTER, BAGGING ON DAUGHTER

0835 BAG OFF COMPLETE

0847 BEGINNING ~~MOVEMENT~~ 11-7-13 HS MOVEMENT OUT OF TA 50-69 TO TRANSPORTAINERS

0912 MOVEMENT INTO TA 50-75 FROM TA-50/69 IS COMPLETED

0933 BEGINNING MOVEMENT INTO TA50-69 FROM - TRANSPORTAINERS

0944 MOVEMENT INTO TA50-69 IS COMPLETED

1044 BAGGING OFF DAUGHTER, BAGGING OFF POC, BAGGING ON S332499 AND DENESTING

1157 BAG OFF, BAG ON, DENESTING COMPLETED

1459 BAGGING OFF 1 DAUGHTER, BAGGING ON 1 DAUGHTER AND CONTINUING THE PROCESS

1516 BAG OFF COMPLETED

1527 STARTING INSIDE ROUNDS

1530 STARTING OUTSIDE ROUNDS

1536 ITEM #63 INSIDE ROUNDS OOS, PERMISSION TO PROCEED PER CSE DOCUMENTATION

1551 COMPLETED OUTSIDE ROUNDS

1552 NOTIFIED BY INSIDE PIC, LEAD WINDOW BETWEEN STATIONS #1 AND #2 SHOW ONE INCH GAP, AND IS REQUESTING LEAD TAPE

1620 INSIDE AND OUTSIDE ROUNDS REVIEWED BY SOS

1630 BAGGING 1 DAUGHTER AND BAGGING OF PARENT AND INSTALLING PORT COVER

1712 ~~1656~~ HS BAG OFF COMPLETE

1738 11/7/13 BEGINNING MOVEMENT FROM TA50-69 TO TRANSPORTAINER

1739 BAGGING ON S833481

1752 MOVEMENT OUT OF TA50-69 IS COMPLETE

11-7-13 RELIEVED BY OCO TERI COLEMAN · H SMITH

NO FURTHER ENTRIES ON THIS PAGE HSMITH

Best Available Copy

11-7-13 DAYSHIFT

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

0645 Completed attending the pre-job brief conducted by the SCS (Gilbert). Discussion was focused on the prior drums processed. The 1st drum from yesterday was noted to have 7 gallons of water/liquid and the bottom 10 inches of the poly liner was frozen. Operators were required to crack the bottom of the poly liner to remove the frozen slugs. It was noted that the attachment tool with the shovel extension was broken. Another adapter is needing to be procured. RCTs noted that a bag seam split when prepping a drum on the containment pallet the parent drum was repreppped. Operators were reminded to be cautious. Shift orders in affect were discussed. There are no transfers today.

0710 Completed daily call in with ARCA & SOM presiding FOD.

0822 Operators Inside report Bag off 1 daughter and bag on 1 daughter and continue to process parent drum SE 333489

0835 Bag off is completed.

0858 Interfaced with RP-1 supervision obtaining 3 8" post covers for the WCC from the MARM Center.

0923 Operations outside initiate a movement out of 52 cy - 7 drums total

0944 Operations completed movement in of 3 drums into GB.

1015 Discussed with RP-1 the Radiological waste Container Storage Sign noted along the BGE side along the wall. Upon evaluation, the sign will be removed.

1126 Completed procedure validation checklist for ACPs - (new version) Comments were discussed with the procedure writer.

1157 Inside Operators report completion of bag on, dewatering and bagging on Parent SE 332449 - completed (Note: SE 333489 generated 2 daughters 1 POC).

12-5 Completed the daily noon phone call with SOM and PM.

1315 Updated posting for Radiological Source Inventory sheet in SCLA Room 104 located on the RADIOLOGICAL SAFE. A copy of the posting was placed in the Posting LOGBOOK

1459 Operators bag off 1 daughter, bag on another and continue to process.

1550 Operators notified the Operations Center/SCS and indicated they were receiving dose through the lead tape of 1mr/hr and through the crack of 2mr/hr (the crack is noted on the lead glass). Operators were requesting additional lead tape. Operators and RP-1

(Continued on NEXT PAGE)

PROJECT NAME WCRR SOS LOG BOOK NOTEBOOK NO.

11/7/13

0600 Assuming SOS Position Called m.t

0615 Conducted shift brief. Discussed status of Glovebox alarm status of Lead lined windows status and Alarm Binnacle.

0645 Shift brief Concluded.

0822 Operators entering 50-69 For Processing.

0870 Bagging off Daughter. Bagging on Mother.

0835 Bag off/on complete.

0847 Moving out of 50-69 To transportation.

0912 Movement Complete.

0933 Moving into 50-69 from transportation

0944 Move in complete.

1644 Bagging off Daughter and Pec Bagging on 5832499 and denesting.

1157 Bag off/on and denesting Complete.

1446 Relieved by Clarence Velarde

1447 Assuming WCRRF SOS Position - CVelarde

1459 Bagging off (daughter), Bagging on (daughter).

1516 Bag on, Bag off complete.

1527 Started inside rounds and outside rounds.

1551 Completed outside rounds

1620 Rounds have been signed off.

1630 Bagging off (daughter)

1712 Bag off completed, waiting to receive lead tape.

1741 Bagged on 3833481

1742 Started movement out of 50-69.

1750 Completed movement into 50-69

-7-13 1846 Relieved by SOS Clayton Mullins - CVelarde

HA

no further entries 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-RTR2-13-0128
Examination Date:	11/14/2013
Waste Container ID:	68635
Video/Audio Recorded Media Number:	LA-RTR2-13-0128 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 14
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3110
Waste Stream I.D.:	LA-MIN02-V.001
Waste Container Weights:	Gross Wt.: 156.0 kg Tare Wt.: 33.4 kg Net Wt.: 122.6 kg
Rigid Liner and Liner Vent Description:	Liner: [X] No [ ] Yes Lid: [X] No [ ] Yes Type: [ ] 30-mil [ ] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [ ] Yes [X] N/A Punctured: [X] No [ ] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [ ] No [X] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 2 layers
Volume Utilization Percentage:	75 %

CCP Radiography Data Sheet

Waste Container ID: 68635

Section 3: Container Inventory and Comments (Detailed descriptions)

IM: Scrap metal

AM:

OM: Scrap lead

OI:

C:

R:

XPM: Plastic bags

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP): Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	2.0
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	8.0
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	4.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	108.6
Soils (S):	
Total WMP Weight:	122.6

CCP Radiography Data Sheet

Waste Container ID: 68635

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

RTR Operator:

Benito Maestas		11/14/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	68635	Count Sequence Number:	16734
Operator:	DCLTD231\Operator		
Assay Start:	11/18/2013 3:15:35 PM		
Description 1:	2LANDA1242		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6, MT-42 MIX		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gal Drum		
Weight:	Net: 123.0 kg	Net:	123.0 kg
Container:	Volume: 208.0 l	Full:	75.0 %
Density:	0.790 kg /l		

System Configuration

Counter:	HENC #2
Count Type:	Item Count
Collimator/Geometry Setting:	All Banks on GEO - 0

Errors quoted at 1.000 sigma

Automated Independent Technical Review

Count Sequence Number: 16734 Batch Number: 2LANDA1242
Counter ID: HENC #2
Container ID: 68635
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 11/18/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis No Add-a-Source warnings.	Ok
Section 2 - Passive Neutron Analysis Analysis Status: No errors.	Ok
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-52,53,42
Section 5 - Gamma Analysis Analysis Status: No errors.	Ok
Miscellaneous	No additional nuclides contributing to 95% of the radiological hazard identified.

Expert Review by: Sheri Chandler Date: 11-19-13

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number:	16734	Batch Number:	2LANDA1242
Assay Instrument:	HENC #2	Location:	LANL TA-54
Analysis Method:	CCP-TP-063 v 15	Software Version:	NDA 2000 V.4.0
Item ID:	68635	Analysis Date:	11/18/2013

Net Weight	123000.0 g		
Pu mass	2.65E+001	+- 9.05E+000	g
TRU Alpha Activity	8.58E+000	+- 4.61E+000	Ci
TRU Activity Concentration	6.98E+004	+- 3.75E+004	nCi/g
Pu-239 Equivalent Activity	8.65E+000	+- 4.61E+000	Ci
Pu-239 FGE	2.49E+001	+- 9.03E+000	g
Decay heat	2.81E-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	8.94E-007
U233	<LLD	<LLD	0.00E+000	7.67E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	2.40E-006
NP237	1.04E-001	7.36E-005	1.46E-005	1.85E-006
PU238	3.88E-003	6.63E-002	2.60E-002	1.32E-003
U238	<LLD	<LLD	0.00E+000	2.51E-005
PU239	2.47E+001	1.53E+000	5.60E-001	3.04E-002
PU240	1.69E+000	3.84E-001	1.50E-001	7.62E-003
AM241	1.92E+000	6.60E+000	4.57E+000	1.51E-001
PU241	3.50E-002	3.60E+000	1.41E+000	7.16E-002
PU242	9.30E-002	3.67E-004	1.44E-004	0.00E+000
AM243	1.75E-003	3.49E-004	6.97E-005	1.12E-005

Errors quoted at 1.000 sigma

Operator: _____ Date: 11/21/13

ITR: Ari Dalton Date: 11/25/13

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **68635**

BDR Number: **LA13FG2121**

Sampling Date: **11/27/2013**

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\131127C\
Data File : 68635.D
Acq On : 27 Nov 2013 10:40 am (#1); 27-Nov-13, 10:39:40 (#2)
Operator : RJ
Sample :
Misc : 55 Gallon drum through filter (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Nov 27 10:47:55 2013
Quant Method : C:\msdchem\1\METHODS\VOCGAS.M
Quant Title : Flammable Gas Analysis
QLast Update : Mon Aug 26 13:12:56 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
3) Fluorobenzene	3.548	96	4077845	205.75 ppmv	0.03
15) Chlorobenzene-d5	5.855	117	3187904	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-RTR2-13-0131
Examination Date:	11/21/2013
Waste Container ID:	68636
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.: 154.0 kg Tare Wt.: 33.4 kg Net Wt.: 120.6 kg
Rigid Liner and Liner Vent Description:	Liner: [X] No [ ] Yes Lid: [X] No [ ] Yes Type: [ ] 30-mil [ ] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [ ] Yes [X] N/A Punctured: [X] No [ ] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [ ] No [X] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 2 layers
Volume Utilization Percentage:	80 %

CCP Radiography Data Sheet

Waste Container ID: 68636

Section 3: Container Inventory and Comments (Detailed descriptions)

IM: Scrap metal

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):	1.0
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	12.0
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	8.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	99.6
Soils (S):	
Total WMP Weight:	120.6

CCP Radiography Data Sheet

Waste Container ID: 68636

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:	68636	Count Sequence Number:	23926
Operator:	D3PW2DK1\operator		
Assay Start:	12/4/2013 11:16:40 AM		
Description 1:	1LANDA1872		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 121.0 kg	Net:	121.0 kg
Container:	Volume: 208.0 l	Full:	80.0 %
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

Automated Independent Technical Review

Count Sequence Number: 23926 Batch Number: 1LANDA1872
Counter ID: MCS HENC #1
Container ID: 68636
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 12/4/2013

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-52,53,42
Section 5 - Gamma Analysis Analysis Status: No errors. Spectrum Validity Check engine has suggested data review.	Ok After EA review, spectrum valid.
Miscellaneous	No additional nuclides contributing to 95% of the radiological hazard identified.

Expert Review by: Sheri Clearwater Date: 12-5-13

008

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number:	23926	Batch Number:	1LANDA1872
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:	68636	Analysis Date:	12/4/2013

Net Weight	121000.0 g		
Pu mass	2.27E+001	+-	1.03E+001 g
TRU Alpha Activity	7.56E+000	+-	4.10E+000 Ci
TRU Activity Concentration	6.25E+004	+-	3.39E+004 nCi/g
Pu-239 Equivalent Activity	7.61E+000	+-	4.10E+000 Ci
Pu-239 FGE	2.12E+001	+-	1.03E+001 g
Decay heat	2.48E-001	+-	1.36E-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	9.32E-007
U233	<LLD	<LLD	0.00E+000	7.75E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	3.06E-006
NP237	1.09E-001	7.70E-005	1.47E-005	3.61E-006
PU238	3.31E-003	5.67E-002	2.88E-002	1.64E-003
U238	<LLD	<LLD	0.00E+000	3.71E-005
PU239	2.11E+001	1.31E+000	6.38E-001	3.79E-002
PU240	1.44E+000	3.28E-001	1.66E-001	9.51E-003
AM241	1.71E+000	5.87E+000	4.05E+000	1.64E-001
PU241	2.98E-002	3.07E+000	1.56E+000	8.90E-002
PU242	7.95E-002	3.14E-004	1.59E-004	0.00E+000
AM243	1.77E-003	3.54E-004	6.81E-005	1.08E-005

Errors quoted at 1.000 sigma

Operator: Jim Barton Date: 12/10/13

ITR: [signature] Date: 12/10/13

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **68636**

BDR Number: **LA13FG2124**

Sampling Date: **12/6/2013**

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\131206C\
Data File : 68636.D
Acq On : 6 Dec 2013 1:53 pm (#1); 06-Dec-13, 13:53:08 (#2)
Operator : SA
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Dec 06 14:02:38 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	3.581	96	3828706	205.75	ppmv	0.06
15) Chlorobenzene-d5	5.881	117	3050634	177.50	ppmv	0.02

Target Compounds	Qvalue

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

S833037

S833037

Container 768391

File Options Reports Help

S833037

768391	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

S833037

- S833037
  - LA00000068469
  - LA00000068458
  - LA00000068400
  - LA00000068421 – EMPTY

Working Copy
Date: 9-25-13

ATTACHMENT 1
Page 1 of 4

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: S833037

6.2[4] Date Processed: 9-25-13

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: NONE

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

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

4.3[4][B] Platform Scale: Equipment No.: 019065
Cal. Due Date: 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 / Bi Holloway / 2601729 9-25-13
Waste Handling Tech (print) Signature Z # Date

ATTACHMENT 1
Page 2 of 4

4.1[6][B] Parent Waste Container No.: 5833637

5.[18] Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable: 382.8 lb

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

6.2[5][B]/ 6.2[6] Total Parent Drum Weight (lb) 462.8 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.: 5833037

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	68469.	68458		
10.1[4]	Daughter Drum Filter No.	LM-295	LM-256	N	
10.1[4]	Daughter Drum Bag Filter No.	L-10345	L-6727		
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	130P			
	Model No.	UCPVC1.5-25PVC			
	Serial No.	L-67068	EM 9-25-13		
	Date of Manufacture	1/13			
10.2[5]	POC ID No	~~68398~~ 68400 EM 9-25-13	~~68370~~ 68398 EM 9-25-13		
10.2[7][B]/10.2[6]	POC Item Description	NITRATE SALTS	~~Nitrate~~ Nitrate EM ~~Salts~~ 9-25-13		
10.2[13]	POC Assembly closed per Manufacturer's instructions. (Initial and Z#)	EM 239911		N	
10.2[14]	POC Assembly Gross Weight (lb)	390.2		A	
10.2[15]	POC Rad. Survey Results (mrem/hr)	1095.5			
10.3[3][A]	Approx. Containerized Liquid Vol./Units	N A			
10.3[5][A]	Free Liquid Volume/Units	2 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		
10.3[13]/10.4[10]/ 10.5[4]/10.6[10]	Daughter Drum % Full (%)	100%	15%	N	
10.5[3]/10.6[2]	Description Waste Added During Processing	KITTY LITTER	Kitty Litter	A	

ATTACHMENT 1
Page 4 of 4

4.1[6][B] Parent Waste Container No.: 5833037

Comments: ROOM TRASH, PLASTICS, NITRATE SALTS, KITTY LITTER, LEAD SHIELDING, HEX ARMOUR GLOVES

11.1[1] Performed By: Edward Martinez / [signature] / 239911 / 9-25-13
Waste Handling Tech (print) Signature Z # Date

11.1[8] Reviewed By: Clayton Mullins / [signature] 240092 / 9/25/13 2339
SOS or designee (print) Signature Z # Date/Time

ATTACHMENT 2
Page 1 of 1

Working Copy
Date: 9-17-13

WCRRF OVERPACK DRUM ASSEMBLY PREPARATION DATA SHEET

5.[3] Overpack drum information:

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

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

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

Overpack filtered vent information:

Manufacturer: Nucfil
Model No.: 013
Serial No.: J2-917
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: Frederico Arabelate / [signature] 1235026 / 9-17-13
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: Frederico Arabelate / [signature] 1235026 / 9-17-13
Waste Handling Technician (print) Signature Z# Date

8.1[6] Reviewed By: Clayton Mullins / [signature] 1240092 / 9/25/13
Supervisor or designee (print) Signature Z# Date

ATTACHMENT 5
Page 1 of 1

Date: 9-25-13

WCRRF OVERPACK DRUM CLOSURE DATA SHEET

7.[17] Overpack Drum Unique Identifier No.: 68421

7.[23] Overpack drum closure ring torque wrench information:
M&TE No.: 038370
Cal. Expiration Date: 8-02-14
Range in ft-lb: 10-80
Tolerance: ±3% cw ±6% ccw

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

Performed By: Brian Gallegos / [signature] / 1261129 9-25-13
Waste Handling Technician (print) Signature Z # Date

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

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

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

7.[34][D] 85-gal overpack drum gross weight (lb): 172.6 lb

Comments: N/C

8.1[1] Performed By: Edward Martinez / [signature] / 1234911 9-25-13
Waste Handling Technician (print) Signature Z # Date

8.1[7] Reviewed By: Clayton Mullins / [signature] / 1240092 9/25/13
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 1
Page 1 of 2

9/23/13 HS

WCRRF DRUM PREPARATION DATA SHEET

5.[34][E] Drum ID No.: 68458

5.[3] Drum information:
Purchase Order No.: 501578
Lot No.: 02407 99
Manufacture Date: 13

5.[17] Drum Liner Bag/Filter Assembly:
Manufacturer: BOB
Model No.: 6CPVC 1.5-2SPVC
Serial No.: L-6727
Manufacture Date: 01/13

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

	Filtered Vent	2 in. Bung
M&TE No.:	100216	038349
Cal. Expiration Date:	12/18/14	12/18/14
Range in ft-lb:	40-200	10-80
Tolerance:	+/- 4% CW +/- 6% CCW	+/- 3% CW +/- 6% CCW

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

Performed By: IAN MARWICK / [signature] Z7[illegible] 9-23-13
Operator (print) Signature Z # Date

5.[23] Filtered vent information:
Manufacturer: MICFIL
Model No.: 0190S
Serial No.: CM-256
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: CV 906S

ATTACHMENT 1
Page 2 of 2

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

5.[32] Drum tare weight (lbs): 79 lbs

5.[34][E] Drum ID No.: 684858

Comments: N/C

5.[35] Performed By: IAN MARQUEZ / [signature] / 276209 9-23-13
Operator (print) Signature Z # Date

7.1[4] Reviewed By: Clayton Mullins / [signature] / 240096 9/25/13
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 2
Page 1 of 2

Working Copy
Date: 9-25-13

WCRRF DRUM CLOSURE DATA SHEET

6.[3] Drum ID No.: 68458

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

M&TE No.: 038370
Cal. Expiration Date: 08/02/2014
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] 1235911, 9-25-13
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	
Range in ft-lb:		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: Edward Martinez, [signature] 1235911, 9-25-13
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.: 108458

6.[26] Scale File ID number: 019065

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

6.[28] Drum gross weight: 103.4 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, [signature] 123911 9-25-13
Operator (print) Signature Z # Date

7.1[4] Reviewed By: Clayton Mullins, [signature] 241092 9/25/13
Supervisor or designee (print) Signature Z # Date

9-3-13

ATTACHMENT 1
Page 1 of 2

WCRRF DRUM PREPARATION DATA SHEET

5.[34][E] Drum ID No.: 68469

5.[3] Drum information:
Purchase Order No.: 501578
Lot No.: 0240999
Manufacture Date: 13

5.[17] Drum Liner Bag/Filter Assembly:
Manufacturer: BOP
Model No.: 6CPUC 1.5-2 SPUC
Serial No.: L-10345
Manufacture Date: 6/13

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

5.[23] Filtered vent information:
Manufacturer: NUCFil
Model No.: 019DS
Serial No.: LM-295
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.: 68469

Comments: N/C

5.[35] Performed By: Brandon Chavez / [signature] 204712 / 9-24-13
Operator (print) Signature Z # Date

7.1[4] Reviewed By: Clayton Mullins / [signature] 240094 9/25/13
Supervisor or designee (print) Signature Z # Date

9-25-13

ATTACHMENT 2
Page 1 of 2

WCRRF DRUM CLOSURE DATA SHEET

6.[3] Drum ID No.: 68469

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

M&TE No.: 08370
Cal. Expiration Date: 8-02-14
Range in ft-lb: 0-80
Tolerance: ±3/cw ±6/ccw

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

Performed By: Brian Gallegos / [signature] / 1267129 / 9-25-13
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:		
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: Edward Martinez / [signature] / 1234111 / 9-25-13
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.: 68469

6.[26] Scale File ID number: 019065

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

6.[28] Drum gross weight: 406.0 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: Edward Montoya, [signature] 239911 9-25-13
Operator (print) Signature Z # Date

7.1[4] Reviewed By: Clayton Mullins, [signature] 240096 9/25/13
Supervisor or designee (print) Signature Z # Date

RZ
NR
6.1082

WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Production Control

Container ID: S833037 ✓ Container Type: 55-GAL ✓ Gross Weight (lbs): 390 ✓
Inner Seal #: 013022 ✓ Filter Prefix: LAVC ✓ Filter Serial #: 06656 ✓
AK Waste Stream: LA-MHD01.001 Certified RTR BDR: No BDR —
TWSR Comments: LEACHED SOLIDS MST 12 PACKED BY EVAP ✓
Total PE-Ci Activity: 8.06E+00 ✓ Equivalent Combustible PE-Ci: 3.02E+00 ✓ AM-241 PE-Ci: 9.28E-01
Total Fissile Gram Equivalents: 76.9 ✓ Total Surface Dose Rate (mrem/hr): 1 ✓
EPA Code(s): None ✓
NCR RTR/NDA Comment: None
RTR Pre-Screen Date: 6/25/2007 Comment: Liquids, Impenetrable Obj, Liquid Location: 27
Certified RTR Comment: None
Prohibited Items: ■ Sealed > 4 Liters ☑ Liquid ■ Pressurized Container ☑ Impenetrable Item ■ Other
Security Determination: ☑ Green ☐ Yellow
Remediation Determination: ~~Repack~~ ☑ PID ☐ Split ☑ Repack
Estimated 30-cm Dose Rate (mrem/hr): ☐ <100 ☐ >100 and <1,000 ☑ >1,000 and <10,000 ☐ >10,000
TRUCON Code: LA125M Production Control Comments: Ensure EPA Codes D007, D008, and D009 are on the label. A minimum of 1:2 volumes of kitty litter/zeolite must be mixed with 1 volume of nitrate salts.

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

WDP Engineering

SUSAN S RAMSEY (Signature) 100681 11/28/12

Chemicals Present (e.g., pyrophorics, acids, bases, shock sensitive, organic liquids, peroxides, crown ethers): ☐ Yes ☑ No ☐ Unknown
Processing Determination: ☑ Accept ☐ Reject
WDP Engineering Comments: Leached solids nitrate salts
Net Wt: 3301b. Thirteen items with weights ranging from 21b to 351b.

Drums w/ nitrate salts may contain undocumented liquids

May require RWP for > 1000 and < 10000 mrem/hr @ 30 cm
Drum may have lead lum

Performed By: Valerie Rhodes (WDP Engineering (Print)) Valerie Rhodes (Signature) 112609 (Z Number) 12/15/11 (Date)

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: Joe Perez (TRU Remediation Operations (Print)) Joe Perez (Signature) 221452 (Z Number) 1-8-13 (Date)

ROBIN Shult RS 272995 1-14-13
145 Review [illegible] CSP, No IH concerns 12/4/12

Noncertified TRU Waste Drum Item Information

DrumID: 013022

Item No	ItemID	Process Status	Net Wt (kg)	Matrix	Meas Code	SNM (g)	MT	Auth (Pg/Ln)	Comments
1	IXFS-745-FD		3.860	NITRATE SALTS		1.13	54	6/11	G468
2	IXFS-748FA		6.360	NITRATE SALTS		6.7	52	6/11	G468
3	IXFS 751FA		3.860	NITRATE SALTS		11.34	53	6/11	G468
4	IXFS-749F1		1.000	NITRATE SALTS		5.64	52	6/11	G468
5	IXFS-750-FA		9.230	NITRATE SALTS		21.67	52	6/11	G468
6	IXFS-753-FA		13.410	NITRATE SALTS		1.02	52	6/11	G468
7	IXFS754FA		1.820	NITRATE SALTS		12.	54	6/11	G468
8	IXFS-763-FD		14.090	NITRATE SALTS		3.48	54	6/11	G468
9	IXFS-765-FA		6.840	NITRATE SALTS		4.4	53	6/11	G468
10	IXFS-766-F1		15.910	NITRATE SALTS		11.69	52	6/11	G468
11	IXFS-757FA		12.050	NITRATE SALTS		3.19	52	6/11	G468
12	IXFS-759FA		7.730	NITRATE SALTS	N01	0.	52	6/11	G468
13	IXFS-760FDFA		2.950	NITRATE SALTS		0.78	54	6/11	G468

Noncertified Waste Drum Material Summary

Gross Wt (kg): 176.8

Material Type	SNM (grams)	Items Net Wt (kg)
52	49.91	65.69
53	15.74	10.70
54	17.39	22.72
Totals	83.04	99.11

ATTACHMENT 1
Page 1 of 1

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

5.[1] Sample Date: 3/29/12

Container No. (5.[1])	21 5872449	21 5793718	5832140	5833037	5832330	5842234
Filtered Vent Type (5.[1])	72	72	72	72	72	72
WIPP-Approved Filtered Vent (5.[2])	☑ SAT ☐ UNSAT	☑ SAT ☐ UNSAT	☑ SAT ☐ UNSAT	☑ SAT ☐ UNSAT	☑ SAT ☐ UNSAT	☑ SAT ☐ UNSAT
Total CCP VOC value (< 7,000 ppm) (5.[4])	Ø ppm	Ø ppm	Ø ppm	Ø ppm	Ø ppm	Ø ppm
Hydrogen Reading (< 64,000 ppm) (5.[5])	Ø ppm	Ø ppm	Ø ppm	Ø ppm	Ø ppm	282.85 ppm
Methane Reading (< 16,000 ppm) (5.[5])	Ø ppm	Ø ppm	Ø ppm	Ø ppm	Ø ppm	Ø ppm

5.[7] Certified CCP Technician:

Performed By: Erik Loechell (CCP (Print)), 234183 (Z #)

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

Comments: N/C

6.1[2][A] (S) WCRRF waste container satisfies the following criteria: ☑ SAT ☐ UNSAT

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

6.1[2][B]/ 6.1.3] Performed By: Alicia Herrera (Waste Handling Operator (print)) [signature] 188450 (Z #), 4/2/12 (Date)

InstName : Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\120329c\
Data File : S833037.D
Acq On : 29 Mar 2012 3:20 pm (#1); 29-Mar-12, 15:19:23 (#2)
Operator : SA
Sample :
Misc : 55 GALLON LFL DRUM THROUGH FILTER, 72 FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 29 15:27:50 2012
Quant Method : C:\msdchem\1\METHODS\vocgas.m
Quant Title : Flammable Gas Analysis
QLast Update : Tue Mar 06 12:05:15 2012
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
3) Fluorobenzene	3.619	96	3678012	209.00 ppmv	0.00
15) Chlorobenzene-d5	5.929	117	2504640	185.50 ppmv	-0.01

Target Compounds	Qvalue

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

vocgas.m Thu Mar 29 15:28:06 2012

9.25.13 WCRF SOS COG Book

0600 Assuming SOS Position [illegible]

0615 Conducted Shift Brief discussed the Importance of Attending Safety meetings and shift Briefs Also the status of drum on WCG. Also Need to Attend All hand Meeting

0645 Pre Job Concluded.

0704 Mode Change due to All hand meeting WCRF In warm

0715 Attending All hands meeting.

0870 All Hands Meeting Complete.

0853 Mode Change Complete WCRF In operations.

0910 Operators Continuing to Process 5881570

1037 started shipment out of 50-69- to Area G.

1128 Shipment to G Complete.

1351 moving into 50-69 From Transportainers.

1407 Completed movement Into 50-69

1428 started Rounds.

1426 Late entry Bagging off 1 daughter Bagging on Another @ 1120 AM

1429 Late entry Bag on/off complete @ 1143 AM.

1518 Bagging off /on 5833037

1600 Bag on /off complete

1617 Reviewed Inside And outside Rounds

1806 Relieved by Clayton Mullins [illegible]

HS

No Further entries on this Page

9/25/13 WCRR SOS Log Book

1807 Assuming SOS position. CA

1818 Starting Pre-Job discussed correct steps taken for nose bleeds, using all tools and equipment correctly, and creating an operator aid for the alarm box of the fume hood.

1840 Pre-Job complete.

1925 Starting move out of 50-69.

2008 Move out complete.

2038 Bagging off 1 daughter and 1 POC (maybe 2 POC's), bagging on 5823004.

2138 Bag off/on complete, drum resulted in 2 daughters and 1 POC.

2348 Bagging off 1 daughter, bagging on a 2nd daughter.

2356 Bag off/on complete.

0137 Starting movement ~~out of 50-69.~~ cm 9-26-13 into 50-69.

0145 Movement in complete.

0455 Starting movement out of 50-69.

0505 Movement out complete.

0525 Signed of on the rounds.

0610 Relieved by Gilbert Martinez. 9/26/13 CA

No Further Entries on This Page

9-25-13 DAYSHIFT

0610 Reviewed the shift turnover checklist and assumed the WCRR SOM Position John Guadagnoli

0645 Completed attending the pre-job brief conducted by the SOS (Gilbert) Current Status, the drum is bagged on and secured with the lid. The safety topic was - how to respond to BLOODY NOSE, There is one transfer scheduled out, to be conducted this afternoon. One operator who used the transportainer key yesterday - will search for the key today, There is a scheduled tour of the WCG glovebox by CMR personnel, Scheduled arrival is noted for 0900 - Also the WGST monthly Safety meeting is scheduled today starting at 0730.

0704 Mode Change: 50/69 and yard transition from Operations/Operations to WARM/WARM

0853 Mode Change 50/69 and yard transition from WARM/WARM to Operations/Operations

0937 Completed providing an overview of WCRRF and glovebox WCG activities. RP-1 provided a brief to 5 CMR personnel. 4 personnel will enter 50-69.

1029 CMR personnel exited the 50/69 Facility. All questions were answered the personnel focused on glovebox safety and sharps.

1037 Operations initiate the transfer to AREA-G with PPT support and RP-1 support. They will load the Transfer vehicle and wait till after lunch to move the truck to G.

1120 Inside Operators initiate bag offs and Bagon of daughters and continue to process.

1130 Outside operations completed the movement to the Transfer Vehicle and the Vehicle Barrier Gates were restored

1145 Completed review and sign off for approval of 50-10-01 R28 for Torque Wrench Specs. to be posted in 50-69-102 and RRCTIC, and prior ~~postings~~ JOB AID will be removed. Also vehicle Barrier Gate 50-10-05 R2 Operator AID was reposted. The prior posted AID was weather beat.

1214 Completed the noon call in, statusing the WCRRF with OM, SOM, and PM.

1235 Inside Operators break for lunch and report that Parent drum 5881570 - contained ~10 gallons of liquid, Upon pulling lid off, the filter venting the drum adhered to the Poly liner and the inner liner came out with the inner lead lid and drum lid releasing all of the liquid. Quick action by the Operators dumped the glovebox - not to allow liquid to get high as the small window. and not go into the daughter drum. ph was noted as 2. Neutralizer was added and it came up to ~4, then operators absorbed. The CMR team observed the liquid in the box - The contents were 1.3 R. dose.

1351 Operators initiated movement into the facility 3 drums total, 5833037, 5825021, and 5823004.

(Continued on next page)

9/25/13 Night Shift

1814 Reviewed shift turnover checklist, approved and posted Night Shift Operations watch bill and assumed WCRR SOM position.

1815 Attended pre job brief conducted by SOS. Discussed current conditions of 50-69 and there is some discrepency between Operations and RP-1 turnover, SOS will evaluate. IH commented on good catch of operator identifying from MSDS review that new neutralizer will not be compatible w/ bases. Talked about rotating personnel working on WCG - not only for dose reduction but for preventing physical exhaustion as well.

2008 Completed drum movement of 6 drums from 50-69 to transportainers

2138 Completed bagging off parent # 5833037 w/ 2 daughters and 1 POC total. Bagged on 5823004.

2354 Completed bag off of 1 daughter - continuing to process.

9/26/13 0003 Operators breaking for lunch.

0125 Resuming operations.

0145 Completed move in of 3 drums into 50-69 for processing.

0505 Completed move out of 4 drums from 50-69 to transportainers.

9/26/13 0612 Relieved by J. Guadagnoli as SOM.

No further entries this page
RLG

Available Copy

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9-25-13

0606 Assuming WCRRF OCC position. Cleared
0620 Pre job being conducted by SOS.
0645 Pre job being concluded by SOS.
0704 mode change performed TA50-69 and WCRRF yard now in warm standby.
0715 attending mandatory safety meeting at physics
0880 Safety meeting concluded.
0853 mode change performed TA50-69 and WCRRF yard now in operations
0855 Procedure during work is released.
0910 Operators continuing to process 3881570
1037 Permission granted to lower vehicle access gates for shipment to Area 4.
1120 Bagging off 1 daughter, bagging on another daughter continuing to process.
1128 Vehicle access gates have been restored. Shipment out of WCRRF is complete.
1351 Starting movement into 50-69.
1407 Completed movement into 50-69
1428 Starting inside rounds
1430 Late entry 1143 bag on, bag off is complete. ok
1448 Item #13 & CCS, FCD in place okay to proceed per OSE documentation.
1451 Inside rounds complete
1518 Bagging off 1 daughter and FCC, Bagging on 3833037.
1523 Starting outside rounds.
1547 Item #19 is unsat, FSK in place, ok to proceed.
1600 Bag on, bag off complete. Outside rounds complete.
1617 Inside and outside rounds signed off by SOS.
1805 9-25-13 Returned by OCC Terri Allman Cleared

HG

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9-25-13
1805 Assuming WCRR operations center. (Coleman)
1820 Pre-job being conducted by SOS.
1838 Pre-job concluded.
1839 Procedure driven work is released.
1906 Operators entering 50-69 to resume operations.
1925 Initiating a drum movement from 50-69 to a transportainer.
2008 Drum movement out of 50-69 complete.
2038 Bagging off 1 daughter (JC 9-25-13) and 1 POC, bagging on S823004.
2138 Bag off/on complete.
2348 Bagging off 1 daughter, bagging on another daughter.
2356 Bag off/on complete.
9-26-13 0003 Operators exiting 50-69 for lunch.
0104 Beginning outside rounds.
0121 Item #19 is unsat, okay to proceed, FSR in place.
0131 Outside rounds complete.
0137 Initiating a drum movement from ~~50-69~~ JC 9-26-13 transportainer to 50-69.
0145 Drum movement into 50-69 is complete.
0146 Late entry - at 0125, operators back from lunch (JC)
0344 Beginning inside rounds.
0407 Item #63 on the rounds is OOS, okay to proceed per CSE documentation
0408 Inside rounds complete.
0455 Initiating a drum movement from 50-69 to a transportainer.
0505 Drum movement of JC 9-26-13 out of 50-69 complete.
0535 Both rounds reviewed by SOS.
9-26-13 0605 Relieved by OCO, Clarissa Velarde, J Coleman

No further entries this page.

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0116
Examination Date:	10/4/2013
Waste Container ID:	68400
Video/Audio Recorded Media Number:	LA-RTR2-13-0116 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 14
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3110
Waste Stream I.D.:	LA-MIN02-V.001
Waste Container Weights:	Gross Wt.: 177.0 kg Tare Wt.: 145.1 kg Net Wt.: 31.9 kg
Rigid Liner and Liner Vent Description:	Liner: [ ] No [X] Yes Lid: [ ] No [X] Yes Type: [ ] 30-mil [X] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [X] Yes [ ] N/A Punctured: [ ] No [X] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [X] No [ ] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 1 layer
Volume Utilization Percentage:	90 %

CCP Radiography Data Sheet

Waste Container ID: 68400

Section 3: Container Inventory and Comments (Detailed descriptions)

IM:

AM:

OM:

OI:

C:

R:

XPM: Plastic bags

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

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

CCP Radiography Data Sheet

Waste Container ID: 68400

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

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

RTR Operator:

Eric Lyles		10/4/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	68400	Count Sequence Number:	16601
Operator:	DCLTD231\Operator		
Assay Start:	10/4/2013 11:29:07 AM		
Description 1:	2LANDA1231		
Description 2:	POC, 177.0		
Location:	LANL TA-54		
Comment:	AK-6, Not Precision		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gal Drum		
Weight:	Net: 31.9 kg	Net:	31.9 kg
Container:	Volume: 208.0 l	Full:	95.0 %
Density:	0.756 kg /l		

System Configuration

Counter:	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:	16601	Batch Number:	2LANDA1231
Assay Instrument:	HENC #2	Location:	LANL TA-54
Analysis Method:	CCP-TP-063 v 15	Software Version:	NDA 2000 V.4.0
Item ID:	68400	Analysis Date:	10/4/2013

Net Weight	31900.0 g		
Pu mass	4.46E+000	+-	9.52E-001 g
TRU Alpha Activity	3.26E+000	+-	1.59E+000 Ci
TRU Activity Concentration	1.02E+005	+-	4.98E+004 nCi/g
Pu-239 Equivalent Activity	3.28E+000	+-	1.59E+000 Ci
Pu-239 FGE	5.33E+000	+-	1.00E+000 g
Decay heat	1.08E-001	+-	5.28E-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	4.83E-007
U233	<LLD	<LLD	0.00E+000	4.74E-003
U234	2.57E-002	1.60E-004	4.45E-005	0.00E+000
U235	1.83E+000	3.96E-006	1.10E-006	2.59E-006
NP237	3.97E-002	2.80E-005	5.43E-006	1.25E-006
PU238	9.92E-004	1.70E-002	4.58E-003	1.33E-003
U238	<LLD	<LLD	0.00E+000	2.24E-005
PU239	4.11E+000	2.55E-001	5.87E-002	2.00E-002
PU240	3.40E-001	7.72E-002	2.09E-002	6.06E-003
AM241	8.48E-001	2.91E+000	1.59E+000	3.70E-002
PU241	9.24E-003	9.52E-001	2.58E-001	7.47E-002
PU242	3.20E-003	1.26E-005	3.42E-006	0.00E+000
AM243	2.51E-004	5.02E-005	9.92E-006	6.54E-006

Errors quoted at 1.000 sigma

Operator: _____ Date: 10/8/13

ITR: _____ Date: 10-8-13

Automated Independent Technical Review

Count Sequence Number: 16601 Batch Number: 2LANDA1231
Counter ID: HENC #2
Container ID: 68400
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 10/4/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis Add-a-Source WARNINGS: Add-a-Source correction factor is less than one.	OK
Section 2 - Passive Neutron Analysis Analysis Status: No errors. No Warnings Reported.	OK
Section 3 - Data Combiner Analysis Override enabled; Gamma data specified as input. Results taken from Quantitative Gamma data. Results comparison test passed.	Results taken from quantitative gamma data.
Section 4 - MGA Analysis Results are marked as invalid.	Isotopic analysis failed. AK isotopics applied. The AK information utilized was provided by Steve Schafer, AKE, and consists of data from CCP-AK-LANL-006, AK Source Document M237. MT-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: RLBaumann Date: 10-8-13

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **68400**

BDR Number: **LA13FG2115**

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

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	1262.77	
74-82-8	Methane	142.14	U
67-56-1	Methanol	35.23	U
60-29-7	Ethyl Ether	0.96	U
75-35-4	1,1-Dichloroethylene	6.38	U
67-64-1	Acetone	18.08	U
75-34-3	1,1-Dichloroethane	4.08	U
156-59-2	cis-1,2-Dichloroethene	0.76	U
78-93-3	Methyl ethyl ketone	11.73	U
110-82-7	Cyclohexane	5.10	U
71-43-2	Benzene	1.77	U
107-06-2	1,2-Dichloroethane	3.66	U
71-36-3	1-Butanol	1.84	U
108-10-1	Methyl isobutyl ketone	9.82	U
108-88-3	Toluene	8.02	U
108-90-7	Chlorobenzene	4.10	U
100-41-4	Ethylbenzene	3.57	U
108-38-3/106-42-3	m- and p-Xylene	1.92	U
95-47-6	o-Xylene	2.10	U
108-67-8	1,3,5-Trimethylbenzene	1.96	U
95-63-6	1,2,4-Trimethylbenzene	2.13	U

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

InstName : Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\131113c\
Data File : 68400.D
Acq On : 13 Nov 2013 1:46 pm (#1); 13-Nov-13, 13:46:12 (#2)
Operator : NW
Sample :
Misc : POC THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Nov 13 13:54:47 2013
Quant Method : C:\msdchem\1\METHODS\VOCGAS.M
Quant Title : Flammable Gas Analysis
QLast Update : Mon Aug 26 13:12:56 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
3) Fluorobenzene	3.522	96	4444810	205.75 ppmv	0.00
15) Chlorobenzene-d5	5.842	117	3410734	177.50 ppmv	-0.02
Target Compounds					Qvalue
1) Hydrogen	1.601	GC1	9495m	1262.77 ppmv	

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

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0116
Examination Date:	10/4/2013
Waste Container ID:	68458
Video/Audio Recorded Media Number:	LA-RTR2-13-0116 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.: 47.0 kg Tare Wt.: 33.4 kg Net Wt.: 13.6 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:	30 %

CCP Radiography Data Sheet

Waste Container ID: 68458

Section 3: Container Inventory and Comments (Detailed descriptions)

IM:

AM:

OM: Scrap lead

OI:

C: Tape roll

R:

XPM: Plastic bags

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP): Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	5.0
Other Inorganic Materials (OI)	
Cellulosics (C):	0.1
Rubber (R):	
Plastics (waste materials) (XPM):	2.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	6.5
Soils (S):	
Total WMP Weight:	13.6

CCP Radiography Data Sheet

Waste Container ID: 68458

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

Comments: N/A

RTR Operator:

Eric Lyles		10/4/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	68458	Count Sequence Number:	23712
Operator:	D3PW2DK1\operator		
Assay Start:	10/24/2013 3:04:27 PM		
Description 1:	1LANDA1852		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 13.6 kg	Net:	13.6 kg
Container:	Volume: 208.0 l	Full:	30.0 %
Density:	0.220 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:	23712	Batch Number:	1LANDA1852
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:	68458	Analysis Date:	10/24/2013

Net. Weight	13600.0 g			
Pu mass	2.03E+000	+-	2.87E-001	g
TRU Alpha Activity	3.02E+000	+-	1.49E+000	Ci
TRU Activity Concentration	2.22E+005	+-	1.10E+005	nCi/g
Pu-239 Equivalent Activity	3.03E+000	+-	1.49E+000	Ci
Pu-239 FGE	1.90E+000	+-	2.85E-001	g
Decay heat	1.00E-001	+-	4.95E-002	W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	3.73E-007
U233	<LLD	<LLD	0.00E+000	2.33E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	5.99E-007
NP237	3.68E-002	2.59E-005	2.68E-006	1.15E-006
PU238	4.15E-004	7.09E-003	1.63E-003	7.00E-004
U238	<LLD	<LLD	0.00E+000	9.94E-006
PU239	1.87E+000	1.16E-001	1.77E-002	1.14E-002
PU240	1.54E-001	3.51E-002	7.46E-003	3.46E-003
AM241	8.34E-001	2.86E+000	1.49E+000	1.96E-002
PU241	5.67E-003	5.84E-001	1.21E-001	5.76E-002
PU242	1.45E-003	5.74E-006	1.19E-006	0.00E+000
AM243	2.04E-004	4.09E-005	4.41E-006	3.00E-006

Errors quoted at 1.000 sigma

Operator: _____ Date: 10·29·13

ITR: _____ Date: 10·29·13

Automated Independent Technical Review

Count Sequence Number: 23712 Batch Number: 1LANDA1852
Counter ID: MCS HENC #1
Container ID: 68458
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 10/24/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis	
Add-a-Source WARNINGS:	
Add-a-Source correction factor is less than one.	OK
Add-a-Source correction factor was set to one.	OK
Section 2 - Passive Neutron Analysis	
Analysis Status: No errors.	OK
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	Isotopic analysis failed. AK isotopics applied. The AK information utilized was provided by Steve Schafer, AKE, and consists of data from CCP-AK-LANL-006, AK Source Document M237. MT-52,53,54.
Results are marked as invalid.	
Section 5 - Gamma Analysis	
Analysis Status: No errors.	OK

Automated Independent Technical Review	
Miscellaneous	No additional nuclides contributing to 95% of the radiological hazard identified.

Expert Review by: _____ Date: 10/29/13

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **68458**

BDR Number: **LA13FG12108**

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

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	75.99	
74-82-8	Methane	9.63	U
67-56-1	Methanol	30.57	U
60-29-7	Ethyl Ether	1.77	U
75-35-4	1,1-Dichloroethylene	5.36	U
67-64-1	Acetone	11.55	U
75-34-3	1,1-Dichloroethane	2.29	U
156-59-2	cis-1,2-Dichloroethene	0.36	U
78-93-3	Methyl ethyl ketone	2.55	U
110-82-7	Cyclohexane	2.09	U
71-43-2	Benzene	0.47	U
107-06-2	1,2-Dichloroethane	0.92	U
71-36-3	1-Butanol	0.54	U
108-10-1	Methyl isobutyl ketone	3.11	U
108-88-3	Toluene	2.73	U
108-90-7	Chlorobenzene	0.87	U
100-41-4	Ethylbenzene	1.15	U
108-38-3/106-42-3	m- and p-Xylene	0.59	U
95-47-6	o-Xylene	0.63	U
108-67-8	1,3,5-Trimethylbenzene	0.72	U
95-63-6	1,2,4-Trimethylbenzene	0.78	U

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

Quantitation Report (QT Reviewed)

InstName : FGA Unit 12

Data Path : C:\msdchem\1\DATA\131025c\
Data File : 68458.D
Acq On : 25 Oct 2013 2:41 pm (#1); 25 Oct 2013 2:40 pm (#2)
Operator : SA
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Oct 25 14:49:57 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	7394836	207.75 ppmv	0.00
15) Chlorobenzene-d5	6.639	117	5531543	178.75 ppmv	0.00
Target Compounds					Qvalue
1) Hydrogen	1.907	GC1	21677m	75.99 ppmv	

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

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0116
Examination Date:	10/4/2013
Waste Container ID:	68469
Video/Audio Recorded Media Number:	LA-RTR2-13-0116 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.: 184.0 kg Tare Wt.: 33.4 kg Net Wt.: 150.6 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:	95 %

CCP Radiography Data Sheet

Waste Container ID: 68469

Section 3: Container Inventory and Comments (Detailed descriptions)

IM:

AM:

OM: Scrap lead

OI:

C: Leather gloves

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):	20.0
Other Inorganic Materials (OI)	
Cellulosics (C):	1.0
Rubber (R):	
Plastics (waste materials) (XPM):	5.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	124.6
Soils (S):	
Total WMP Weight:	150.6

CCP Radiography Data Sheet

Waste Container ID: 68469

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

RTR Operator:

Eric Lyles		10/4/2013
Print Name	Signature	Date

S833037

NDA 2000 Assay Report

Item Information

Item ID:	68469	Count Sequence Number:	16606
Operator:	DCLTD231\Operator		
Assay Start:	10/22/2013 2:45:14 PM		
Description 1:	2LANDA1232		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gal Drum		
Weight:	Net: 151.0 kg	Net:	151.0 kg
Container:	Volume: 208.0 l	Full:	95.0 %
Density:	0.760 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:	16606	Batch Number:	2LANDA1232
Assay Instrument:	HENC #2	Location:	LANL TA-54
Analysis Method:	CCP-TP-063 v 15	Software Version:	NDA 2000 V.4.0
Item ID:	68469	Analysis Date:	10/22/2013

Net Weight	151000.0 g		
Pu mass	7.09E+001	+- 1.61E+001	g
TRU Alpha Activity	1.92E+001	+- 3.45E+000	Ci
TRU Activity Concentration	1.27E+005	+- 2.29E+004	nCi/g
Pu-239 Equivalent Activity	1.94E+001	+- 3.45E+000	Ci
Pu-239 FGE	6.83E+001	+- 1.49E+001	g
Decay heat	6.26E-001	+- 1.14E-001	W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	1.65E-001	1.16E-004	2.25E-005	2.82E-006
PU238	1.36E-002	2.33E-001	5.30E-002	5.85E-005
PU239	6.53E+001	4.05E+000	9.22E-001	1.02E-003
PU240	5.40E+000	1.23E+000	2.79E-001	3.08E-004
AM241	3.98E+000	1.36E+001	3.31E+000	2.26E-001
PU241	1.43E-001	1.47E+001	3.35E+000	3.70E-003
PU242	4.97E-002	1.96E-004	4.47E-005	0.00E+000
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	1.07E-006
U233	<LLD	<LLD	0.00E+000	1.10E-002
U234	5.44E-002	3.39E-004	1.00E-004	0.00E+000
U235	3.88E+000	8.38E-006	2.48E-006	6.13E-006
U238	<LLD	<LLD	0.00E+000	3.23E-005
AM243	1.08E-003	2.16E-004	4.25E-005	1.72E-005

Errors quoted at 1.000 sigma

Operator: D R Date: 10-23-13

ITR: Martha Gr Date: 10-23-13

Automated Independent Technical Review

Count Sequence Number: 16606 Batch Number: 2LANDA1232
Counter ID: HENC #2
Container ID: 68469
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 10/22/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis No Add-a-Source warnings.	Ok
Section 2 - Passive Neutron Analysis Analysis Status: No errors. Ones Rate Analysis complete with warnings. - Error calculating the Ones Rate Pu-240 Effective MDA.	Ok Not data affecting.
Section 3 - Data Combiner Analysis Override enabled; Passive Neutron Pu and Gamma U data specified as input. Pu results taken from Passive Neutron data, U from Quantitative Gamma data. Results comparison test passed.	Passive Neutron Pu and Gamma U data specified as input.
Section 4 - MGA Analysis Results are marked as invalid.	MGA analysis failed. AK isotopics applied. The AK information utilized was provided by Steve Schafer, AKE, and consists of data from CCP-AK-LANL-006, AK Source Document M237. MT-52,54,53
Section 5 - Gamma Analysis Analysis Status: No errors.	Ok
Miscellaneous	No additional nuclides contributing to 95% of the radiological hazard identified.

Expert Review by: Sherri Chandler Date: 10-23-13

Waste Container ID: **68469**

BDR Number: **LA13FG2108**

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

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	413.34	
74-82-8	Methane	142.14	U
67-56-1	Methanol	35.23	U
60-29-7	Ethyl Ether	0.96	U
75-35-4	1,1-Dichloroethylene	6.38	U
67-64-1	Acetone	18.08	U
75-34-3	1,1-Dichloroethane	4.08	U
156-59-2	cis-1,2-Dichloroethene	0.76	U
78-93-3	Methyl ethyl ketone	11.73	U
110-82-7	Cyclohexane	5.10	U
71-43-2	Benzene	1.77	U
107-06-2	1,2-Dichloroethane	3.66	U
71-36-3	1-Butanol	1.84	U
108-10-1	Methyl isobutyl ketone	9.82	U
108-88-3	Toluene	8.02	U
108-90-7	Chlorobenzene	4.10	U
100-41-4	Ethylbenzene	3.57	U
108-38-3/106-42-3	m- and p-Xylene	1.92	U
95-47-6	o-Xylene	2.10	U
108-67-8	1,3,5-Trimethylbenzene	1.96	U
95-63-6	1,2,4-Trimethylbenzene	2.13	U

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

InstName : Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\131029c\
Data File : 68469.D
Acq On : 29 Oct 2013 3:06 pm (#1); 29-Oct-13, 15:05:52 (#2)
Operator : NW
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Oct 29 15:14:16 2013
Quant Method : C:\msdchem\1\METHODS\VOCGAS.M
Quant Title : Flammable Gas Analysis
QLast Update : Mon Aug 26 13:12:56 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
3) Fluorobenzene	3.555	96	4992618	205.75 ppmv	0.04
15) Chlorobenzene-d5	5.858	117	3895557	177.50 ppmv	0.00
Target Compounds					Qvalue
1) Hydrogen	1.621	GC1	3108	413.34 ppmv	100

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

S833261

S833261

Container 759971

File Options Reports Help

S833261

759971	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

S833261

- S833261
  - 90887 - EMPTY
  - 90886
    - 92673 - EMPTY
    - 92672
    - 92671
      - SB02054
  - 90885
    - 92683 - EMPTY
    - 92682
  - 90884
    - 92356 - EMPTY
    - 92355
  - 90883

2-8-10a

ATTACHMENT 1
Page 1 of 3

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: 58332661

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 ESPINOZA / [signature] 1877201 2-8-12
Waste Handling Tech (print) Signature Z # Date

5.[16] Prepared Parent Drum Weight (lb): 400.0 lb

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

ATTACHMENT 1
Page 2 of 3

4.1[6][B] Parent Waste Container No.: 5833261

6.2[5][B] Total Parent Drum Weight (lb) 480.0 lb
6.2[6]

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

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	90883		N	
10.1[4]	Daughter Drum Filter No.	CL1399			
10.1[4]	Daughter Drum Bag Filter No.	W01484		A	
10.1[4]	Daughter Drum Purchase Order No.	414992			
10.1[13][C]	WCG Fire Watch Stationed		☐ YES	☐ NO	☑ N/A
10.1[14][C][d]3/11.1[3]	WCG Fire Watch Secured		☐ YES	☐ NO	☑ N/A
10.2[4]	POC bag-on bag: Manufacturer	NUCFIL	NUCFIL	NUCFIL	NUCFIL
	Model No.	036DA	036DA	036DA	036DA
	Serial No.	LL-246	LL-206	LL-245	LL-247
	Date of Manufacture	12-11	12-11	12-11	12-11
10.2[5]	POC ID No	90884	90885	90886	
10.2[7][B]/10.2[6]	POC Item Description	SALTS PLASTIC	SALTS PLASTIC	SALTS PLASTIC	SALTS PLASTIC
10.2[7][D]/10.2[8][D]	Bag-out Bag Filter No.	LL-246	LL 206	LL 245	
10.2[13]	POC Assembly closed per Manufacturer's instructions. (Initial and Z#)	DP 240012	DP 240012	DP 240012	DP 240012
10.2[14]	POC Assembly Gross Weight (lb)	394.8	419.0	373.8	
10.2[15]	POC Rad. Survey Results (mrem/hr)	401	360.5	221	301
10.3[3][A]	Approx. Containerized Liquid Vol./Units	5 GAL			
10.3[7][A]	Opaque/Non-penetrable Item Description:	lead SHIELDING			
10.3[5][A]	Free Liquid Volume/Units	2 gal			
10.3[9][A]	PCB-contaminated Waste Description	N A		N	
10.3[9][B]	PCB Item ID No.			A	
10.3[10]	Remaining Waste Description	See Comments			
10.3[13]/10.4[12]/ 10.5[5]	Daughter Drum % Full (%)	65%			
10.5[4]	Description Waste Added During Processing	PLASTIC ABSORBANT			

1.8.12

ATTACHMENT 1
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4.1[6][B] Parent Waste Container No.: 58332601

Comments: LEAD, SALTS, PLASTIC.

11.1[1] Performed By: Gerald Espinoza | [signature] | 193709 | 2-8-12
Waste Handling Tech (print) Signature Z # Date

11.1[7] Reviewed By: Anthony Vig | [signature] | 184864 | 2-8-12 | 1345
SOS/SOM (print) Signature Z # Date/Time

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

85-Gallon Overpack ID Number 90887

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% cw
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: 600 ft-lb

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

Drum lid ring ends touching: ☐ YES ☑ NO

Technician Name (print)	Signature	Initials	Z#	Date
Gerald Espinoza	[signature]	GE	1237720	2-8-12
Eddie Rios	[signature]	[illegible]	1187822	2-8-12

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

Drum ID#: 90883

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

2. Drum Liner Bag/Filter Assembly:

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

RECORD bag filter information:

- Manufacturer: BOP
- Model #: 3CPVC 1.5-2 SPVC
- Serial #: WO 1484
- 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 #: 019 DS
- Serial #: CL-1329
- 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.

☑ Yes ☐ No

Print Name: Timmy Romero Signature: [signature] Z#: 234253

5. Weigh Drum Assembly

RECORD weight information

- Tare witght (lbs) 75.6
- File ID #: 019065

☑ Write the tare weight on drum using permanent marker

6. Label Drum Assembly

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

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

Operator Print:	Timmy Romero	Operator Sign:	[signature]	Z#: 234253	Date: 01-10-12
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#: 90883

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.): 177.8

Scale ID#: 019005

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

4. FINALIZE DOCUMENTATION

✓ Have RCT monitor drum prior to moving to storage area

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

✓ Complete TWSR.

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

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

SP13

ATTACHMENT 1

WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Production Control

Container ID: S833261 Container Type: 85-GAL Gross Weight (lbs): 413

Inner Seal #: 015690 Filter Prefix: LAVC Filter Serial #: 03233; 06576

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

TWSR Comments: LEACHED SOLIDS RM 434

Total PE-Ci Activity: 5.57E+00 Equivalent Combustible PE-Ci: 2.09E+00 AM-241 PE-Ci: 5.06E-01

Total Fissile Gram Equivalents: 58.6 Total Surface Dose Rate (mrem/hr): 2

EPA Code(s): None

NCR RTR/NDA Comment: None

RTR Pre-Screen Date: 1/16/2007 Comment: Impenetrable Obj.

Certified RTR Comment: None

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

Security Determination: ☑ Green ☐ Yellow

Remediation Determination: ☑ VE ☐ PID ☐ Split ☐ Repack

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

TRUCON Code: LA125M Production Control Comments:

Performed By: R. W. Jones (Production Control (Print)) / R. W. Jones (Signature) / 117434 (Z Number) / 10.6.10 (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 WASTE WT = 115.31 KG (254 LBS) IN 12 ITEMS. MAX ITEM WT = 17.83 KG (39 LBS). NO CERT RTR DATA. FAILED RTR PRE-SCREEN. MAY REQUIRE RWP FOR > 1000 MREM/HR. MULTIPLE ITEMS WITH ELEVATED SUM MASS. NOTE: NITRATE SALTS HAVE PREVIOUSLY HAD SIGNIFICANT UNDOCUMENTED LIQUIDS.

Performed By: ROBERT L GRIFFIS (WDP Engineering (Print)) / Robert L. Griffis (Signature) / 130356 (Z Number) / 11-17-10 (Date)

TRU Remediation Operations

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

Other Specific Safety Concerns:

Processing Determination: ☑ Accept ☐ Reject

TRU Remediation Operations Comments:

Performed By: C. Velarde (TRU Remediation Operations (Print)) / C Velarde (Signature) / 234079 (Z Number) / 10/8/10 (Date)

Noncertified TRU Waste Drum Item Information

DrumID: 015690

Item No	ItemID	Process Status	Net Wt (kg)	Matrix	Meas Code	SNM (g)	MT	Auth (Pg/Ln)	Comments
1	IXFS764-OX35		8.180	NITRATE SALTS		11.36	52	11/6	
2	IXFS772FA		8.180	NITRATE SALTS		2.53	54	11/6	
3	IXFS771FA		16.140	NITRATE SALTS		3.78	52	11/6	
4	IXFS767FA		8.820	NITRATE SALTS		8.34	53	11/6	
5	IXFS773-FA		9.550	NITRATE SALTS		8.41	53	11/6	
6	IXFS-774A		3.120	NITRATE SALTS		0.77	52	11/6	
7	IXFS775-OX36		16.450	NITRATE SALTS		2.71	52	11/6/	
8	IXFS776-F1-NE1		8.180	NITRATE SALTS		3.87	52	11/6	
9	IXFS-777-NW-1		7.950	NITRATE SALTS		4.93	52	11/6	
10	IXFS-778-NE-1		7.500	NITRATE SALTS			53	11/6	
11	IXFS-779-FA		17.830	NITRATE SALTS		13.65	52	11/6	
12	IXFS-783FA		3.410	NITRATE SALTS		8.64	52	11/6	

Noncertified Waste Drum Material Summary

Gross Wt (kg): 187.5

Material Type	SNM (grams)	Items Net Wt (kg)
52	49.71	81.26
53	16.75	25.87
54	2.53	8.18
Totals	68.99	115.31

UFI

ATTACHMENT 1
Page 1 of 2

HYDROGEN/VOC SAMPLING USING GAS CHROMATOGRAPHY DATA SHEET

7.[1] Sample Date: 10-12-10

7.[7] Certified CCP Technician:

CCP (Print)	Signature	Z #	Date
Grace Romero	[redacted]	1286973	10-20-10
	/	/	/

Container No. (7.[1]):	S824187	S832176	S833261
Container Type (SWB, 110/85/55-gal) (7.[1]):	55gal	55gal	55gal
Current Filter Vent No. (7.[1]):	72	72	72
New Filter Vent No.: (7.[8][A]):	72	72	72
WIPP-Approved Filter Vent (7.[8][B]):	☑ SAT ☐ UNSAT	☑ SAT ☐ UNSAT	☑ SAT ☐ UNSAT
VOC	Value (ppm) (7.[10])		
Benzene	9.88	17.95	
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		54.03	
1-Butanol			
Methanol			
Methyl ethyl ketone			
Methyl isobutyl ketone			
Total CCP VOC value (ppm) (7.[11]):	9.88	71.98	Ø

ATTACHMENT 1
Page 2 of 2

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

Container Number (7.[1]):	S884187	S832716	S833261
Hydrogen Reading (ppm) (7.[10]):	1988.24 ppm	652.83 ppm	Ø ppm
Methane Reading (ppm) (7.[10]):	Ø ppm	Ø ppm	Ø ppm
Total VOC Reading (ppm) (7.[11]):	9.88 ppm	71.98 ppm	Ø ppm
Filter Type (7.[9][F][c]/7.[9][G][a]):	72	72	72
WIPP Approved (SAT/UNSAT) (7.[9][F][c]/7.[9][G][a]):	SAT	SAT	SAT
Torque Wrench M&TE/ID Number (7.[9][F][a]/7.[9][G][a]):	N/A	N/A	N/A
Torque Wrench Calibration Due Date (7.[9][F][a]/7.[9][G][a]):	N/A	N/A	N/A
Torque Wrench Tolerance (7.[9][F][a]/7.[9][G][a]):	N/A	N/A	N/A
VERIFY Torque Wrench is within acceptable range as specified on Cal Certificate. (7.[9][F][a]/7.[9][G][b])	☐ YES ☐ NO ☑ N/A	☐ YES ☐ NO ☑ N/A	☐ YES ☐ NO ☑ N/A
Filter Torque Value (7.[9][F][a]/7.[9][G][d]) *	N/A	N/A	N/A

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

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

11.1[1] Performed By: Alicia Herrera, [signature] 198450, 10-13-10
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 117881 10-27-10
11.1[8] Waste Handling Supervisor (print) Signature Z # Date

InstName : Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\101012c\
Data File : S833261.D
Acq On : 12 Oct 2010 3:43 pm (#1); 12-Oct-10, 15:42:52 (#2)
Operator : SA
Sample :
Misc : 55 GALLON SAMPLED FROM 85 GALLON OVERPACKED (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Oct 12 15:51:49 2010
Quant Method : C:\msdchem\1\METHODS\vocgas.m
Quant Title : Flammable Gas Analysis
QLast Update : Wed Aug 18 13:26:05 2010
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
3) Fluorobenzene	3.700	96	2644037	207.75	ppmv	0.06
15) Chlorobenzene-d5	6.026	117	1899712	180.75	ppmv	0.05

Target Compounds	Qvalue

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

vocgas.m Tue Oct 12 15:51:55 2010

2-8-12 PROJECT NAME NOTEBOOK NO.

~~2-8-11~~ 2-8-11

0000 Assuming WCRRF operations center Crew Leader
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
0750 Mode change performed we are now in operations
0750 Starting movement out of 50-69
0800 Starting to process drum 3843962
0830 movement out of 50-69 complete
0927 Bagging off 3843962 and 3 POC's, bagging on 3833261
1104 Bagging off 3833261 and 3 POC's, bagging on 3823194
1325 Operators introducing absorbant into bag thru introductory part.
1329 Completed introducing absorbant.
1344 Starting movement into 50-69
1412 movement completed into 50-69.
1434 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 3 POC's.
1535 Starting inbound 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 - Crew leader

No further entries this page.

SIGNATURE DATE 20
READ AND UNDERSTOOD DATE 20

PROJECT NAME 2-8-12 NOTEBOOK NO

0600 Received 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 informal assessment team coming up to WCRR and Area 5. The team will be assessing "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)

Jeremiah Hernandez

SIGNATURE Jeremiah Hernandez DATE 2-8 20 12

READ AND UNDERSTOOD DATE 20

240 PROJECT NAME WCRR SOS LOG BOOK NOTEBOOK NO.

2-8-12

0005 Reviewed SOS Turn over Assuming Position

0015 Shift Brief Completed with over the use of waste LLR Also Issues with transportaner Doors And revised NWPS

0015 Shift brief Concluded

0730 ~~Am~~ Mode Change Complete WCRR Yard And 50-69 In Operations Mode

1618 Mode Change Complete WCRR Yard And 50-69 In warm

1630 End of Shift Securing SOS Position

GD 2/10/12

No further entries on this page

SIGNATURE DATE 20

READ AND UNDERSTOOD DATE 20

CCP Radiography Data Sheet 583326

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0019
Examination Date:	2/5/2013
Waste Container ID:	90883
Video/Audio Recorded Media Number:	LA-RTR2-13-0019 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.: 80.5 kg Tare Wt.: 33.4 kg Net Wt.: 47.1 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: 90883

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):	7.0
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	2.5
Organic Matrix (OR):	
Inorganic Matrix (IN):	37.6
Soils (S):	
Total WMP Weight:	47.1

CCP Radiography Data Sheet

Waste Container ID: 90883

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]	2/5/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	90883	Count Sequence Number:	22043
Operator:	D3PW2DK1\operator		
Assay Start:	2/11/2013 3:37:08 PM		
Description 1:	1LANDA1712		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 47.1 kg	Net:	47.1 kg
Container:	Volume: 208.0 l	Full:	40.0 %
Density:	0.570 kg /l		

System Configuration

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

Errors quoted at 1.000 sigma

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number:	22043	Batch Number:	1LANDA1712
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:	90883	Analysis Date:	2/11/2013

Net Weight	47100.0 g		
Pu mass	1.22E+001	+-	2.11E+000 g
TRU Alpha Activity	5.65E+000	+-	2.49E+000 Ci
TRU Activity Concentration	1.20E+005	+-	5.28E+004 nCi/g
Pu-239 Equivalent Activity	5.77E+000	+-	2.49E+000 Ci
Pu-239 FGE	1.15E+001	+-	1.94E+000 g
Decay heat	1.87E-001	+-	8.31E-002 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	7.95E-002	5.68E-005	9.32E-006	2.10E-006
PU238	6.14E-003	1.06E-001	1.83E-002	1.51E-004
PU239	1.13E+001	7.09E-001	1.22E-001	1.01E-003
PU240	8.59E-001	1.97E-001	3.41E-002	2.81E-004
AM241	1.33E+000	4.63E+000	2.49E+000	4.36E-002
PU241	6.39E-002	6.64E+000	1.15E+000	9.45E-003
PU242	3.13E-002	1.24E-004	2.14E-005	0.00E+000
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	6.06E-007
U233	<LLD	<LLD	0.00E+000	4.36E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	1.24E-006
U238	<LLD	<LLD	0.00E+000	1.36E-005
AM243	3.03E-004	6.11E-005	1.03E-005	5.24E-006

Errors quoted at 1.000 sigma

Operator: _____ Date: 2/13/13

ITR: _____ Date: 2·14·13

Automated Independent Technical Review

Count Sequence Number: 22043 Batch Number: 1LANDA1712
Counter ID: MCS HENC #1
Container ID: 90883
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 2/11/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis	
Add-a-Source WARNINGS:	
Add-a-Source correction factor was set to one.	Ok
Add-a-Source correction factor is less than n-sigma * the correction factor error.	Ok
Section 2 - Passive Neutron Analysis	
Analysis Status: No errors.	Ok
Ones Rate Analysis complete with warnings.	
- Error calculating the Ones Rate Pu-240 Effective MDA.	Not data affecting.
Section 3 - Data Combiner Analysis	
Override enabled; Passive Neutron Pu and Gamma U data specified as input.	Passive Neutron and Gamma U data specified as input.
Pu results taken from Passive Neutron data, U from Quantitative Gamma data.	
Results comparison test passed.	
Section 4 - MGA Analysis	MGA analysis failed. 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: Sheri Chamberlin Date: 2-13-13

5833261

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **90883**

BDR Number: **LA13FG8015**

Sampling Date: **3/1/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	120.87	
74-82-8	Methane	213.40	U
67-56-1	Methanol	27.87	U
60-29-7	Ethyl Ether	1.25	U
75-35-4	1,1-Dichloroethylene	5.71	U
67-64-1	Acetone	16.90	U
75-34-3	1,1-Dichloroethane	4.24	U
156-59-2	cis-1,2-Dichloroethene	0.55	U
78-93-3	Methyl ethyl ketone	9.86	U
110-82-7	Cyclohexane	5.84	U
71-43-2	Benzene	0.71	U
107-06-2	1,2-Dichloroethane	1.51	U
71-36-3	1-Butanol	1.36	U
108-10-1	Methyl isobutyl ketone	9.34	U
108-88-3	Toluene	3.09	U
108-90-7	Chlorobenzene	1.69	U
100-41-4	Ethylbenzene	2.62	U
108-38-3/106-42-3	m- and p-Xylene	1.48	U
95-47-6	o-Xylene	1.76	U
108-67-8	1,3,5-Trimethylbenzene	3.14	U
95-63-6	1,2,4-Trimethylbenzene	3.92	U

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\130301c\
Data File : 90883.D
Acq On : 1 Mar 2013 12:42 pm (#1); 1 Mar 2013 12:41 pm (#2)
Operator : NW
Sample :
InstName : Unit 8
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 01 12:50:10 2013
Quant Method : C:\msdchem\1\METHODS\Vocgas.m
Quant Title : Flammable Gas Analysis for Transportation
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
3) Fluorobenzene	3.259	96	2545877	206.00 ppm	0.00
15) Chlorobenzene-d5	5.939	117	2346921	179.50 ppm	0.00
Target Compounds					Qvalue
1) Hydrogen	5.311	GC1	29866m	120.87 ppm	

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

Best Available Copy

ATTACHMENT 1
Page 1 of 4

11-13-12 **WCRRF WCG WASTE PROCESSING DATA SHEET**

4.1[6][B] Parent Waste Container No.: 965541

6.2[4] Date Processed 11/13/12

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

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

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

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

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

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

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

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

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

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

Performed By: [illegible] [illegible] [illegible] 11/13/12
Waste Handling Tech (print) Signature Z.# Date

ATTACHMENT 1

Page 2 of 4

4.1[6][B] Parent Waste Container No.: 90-324

5.[18] Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable: 3994 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) 3994 lb

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

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

EWMO-FOD (print)	Signature	/ #	Date

Best Available Copy

ATTACHMENT 1
Page 3 of 4

4.1[6][B] Parent Waste Container No.: 90584

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	92355			
10.1[4]	Daughter Drum Filter No.	JL 1318		N/A	
10.1[4]	Daughter Drum Bag Filter No.	L 3736			
10.1[4]	Daughter Drum Purchase Order No.	4110182			
10.1[13][C]	WCG Fire Watch Stationed		☐ YES	☐ NO	☑ N/A
10.1[14][C][d]3/11.1[3]	WCG Fire Watch Secured		☐ YES	☐ NO	☑ N/A
10.2[4]	POC bag-on bag: Manufacturer				
	Model No.				
	Serial No.				
	Date of Manufacture				
10.2[5]	POC ID No.				
10.2[7][B]/10.2[6]	POC Item Description				
10.2[13]	POC Assembly closed per Manufacturer's instructions. (Initial and Z#)			N/A	
10.2[14]	POC Assembly Gross Weight (lb)				
10.2[15]	POC Rad. Survey Results (mrem/hr)				
10.3[3][A]	Approx. Containerized Liquid Vol./Units				
10.3[5][A]	Free Liquid Volume/Units				
10.3[7][A]	Opaque/Non-penetrable Item Description:				
10.3[9][A]	PCB-contaminated Waste Description				
10.3[9][B]	PCB Item ID No.				
10.3[10]	Remaining Waste Description	see comments			
10.3[13]/10.4[10]/10.5[4]/10.6[8]	Daughter Drum % Full (%)	80%		N/A	
10.5[3]/10.6[2]	Description Waste Added During Processing	plastic			

Best Available Copy

ATTACHMENT 1
Page 4 of 4

4.1[6][B] Parent Waste Container No.: 90884

Comments: SARTS, Plastic, Cheese Cloth,

11.1[1] Performed By: [illegible] [illegible] 11/18/12
Waste Handling Tech (print) Signature Z # Date

11.1[7] Reviewed By: [illegible] [illegible] 11/19/12 1500
SOS or designee (print) Signature Z # Date/Time

ATTACHMENT 2
Page 1 of 1

WCRRF OVERPACK DRUM ASSEMBLY PREPARATION DATA SHEET

5.[4] Overpack drum information:

Purchase Order No.: 013954
Lot No.: 211426
Manufacture Date: 10—

5.[8] Overpack filtered vent information:

Manufacturer: Nucfil
Model No.: 013
Serial No.: 27-2551
Manufacture Date: 9-11

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

	Filtered Vent	2 in. Bung
M&TE No.:	046694	22-1151
Cal. Expiration Date	9-26-13	6-11-13
Tolerance	±4% cw ±4% cm	±3% cw ±2% cm

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

Performed By: Michael Romero (Waste Handling Technician (print)) Michael Romero (Signature) 188713 (ID) 11-7-12 (Date)

5.[12] Filtered vent torque value [120 ± 10 (96 to 144 in-lb)]: 120 in-lb

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

Comments: N/C

8.[1] Performed By: Michael Romero (Waste Handling Technician (print)) Michael Romero (Signature) 188713 (ID) 11-7-12 (Date)

8.[5] ☐ Deficiencies identified and submitted (e.g., PCR or ESR system)
☑ No deficiencies

8.[7] Reviewed By: Gilbert Martinez (Supervisor or designee (print)) (Signature) 184[illegible] (ID) 11-7-12 (Date)

Date: 11-13-12

ATTACHMENT 5
Page 1 of 1

WCRRF OVERPACK DRUM CLOSURE DATA SHEET

7.[19] Overpack Drum Unique Identifier No.: 923560

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

M&TE No.: 640329
Cal. Expiration Date: 3-15-13
Range in ft-lb: 110-80
Tolerance: ±3% Full Scale

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

Performed By: Gerardo Esparza
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: 0190009
Platform scale calibration expiration date: 7-31-13

7.[36][D] 85-gal overpack drum gross weight (lb): 330.0 lb

Comments:

8.1[1] Performed By: Gerardo Esparza 11/13/12
Waste Handling Technician (print) Signature Z # Date

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

8.1[7] Reviewed By: Robert Martinez 11-13-12
Supervisor or designee (print) Signature Z # Date

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

Drum ID#: 92355

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: Bag
Model #: 6CDVC1.5-2-SPVC
Serial #: L-3736
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 liner/plastic liner into drum liner bag/filter assembly
- [x] Line up liner with drum seam
- [x] Place liner/bag/filter assembly into drum
- [x] Roll excess liner bag into cardboard liner/plastic liner

4. Install Lid/Drum Filter

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

RECORD drum filter information:

Manufacturer: Nucfil
Model #: 0190B
Serial #: 3L-1318
Date of Manufacture: 10/11

RECORD torque wrench information

Filter torque wrench:		Jam Nut / Bung torque wrench:	
M&TE ID #:	046694	M&TE ID #:	021151
Cal Expiration Date:	7-26-13	Cal Expiration Date:	6-11-13
Range (ft-lbs or in-lbs):	40-200	Range (ft-lbs or in-lbs):	16-80
Tolerance:	1% cw ±0% ccw	Tolerance:	±3% cw ±0% ccw

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

[x] Yes [ ] No

Print Name: Michael Ramirez Signature: Michael Ramirez ZH: 192723

5. Weigh Drum Assembly

RECORD weight information

Tare wight (lbs) 76.2
File ID #: 019005

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

6. Label Drum Assembly

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

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

Operator Print: Michael Ramirez Operator Sign: Michael Ramirez ZH: 192723 Date: 11-7-12

Verifier Print: GERALD ESPINOSA Verifier Sign: Gerald Espinosa ZH: 237720 Date: 11/13/12

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

DRUM ID#: 92355

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: 3-15-2013

Range/ Value (ft-lbs): 14-80

Tolerance ±3% Qw ±6% Rcw

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): 254.4

Scale ID#: 0190105

✓ 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 Espinosa Date 11/13/12

Verifier Print/Sign: Date 11-13-12

WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Production Control

Container ID: 90884 Container Type: POC Gross Weight (lbs): 395

Container Seal #: None Filter Prefix: None Filter Serial #: EL-426; EL-483

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

TWSR Comments: PARENT #S833261 WTS-12STD-897

Total PE-Ci Activity: 1.39E+00 Equivalent Combustible PE-Ci: 5.22E-01 AM-241 PE-Ci: 1.26E-01

Total Fissile Gram Equivalents: 14.7 Total Surface Dose Rate (mrem/hr): 2

EPA Code(s): D008

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 D00 & D009

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

Performed By: Susan Ramsey (Production Control (Print)) Signature: Susan L Ramsey Z Number: 100681 Date: 9/10/12

WDP Engineering

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

Processing Determination: Accept Reject

WDP Engineering Comments: Nitrate Salts – POC

Net Wt: 85lb Parent drum (SEDS attached) was part of WCRR nitrate salt repack campaign using Waste Lock 770®. This resulting daughter POC is being repacked to adjust the admixture/nitrate salt ratio. Nitrate salts carry waste codes for chromium, lead, and mercury. No chemicals present. May require RWP for > 100 + < 1000 mrem/hr

Performed By: Valerie Rhodes (WDP Engineering (Print)) Signature: Valerie Rhodes Z Number: [illegible] Date: 10/2/12

TRU Remediation Operations

Waste Container Information Evaluated Less Than 170 lbs RTR Video Available

Other Specific Safety Concerns: Use Heavy duty gloves when handling waste in the Glove Box. Do not push or press on waste

Processing Determination: Accept Reject

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

Performed By: Jose Jerez (TRU Remediation Operations (Print)) Signature: Jose Jerez Z Number: 221452 Date: 10-4-12

OA Z# 249750 10/9/12

HS Review RO 206362 10.3.12

Noncertified TRU Waste Drum Item Information

DrumID: 015690

Item No	ItemID	Process Status	Net Wt (kg)	Matrix	Meas Code	SNM (g)	MT	Auth (Pg/Ln)	Comments
1	IXFS764-OX35		8.160	NITRATE SALTS		11.36	52	11/6	
2	IXFS773FA		8.180	NITRATE SALTS		2.93	54	11/6	
3	IXFS771FA		16.140	NITRATE SALTS		3.78	52	11/6	
4	IXFS767FA		8.820	NITRATE SALTS		8.34	53	11/6	
5	IXFS773-FA		9.550	NITRATE SALTS		8.41	53	11/6	
6	IXFS-774A		3.120	NITRATE SALTS		6.77	52	11/6	
7	IXFS775-OX36		16.450	NITRATE SALTS		2.71	52	11/6/	
8	IXFS776-F1-NE1		8.180	NITRATE SALTS		3.87	52	11/6	
9	IXFS-777-NW-1		7.950	NITRATE SALTS		4.91	52	11/6	
10	IXFS-778-NE-1		7.500	NITRATE SALTS			53	11/6	
11	IXFS-779-FA		17.830	NITRATE SALTS		13.65	52	11/6	
12	IXFS-783FA		3.410	NITRATE SALTS		8.64	52	11/6	

Noncertified Waste Drum Material Summary

Gross Wt (kg): 187.5

Material Type	SNM (Grams)	Items Net Wt (kg)
52	49.71	81.26
53	16.75	75.67
54	2.53	8.18
Totals	68.99	115.31

ULT

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])	408874					
Container type sampled (e.g., 55-gal, 85-gal, 110-gal, or SWB) (5.[1])	POC					
Filtered Vent Type (5.[1])	190S					
Filtered Vent Unobstructed (5.[1])	☑ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT
WIPP-Approved Filtered Vent (5.[2])	☑ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT
Total CCP VOC Value (< 7,000 ppm) (5.[4])	0 ppm	ppm	ppm	ppm	ppm	ppm
Hydrogen Reading (< 64,000 ppm) (5.[5])	3,857.32 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)

Reviewed By NATHAN WALES 238566
CCP (Print)

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.[1] Performed By SUSAN S. RAMSEY [signature] 10/2/12
Waste Handling Operator (print) Signature Date

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\120928C\
Data File : 90884.D
Acq On : 28 Sep 2012 3:23 pm (#1), 28 Sep 2012 3:22 pm (#2)
Operator : SA
Sample :
InstName : Unit 8
Misc : LFL PDC THROUGH FILTER-19DS FILTER (Sig #1), (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 28 15:36:07 2012
Quant Method : C:\msdchem\1\METHODS\Voggas.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	2362727	206.00 ppm	0.00
15) Chlorobenzene d5	5.936	117	2124461	179.50 ppm	0.00
Target Compounds					Qvalue
1) Hydrogen	5.773	301	953075m	3857.32 ppm	

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

Voggas.m Fri Sep 28 15:36:14 2012

11-13-12

0600 Assuming WCRRF operations center checklists
0615 Pre job being conducted by SOS
0620 Starting inside rounds completed outside rounds
0655 Inside rounds complete
0718 Inside and outside rounds signed off by SOS
0733 Mode change performed TA50-69 and WCRRF yard now in operations
0739 TOC lift operations complete
0825 Permission granted to start movement into 50-69
0877 bagging on 90834
0900 Completed movement into 50-69, bag on complete.
0913 Permission granted to lower vehicle access gate for loading of transport vehicle.
0931 bagging off 90834, bagging on 90941
0956 bag on, bag off complete
1024 Vehicle access gate has been restored. loading of transport vehicle is complete.
1057 bagging off 90941, bagging on 90890
1052 starting movement into 50-69
1101 movement into 50-69 is complete.
1105 bag on, bag off complete.
1152 bagging off 90890, bagging on 90897
1312 bag off, bag on complete
1319 bagging off 90897 and bagging on 90972
1340 bag off, bag on complete
1433 bagging off 90972, bagging on 90974
1434 bag on, bag off complete.
1435 starting inside rounds
1536 completed inside rounds
1538 starting movement out of 50-69
1552 bagging off 90974
1557 Completed movement out of 50-69.
1600 starting outside rounds
1615 Completed outside rounds
1616 bag off is complete.
1618 Rounds have been signed off by SOS
1630 mode change performed TA50 and WCRRF yard now in warm standby
1640 shutting WCRRF operations center down. Checklists
MM

[illegible] between this page

0600 Assumed WCRR SOM position

0615 Attended prejob brief conducted by SOS. Discussed winter weather early closure / late opening plans for safety topic, use of handrails, weekend work including contamination event.

0702 CSE completed signoff of work packages from weekend maintenance.

0739 Completed Mode Change: WCRR Yard / Bldg 50-69 from Warm / Cold to Operations / Operations.

1100 Briefed to RWP for entering radiation areas.

1200 Conducted call in for solution package processing @ WCRR and team call in regarding production @ WCRR and DUS

1400 Attended meeting for DUS Filter change out w/ RPI and DDP Management. Discussed possibility of utilizing Bldg 412 instead of setting up temporary enclosure in one of the domes. PM will give guidance.

1510 (Late Entry 1310) Performed walkdown of containers in TRU storage transportainers w/ Tech 39.

1620 Completed Mode Change: WCRR Yard / Bldg 50-69 from Operations / Operations to Warm / Warm.

1745 Secured SOM position.

No Further Entries this Date

11-13-12 WCRR SOS Log Book

0600 Assuming SOS position for the day

0615 Pre-Job brief Started. Discussed Changes to Snow and increment weather procedure Delayed Starts and early dismissal. 1 Shipment out eight drums remaining to process prior to removing inventory from the yard and 50-69 to put in Cold.

0640 Pre-Job concluded

0655 Signed off on outside rounds.

0718 Signed off on inside rounds

0739 Mode Change to Operations in Yard and Building 50-69.

1618 G 11-13-12 ~~Mode Change Complete WCRRF In~~ Reviewed Inside And outside Rounds.

1620 Mode Change Complete WCRRF In warm standby.

11-13-12 1630 end of shift Securing SOS Position

No further entries on this page

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0005
Examination Date:	1/15/2013
Waste Container ID:	92355
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.: 115.5 kg Tare Wt.: 33.4 kg Net Wt.: 82.1 kg
Rigid Liner and Liner Vent Description:	Liner: [X] No [ ] Yes Lid: [X] No [ ] Yes Type: [ ] 30-mil [ ] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [ ] Yes [X] N/A Punctured: [X] No [ ] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [ ] No [X] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 1 layer
Volume Utilization Percentage:	90 %

CCP Radiography Data Sheet

Waste Container ID: 92355

Section 3: Container Inventory and Comments (Detailed descriptions)

IM: Metal hardware, metal lid

AM:

OM: Scrap lead

OI:

C: Fiberboard material, fiberboard insert sleeve

R:

XPM: Liner lid, 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):	10.0
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	22.1
Other Inorganic Materials (OI)	
Cellulosics (C):	10.0
Rubber (R):	
Plastics (waste materials) (XPM):	10.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	30.0
Soils (S):	
Total WMP Weight:	82.1

CCP Radiography Data Sheet

Waste Container ID: 92355

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:	92355	Count Sequence Number:	14847
Operator:	DCLTD231\Operator		
Assay Start:	1/16/2013 4:10:12 PM		
Description 1:	2LANDA1079		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6, Not Precision		
Matrix Type:	Debris S5000		
Container Type:	55 gal Drum		
Weight:	Net: 82.1 kg	Net:	82.1 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:	14847	Batch Number:	2LANDA1079
Assay Instrument:	HENC #2	Location:	LANL TA-54
Analysis Method:	CCP-TP-063 v 14	Software Version:	NDA 2000 V.4.0
Item ID:	92355	Analysis Date:	1/16/2013

Net Weight	82100.0 g		
Pu mass	1.25E+001	+- 2.03E+000	g
TRU Alpha Activity	8.15E+000	+- 3.75E+000	Ci
TRU Activity Concentration	9.93E+004	+- 4.56E+004	nCi/g
Pu-239 Equivalent Activity	8.20E+000	+- 3.75E+000	Ci
Pu-239 FGE	1.20E+001	+- 1.82E+000	g
Decay heat	2.70E-001	+- 1.25E-001	W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	1.10E-001	7.85E-005	1.11E-005	1.42E-006
PU238	4.26E-003	7.36E-002	1.19E-002	7.20E-005
PU239	1.11E+001	6.98E-001	1.13E-001	6.83E-004
PU240	1.34E+000	3.08E-001	5.00E-002	3.01E-004
AM241	2.04E+000	7.07E+000	3.74E+000	4.78E-002
PU241	2.62E-002	2.72E+000	4.41E-001	2.66E-003
PU242	3.94E-002	1.56E-004	2.53E-005	0.00E+000
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	5.30E-007
U233	<LLD	<LLD	0.00E+000	5.68E-003
U234	1.75E-002	1.11E-004	3.48E-005	0.00E+000
U235	1.26E+000	2.75E-006	8.61E-007	2.59E-006
U238	<LLD	<LLD	0.00E+000	1.78E-005
AM243	4.43E-004	8.94E-005	1.30E-005	8.33E-006

Errors quoted at 1.000 sigma

Operator: _____ Date: 1-21-13

ITR: _____ Date: 1-28-13

Automated Independent Technical Review

Count Sequence Number: 14847 Batch Number: 2LANDA1079
Counter ID: HENC #2
Container ID: 92355
Waste Matrix Code: Debris S5000 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. 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 Chandler Date: 1-17-13

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **92355**

BDR Number: **LA13FG8003**

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

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	129.22	
74-82-8	Methane	213.40	U
67-56-1	Methanol	27.87	U
60-29-7	Ethyl Ether	1.25	U
75-35-4	1,1-Dichloroethylene	5.71	U
67-64-1	Acetone	16.90	U
75-34-3	1,1-Dichloroethane	4.24	U
156-59-2	cis-1,2-Dichloroethene	0.55	U
78-93-3	Methyl ethyl ketone	9.86	U
110-82-7	Cyclohexane	5.84	U
71-43-2	Benzene	0.71	U
107-06-2	1,2-Dichloroethane	1.51	U
71-36-3	1-Butanol	1.36	U
108-10-1	Methyl isobutyl ketone	9.34	U
108-88-3	Toluene	3.09	U
108-90-7	Chlorobenzene	1.69	U
100-41-4	Ethylbenzene	2.62	U
108-38-3/106-42-3	m- and p-Xylene	1.48	U
95-47-6	o-Xylene	1.76	U
108-67-8	1,3,5-Trimethylbenzene	3.14	U
95-63-6	1,2,4-Trimethylbenzene	3.92	U

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\130124c\
Data File : 92355.D
Acq On : 24 Jan 2013 1:13 pm
Operator : SA
Sample :
InstName : Unit 8
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jan 24 13:21:22 2013
Quant Method : C:\msdchem\1\METHODS\Vocgas.m
Quant Title : Flammable Gas Analysis for Transportation
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
3) Fluorobenzene	3.253	96	2170614	206.00 ppm	0.00
15) Chlorobenzene-d5	5.933	117	1922494	179.50 ppm	0.00
Target Compounds					Qvalue
1) Hydrogen	5.315	GC1	31929m	129.22 ppm	

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

Working Copy
Date: 1-24-13

ATTACHMENT 1
Page 1 of 4

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: 90885

6.2[4] Date Processed: 1-24-13

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 / [signature] / 267129 / 1-24-13
Waste Handling Tech (print) Signature Z # Date

ATTACHMENT 1
Page 2 of 4

4.1[6][B] Parent Waste Container No.: 90885

5.[18] Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable: 423.0 lb

6.2[5][A] Parent Drum Lead Blanket Weight (lb): 0 lb

6.2[5][B] Total Parent Drum Weight (lb) 423.0 lb
6.2[6]

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

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

N/A

FWMC-FOD (print) Signature Z # Date

ATTACHMENT 1
Page 3 of 4

4.1[6][B] Parent Waste Container No.: 90885

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	92682			
10.1[4]	Daughter Drum Filter No.	JL-1109	N		
10.1[4]	Daughter Drum Bag Filter No.	L-6154		A	
10.1[4]	Daughter Drum Purchase Order No.	501011			
10.1[13][C]	WCG Fire Watch Stationed		☐ YES	☐ NO	☑ N/A
10.1[14][C][d]3/11.1[3]	WCG Fire Watch Secured		☐ YES	☐ NO	☑ N/A
10.2[4]	POC bag-on bag: Manufacturer				
	Model No.				
	Serial No.				
	Date of Manufacture				
10.2[5]	POC ID No				
10.2[7][B]/10.2[6]	POC Item Description				
10.2[13]	POC Assembly closed per Manufacturer's instructions. (Initial and Z#)				
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			A	
10.3[5][A]	Free Liquid Volume/Units	20 oz.			
10.3[7][A]	Opaque/Non-penetrable Item Description:	N/A	N		
10.3[9][A]	PCB-contaminated Waste Description				
10.3[9][B]	PCB Item ID No.				
10.3[10]	Remaining Waste Description	See COMMENTS			
10.3[13]/10.4[10]/10.5[4]/10.6[8]	Daughter Drum % Full (%)	100%			
10.5[3]/10.6[2]	Description Waste Added During Processing	BAG OUT STUBS			

ATTACHMENT I
Page 4 of 4

4.1[6][B] Parent Waste Container No.: 90885

Comments: ROOM TRASH, POL LIDS, PLASTICS, CARDBOARD LINER, SALTS, KITTY LITTER, NEAUTRALIZER

11.1[1] Performed By: BRIAN GALLEGOS [signature] 2671129 ~~1-23-13~~ 1-24-13 1-24 0800
Waste Handling Tech (print) Signature Z # Date

11.1[7] Reviewed By: JOSE JEREZ [signature] 221452 1-26-13 1140
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.: 413459
Lot No.: 208849
Manufacture Date: 2010

5.[8] Overpack filtered vent information:

Manufacturer: NUCFIL
Model No.: 013
Serial No.: IL-44
Manufacture Date: 9/11

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

	Filtered Vent	2 in. Bung
M&TE No.:	040694	038369
Cal. Expiration Date:	9-26-13	12-18-13
Tolerance:	+/- 4% cw +/- 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 Mondragon / Steven Mondragon / 1047741 / 1-22-13
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/A

8.1[1] Performed By: Steven Mondragon / Steven Mondragon / 1047741 / 1-22-13
Waste Handling Technician (print) Signature Z # Date

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

8.1[7] Reviewed By: Jose Jerez / [signature] / 2214521 / 1-26-13
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.: 92683

7.[25] Overpack drum closure ring torque wrench information:
M&TE No.: 038367
Cal. Expiration Date: 3-16-13
Range in ft-lb: 10-80
Tolerance: ±3% cw ± 6% ccw

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

Performed By: BRIAN GALLEGOS / B. Gallegos / 267129 1-24-13
Waste Handling Technician (print) Signature Z # Date

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

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

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

7.[36][D] 85-gal overpack drum gross weight (lb): 325.6 lb

Comments: N/C

8.1[1] Performed By: BRIAN GALLEGOS / B. Gallegos / 267129 1-24-13
Waste Handling Technician (print) Signature Z # Date

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

8.1[7] Reviewed By: Jose Jerez / [signature] 221452 1-26-13
Supervisor or designee (print) Signature Z # Date

Attachment 1. Checklist for the preparation of a new 55-Gallon Drum Assembly

Drum ID#: 92682

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 #: 501011
- Lot #: 0233370
- Date of Manufacture: 2012

2. Drum Liner Bag/Filter Assembly:

- ☑ Place yellow vinyl tape, with smear centered on tape, over filter
- ☑ Fill bag with air from compressed air source
- ☑ Inspect bag for damage, cuts, or leaks by looking, listening, and feeling
  - NOTE: Reject or repair damaged, cut, or leaking bags
- ☑ Stretch bag's bungee cord
- ☑ Inspect bungee cord
  - NOTE: Reject bag if bungee cord is broken or damaged

RECORD bag filter information:
- Manufacturer: BOP
- Model #: 6C PVC-1.5-25PVC
- Serial #: L-6159
- Date of Manufacture: 6-12

3. Cardboard Liner/Plastic Liner Drum Liner Bag/Filter Assembly:

- ☑ Inspect cardboard liner/plastic liner (circle type of liner used)
  - NOTE: Reject any damaged liners
- ☑ Place cardboard/plastic liner into drum liner bag/filter assembly
- ☑ Line up filter with drum seam
- ☑ Place liner/bag/filter assembly into drum
- ☑ Roll excess liner bag into cardboard liner/plastic liner

4. Install Lid/Drum Filter

- ☑ Place lid and ring onto drum
- ☑ Tighten ring sufficiently to simply hold lid in place
- ☑ Torque 2" bung plug
- ☑ Apply sealant to filter threads, screw in ¾" bung hole, and torque
- ☑ Place this Attachment and blank Attachment 2 into a protective sleeve and tape to top of drum

RECORD drum filter information:
- Manufacturer: NUCELL
- Model #: 019DS
- Serial #: JL-1109
- Date of Manufacture: 10/11

RECORD torque wrench information:

Filter torque wrench:		Jam Nut / Bung torque wrench:	
M&TE ID #:	040694	M&TE ID #:	038369
Cal Expiration Date:	9/26/13	Cal Expiration Date:	12/28/13
Range (ft-lbs or in-lbs):	40-200	Range (ft-lbs or in-lbs):	10-80
Tolerance:	+/-4% cw +/-6% ccw	Tolerance:	+/-3% cw +/-6% ccw

Torque wrenches listed above are within the acceptable ranges as displayed on the calibration certificate.
☑ Yes ☐ No
Print Name: James Sadler Signature: [signature] Z#: 116682

5. Weigh Drum Assembly

RECORD weight information
- Tare wtght (lbs) 76.2
- File ID #: 019065

☑ Write the tare weight on drum using permanent marker

6. Label Drum Assembly

- ☑ Place 1 barcode drum ID label to the left of the drum seam, ~6" from drum bottom
- ☑ Place 1 barcode drum ID label in the center of the drum lid

RECORD drum ID# at the top of Attachments 1 and 2

Operator Print: James Sadler Operator Sign: [signature] Z#: 116662 Date: 01-23-13

Verifier Print: BRIAN GALLEGOS Verifier Sign: [signature] Z#: 267129 Date: 1-24-13

Attachment 2. Checklist for the Closing of a 55-Gallon Drum Assembly

DRUM ID#: 92682

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 #: 038367

Cal expiration date: 3-16-13

Range/ Value (ft-lbs): 10-80

--- Tolerance ±3% cw ±6% ccw

2. DRUM LABELING

NOTE: Do not cover the drum seam with any labels.

✓ Place two barcode drum ID labels ~6" from the bottom of the drum ~120° from previously placed ID label.

✓ Place one barcode drum ID label to the right of drum seam between the top two rolling hoops.

✓ Place one yellow radioactive waste label between the top two rolling hoops

✓ Place one yellow radioactive waste label in the center of the drum lid.

RCRA Label:

☑ Place one blue NON-RCRA Regulated Waste label between the top two rolling hoops.

OR

☐ Place one yellow HAZARDOUS Waste label between the top two rolling hoops left of the drum seam. (Ensure EPA waste number and accumulation start date are documented.)

NOTE: Check only one of the above two boxes.

3. WEIGH DRUM ASSEMBLY

Record weight information:

Gross Weight(lbs): 299.4

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 ~~1-23-13~~ 1-24-13 BG 1-24-13

Verifier Print/Sign: [signature] Date: ~~1-23-13~~ 1-24-13 BG 1-24-13

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WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Production Control

Container ID: 90885 Container Type: POC Gross Weight (lbs): 419

Liner Seal #: None Filter Prefix: None Filter Serial #: EL-222; EL-325

RTR Waste Stream: LA-MHD01.001 Certified RTR BDR: No BDR

TWSR Comments: PARENT #S833261 WTS-12STD-840

Total PE-Ci Activity: 1.39E+00 Equivalent Combustible PE-Ci: 5.22E-01 AM-241 PE-Ci: 1.26E-01

Total Fissile Gram Equivalents: 14.7 Total Surface Dose Rate (mrem/hr): 2

EPA Code(s): D008 D007 D009 WR 10/3/12

NCR RTR/NDA Comment: None

RTR Pre-Screen Date: None Comment: None

Certified RTR Comment: None

Prohibited Items: ■ Sealed > 4 Liters ■ Liquid ■ Pressurized Container ■ Impenetrable Item ■ Other

Security Determination: ☑ Green ☐ Yellow

Remediation Determination: ☐ VE ☐ PID ☐ Split ☑ Repack

Estimated 30-cm Dose Rate (mrem/hr): ☐ <100 ☑ >100 and <1,000 ☐ >1,000 and <10,000 ☐ >10,000

TRUCON Code: TBD Production Control Comments: Need to add EPA Codes D007 & D009

Nitrate salts mixed with Waste Lock 770® from previous repack campaign. A minimum of 1/2 volume of kitty litter/zeolite must be mixed with 100 lb of nitrate salts

Performed By: Susan Ramsey / Signature / 100681 / 9/10/12
Production Control (Print) Signature Z Number Date

WDP Engineering

Chemicals Present (e.g., pyrophorics, acids, bases, shock sensitive, organic liquids, peroxides, crown ethers): ☐ Yes ☒ No ☐ Unknown

Processing Determination: ☒ Accept ☐ Reject

WDP Engineering Comments: Nitrate Salts – POC

Net Wt: 109 lb. Parent drum (SEDS attached) was part of WCRR nitrate salt repack campaign using Waste Lock 770®. This resulting daughter POC is being repacked to adjust the admixture/nitrate salt ratio. Nitrate salts carry waste codes for [redacted] and mercury. No chemicals present. May require RWP for > 100 + < 1000 mrem/hr

Performed By: Valerie Rhodes / Valerie Rhodes / 1112609 / 10/3/12
WDP Engineering (Print) Signature Z Number Date

TRU Remediation Operations

☑ Waste Container Information Evaluated ☐ Less Than 170 lbs RTR Video Available

Other Specific Safety Concerns: Use Hexarmour gloves when processing waste. Do not push or press on waste with hands.

Processing Determination: ☑ Accept Reject

TRU Remediation Operations Comments: Use proper ratio of kitty litter to waste in accordance with the procedure

Performed By: Jose Perez / Jose Perez / 221452 / 10-9-12
TRU Remediation Operations (Print) Signature Z Number Date

LL Z#249750 10/18/12

HS REVIEW: RB 206362 10.4.12

Noncertified TRU Waste Drum Item Information

DrumID: 015690

Item No	ItemID	Process Status	Net Wt (kg)	Matrix	Meas Code	SNM (g)	MT	Auth (Pg/Ln)	Comments
1	IXFS764-OX35		8.180	NITRATE SALTS		11.36	52	11/6	
2	IXFS772FA		8.180	NITRATE SALTS		2.53	54	11/6	
3	IXFS771FA		16.140	NITRATE SALTS		3.78	52	11/6	
4	IXFS767FA		8.820	NITRATE SALTS		8.34	53	11/6	
5	IXFS773-FA		9.550	NITRATE SALTS		8.41	53	11/6	
6	IXFS-774A		3.120	NITRATE SALTS		0.77	52	11/6	
7	IXFS775-OX36		16.450	NITRATE SALTS		2.71	52	11/6/	
8	IXFS776-F1-NE1		8.180	NITRATE SALTS		3.87	52	11/6	
9	IXFS-777-NW-1		7.950	NITRATE SALTS		4.93	52	11/6	
10	IXFS-778-NE-1		7.500	NITRATE SALTS			53	11/6	
11	IXFS-779-FA		17.830	NITRATE SALTS		13.65	52	11/6	
12	IXFS-783FA		3.410	NITRATE SALTS		8.64	52	11/6	

Noncertified Waste Drum Material Summary

Gross Wt (kg): 187.5

Material Type	SNM (grams)	Items Net Wt (kg)
52	49.71	81.26
53	16.75	25.87
54	2.53	8.18
Totals	68.99	115.31

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])	90885					
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: N. Wales 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 : 90885.D
Acq On : 3 Oct 2012 2:46 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 14:54:11 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	Lev(Min)
Internal Standards						
3) Fluorobenzene	3.259	96	2163895	206.00	ppm	0.00
15) Chlorobenzene-d5	5.936	117	1951123	179.50	ppm	0.00

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Vocgas.m Wed Oct 03 14:54:30 2012

1-24-13
0600 Assuming WCRRF Operations Center ~~[illegible]~~ CW 1-24-13 C Velarde
0605 starting inside and outside ~~[illegible]~~ CW 1-24-13 rounds.
0615 ASSUMING OPERATIONS CENTER LOG BOOK UNDER THE DIRECTION OF CLARISSA VELARDE OCO OJT INSTRUCTOR B. Fordham STARTING THE PRE JOB BRIEF
0617 OUTSIDE ROUNDS complete
0625 ITEM #61 ON THE INSIDE ROUNDS IS OOS, THERE IS A POD
0633 IN PLACE WE ARE OK TO PROCEED.
0644 INSIDE ROUNDS completed
0645 Pre job complete
0709 ROUNDS SIGNED OFF BY SOS @0709
0720 PERFORMED MODE CHANGE FOR WCRRF YARD, AND TA-50-69 IN OPERATIONS.
0857 BAGGED ON DRUM # 90934
0808 Bag on complete
0810 PPE CHECK IS SAT
0848 BAGGING OFF, bagging ON 90885
0850 PPE CHECK IS SAT
0920 Bag on of 90885 complete
0930 PPE CHECK IS SAT
0951 PPE CHECK IS SAT
1010 BAGGING OFF AND BAGGING ON DRUM # 90932
1038 Bag on complete
1040 PPE CHESK SAT
1110 BAGGING OFF AND BAGGING ON DRUM # S834480
1139 BAG OFF COMPLETE
1140 WCRRF OPERATORS INFORMED OPS CENTER THAT THEY HAVE A 30 gal SEALED IN THE GLOVEBOX, THE GLOVEBOX HAS BEEN DE-ENERGIZED
1155 30 gal drum breached
1226 30 minute WAIT TIME HAS ELAPSED.
1309 PPE CHECK IS SAT
1330 BAGGING OFF, BAGGING ON S818279
1358 Bag on complete
1415 Operators called in to inform ops center and SOS that this drum will be taking time to process due to the many cans that will need to be opened one at a time

Continue on next page B. Fordham

Int - Int Designee - 91018
92894

PROJECT NAME 1/24/13 NOTEBOOK NO.

0700 Assumed the WCRR SOM position. Jeneane Hernandez
0615 Attended the pre-job briefing conducted by SOS. Discussed memo on approval for sliding of empty/waste containers with team. Discussed safety and staying focused today, especially because some operators have worked four days straight.
0700 Met in meeting with TA54 SOM, Stands, WCRR and DVS was statused. Safety topic discussed. Ensure documents (e.g. daily rounds) are being filled out completely.
0730 Mode change complete. WCRR YARD/50-69 from WARM/WARM to OPERATIONS/OPERATIONS.
0735 Late entry 0600 extended shift order WCRR-SH-12 011 "daily checks for wounds". [illegible]
0755 Begins on first drum of the day.
0930 SOM attended PID at TA54 bld. 2047.
1030 SOM attended Solution Package Meeting held at TA50-54.
1200 SOM attended daily status meeting held at TA50-54.
1730 An FSR was initiated to repair the security door (fence) outside of 50-69. Item #3 on the round sheet was marked UNSAT.
1800 Mode change complete. WCRR YARD/50-69 from OPERATIONS/OPERATIONS to WARM/WARM.
1830 Securing the SOM position. Jeneane Hernandez

No further entries to this page.

SIGNATURE Jeneane Hernandez DATE 1/24 2013
READ AND UNDERSTOOD DATE 20

1.24.13 WCRR SOS LOG Book

0600 Assuming SOS Position [illegible]

0615 Conducted shift brief Discussed sliding of drums In transport Vehicle And In building

0635 shift brief Concluded.

0709 Reviewed Inside And outside Rounds.

0720 Mode change Complete

0757 Bagging on 90134 Final drum of day

0810 PPE Check

0848 Bagging off And bagging on 90885

0850 PPE Check sat

0930 PPE Check sat

1010 Bagging off And bagging on 90932

1040 PPE Check

1110 Bagging off And bagging on 5834480

1140 Inside personal notified of a 30 gallon sealed

1155 Drum has been breached.

1225 30 minute wait on sealed 30 gallon Flagged

1300 PPE check Sat.

1330 Bagging off and bagging on 8018279

1415 Operator Inside Entered that drum has a lot of Small Can that have to be opened on the Can opener may take longer time to process

1635 Reviewed Inside And outside Rounds

1705 bagging off Final drum of day

1706 late entrix Bagging off And bagging on 822302 1550 Gen

1800 mode change complete WCRRF In warm

1830 end of shift securing SOS Position [illegible]

HH

No further entries on this page.

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0040
Examination Date:	3/8/2013
Waste Container ID:	92682
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.: 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:	80 %

CCP Radiography Data Sheet

Waste Container ID: 92682

Section 3: Container Inventory and Comments (Detailed descriptions)

IM: Metal hardware, pipe component lid

AM:

OM:

OI:

C: Fiberboard liner sleeve, fiberboard

R:

XPM: Plastic bags, 90 mil plastic liner lid

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP): Plastic Liner Bag	2.0
Other: Fiberboard Liner (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	18.0
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	
Other Inorganic Materials (OI)	
Cellulosics (C):	6.0
Rubber (R):	
Plastics (waste materials) (XPM):	4.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	74.6
Soils (S):	
Total WMP Weight:	102.6

CCP Radiography Data Sheet

Waste Container ID: 92682

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

5833261

NDA 2000 Assay Report

Item Information

Item ID:	92682	Count Sequence Number:	22281
Operator:	D3PW2DK1\operator		
Assay Start:	3/14/2013 12:34:48 PM		
Description 1:	1LANDA1731		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 103.0 kg	Net:	103.0 kg
Container:	Volume: 208.0 l	Full:	80.0 %
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:	22281	Batch Number:	1LANDA1731
Assay Instrument:	MCS HENC #1	Location:	LANL TA-54
Analysis Method:	CCP-TP-063 v 14	Software Version:	NDA 2000 V.4.0
Item ID:	92682	Analysis Date:	3/14/2013

Net Weight	103000.0 g		
Pu mass	2.03E+001	+- 5.46E+000	g
TRU Alpha Activity	1.16E+001	+- 5.24E+000	Ci
TRU Activity Concentration	1.13E+005	+- 5.09E+004	nCi/g
Pu-239 Equivalent Activity	1.18E+001	+- 5.24E+000	Ci
Pu-239 FGE	1.85E+001	+- 4.89E+000	g
Decay heat	3.84E-001	+- 1.75E-001	W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	1.71E-001	1.22E-004	2.10E-005	2.23E-006
PU238	1.79E-002	3.09E-001	8.31E-002	1.89E-004
PU239	1.82E+001	1.14E+000	3.07E-001	6.98E-004
PU240	1.93E+000	4.43E-001	1.19E-001	2.70E-004
AM241	2.80E+000	9.71E+000	5.23E+000	7.74E-002
PU241	8.60E-002	8.94E+000	2.40E+000	5.46E-003
PU242	9.77E-002	3.88E-004	1.04E-004	0.00E+000
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	1.11E-006
U233	<LLD	<LLD	0.00E+000	7.83E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	2.19E-006
U238	<LLD	<LLD	0.00E+000	2.44E-005
AM243	6.39E-004	1.29E-004	2.28E-005	1.06E-005

Errors quoted at 1.000 sigma

Operator: Jim Barton Date: 3/18/13

ITR: [signature] Date: 3-18-13

Automated Independent Technical Review

Count Sequence Number: 22281 Batch Number: 1LANDA1731
Counter ID: MCS HENC #1
Container ID: 92682
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 3/14/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis	
No Add-a-Source warnings.	Ok
Section 2 - Passive Neutron Analysis	
Analysis Status: No errors.	Ok
- Error calculating the Ones Rate Pu-240 Effective MDA.	Not data affecting.
Curium/Californium Neutron Analysis complete with warnings.	
- The Cm/Cf Mass Variance is negative, Cm/Cf Mass Uncertainty set to zero so analysis could continue.	Ok
- The Pu-240 Eff. Mass Variance is negative, Pu-240 Eff. Mass Uncertainty set to zero so analysis could continue.	Ok
Cosmic Ray Rejection Analysis complete with warnings.	
- The CRR High-Z mass Mass Variance is negative, High-Z mass Uncertainty set to zero so analysis could continue.	Ok
Section 3 - Data Combiner Analysis	
Override enabled; Passive Neutron Pu and Gamma U data specified as input.	Passive Neutron Pu and Gamma U data specified as input.
Pu results taken from Passive Neutron data, U from Quantitative Gamma data.	
Results comparison test passed.	

Comments	Disposition
Section 4 - MGA Analysis Results are marked as invalid.	MGA analysis failed. 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 Chamber Date: 3-18-13

Attachment 4 – Flammable Gas Analysis Form

SCO 1049 Add 4 - Win XP SP3/Win 7 SP1
Excel 2003/2007/2010

Waste Container ID: **92682**

BDR Number: **LA13FG2028**

Sampling Date: **3/21/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	284.21	
74-82-8	Methane	142.14	U
67-56-1	Methanol	39.53	
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\130321c\
Data File : 92682.D
Acq On : 21 Mar 2013 1:04 pm (#1); 21-Mar-13, 13:04:11 (#2)
Operator : NW
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 21 13:13:11 2013
Quant Method : C:\msdchem\1\METHODS\vocgas.m
Quant Title : Flammable Gas Analysis
QLast Update : Thu Jan 24 09:52:49 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
3) Fluorobenzene	3.604	96	3758884	201.25	ppmv	0.04
15) Chlorobenzene-d5	5.930	117	3360302	177.00	ppmv	0.03
Target Compounds						Qvalue
1) Hydrogen	1.615	GC1	2020m	284.21	ppmv	
4) Methanol	0.854	31	15006m	39.53	ppmv	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Working Copy
Date: 1-23-13

ATTACHMENT 1
Page 1 of 4

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: 90286

6.2[4] Date Processed: 1-23-13

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] (S) TA-50-69 is in the OPERATION or WARM STANDBY MODE (TSR 1.2) ☑ OPERATIONS ☐ WARM STANDBY ☐ N/A

4.3[4][B] Platform Scale: Equipment No.: 019065
Cal. Due Date: 7-31-13

4.3[5][B] (S) Three 1-Liter containers carbon spheroids or MET-L-X in WCG: (SAC 5.10.1.7.1) ☑ YES ☐ NO ☐ N/A

4.3[6] (S) Stationary Fire Watch has been established:
(> 300 PE-Ci Equivalent Combustible)
(SAC 5.10.1.7.2) N/A
(Initial and Date)

4.3[7 [A] Parent Waste Container degraded, loss of integrity, or weighs greater than 468 lb but less than or equal to 624 lb:
☐ YES ☑ NO ☐ N/A

4.3[8][D] WCG glove and bag-in/bag-out bag inspection: ☑ SAT ☐ UNSAT ☐ N/A

Performed By: Brian Gallegos / [signature] / 267129 / 1-23-13
Waste Handling Tech (print) Signature Z # Date

ATTACHMENT 1
Page 2 of 4

4.1[6][B] Parent Waste Container No.: 90886

5.[18] Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable: 378.8 lb

6.2[5][A] Parent Drum Lead Blanket Weight (lb): .0 lb

6.2[5][B]/ 6.2[6] Total Parent Drum Weight (lb) 378.0 lb

6.2[7] ($) Total Parent Drum Weight < 624 lb (SR 4.5.1): ☑ SAT ☐ UNSAT

6.2[28] Approval to leave a parent drum attached to the WCG overnight:

N/A / / /
EWMO-FOD (print) Signature Z # Date

ATTACHMENT 1
Page 3 of 4

4.1[6][B] Parent Waste Container No.: 908846

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	92671		N	
10.1[4]	Daughter Drum Filter No.	JL-1150			
10.1[4]	Daughter Drum Bag Filter No.	L-6116		A	
10.1[4]	Daughter Drum Purchase Order No.	501011			
10.1[13][C]	WCG Fire Watch Stationed		☐ YES	☐ NO	☑ N/A
10.1[14][C][d]3/11.1[3]	WCG Fire Watch Secured		☐ YES	☐ NO	☑ N/A
10.2[4]	POC bag-on bag: Manufacturer	BOP			
	Model No.	WPVC15-25PVC			
	Serial No.	L-6131			
	Date of Manufacture	6/12			
10.2[5]	POC ID No	92672			
10.2[7][B]/10.2[6]	POC Item Description	SALTS			
10.2[13]	POC Assembly closed per Manufacturer's instructions. (Initial and Z#)	BG 267129			
10.2[14]	POC Assembly Gross Weight (lb)	386.6			
10.2[15]	POC Rad. Survey Results (mrem/hr)	1000			
10.3[3][A]	Approx. Containerized Liquid Vol./Units	N/A		N	
10.3[5][A]	Free Liquid Volume/Units	16 oz.			
10.3[7][A]	Opaque/Non-penetrable Item Description:	N/A		A	
10.3[9][A]	PCB-contaminated Waste Description				
10.3[9][B]	PCB Item ID No.				
10.3[10]	Remaining Waste Description	SEE COMMENTS			
10.3[13]/10.4[10]/10.5[4]/10.6[8]	Daughter Drum % Full (%)	50%			
10.5[3]/10.6[2]	Description Waste Added During Processing	BAG OUT STUBS			

ATTACHMENT 1
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4.1[6][B] Parent Waste Container No.: 90886

Comments: POC LIDS, ROOM TRASH, PLASTICS, CARDBOARD, SALTS, KITTY-LITTER, NEUTRALIZER

11.1[1] Performed By: BRIAN GALLEGOS / [signature] / 267129 / 1-23-13
Waste Handling Tech (print) Signature Z # Date

11.1[7] Reviewed By: Gilbert Martinez / [signature] / 149235 / 1-23-13 0810
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.: 413659
Lot No.: 208849
Manufacture Date: 10

5.[8] Overpack filtered vent information:

Manufacturer: Nucf.
Model No.: 013
Serial No.: [illegible]-43
Manufacture Date: 9/11

Overpack filtered vent and 2 in. bung torque wrench information:

	Filtered Vent	2 in. Bung
M&TE No.:	1240694	038369
Cal. Expiration Date:	9-26-13	12-18-13
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 1104TM 1-22-13
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: Steven Mendoza / Steven Mendoza 1104TM 1-22-13
Waste Handling Technician (print) Signature Z # Date

8.1[5] ☐ Deficiencies identified and submitted (e.g., PCR or FSR system)
☑ No deficiencies

8.1[7] Reviewed By: Gilbert Martinez / [illegible] 1493XX 1-24-13
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.: 92673

7.[25] Overpack drum closure ring torque wrench information:
M&TE No.: 038367
Cal. Expiration Date: 3-16-13
Range in ft-lb: 10-80
Tolerance: ±3% cw ±6% ccw

7.[26] Torque wrench listed above is within the acceptable ranges as displayed on the calibration certificate. ☑ Yes ☐ No

Performed By: BRIAN GALLEGOS / Bri Gallegos / 267129 1-23-13
Waste Handling Technician (print) Signature Z # Date

7.[28] Overpack drum closure ring torque value: 60 ft-lb

7.[31] Threaded lug of the drum closure ring is not touching the jam nut and the locking ring lugs are not touching. ☑ SAT ☐ UNSAT

7.[36][B] Platform scale serial number: 019065
Platform scale calibration expiration date: 7-31-13

7.[36][D] 85-gal overpack drum gross weight (lb): 325.0 lb

Comments: N/C

8.1[1] Performed By: BRIAN GALLEGOS / Bri Gallegos / 267129 1-23-13
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 / G Martinez / 149285 1-24-13
Supervisor or designee (print) Signature Z # Date

Attachment 1. Checklist for the preparation of a new 55-Gallon Drum Assembly

Drum ID#: 92671

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 #: 50101
Lot #: 233370
Date of Manufacture: 12

2. Drum Liner Bag/Filter Assembly:

- [x] Place yellow vinyl tape, with smear centered on tape, over filter
- [x] Fill bag with air from compressed air source
- [x] Inspect bag for damage, cuts, or leaks by looking, listening, and feeling
  - NOTE: Reject or repair damaged, cut, or leaking bags
- [x] Stretch bag's bungee cord
- [x] Inspect bungee cord
  - NOTE: Reject bag if bungee cord is broken or damaged

RECORD bag filter information:

Manufacturer: BOP
Model #: 6CPVC 1.5-2 SPVC
Serial #: L-4116
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 #: SL-1150
Date of Manufacture: 10/11

RECORD torque wrench information:

Filter torque wrench:		Jam Nut / Bung torque wrench:	
M&TE ID #:	046194	M&TE ID #:	038369
Cal Expiration Date:	9-26-13	Cal Expiration Date:	12-19-13
Range (ft-lbs or in-lbs):	40-200	Range (ft-lbs or in-lbs):	10-80
Tolerance:	±4% cw ±6% ccw	Tolerance:	±3% cw ±4% 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 Rom Z#: 182723

5. Weigh Drum Assembly

RECORD weight information:

Tare wtight (lbs) 75.6
File ID #: 019065

- [x] Write the tare weight on drum using permanent marker

6. Label Drum Assembly

- [x] Place 1 barcode drum ID label to the left of the drum seam, ~6" from drum bottom
- [x] Place 1 barcode drum ID label in the center of the drum lid

RECORD drum ID# at the top of Attachments 1 and 2

Operator Print: Michael Romero Operator Sign: Michael Rom Z#: 182723 Date: 1-17-13

Verifier Print: BRIAN GALLEGOS Verifier Sign: Brian Gallegos Z#: 267129 Date: 1-23-13

Attachment 2. Checklist for the Closing of a 55-Gallon Drum Assembly

DRUM ID#: 92671

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 #: 038367

Cal expiration date: 3-16-13

Range/ Value (ft-lbs): 10-80

Tolerance ±3% CW3 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): 178.8

Scale ID#: 019065

✓ Using a permanent marker, write the gross weight on the drum lid.

4. FINALIZE DOCUMENTATION

✓ Have RCT monitor drum prior to moving to storage area.

✓ Place attachment 1 and 2 and HMPT Tag into a protective sleeve.

✓ Complete TWSR.

Operator Print/Sign: B. Bassy Date: 1-23-13

Verifier Print/Sign: Don Pacheco Date: 01-23-13

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WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Production Control

Container ID: 90886 Container Type: POC Gross Weight (lbs): 374

Container Seal #: None Filter Prefix: None Filter Serial #: EL-338; EL-364

Waste Stream: LA-MHD01.001 Certified RTR BDR: No BDR

TWSR Comments: PARENT #S833261 WTS-12STD-828

Total PE-Ci Activity: 1.39E+00 Equivalent Combustible PE-Ci: 5.22E-01 AM-241 PE-Ci: 1.26E-01

Total Fissile Gram Equivalents: 14.7 Total Surface Dose Rate (mrem/hr): 1

EPA Code(s): D008 D007 D009 VR 10/3/12

NCR RTR/NDA Comment: None

RTR Pre-Screen Date: None Comment: None

Certified RTR Comment: None

Prohibited Items: ☐ Sealed > 4 Liters ☐ Liquid ☐ Pressurized Container ☐ Impenetrable Item ☐ Other

Security Determination: ☑ Green ☐ Yellow

Remediation Determination: ☐ VE ☐ PID ☐ Split ☑ Repack

Estimated 30-cm Dose Rate (mrem/hr): ☐ <100 ☑ >100 and <1,000 ☐ >1,000 and <10,000 ☐ >10,000

TRUCON Code: TBD Production Control Comments: Need to add EPA Codes D007 & D009

Nitrate salts mixed with Waste Lock 770® from previous repack campaign. A minimum of 1:2 volume of kitty litter/zeolite must be mixed with 1.0 volume of nitrate salts

Performed By: Susan Rainsey / Production Control (Print) Signature: Susan B. Rainsey Z Number: 100681 Date: 9/10/12

WDP Engineering

Chemicals Present (e.g., pyrophorics, acids, bases, shock sensitive, organic liquids, peroxides, crown ethers): ☐ Yes ☑ No ☐ Unknown

Processing Determination: ☑ Accept ☐ Reject

WDP Engineering Comments: Nitrate Salts – POC

Net Wt: 64 lb Parent drum (SEDS attached) was part of WCRR nitrate salt repack campaign using Waste Lock 770®. This resulting daughter POC is being repacked to adjust the admixture/nitrate salt ratio. Nitrate salts carry waste codes for [redacted] and mercury. No chemicals present. May require RWP for > 100 + < 1000 mrem/hr

Performed By: Valerie Rhodes / WDP Engineering (Print) Signature: Valerie Rhodes Z Number: 112609 Date: 10/3/12

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: Jose Jerez Z Number: 221452 Date: 10-9-12

Z# 249750 10/15/12

HS REVIEW: HS 206362 10.4.12

Noncertified TRU Waste Drum Item Information

DrumID: 015690

Item No	ItemID	Process Status	Net Wt (kg)	Matrix	Mass Code	SNM (g)	MT	Auth (Pg/Ln)	Comments
1	IXFS764-OX35		8.180	NITRATE SALTS		11.36	52	11/6	
2	IXFS772FA		8.180	NITRATE SALTS		2.53	54	11/6	
3	IXFS771FA		16.140	NITRATE SALTS		3.78	52	11/6	
4	IXFS767FA		8.820	NITRATE SALTS		8.34	53	11/6	
5	IXFS773-FA		9.550	NITRATE SALTS		8.41	53	11/6	
6	IXFS-774A		3.120	NITRATE SALTS		0.77	52	11/6	
7	IXFS775-OX36		16.450	NITRATE SALTS		2.71	52	11/6/	
8	IXFS776-P1-NE1		8.180	NITRATE SALTS		3.87	52	11/6	
9	IXFS-777-NW-1		7.950	NITRATE SALTS		4.93	52	11/6	
10	IXFS-778-NE-1		7.500	NITRATE SALTS			53	11/6	
11	IXFS-779-FA		17.830	NITRATE SALTS		11.65	52	11/6	
12	IXFS-783FA		3.410	NITRATE SALTS		8.64	52	11/6	

Noncertified Waste Drum Material Summary

Gross Wt (kg): 187.5

Material Type	SNM (grams)	Items Net Wt (kg)
52	49.71	81.26
53	16.75	25.87
54	2.53	8.18
Totals	68.99	115.31

ATTACHMENT 1
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TA-54 AREA G WASTE CONTAINER HYDROGEN/VOC SAMPLE ANALYSIS DATA SHEET

5.[1] Sample Date: 10·3·12

Container No. (5.[1])	908816					
Container type sampled (e.g., 55-gal, 85-gal, 110-gal, or SWB) (5.[1])	55gal					
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])	166.98 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: CM 10·4·12 ~~None~~ 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 : 90886.D
Acq On : 3 Oct 2012 1:51 pm (#1); 3 Oct 2012 1:50 pm (#2)
Operator : SA
Sample :
InstName : Unit 8
Misc : 55 GALLON LFL DRUM THROUGH FILTER-19DS FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Oct 03 13:59:10 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	2212333	206.00 ppm	0.00
15) Chlorobenzene d5	5.936	117	1981341	179.50 ppm	0.00
Target Compounds					Qvalue
1) Hydrogen	5.306	GC1	41258m	166.98 ppm	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Vocgas.m Wed Oct 03 13:59:17 2012

13

0600 Assuming WCRRF operations center - CVelarde
0615 Pre job briefing being conducted by SOS.
0616 Starting outside rounds.
0620 Starting inside rounds
0638 Item 41 is OOS, POD in place, OK to continue
0641 Completed outside rounds.
0710 Inside and outside rounds signed off by SOS.
0825 Permission granted to lower vehicle access gates to start loading ~~vehicle access gates~~ CV 1-23-13 transport vehicle.
0904 Vehicle access gates have been restored. movement ~~comp~~ CV 1-23-13 complete to transport vehicle.
1000 mode change performed TASD-69 and WCRRF yard now in operations.
1005 Inventory control having problems with labels. Contacting Wooldridge
1007 Permission granted to lower vehicle access gates to begin off loading of transport vehicle.
1125 ASSUMING OPERATIONS CENTER DUTIES UNDER THE OJT INSTRUCTION OF CLARISSA VELARDE OCO OSF - B. FORDHAM
1126 BAGGING ON DRUM # 90886
1136 BAG ON OF # 90886 complete
1137 PPE CHECK INSIDE FACILITY IS complete
1158 RCT'S HAVE PAUSED WORK INSIDE THE FACILY, OPERATORS HAVE INFORMED THE SOS THAT DRUM # 90886 HAS POTENTIAL CRYSTALIZATION, AS IH WILL MAKE A DETERMINATION TO CONTINUE WORK.
1205 WORK HAS COMENCED PER IH EVALUATION
1225 OPERATORS ARE BAGGING OFF 1 DAUGHTER AND 1 POC, AND BAGGING ON DRUM # 90929.
1255 BAG ON Complete
1300 OPERATORS' COMING OUT OF FACILITY FOR LUNCH
1302 ENGINEERS ENTERING FACILITY TO SCOPE WORK FOR DRUMLIFT
1305 TURNING OVER OPERATIONS CENTER TO CLARISSA VELARDE.
1306 ~~BKelarde~~ CV 1-23-13 Shift turnover never performed B Fordham was under instruction OCO position still occupied under CVelarde.
Continued ~~from~~ CV 1-23-13 on ~~page~~ CV 1-23-13 next page - CVelarde

53 PROJECT NAME 1/23/13 NOTEBOOK NO

0000 Assumed the WCRR SOM position and received the previous shift turnover. Genevieve Mendez
0015 Attended the pre-job briefing conducted by SOS SOM discussed importance of SOS being aware of not allowing employees to exceed work hours per conduct of operations.
0045 SOM attending mandatory all hands meeting at the TSSIB auditorium.
0955 SOM arrived back from meeting.
1000 Mode change complete. WCRR YARD/50 to 9 from WARM/WARM to OPERATIONS/OPERATIONS
1002 Call in with TAS4 SOM. Status WCRR and DVS was started as well.
1005 Notified by SOS that inventory control is causing problems printing shipping labels. A request to WCATS will be submitted
1158 Notified by OCO that RP-1 paused work inside due to a patient drum containing crystal like substance. Energy Solutions is en route to investigate.
1305 Energy Solutions ES deemed crystal like substance to be frozen salts. Drum had been re-mediate at WCRR before and is from SP #72. ES deemed drum safe to work. Operations resumed.
1255 CSE J. West going into 50 to 9 to D&D drum lift.
1745 Operations processed 4 patients resulting in 4 daughters and 1 POC.
1755 Mode change complete. WCRR YARD/50 to 9 from OPERATIONS/OPERATIONS to WARM/WARM.
1830 Securing the WCRR SOM position. Genevieve Mendez

1-23-13

No further entries this page.

Genevieve Mendez 1/23 13

SIGNATURE DATE
READ AND UNDERSTOOD DATE

1-23-13 WCRF SOS LOG BOOK

0000 Assuming SOS Position [illegible]

0015 Conducted Shift Brief EP-WCRF-RM-ACP-0202, R3 And EP DIV-DOP-20086, R1 Also talked About Fatigue.

0045 Concluded Shift Brief Operators Already Hot Hand washing

0710 Received Tripod Injuries Fences

0955 Issued back from Hot hand washing

1000 Mode Change Complete WCRF In operations.

1003 Emergency Control noticed that They are having issues with Label Maker (Shorters) Contacted Waste Mgt on Issue

1126 bagging on first drum of day labels will be printed to 1 of 46 Drum # 70550 PPE check sat.

1.23.13 1157 PPE-Check

1158 RCT have passed work In facility Drum 90886 has Potential Crystalization as it ages Determination ok to Proceed Pre T-4

1205 bagging off and bagging on 90929

1300 Operators breaking for lunch

1400 Operators entering facility from lunch

1500 Bagging off and bagging on ~~[illegible]~~ 90969

1508 PPE Check

1-04 Bagging on and bagging off Bagged on 90957

1600 Inside And outside Rounds Reviewed ~~90957~~ 6m 1.27.13

1704 Bagging off last drum of day.

1755 Mode Changes Complete WCRF In warm.

1.23.13 1830 end of shift Securing SOS Position Locked on

RPG No Entry

Entries on this Page

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0083
Examination Date:	6/18/2013
Waste Container ID:	92671
Video/Audio Recorded Media Number:	LA-RTR2-13-0083 C&D
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:	LA225
Waste Matrix Code:	S5400
Waste Stream I.D.:	LA-MHD01.001
Waste Container Weights:	Gross Wt.: 81.0 kg Tare Wt.: 33.4 kg Net Wt.: 47.6 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: 92671

Section 3: Container Inventory and Comments (Detailed descriptions)

IM: Hardware, metal lid

AM:

OM:

OI:

C: Fiberboard liner sleeve, fiberboard

R:

XPM: Liner lid, plastic bags

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP): Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	20.0
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	
Other Inorganic Materials (OI)	
Cellulosics (C):	10.0
Rubber (R):	
Plastics (waste materials) (XPM):	5.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	12.6
Soils (S):	
Total WMP Weight:	47.6

CCP Radiography Data Sheet

Waste Container ID: 92671

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	6/18/2013

NDA 2000 Assay Report

Item Information

Item ID:	92671	Count Sequence Number:	23053
Operator:	D3PW2DK1\operator		
Assay Start:	6/20/2013 2:23:27 PM		
Description 1:	1LANDA1794		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6, Not Precision		
Matrix Type:	Debris S5000		
Container Type:	55 gallon drum		
Weight:	Net: 47.6 kg	Net:	47.6 kg
Container:	Volume: 208.0 l	Full:	90.0 %
Density:	0.250 kg /l		

System Configuration

Counter:	MCS HENC #1
Count Type:	Item Count
Collimator/Geometry Setting:	All Banks On (GE - 0

Errors quoted at 1.000 sigma

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number: 23053
Assay Instrument: MCS-HENC #1
Analysis Method: CCP-TP-063 v 14
Item ID: 92671

Batch Number: 1LANDA1794
Location: LANL TA-54
Software Version: NDA 2000 V.4.0
Analysis Date: 6/20/2013

Net Weight	47600.0 g		
Pu mass	9.53E-001	+-	3.50E-001 g
TRU Alpha Activity	1.07E+000	+-	5.19E-001 Ci
TRU Activity Concentration	2.24E+004	+-	1.09E+004 nCi/g
Pu-239 Equivalent Activity	1.07E+000	+-	5.19E-001 Ci
Pu-239 FGE	8.96E-001	+-	3.26E-001 g
Decay heat	3.54E-002	+-	1.73E-002 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	1.28E-002	9.13E-006	1.02E-006	7.52E-007
PU238	1.40E-004	2.42E-003	8.89E-004	4.97E-005
PU239	8.86E-001	5.57E-002	2.05E-002	1.14E-003
PU240	6.48E-002	1.49E-002	5.48E-003	3.06E-004
AM241	2.86E-001	9.92E-001	5.19E-001	1.63E-002
PU241	1.45E-003	1.50E-001	5.53E-002	3.09E-003
PU242	3.72E-004	1.48E-006	5.43E-007	0.00E+000
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	2.69E-007
U233	<LLD	<LLD	0.00E+000	1.50E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	4.17E-007
U238	<LLD	<LLD	0.00E+000	4.67E-006
AM243	6.09E-005	1.23E-005	1.47E-006	1.81E-006

Errors quoted at 1.000 sigma

DA 6.27.13

Operator: D E R. [illegible] Date: 6/6.27.13

ITR: Ann Burton Date: 6/28/13

Automated Independent Technical Review

Count Sequence Number: 23053
Batch Number: 1LANDA1794
Counter ID: MCS HENC #1
Container ID: 92671
Waste Matrix Code: Debris S5000
Count Type:
Sequence Type:
Assay Date: 6/20/2013

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; Passive Neutron Pu and Gamma U data specified as input.	Passive Neutron Pu and Gamma U data specified as input.
Pu results taken from Passive Neutron data, U from Quantitative Gamma data.	
Results comparison test passed.	
Section 4 - MGA Analysis	MGA analysis failed. AK isotopics applied. The AK information utilized was provided by Steve Schafer, AKE, and consists of data from CCP-AK-LANL-006, AK Source Document M237. MT-52,53,54
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 Chamber Date: 6-26-13

Attachment 4 – Flammable Gas Analysis Form

SCO 1049 Add 4 - Win XP SP3/Win 7 SP1
Excel 2003/2007/2010

Waste Container ID: **92671**

BDR Number: **LA13FG12054**

Sampling Date: **6/24/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	55.18	
74-82-8	Methane	9.63	U
67-56-1	Methanol	54.41	
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	6.21	
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\130624c\
Data File : 92671.D
Acq On : 24 Jun 2013 10:41 am
Operator : GR
Sample :
Misc : 55 GALLON DRUM THOUGH FILTER. (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jun 24 10:50:53 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	7597656	207.75 ppmv	0.00
15) Chlorobenzene-d5	6.639	117	6056726	178.75 ppmv	0.00
Target Compounds					Qvalue
1) Hydrogen	1.903	GC1	15740m	55.18 ppmv	
4) Methanol	0.827	31	21845	54.41 ppmv	100
17) Toluene	5.580	92	151881	6.21 ppmv	96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

CCP Radiography Data Sheet

S833261

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0021
Examination Date:	2/7/2013
Waste Container ID:	92672
Video/Audio Recorded Media Number:	LA-RTR2-13-0021 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 12
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3110
Waste Stream I.D.:	LA-MIN02-V.001
Waste Container Weights:	Gross Wt.: 175.5 kg Tare Wt.: 145.1 kg Net Wt.: 30.4 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

Waste Container ID: 92672

Section 3: Container Inventory and Comments (Detailed descriptions)

IM: Scrap metal

AM:

OM:

OI:

C:

R:

XPM:

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	109.0
Plastics (PP): Rigid Liner/Lid Liner Bag (Inside POC)	8.1
Other: Fiberboard (CP), Liner/Sleeve(Inside POC)	28.0
Total Packaging Weight	145.1
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	0.1
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	
Organic Matrix (OR):	
Inorganic Matrix (IN):	30.3
Soils (S):	
Total WMP Weight:	30.4

CCP Radiography Data Sheet

Waste Container ID: 92672

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:

Aaron Elliott		2/7/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	92672	Count Sequence Number:	15009
Operator:	DCLTD231\Operator		
Assay Start:	2/8/2013 9:56:24 AM		
Description 1:	2LANDA1095		
Description 2:	POC- 175.5		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gal Drum		
Weight:	Net: 30.4 kg	Net:	30.4 kg
Container:	Volume: 208.0 l	Full:	95.0 %
Density:	0.748 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:	15009	Batch Number:	2LANDA1095
Assay Instrument:	HENC #2	Location:	LANL TA-54
Analysis Method:	CCP-TP-063 v 14	Software Version:	NDA 2000 V.4.0
Item ID:	92672	Analysis Date:	2/8/2013

Net Weight	30400.0 g			
Pu mass	5.85E+000	+-	1.31E+000	g
TRU Alpha Activity	2.64E+000	+-	1.20E+000	Ci
TRU Activity Concentration	8.68E+004	+-	3.95E+004	nCi/g
Pu-239 Equivalent Activity	2.66E+000	+-	1.20E+000	Ci
Pu-239 FGE	5.49E+000	+-	1.22E+000	g
Decay heat	8.72E-002	+-	4.01E-002	W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	2.90E-002	2.07E-005	4.01E-006	1.72E-006
PU238	7.53E-004	1.30E-002	2.92E-003	4.77E-005
PU239	5.45E+000	3.43E-001	7.69E-002	1.26E-003
PU240	3.83E-001	8.81E-002	1.98E-002	3.22E-004
AM241	6.32E-001	2.19E+000	1.20E+000	3.11E-002
PU241	8.70E-003	9.04E-001	2.03E-001	3.31E-003
PU242	2.05E-003	8.13E-006	1.82E-006	0.00E+000
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	3.11E-007
U233	<LLD	<LLD	0.00E+000	3.51E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	1.17E-006
U238	<LLD	<LLD	0.00E+000	8.50E-006
CM243	2.51E-007	1.31E-005	3.35E-006	7.21E-006

Errors quoted at 1.000 sigma

Operator: _____ Date: 2/13/13

ITR: _____ Date: 2-13-2013

Automated Independent Technical Review

Count Sequence Number: 15009 Batch Number: 2LANDA1095
Counter ID: HENC #2
Container ID: 92672
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 2/8/2013

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-52,53,54
Section 5 - Gamma Analysis Analysis Status: No errors.	Ok
Miscellaneous	No additional nuclides contributing to 95% of the radiological hazard identified.

Expert Review by: Sheila Chandler Date: 2-12-13

Waste Container ID: **92672**

BDR Number: **LA13FG2033**

Sampling Date: **4/3/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	1146.55	
74-82-8	Methane	142.14	U
67-56-1	Methanol	36.06	
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\130403c\
Data File : 92672.D
Acq On : 3 Apr 2013 2:35 pm (#1); 03-Apr-13, 14:34:57 (#2)
Operator : GR
Sample :
Misc : POC THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 03 14:50:15 2013
Quant Method : C:\msdchem\1\METHODS\vocgas.m
Quant Title : Flammable Gas Analysis
QLast Update : Thu Jan 24 09:52:49 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
3) Fluorobenzene	3.604	96	3659680	201.25	ppmv	0.04
15) Chlorobenzene-d5	5.927	117	3189461	177.00	ppmv	0.03
Target Compounds						Qvalue
1) Hydrogen	1.610	GC1	8149m	1146.55	ppmv	
4) Methanol	0.854	31	13330	36.06	ppmv	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

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