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NMED
Hazardous Waste Bureau

Los Alamos
NATIONAL LABORATORY
EST. 1943

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

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

Date: SEP 0 4 2014
Symbol: ENV-DO-14-0243
LAUR: 14-26711
Locates Action No.: Not Applicable

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

Dear Mr. Kieling:

Subject: Transmittal of Remediation and Repackaging Documentation for Nitrate Salt-Bearing Waste Containers – Package 11

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 eleventh submittal in response to comment 5 in the June 10, 2014 email request. Because documentation to fulfill the request is still being compiled, the response to comment 5 of the email request will be transmitted in packages as they become available.

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Enclosure 1 includes the pertinent documentation for fifteen (15) of the original 267 parent waste containers and all associated daughter and granddaughter waste containers. The enclosed documentation for each parent waste container is separated by a tab and documentation for the daughter containers are highlighted within each tab by colored pages. These parent containers and their daughter and granddaughter containers were listed in the *Nitrate Salt Drums with Associated Waste Stream and Location Data for 267 Original Parent and 707 Current/Remediated Daughter Containers* table (as revised and submitted to the NMED on July 17, 2014).

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

Sincerely,

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

Sincerely,

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

AMD:GET:MPH:LVH/kt

Enclosures: (1) Remediation and Repacking Documentation for Nitrate Salt-Bearing Waste Containers – Package 11

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

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

Remediation and Repackaging Documentation for Nitrate Salt-Bearing Waste Containers – Package 11
ENV-DO-14-0243
LA-UR-14-26711

September 2014

Los Alamos
NATIONAL LABORATORY
EST. 1943

ENCLOSURE 1

Remediation and Repacking Documentation for Nitrate Salt-Bearing Waste Containers – Package 11

ENV-DO-14-0243

LA-UR-14-26711

Date: SEP 0 4 2014

ParentID	Intermediate Daughters	PKG_ID	Overpacked Into
S835372		94078	
S835372		94079	
S841240		68337	
S841240		68387	
S841251		69280	SB50431
S841251		69298	
S841292		68473	
S841292		68484	
S841314		68411	
S841314		68414	
S841320		68394	
S841320		68467	
S841320		68468	
S841627		69553	
S841627		69616	
S842181		68540	
S842181		68552	
S842181		68553	
S842181		68577	
S842181		68583	SB50037
S842213		68315	SB02204
S842213		68339	
S842234		68435	
S842234		68465	
S842234		68466	
S842463		68380	
S842463		68396	SB50109
S842463		68408	SB02198
S842526		68509	SB50018
S842526		69060	SB50100
S842526		69067	SB50015
S842528		94151	
S842528		94152	
S843528		68500	
S843528		68504	
S843593		68547	
S843593		68551	

S835372

S835372

Container Pr 748494

File Options Reports Help

S835372

748494	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

S835372

- S835372
  - 94078
  - 94079
  - 94080 - EMPTY

Working Copy
Date: 7.25.13

ATTACHMENT 1
Page 1 of 4

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: S835372

6.2[4] Date Processed: 7-25-13

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: D007, D008, D009

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

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

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

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

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

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

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

Performed By: Brian Gallegos, Bri Gallegos 267129 7-25-13
Waste Handling Tech (print) Signature Z # Date

ATTACHMENT 1
Page 2 of 4

4.1[6][B]	Parent Waste Container No.: S835372	
5.[18]	Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable:	351.6 lb
6.2[5][A]	Parent Drum Lead Blanket Weight (lb):	120 lb
6.2[5][B]/ 6.2[6]	Total Parent Drum Weight (lb)	471.6 lb
6.2[7]	(S) Total Parent Drum Weight < 624 lb (SR 4.5.1):	☑ SAT ☐ UNSAT
6.2[28]	Approval to leave a parent drum attached to the WCG overnight:	

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

ATTACHMENT 1

Page 3 of 4

4.1[6][B] Parent Waste Container No.: SB3553 72

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	94078	94079		
10.1[4]	Daughter Drum Filter No.	KL-518	KL-524	N	
10.1[4]	Daughter Drum Bag Filter No.	L-8188	L-8244		A
10.1[4]	Daughter Drum Purchase Order No.	501103	501103		
10.1[13][C]	WCG Fire Watch Stationed		☐ YES	☐ NO	☒ N/A
10.1[14][C][d]3/11.1[3]	WCG Fire Watch Secured		☐ YES	☐ NO	☒ N/A
10.2[4]	POC bag-on bag: Manufacturer				
	Model No.				
	Serial No.				
	Date of Manufacture				
10.2[5]	POC ID No				
10.2[7][B]/10.2[6]	POC Item Description		N		
10.2[13]	POC Assembly closed per Manufacturer's instructions. (Initial and Z#)			A	
10.2[14]	POC Assembly Gross Weight (lb)				
10.2[15]	POC Rad. Survey Results (mrem/hr)				
10.3[3][A]	Approx. Containerized Liquid Vol./Units				
10.3[5][A]	Free Liquid Volume/Units	4Gallons	1Gallons		
10.3[7][A]	Opaque/Non-penetrable Item Description:	~~Lead in shielding~~ 7-25-13	Lead shielding		
10.3[9][A]	PCB-contaminated Waste Description	N			
10.3[9][B]	PCB Item ID No.		A	N	
10.3[10]	Remaining Waste Description	see comments	see Comments		A
10.3[13]/10.4[10]/ 10.5[4]/10.6[10]	Daughter Drum % Full (%)	75%	100%		
10.5[3]/10.6[2]	Description Waste Added During Processing	kitty litter shut outs thru Armor gloves	kitty litter shut outs		

ATTACHMENT 1
Page 4 of 4

4.1[6][B] Parent Waste Container No.: S835372

Comments: Hex Armors, plastic, Kitty litter, Nitrate salts
4 gallons of Free liquid unable to neautralize But
was absorbed with Kitty litter, polly liner Wel

11.1[1] Performed By: Edward Martinez, [signature], 23994, 7-26-13
Waste Handling Tech (print) Signature Z # Date

11.1[7] Reviewed By: G Mk, [signature], 1492351 8/5/13 0845
SOS or designee (print) Signature Z # Date/Time

ATTACHMENT 2
Page 1 of 1

Working Copy
Date 7-24-13

WCRRF OVERPACK DRUM ASSEMBLY PREPARATION DATA SHEET

5.[3] Overpack drum information:

Purchase Order No.: 501323
Lot No.: 0238025
Manufacture Date: 2013

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

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

Overpack filtered vent information:

Manufacturer: NUCFIL
Model No.: 013
Serial No.: 32-1808
Manufacture Date: 10/11

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

5.[11] Performed By: BRIAN GALLEGOS / B. Gallegos / 267129 7-24-13
Waste Handling Technician (print) Signature Z # Date

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

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

Comments: N/C

8.1[1] Performed By: BRIAN GALLEGOS / B. Gallegos / 267129 7-24-13
Waste Handling Technician (print) Signature Z # Date

8.1[6] Reviewed By: G Mk / G Mk / 149335 8/5/13
Supervisor or designee (print) Signature Z # Date

Working Copy
Date: 7-25-13 EE

ATTACHMENT 5
Page 1 of 1

WCRRF OVERPACK DRUM CLOSURE DATA SHEET

7.[18] Overpack Drum Unique Identifier No.: 94080

7.[24] Overpack drum closure ring torque wrench information:
M&TE No.: 038373
Cal. Expiration Date: 09/11/2013
Range in ft-lb: 10-80
Tolerance: +/-3% CW and +/-6% CCW

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

Performed By: Edward Martinez (Waste Handling Technician (print)) (Signature) 1258911 (Z #) 7-25-13 (Date)

7.[27] Overpack drum closure ring torque value: 30 ft-lb

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

7.[35][B] Platform scale serial number: 019065
Platform scale calibration expiration date: 10-14-14

7.[35][D] 85-gal overpack drum gross weight (lb): 179.2 lb

Comments: N/C

8.1[1] Performed By: Edward Martinez (Waste Handling Technician (print)) (Signature) 1258911 (Z #) 7-26-13 (Date)

8.1[7] Reviewed By: (Supervisor or designee (print)) (Signature) 1149238 (Z #) 8/5/13 (Date)

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

Drum ID#: 94078

1. Drum/Lid Assembly

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

RECORD drum information:

Purchase Request #: 501103
Lot #: 02347666
Date of Manufacture: 2013

2. Drum Liner Bag/Filter Assembly:

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

RECORD bag filter information:

Manufacturer: BOP
Model #: WCRC LS-SAC
Serial #: L-91858
Date of Manufacture: 3-13

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

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

4. Install Lid/Drum Filter

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

RECORD drum filter information:

Manufacturer: Nucfil
Model #: 01ADS
Serial #: KL-518
Date of Manufacture: 11-11

RECORD torque wrench information:

Filter torque wrench:		Jam Nut / Bung torque wrench:	
M&TE ID #:	100216	M&TE ID #:	038369
Cal Expiration Date:	12-18-13	Cal Expiration Date:	12-18-13
Range (ft-lbs or in-lbs):	40-200	Range (ft-lbs or in-lbs):	10-80
Tolerance:	+1.48 or -1.6 ft-lbs	Tolerance:	+1.54 or -1.6 ft-lbs

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

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: Zachariah Babb Operator Sign: [signature] ZS: 228826 Date: 7-26-13
Verifier Print: Edward Mitz Verifier Sign: [signature] ZS: 239911 Date: 7-26-13

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

DRUM ID#: 94078

1. LID INSTALLATION

NOTE: Install lid per manufacturer's instructions

✓ Mount lid with filter directly over drum seam.

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

✓ Engage bolt and nut and torque per manufactures instructions.

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

✓ Tighten jam nut.

Record torque wrench information:

MT&E #: 038373

Cal expiration date: 9/11/2013

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

— Tolerance +/- 3% CW and +/- 6% CCW

2. DRUM LABELING

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

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

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

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

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

RCRA Label:

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

OR

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

NOTE: Check only one of the above two boxes.

3. WEIGH DRUM ASSEMBLY

Record weight information:

Gross Weight(lbs): 227.2

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: 7-26-13

Verifier Print/Sign: Kevin Belwcak Date: 7-26-13

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

Drum ID#: 94079

1. Drum/Lid Assembly

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

RECORD drum information:
- Purchase Request #: 501103
- Lot #: 0234766
- 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 #: KPNC 1-B-25PVC
- Serial #: 4-82-44
- Date of Manufacture: 3-13

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

- [x] Inspect cardboard liner/plastic liner (circle type of liner used)
  - NOTE: Reject any damaged liners
- [x] Place cardboard/plastic liner into drum liner bag/filter assembly
- [x] Line up 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: Nelson
- Model #: 01905
- Serial #: K1-524
- Date of Manufacture: 11-11

RECORD torque wrench information:

Filter torque wrench:
- M&TE ID #: 100216
- Cal Expiration Date: 12-18-12
- Range (ft-lbs or in-lbs): 40-200
- Tolerance: ±1.4 new ft-lbs

Jam Nut / Bung torque wrench:
- M&TE ID #: 038569
- Cal Expiration Date: 12-18-13
- Range (ft-lbs or in-lbs): 40-80
- Tolerance: ±1.2 new ft-lbs

Torque wrenches listed above are within the acceptable ranges as displayed on the calibration certificate.
☐ Yes ☐ No
Print Name: [illegible] Signature [illegible] ZS: 116662

5. Weigh Drum Assembly

RECORD weight information
- Tare wight (lbs) 76.2
- File ID #: 019045
- [x] Write the tare weight on drum using permanent marker

6. Label Drum Assembly

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

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

Operator Print: [illegible] Operator Sign: [illegible] ZS: 116662 Date: 7-25-13
Verifier Print: Edward Martinez Verifier Sign: [illegible] ZS: 239911 Date: 7-26-13

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

DRUM ID#: 94079

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 #: 028373

Cal expiration date 09/11/2013

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

— Tolerance +/- 3% CW and +/- 6% CCW

2. DRUM LABELING

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

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

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

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

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

RCRA Label:

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

OR

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

NOTE: Check only one of the above two boxes

3. WEIGH DRUM ASSEMBLY

Record weight information:

Gross Weight(lbs) 331.4

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 7-26-13

Kevin Belbsar 7-26-13

Verifier Print/Sign: Kevin Belbsar Date: ~~8-01-13~~

KB 7-26-13

WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Production Control

Container ID: S835372 Container Type: 55-GAL Gross Weight (lbs): 375

Inner Seal #: 015762 Filter Prefix: LAVC Filter Serial #: 02735

AK Waste Stream: LA-CIN01.001 Certified RTR BDR: LA-HERTR-12-0094

TWSR Comments: LEACHED SOLIDS MST 12 LEACHED SOLIDS RM 434

Total PE-Ci Activity: 7.78E+00 Equivalent Combustible PE-Ci: 2.92E+00 AM-241 PE-Ci: 6.94E-01

Total Fissile Gram Equivalents: 83.0 Total Surface Dose Rate (mrem/hr): 7

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

NCR RTR/NDA Comment: LANL: remediate-4 Gallons of prohibited liquid in plastic bags from 20" to 32."

RTR Pre-Screen Date: 3/23/2007 Comment: Liquids, Impenetrable Obj Liquid Location: 20"

Certified RTR Comment: Prohibited Liquid

Prohibited Items: 10/18/12 Sealed > 4 Liters ✓ Liquid Pressurized Container ✓ Impenetrable Item Other

Security Determination: ✓ Green Yellow

Remediation Determination: VE ☑ PID Split Repack

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

TRUCON Code: None Production Control Comments: Apply kitty litter/fixative mixture

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

WDP Engineering

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

Processing Determination: ☒ Accept Reject

WDP Engineering Comments: Nitrate Salts

Net Wt: 315# Generator info shows 11 items of nitrate salts, weights range from 9-47#. RTR BDR shows scrap lead, plastic bags, & homogeneous solids. It also shows prohibited liquids. Nitrate salts require repack w/ admixture. No chemicals identified. nitrate salts carry waste codes for uranium, lead, & mercury.

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

TRU Remediation Operations

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

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

Processing Determination: ☒ Accept Reject

TRU Remediation Operations Comments: USE Proper PPE and Hotty Litter Eater

Performed By: Guth (TRU Remediation Operations (Print)) (Signature) 149235 (Z Number) 6/28/13 (Date)

Jose Jaez (Signature) 221452 7/2/13

IHS REVIEW: 206362 12.17.12

Document No: EP-DIV-AP-0107

Noncertified TRU Waste Drum Item Information

DrumID: 015762

Item No	ItemID	Process Status	Net Wt (kg)	Matrix	Meas Code	SNM (g)	MT	Auth (Pg/Ln)		Comments
1	IXFS920-FD		9.540	NITRATE SALTS		0.61	42	6/11	G468	
2	IXFS-P21-FA		21.100	NITRATE SALTS		20.35	52	6/11	G468	
3	IXFS-923-S		7.730	NITRATE SALTS		3.1	52	6/11	G468	
4	IXFS-922-FA		4.320	NITRATE SALTS		2.74	53	6/11	G468	
5	IXFS-924-FA		4.770	NITRATE SALTS		4.03	52	6/11	G468	
6	IXFS-925-FA		5.230	NITRATE SALTS		1.94	52	6/11	G468	
7	IXFS-927-FA		8.640	NITRATE SALTS		2.91	52	6/11	G468	
8	IXFS-929-FA		4.770	NITRATE SALTS		1.64	52	6/11	G468	
9	IXFS-928-FA		17.730	NITRATE SALTS		47.61	52	6/11	G468	
10	IXFS-932-FA		8.410	NITRATE SALTS		3.47	53	6/11	G468	
11	IXFS-933-FA		8.860	NITRATE SALTS		0.58	52	6/11	G465	

Noncertified Waste Drum Material Summary

Gross Wt (kg): 170.

Material Type	SNM (grams)	Items Net Wt (kg)
42	0.61	9.54
52	82.16	78.83
53	6.21	12.73
Totals	88.98	101.10

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination	[ ] RTR Replicate Scan [ ] RTR Independent Observation
Site ID:	LANL
Batch Number:	LA-HERTR-12-0094
Examination Date:	8/29/2012
Waste Container ID:	S835372
Video/Audio Recorded Media Number:	LA-HERTR-12-0094 C&D
Procedure and Revision No.:	CCP-TP-053 Rev. 12
NCR(s) associated with the container? (e.g., Prohibited Items)	[ ] No [X] Yes NCR No.: NCR-LANL-1631-12 NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3150
Waste Stream I.D.:	LA-CIN01.001
Waste Container Weights:	Gross Wt.: 161.0 kg Tare Wt.: 37.1 kg Net Wt.: 123.9 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: [ ] No [X] Yes Fiberboard Liner: [X] No [ ] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 2 layers
Volume Utilization Percentage:	50 %

CCP Radiography Data Sheet

Waste Container ID: S835372

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, 90 MIL. Liner with Liner Lid	9.4
Other:	0.0
Total Packaging Weight	37.1
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	23.0
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	4.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	96.9
Soils (S):	
Total WMP Weight:	123.9

CCP Radiography Data Sheet

Waste Container ID: S835372

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

Comments: Per CCP-SO-LANL-55 Inconsistencies associated with these packaging configurations (90 MIL. Liner with Liner Lid) will not disqualify the container from meeting the waste stream description. NCR-LANL-1631-12. The operator noted on the audio/video recording media Lead Liner would be placed in packaging material after it was reviewed it was scrap lead and part of the waste,this attachment 2 reflects the correct data.

RTR Operator:

Eric Lyles		8/29/2012
Print Name	Signature	Date

ATTACHMENT 1
Page 1 of 1

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

5.[1] Sample Date: Jan 29 2013

Container No. (5.[1])	9835372					
Container type sampled (e.g., 55-gal, 85-gal, 110-gal, or SWB) (5.[1])	55 gal					
Filtered Vent Type (5.[1])	72					
Filtered Vent Unobstructed (5.[1])	☑ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT
WIPP-Approved Filtered Vent (5.[2])	☑ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT
Total CCP VOC value (< 7,000 ppm) (5.[4])	0 ppm	ppm	ppm	ppm	ppm	ppm
Hydrogen Reading (< 64,000 ppm) (5.[5])	486.14 ppm	ppm	ppm	ppm	ppm	ppm
Methane Reading (< 16,000 ppm) (5.[5])	0 ppm	ppm	ppm	ppm	ppm	ppm

N/A 1/30/13

5.[7] Certified CCP Technician:

Performed By: Sara Aragon (CCP (Print)) 1237975 (Z#)

Reviewed By: Nathan Wales (CCP (Print)) 1233566 (Z#)

Comments: n/a

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

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

6.1[3] Performed By: Julie Gallegos (Waste Handling Operator (print)) Julie Gallegos (Signature) 176905 (Z#) 1/30/13 (Date)

Quantitation Report (QT Reviewed)

InstName : FGA Unit 12

Data Path : C:\msdchem\1\DATA\130129c\
Data File : S835372.D
Acq On : 29 Jan 2013 2:03 pm (#1); 29 Jan 2013 2:01 pm (#2)
Operator : SA
Sample :
Misc : 55 GAL LFL THROUGH UNOBSTRUCTED FILTER-072 (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jan 29 14:11:21 2013
Quant Method : C:\msdchem\1\METHODS\H2-CH4.M
Quant Title : Flammable Gas Analysis for Transportation Only
QLast Update : Thu Oct 04 08:07:46 2012
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Target Compounds						Qvalue
1) Hydrogen	1.927	GC1	137335m	486.26	ppmv	

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

H2-CH4.M Tue Jan 29 14:11:26 2013 UNIT12

2-25-13
0405 Assuming WCRR operations center clearance
0415 Pre job being ~~conducted~~ 07-25-13 performed by SOS.
0417 Rounds have been signed off by SOS.
0734 Permission granted to lower vehicle access gates for loading of ~~this~~ 07-25-13 transport vehicle. Operators inside are continuing to process 3851852
0816 Transportainers doors have been closed and labeled
0829 Vehicle access gates have been restored, movement to transportainers is complete.
0836 CCP has completed the tour and has exited facility.
0843 Bagging off 1 daughter, Bagging on 1 daughter
0848 Starting movement into 50-69.
0900 movement into 50-69 complete.
0901 Bag off is complete
0946 Starting movement out of 50-69
1004 movement out of 50-69 is complete.
1018 Bagging off 3851852, Bagging on 3833923
1056 Bag on Bag off complete.
1230 Operators leaving 50-69 for lunch.
1326 Operators continuing to process.
1415 Bagging off 1 daughter and POC, Bagging on 3824408
1441 Starting outside rounds.
1444 Item #3 is unsat, FSE in place OK to proceed.
1450 Bag off, Bag on complete.
1457 Completed outside rounds.
1508 Starting inside rounds.
1520 Item #63 is OOS, POD in place okay to proceed.
1535 Inside rounds complete.
1553 Starting movement ~~into~~ 07-25-13 out of 50-69.
1622 movement is complete out 50-69.
1642 Rounds have been signed off by SOS.
1722 Bagging off 1 daughter 2 pocs, Bagging on 3835372.
1810 Bag on, Bag off is complete.
1812 Reconvening shift turnover with CCO gerald Espinoza
no further entries

7-25-13

1812 Assuming WCRRF Operations Center. Gerald Espinoza
1815 Prejob being conducted by SOS.
1830 Prejob has been concluded.
1905 Operators headed into 50-69.
1955 Notified by operators that gloves had waste caked on and were unable to inspect them. Notified SOS, SOM and IH.
2123 Entering EP-WCRR-RM-AOP-0207 due to lightning.
2141 Bagging off 1 daughter, bagging on 2nd daughter.
2202 Bag off/on complete.
2230 Exiting EP-WCRR-RM-AOP-0207.
2301 Entering EP-WCRR-RM-AOP-0207 due to lightning.
0030 Operators exiting 50-69 for lunch.
0133 Operators entering 50-69.
0150 Exiting EP-WCRR-RM-AOP-0207.
0238 Bagging off 1 daughter and empty.
0305 Bag off complete.
0327 Starting inside rounds.
0349 Starting outside rounds
0350 Item #63 is OOS, POD in place, ok to proceed.
0352 Inside rounds completed.
0355 ~~Performing~~ GE 7-2013 SOS assuming OCO logbook. Gerald Espinoza
0356 Assuming OCO Logbook. CA
0357 Late entry @ 0306 IC notifies that Oracle has gone down, informed SOM, contacting help desk to bring system back up. CA
0359 Late entry @ 0358 item #3 is UNSAT, FSR in place ok to proceed. CA
0401 Late entry @ 0351 Mode change complete, WCRRF yard and 50-69 are now in Warm Standby. CA
0406 Outside Rounds complete.
0446 Signed off on the rounds as SOS.
0448 Operators exited 50-69, WCG cleaned and all gloves inspected. Waiting for Oracle to get back up in order to de-inventory 50-69

Continued on Next Page

PROJECT NAME 7-25-13 ~~Pm~~ Day Shift NOTEBOOK NO.

0609 Received, Reviewed Shift Turnover Checklist and assumed WCRR SOM Position - John Guadagnoli

0610 Reviewed, approved and posted the day shift watch bill.

0638 Completed attending the preop brief conducted by the SOS (Gilbert). The safety topic was clean respirators with ~~alcohol~~ sanwipe swipes. There is one scheduled transfer out, we anticipate CBFO to visit 50/69, Operations will secure LLW containers, two procedures were reviewed and the scheduled maintenance for Friday was reviewed to give the escorts an idea of what is scheduled.

0709 Call into TA-54 SOM - Status daily activities.

0820 Operations transfer 16 drums to the transfer vehicle safe and compliant. 16 drums total were transferred.

0826 CBFO personnel (4 were briefed by RCT on RWP) and escorted to 50/69 to view the WCG - CCP - escorted the team.

0838 CBFO exits and leaves the WCRR facility - No impact to operations.

0843 Inside Operations conducted a bag off of 1 Daughter from Parent S851852

0900 Inside PIC notifies the Ops Center that bag-off is completed, and continue processing

1015 Completed attending Lock in Meeting TA-54.

1018 Inside Operations completed bag off of another daughter (Parent S851852 generated 2 daughters) Parent S833923 was bagged on.

1030 ATTENDED Weekly Project team meeting, reviewed and obtained project info.

1133 Provided daily WCRF update to PM and OM

1415 Inside Operations completed bagging off 1 daughter and 1 ~~Parent fast~~ DOC generated from Parent drum S833923. Also Parent drum S824468 was bagged on.

1553 Starting movement out of 50-69

1559 The Quarterly Operator AID/Posting LOGBOOK was signed off after removal of one AID, Complete verification was conducted the prior night noting compliance with all other AIDs and Postings.

1622 Drum movement out of 50-69 noted complete -

1715 Completed shift turnover checklist.

1720 Secured the Day Shift SOM position John Guadagnoli

No further entries this page

SIGNATURE _____ DATE _____ 20 ____

READ AND UNDERSTOOD _____ DATE _____ 20 ____

PROJECT NAME 7/25/13 Night Shift NOTEBOOK NO.

1800 Reviewed Shift Turnover Checklist and assumed WCRR SOM position.

1810 Bag off of parent 824468 w/ 1 daughter and 2 POC's complete w/ Bag on of 5835372

1815 Attended pre job brief conducted by SOS. Discussed drum processing from day shift concerning high dose rates and work/rest (time) requirements for ALARA. Expect for tonights processing. Safety topic covered by IH was "Struck-By" hazards, relating to night time work / PPE requirements for forklift ops at night. Covered plan for going to Cold by COB of shift to prepare for maintenance tomorrow. Shift Order WCRR-SH-13-003 R.2 Manual Drum Movements is in effect.

1955 Ops Center notified that WCG gloves were turned over with large amounts of debris on them will have to be cleaned (in process) prior to inspecting.

2000 Inventory Control identified that numbers again are not matching up between the status board and Actions Worksheet. Day shift IC had turned over that the system had gone down during the day and some information was not saved. IC on shift is investigating.

2106 IC reported that inventory is satisfactory. Problem was identified as 2 drums that were processed today were not on the Actions Worksheet.

2123 Entered EP-WCRR-RM-AOP-0207 Severe Weather due to lightning - 30-30 rule in effect.

2230 Exited from severe weather conditions.

2250 Late Entry 2202 Completed bag off of 1 daughter. MA

2301 Entered AOP-0207 Severe weather due to lightning - 30/30 rule.

0030 Operators breaking for lunch

0133 Resuming operations

0150 Exited from severe weather conditions.

0305 All bag offs for parent # 835372 completed (2 daughters total)

0304 Notified by IC that Oracle system is down.

0315 Contacted On call numbers for Waste Help and WCATS about Oracle problem.

0325 J. Tozier called back from WCATS pager - He is contacting NIE-1 for server reset. OM notified.

0351 Completed Mode Change: WCRR Yard / Blds 50-69 from Operations / Operations to Warm / Warm.

0507 Late Entry 0210 Notified by SOS that rain is producing 2 leaks inside 50-69, one by the scale and another by the spill pallet - same areas previously identified

0514 J. Tozier updated Oracle situation - NIE-1 technician determined not just the servers were down but the entire network as well. Will require operations @ TA-54 to correct problem - TA-54 is still without power. (continued on next page →

SIGNATURE _____ DATE _____ 20

READ AND UNDERSTOOD _____ DATE _____ 20

7/25/13 WCRR SOS LOGBOOK

0600 Assuming SOS Position [signature]

0615 Conducted shift Brief wentower EP-WCRR-RS-DOP-0201.R6 And EP-WCRR-FP-DOP 0303.R.5 Also to stay Hydrated And take breaks as necessary

[signature] 7-25-13 0640 Concluded shift brief

0700 Continuing operations on drum 5851852

0734 starting shipment out.

0829 shipment out Complete

0848 Bagging off 1 daughter Bagging on Another

0901 Bag off complete

1018 Bagging off 5851852 Bagging on 5873523

1036 Bag on/off Complete

Gun 7-25-13 1130 Operator Leaving to lunch

1320 operator's Continuing operations

1415 Bagging off 1 daughter and POL. Bagging on 5824168

1441 Starting outside Rounds

1642 Signed off Inside And outside Rounds

1722 Bagging off 1 daughter 2 Pocs Bagging on 5835372

1810 Bag off/on Complete

1815 Turning over SOS Position to clayton Mullins [signature]

no further entries on this page.

7/25/13 WCRR SOS Log Book

1816 ~~0816~~ 7-25-13 Assuming SOS position. CA

1817 ~~0817~~ 7-25-13 Starting Pre-Job, discussed cleaning of the WCG and moving drums out to go into cold.

1838 Pre-Job complete.

1955 Notified ~~[illegible]~~ CA 7-25-13 by the operators inside ~~that~~ 7-25-13 that prior to processing, cleaned the glovebox gloves to ensure they were in good condition.

2123 Entering EP-WCRR-RM-AOP-0207 due to lightning

2141 Bagging off 1 daughter, bagging on a 2nd daughter.

2202 Bag off/on complete.

2230 ~~2301~~ 7-25-13 Exiting EP-WCRR-RM-AOP-0207 after several restarts.

2301 Entering EP-WCRR-RM-AOP-0207 due to lightning.

0150 Exiting EP-WCRR-RM-AOP-0207 after several restarts.

0210 Notified by operators of 2 leaks inside 50-69, by the spill pallet against the wall and also by the scale.

0238 Bagging off 2nd daughter and the empty to complete processing.

0305 Bag off complete

0306 Notified by IC that Oracle is down. Notified SOM, contacting help desk to try to resolve issue.

0351 Mode change complete, WCRRF yard and 50-69 are now in Warm Standby.

0446 Signed off on the rounds.

0604 Call back from help desk about Oracle system, cause is due to power outage at TA-54. As soon as power is restored, Oracle can be worked on.

No Further Entries on this Page

CCP Radiography Data Sheet

5835372

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0097
Examination Date:	8/1/2013
Waste Container ID:	94078
Video/Audio Recorded Media Number:	LA-RTR2-13-0097 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 13
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3150
Waste Stream I.D.:	LA-CIN01.001
Waste Container Weights:	Gross Wt.: 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: 94078

Section 3: Container Inventory and Comments (Detailed descriptions)

IM:

AM:

OM: Scrap lead

OI:

C: Tape roll

R:

XPM: Plastic bags, liner lid

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP): Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	1.0
Other Inorganic Materials (OI)	
Cellulosics (C):	0.1
Rubber (R):	
Plastics (waste materials) (XPM):	7.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	61.5
Soils (S):	
Total WMP Weight:	69.6

CCP Radiography Data Sheet

Waste Container ID: 94078

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

Comments: N/A

RTR Operator:

Eric Lyles		8/1/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	94078	Count Sequence Number:	23361
Operator:	D3PW2DK1\operator		
Assay Start:	8/2/2013 12:34:36 PM		
Description 1:	1LANDA1821		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
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:	23361	Batch Number:	1LANDA1821
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:	94078	Analysis Date:	8/2/2013

Net Weight	69600.0 g		
Pu mass	2.94E+000	+- 9.54E-001	g
TRU Alpha Activity	3.55E+000	+- 1.78E+000	Ci
TRU Activity Concentration	5.10E+004	+- 2.56E+004	nCi/g
Pu-239 Equivalent Activity	3.56E+000	+- 1.78E+000	Ci
Pu-239 FGE	2.77E+000	+- 8.88E-001	g
Decay heat	1.18E-001	+- 5.92E-002	W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	3.25E-002	2.29E-005	3.61E-006	1.91E-006
PU238	4.31E-004	7.37E-003	2.39E-003	4.51E-005
PU239	2.74E+000	1.70E-001	5.50E-002	1.04E-003
PU240	1.82E-001	4.12E-002	1.34E-002	2.52E-004
AM241	9.72E-001	3.33E+000	1.78E+000	4.63E-002
PU241	3.76E-003	3.87E-001	1.26E-001	2.37E-003
PU242	1.88E-002	7.44E-005	2.41E-005	0.00E+000
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	5.51E-007
U233	<LLD	<LLD	0.00E+000	4.48E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	1.25E-006
U238	<LLD	<LLD	0.00E+000	9.57E-006
AM243	1.24E-003	2.48E-004	3.92E-005	5.91E-006

Errors quoted at 1.000 sigma

Operator: _____ Date: 8-6-13

ITR: _____ Date: 8-8-13

Automated Independent Technical Review

Count Sequence Number: 23361 Batch Number: 1LANDA1821
Counter ID: MCS HENC #1
Container ID: 94078
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 8/2/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis No Add-a-Source warnings.	Ok
Section 2 - Passive Neutron Analysis Analysis Status: No errors. No Warnings Reported.	Ok
Section 3 - Data Combiner Analysis Override enabled; Passive Neutron Pu and Gamma U data specified as input. Pu results taken from Passive Neutron data, U from Quantitative Gamma data. Results comparison test passed.	Passive Neutron Pu and Gamma U data specified as input.
Section 4 - MGA Analysis Results are marked as invalid.	MGA analysis failed. AK isotopics applied. The AK information utilized was provided by Steve Schafer, AKE, and consists of data from CCP-AK-LANL-006, AK Source Document M237. MT-52,53,42
Section 5 - Gamma Analysis Analysis Status: No errors.	Ok
Miscellaneous	No additional nuclides contributing to 95% of the radiological hazard identified.

Expert Review by: Sheri Chamberlin Date: 8-6-13

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **94078**

BDR Number: **LA13FG12072**

Sampling Date: **8/5/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	314.76	
74-82-8	Methane	103.20	
67-56-1	Methanol	N/A	U
60-29-7	Ethyl Ether	N/A	U
75-35-4	1,1-Dichloroethylene	N/A	U
67-64-1	Acetone	N/A	U
75-34-3	1,1-Dichloroethane	N/A	U
156-59-2	cis-1,2-Dichloroethene	N/A	U
78-93-3	Methyl ethyl ketone	N/A	U
110-82-7	Cyclohexane	N/A	U
71-43-2	Benzene	N/A	U
107-06-2	1,2-Dichloroethane	N/A	U
71-36-3	1-Butanol	N/A	U
108-10-1	Methyl isobutyl ketone	N/A	U
108-88-3	Toluene	N/A	U
108-90-7	Chlorobenzene	N/A	U
100-41-4	Ethylbenzene	N/A	U
108-38-3/106-42-3	m- and p-Xylene	N/A	U
95-47-6	o-Xylene	N/A	U
108-67-8	1,3,5-Trimethylbenzene	N/A	U
95-63-6	1,2,4-Trimethylbenzene	N/A	U

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

Quantitation Report (QT Reviewed)

InstName : FGA Unit 12

Data Path : C:\msdchem\1\DATA\130805c\
Data File : 94078.D
Acq On : 5 Aug 2013 11:51 am (#1); 5 Aug 2013 11:49 am (#2)
Operator : GR
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (NucFil-019DS) (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Aug 05 11:55:10 2013
Quant Method : C:\msdchem\1\METHODS\H2-CH4.M
Quant Title : Flammable Gas Analysis for Transportation Only
QLast Update : Thu May 23 08:37:45 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Target Compounds						Qvalue
1) Hydrogen	1.903	GC1	89786m	314.76	ppmv	
2) Methane	3.727	GC1	13758	103.20	ppmv	100

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

CCP Radiography Data Sheet

5885372

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0097
Examination Date:	8/1/2013
Waste Container ID:	94079
Video/Audio Recorded Media Number:	LA-RTR2-13-0097 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 13
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3150
Waste Stream I.D.:	LA-CIN01.001
Waste Container Weights:	Gross Wt.: 173.0 kg Tare Wt.: 33.4 kg Net Wt.: 139.6 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: 94079

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):	2.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	129.6
Soils (S):	
Total WMP Weight:	139.6

CCP Radiography Data Sheet

Waste Container ID: 94079

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

RTR Operator:

Eric Lyles		8/1/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	94079	Count Sequence Number:	16297
Operator:	DCLTD231\Operator		
Assay Start:	8/2/2013 11:53:34 AM		
Description 1:	2LANDA1204		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gal Drum		
Weight:	Net: 140.0 kg	Net:	140.0 kg
Container:	Volume: 208.0 l	Full:	95.0 %
Density:	0.710 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:	16297	Batch Number:	2LANDA1204
Assay Instrument:	HENC #2	Location:	LANL TA-54
Analysis Method:	CCP-TP-063 v 14	Software Version:	NDA 2000 V.4.0
Item ID:	94079	Analysis Date:	8/2/2013

Net Weight	140000.0 g		
Pu mass	1.19E+002	+- 2.79E+001	g
TRU Alpha Activity	2.30E+001	+- 9.88E+000	Ci
TRU Activity Concentration	1.64E+005	+- 7.06E+004	nCi/g
Pu-239 Equivalent Activity	2.32E+001	+- 9.88E+000	Ci
Pu-239 FGE	1.11E+002	+- 2.59E+001	g
Decay heat	7.46E-001	+- 3.28E-001	W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	2.08E-001	1.47E-004	2.74E-005	2.80E-006
PU238	1.75E-002	2.99E-001	6.98E-002	4.63E-005
PU239	1.11E+002	6.87E+000	1.61E+000	1.07E-003
PU240	7.35E+000	1.67E+000	3.90E-001	2.59E-004
AM241	4.12E+000	1.41E+001	9.74E+000	2.22E-001
PU241	1.52E-001	1.57E+001	3.67E+000	2.43E-003
PU242	7.63E-001	3.02E-003	7.05E-004	0.00E+000
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	1.32E-006
U233	<LLD	<LLD	0.00E+000	1.16E-002
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	3.48E-006
U238	<LLD	<LLD	0.00E+000	2.35E-005
AM243	3.14E-003	6.28E-004	1.17E-004	1.68E-005

Errors quoted at 1.000 sigma

Operator: _____ Date: 8-7-13

ITR: _____ Date: 8-8-13

Automated Independent Technical Review

Count Sequence Number: 16297 Batch Number: 2LANDA1204
Counter ID: HENC #2
Container ID: 94079
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 8/2/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis No Add-a-Source warnings.	Ok
Section 2 - Passive Neutron Analysis Analysis Status: No errors. Ones Rate Analysis complete with warnings. - Error calculating the Ones Rate Pu-240 Effective MDA.	Ok Not data affecting.
Section 3 - Data Combiner Analysis Override enabled; Passive Neutron Pu and Gamma U data specified as input. Pu results taken from Passive Neutron data, U from Quantitative Gamma data. Results comparison test passed.	Passive Neutron Pu and Gamma U data specified as input.
Section 4 - MGA Analysis Results are marked as invalid.	MGA analysis failed. AK isotopics applied. The AK information utilized was provided by Steve Schafer, AKE, and consists of data from CCP-AK-LANL-006, AK Source Document M237. MT-52,53,42
Section 5 - Gamma Analysis Analysis Status: No errors.	Ok
Miscellaneous	No additional nuclides contributing to 95% of the radiological hazard identified.

Expert Review by: Shei Chamlin Date: 8-5-13

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **94079**

BDR Number: **LA13FG12072**

Sampling Date: **8/5/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	933.60	
74-82-8	Methane	33.34	
67-56-1	Methanol	N/A	U
60-29-7	Ethyl Ether	N/A	U
75-35-4	1,1-Dichloroethylene	N/A	U
67-64-1	Acetone	N/A	U
75-34-3	1,1-Dichloroethane	N/A	U
156-59-2	cis-1,2-Dichloroethene	N/A	U
78-93-3	Methyl ethyl ketone	N/A	U
110-82-7	Cyclohexane	N/A	U
71-43-2	Benzene	N/A	U
107-06-2	1,2-Dichloroethane	N/A	U
71-36-3	1-Butanol	N/A	U
108-10-1	Methyl isobutyl ketone	N/A	U
108-88-3	Toluene	N/A	U
108-90-7	Chlorobenzene	N/A	U
100-41-4	Ethylbenzene	N/A	U
108-38-3/106-42-3	m- and p-Xylene	N/A	U
95-47-6	o-Xylene	N/A	U
108-67-8	1,3,5-Trimethylbenzene	N/A	U
95-63-6	1,2,4-Trimethylbenzene	N/A	U

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

Quantitation Report (QT Reviewed)

InstName : FGA Unit 12

Data Path : C:\msdchem\1\DATA\130805c\
Data File : 94079.D
Acq On : 5 Aug 2013 11:58 am (#1); 5 Aug 2013 11:56 am (#2)
Operator : GR
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (NucFil-019DS) (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Aug 05 12:02:06 2013
Quant Method : C:\msdchem\1\METHODS\H2-CH4.M
Quant Title : Flammable Gas Analysis for Transportation Only
QLast Update : Thu May 23 08:37:45 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Target Compounds						Qvalue
1) Hydrogen	1.900	GC1	266309m	933.60	ppmv	
2) Methane	3.723	GC1	4445m	33.34	ppmv	

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

15

S841240

S841240

Container 753986

File Options Reports Help

S841240

753986	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

S841240

- S841240
  - LA00000068419 – EMPTY
  - LA00000068387
  - LA00000068337

Working Copy
Date: 9-18-13

ATTACHMENT 1
Page 1 of 4

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: S841240

6.2[4] Date Processed: 9-18-13

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

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

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

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

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

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

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

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

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

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

Performed By: Edward Martinez 1239911 9-18-13
Waste Handling Tech (print) Signature Z# Date

ATTACHMENT 1
Page 2 of 4

4.1[6][B] Parent Waste Container No.: 5841240

5.[18] Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable: 514.6 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) 514.6 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.: S841240

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	68337	68387		
10.1[4]	Daughter Drum Filter No.	KL-477	KL-534	N	
10.1[4]	Daughter Drum Bag Filter No.	L-8229	L-6682	A	
10.1[4]	Daughter Drum Purchase Order No.	501103	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.	N			
	Date of Manufacture				
10.2[5]	POC ID No			N	
10.2[7][B]/10.2[6]	POC Item Description	A	N		
10.2[13]	POC Assembly closed per Manufacturer's instructions. (Initial and Z#)		A	A	
10.2[14]	POC Assembly Gross Weight (lb)				
10.2[15]	POC Rad. Survey Results (mrem/hr)				
10.3[3][A]	Approx. Containerized Liquid Vol./Units				
10.3[5][A]	Free Liquid Volume/Units	2 gal			
10.3[7][A]	Opaque/Non-penetrable Item Description:	LEAD SHIELDING	Lead		A
10.3[9][A]	PCB-contaminated Waste Description	N/A	N/A		
10.3[9][B]	PCB Item ID No.			N	
10.3[10]	Remaining Waste Description	SEE COMMENTS	see comments		
10.3[13]/10.4[10]/ 10.5[4]/10.6[10]	Daughter Drum % Full (%)	100%	50%		
10.5[3]/10.6[2]	Description Waste Added During Processing	PLASTIC	plastic		

ATTACHMENT 1
Page 4 of 4

4.1[6][B] Parent Waste Container No.: S8411240

Comments: POLY LINER, PLASTIC, KITTY LITTER, Nitrate salts
Lead

11.1[1] Performed By: Brandon Chavez / [signature] 12047421 / 9-18-13
Waste Handling Tech (print) Signature Z # Date

11.1[8] Reviewed By: G [signature] [signature] 149225 / 9/18/13 1346
SOS or designee (print) Signature Z # Date/Time

Working Copy
Date: 9-17-13 aw

ATTACHMENT 2
Page 1 of 1

WCRRF OVERPACK DRUM ASSEMBLY PREPARATION DATA SHEET

5.[3] Overpack drum information:

Purchase Order No.: 501563
Lot No.: 0236387
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.: JZ5913
Manufacture Date: 10/13

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

5. [11] Performed By: Frederico Arbolida / [signature] 122[illegible] / 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/C

8.1[1] Performed By: Frederico Arbolida / [signature] 122[illegible] / 9-17-13
Waste Handling Technician (print) Signature Z# Date

8.1[6] Reviewed By: G [illegible] / [signature] 149235 / 9/17/13
Supervisor or designee (print) Signature Z# Date

ATTACHMENT 5
Page 1 of 1

WCRRF OVERPACK DRUM CLOSURE DATA SHEET

7.[17] Overpack Drum Unique Identifier No.: 68419

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

M&TE No.: 038370
Cal. Expiration Date: 8-2-14
Range in ft-lb: 10-80
Tolerance: ± 3% CW ± 6% CCW

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

Performed By: Brandon Chavez / [signature] 1204742 / 9/18/13
Waste Handling Technician (print) Signature Z # Date

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

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

7.[34][B] Platform scale serial number: C19065
Platform scale calibration expiration date: 10/14/14

7.[34][D] 85-gal overpack drum gross weight (lb): 171.2 lb

Comments: N/C

8.1[1] Performed By: Brandon Chavez / [signature] 1204742 / 9/18/13
Waste Handling Technician (print) Signature Z # Date

8.1[7] Reviewed By: G Mh / [signature] 1492351 / 9/18/13
Supervisor or designee (print) Signature Z # Date

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

Drum ID#: 108337

1. Drum/Lid Assembly

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

RECORD drum information:

Purchase Request #: 501103
Lot #: 0234766
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: BOP

Manufacturer: FOHOZ-L 8-1-13
Model #: 6CPVC 1.5 25PVC
Serial #: C-8229
Date of Manufacture: 5-13

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

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

4. Install Lid/Drum Filter

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

RECORD drum filter information:

Manufacturer: NUCFIL
Model #: 017 D1
Serial #: KQ477
Date of Manufacture: 11/11

RECORD torque wrench information:

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

Jam Nut / Bung torque wrench:
M&TE ID #: 038369
Cal Expiration Date: 12-18-13
Range (ft-lbs or in-lbs): 10-80
Tolerance: +/-3% cw +/-6% ccw

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

[x] Yes [ ] No

Print Name: IAN MARQUEZ Signature: [signature] Z#: Z76708

5. Weigh Drum Assembly

RECORD weight information

Tare wtght (lbs) 760
File ID #: 019065

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

6. Label Drum Assembly

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

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

Operator Print: IAN MARQUEZ Operator Sign: [signature] Z#: Z76708 Date: 8-1-13

Verifier Print: GERALD ESPINOZA Verifier Sign: [signature] Z#: Z31120 Date: 9.18-13

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

DRUM ID#: 108337

1. LID INSTALLATION

NOTE: Install lid per manufacturer's instructions

✓ Mount lid with filter directly over drum seam.

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

✓ Engage bolt and nut and torque per manufactures instructions

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

✓ Tighten jam nut.

Record torque wrench information:

MT&E #: 038370

Cal expiration date: 8-2-14

Range/ Value (ft-lbs): 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): 364.0

Scale ID#: 019065

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

4. FINALIZE DOCUMENTATION

✓ Have RCT monitor drum prior to moving to storage area

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

✓ Complete TWSR.

Operator Print/Sign: [illegible] Date: 9-18-13

Verifier Print/Sign: [illegible] Date: 9-18-13

ATTACHMENT 1
Page 1 of 2

Working Copy
Date: 9-10-13a

WCRRF DRUM PREPARATION DATA SHEET

5.[34][E] Drum ID No.: 68387

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

5.[17] Drum Liner Bag/Filter Assembly:
Manufacturer: BOP
Model No.: 6CPVC 1.5-2 SPVC
Serial No.: L6482
Manufacture Date: 1-13

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

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

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

Performed By: IAN MARQUEZ [signature] V762041 9-11-13
Operator (print) Signature Z# Date

5.[23] Filtered vent information:
Manufacturer: NUCFIL
Model No.: 019DS
Serial No.: KL 534
Manufacture Date: 11-11

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

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

5.[30] Scale File ID number: 019065

ATTACHMENT 1
Page 2 of 2

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

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

5.[34][E] Drum ID No.: 6837

Comments: N/C

5.[35] Performed By: Ian Marquez / [signature] 276205, 9-11-13
Operator (print) Signature Z # Date

7.1[4] Reviewed By: Gilbert Martin / [signature] 149251, 9/15/13
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 2
Page 1 of 2

working Copy
Date: 9/18/13 HS

WCRRF DRUM CLOSURE DATA SHEET

6.[3] Drum ID No.: 68387

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

M&TE No.:	038370
Cal. Expiration Date:	8-2-13
Range in ft-lb:	10-80
Tolerance:	±3% cw ±6% ccw

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

Performed By: Brandon Chavez / [signature] 1204742 / 9-18-13
Operator (print) Signature Z # Date

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

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

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

	Filtered Vent	2 in. Bung
M&TE No.:	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

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

Performed By: Brandon Chavez / [signature] 1204742 / 9-18-13
Operator (print) Signature Z # Date

6.[17][C] 2 in. bung plug torque value: 30 in-lb ☐ N/A

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

ATTACHMENT 2
Page 2 of 2

6.[3] Drum ID No.: 68387

6.[26] Scale File ID number: 019065

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

6.[28] Drum gross weight: 367.8 lbs

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

Comments: N/C

6.[32] Performed By: Brandon Chavez / [signature] R01711219 9/18/13
Operator (print) Signature Z # Date

7.1[4] Reviewed By: G Mh / [signature] 1149237 9/18/13
Supervisor or designee (print) Signature Z # Date

WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

1946 SP70

Production Control

Container ID: S841240 Container Type: 55-GAL Gross Weight (lbs): 533
Inner Seal #: 019568A Filter Prefix: None Filter Serial #: None
Waste Stream: LA-MHD01.001 Certified RTR BDR: No BDR
TWSR Comments: LEACHED SOLIDS MST 12 RM 434
Total PE-Ci Activity: 1.05E+01 Equivalent Combustible PE-Ci: 3.94E+00 AM-241 PE-Ci: 1.81E+00
Total Fissile Gram Equivalents: 107.1 Total Surface Dose Rate (mrem/hr): 1
EPA Code(s): D007; D008; D009
NCR RTR/NDA Comment: None
RTR Pre-Screen Date: 5/23/2007 Comment: Liquids, Impenetrable Obj Liquid Location: 15
Certified RTR Comment: None
Prohibited Items: ☑ Sealed > 4 Liters ☑ Liquid ☐ Pressurized Container ☑ Impenetrable Item ☐ Other
Security Determination: ☑ Green ☐ Yellow
Remediation Determination: ☐ VE ☑ PID ☐ Split ☑ Repack
Estimated 30-cm Dose Rate (mrem/hr): ☐ <100 ☐ >100 and <1,000 ☑ >1,000 and <10,000 ☐ >10,000
TRUCON Code: Production Control Comments: Ensure EPA Codes D007, D008, and D009 are on the label. A minimum of 1.2 volumes of kitty litter/zeolite must be mixed with 1.0 volume of nitrate salts.

Performed By: Susan Ramsey / Susan G. Ramsey / 100681 / 12/20/12
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
Net Wt: 473#. Generator info shows 22 items of nitrate salts; weights range from 4-45#. No RTR BDR. Nitrate salts are typically packaged in plastic bags; undocumented liquids +/or debris may be present. RTR 105 shows prohibited liquids + impenetrable item(s). No chemicals identified. Applicable waste codes are for chromium, lead, + mercury. Nitrate salts require repack w/ admixture.

Performed By: Valerie Rhodes / Valerie Rhodes / 1126091 / 6/23/12
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: Do not push or press on waste with hands. Use heavyweave gloves during processing.
Processing Determination: ☑ Accept ☐ Reject
TRU Remediation Operations Comments: USE Proper PPE Mix Ratio

Performed By: Gus / [signature] / 1149235 / 6/19/13
TRU Remediation Operations (Print) Signature Z Number Date
Jose Jerez 221452 6/22/13

HHS Review - [illegible] CS, may contain Pb, Hg + Cr
1-29-13

Discardable Waste Log Sheet

DrumID: 019568A

Item#	ItemID	Net (kg)	Matrix	M Code	NM	MT	Auth	Remarks
1	108640X3FA	20.45	NITRATE SALTS		16.35	54	6/14	6/7/84 G468
2	LC1087U1FA	8.07	NITRATE SALTS		12.61	54	6/14	6/8/84 G468
3	LCU21095FA	16.93	NITRATE SALTS		19.08	54	6/14	6/13/84 G468
4	UXO41097FA	12.5	NITRATE SALTS		4.62	53	6/14	6/13/84 G468
5	LC1087U1FA	8.07	NITRATE U. SALTS		3000	12	9	6/19/84 G468
6	LC7S1095FA	16.93	NITRATE U. SALTS		9000	12	9	6/19/84 G468
7	LCU3-5-FA	5.68	NITRATE U. SALTS		6.43	53	6/14	6/20 G468
8	LCU3-5-FA	5.68	NITRATE U. SALTS		1000	12	9	6/20 G468
9	UOX5-8FA	8.18	NITRATE U. SALTS		3.53	54	6/14	6/22 G468
10	UOX6-13FA	8.18	NITRATE U. SALTS		0.97	53	6/14	7/3/84 G468
11	LCU-17FA	3.07	NITRATE SALTS		1.24	53	6/14	7/5/84 G468
12	LCU-17FA	3.07	NITRATE SALTS		200	81	9	7/5/84 G468
13	LCU520A	2.16	NITRATE SALTS		2.66	53	6/14	7/12/84 G468
14	LCU520A	2.16	NITRATE SALTS		1.26	12	9	7/12/84
15	LCU6-23A	3.87	NITRATE SALTS		2.26	54	6/14	7/16/84 G468
16	LCU6-23A	3.87	NITRATE SALTS		0.95	12	9	7/16/84 G468
17	MX1-27A	5.68	NITRATE SALTS		2.84	53	6/14	7/23/84 G468
18	MX1-27A	5.68	NITRATE SALTS		1480	12	9	7/23/84 G468
19	LCU7-35A	15.51	NITRATE SALTS		9.58	54	6/14	7/31/84 G468
20	LCU7-35A	15.51	NITRATE SALTS		3250	12	9	7/31/84 G468
21	LCU8-38A	5.34	NITRATE SALTS		3.53	54	6/14	8/7/84 G468
22	LCU8-38A	5.34	NITRATE SALTS		400	12	9	8/7/84 G468

Item#	ItemID	Net (kg)	Matrix	M Code	NM	MT	Auth	Remarks
		181.93 kg						

ATTACHMENT 1
Page 1 of 1

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

5.[1] Sample Date: 4/11/13

Container No. (5.[1])	S841240					
Container type sampled (e.g., 55-gal, 85-gal, 110-gal, or SWB) (5.[1])	55-Gal					
Filtered Vent Type (5.[1])	070					
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])	820.14 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:

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

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

6.1[3] Performed By: SUSAN RAMSEY (Waste Handling Operator (print)), [signature] (Signature), 100481 (Z #), 5/20/13 (Date)

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\130411c\
Data File : S841240.D
Acq On : 11 Apr 2013 1:26 pm
Operator : SA
Sample :
InstName : Unit 8
Misc : 55 GALLON LFL THROUGH UNOBSTRUCTED 072 (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 11 15:49:39 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	1994312	206.00 ppm	0.00
15) Chlorobenzene-d5	5.939	117	1790505	179.50 ppm	0.00
Target Compounds					Qvalue
1) Hydrogen	5.220	GC1	202642m	820.14 ppm	

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

Vocgas.m Thu Apr 11 15:49:47 2013

9-18-13

0600 Assuming WCRRF OCO position - Orlando

0600 ASSUMING WCRRF OCO POSITION IN TRAINING H SMITH

0615 PRE-JOB BRIEFING 9/18/13 HS CONDUCTED BY SOS

0630 PRE-JOB BRIEFING CONCLUDED

0635 OPERATORS ENTERING BUILDING TASO-69 TO START PROCESSING

0734 Starting to process 3841240

0800 CSE letting to scope drumlift.

0801 Operators notifying operations center that FORK lift #940 on 9-18-13 #943092 is unsat for daily inspection. Error code 6, CSE 9-17-13 SOS and SOM have been notified. SOM will be contacting maintenance.

0826 bagging off 1 daughter, bagging on 1 daughter and will continue to process.

0850 Bag on, Bag off is complete.

0855 Maintenance letting WCRRF yard to scope Forklift. WO# 00446212-02, 50-69 Equipment Servicing.

0953 Bagging off, ~~3846224~~ 9-18-13, Bagging on 3862241

1020 Bag on, Bag off is complete

1101 Starting movement out of 50-69

1134 Bagging off 1 daughter bagging on another then will continue processing.

1156 Bag on Bag off complete.

1254 Starting movement into 50-69.

1319 movement into 50-69 is complete.

1400 Bagging off and Bagging on 3853899

1438 Bag on, Bag off is complete

1450 RCT painting inside operations due to water leaking on scale. POTS are performing smears.

1501 Smears are NDA Okay to continue processing.

1513 Starting outside rounds

1520 Item #19 is unsat, FSR in place okay to proceed per CSE documentation.

1532 Starting inside rounds.

- Continued on next page - Orlando

- Continued from previous page - Orlando

1580 Completed outside rounds.

1542 Item #63 is OOS, POD in place, okay to proceed per CSE documentation.

1550 Inside rounds complete.

1645 Bagging off 1 daughter, bagging on 1 daughter, continuing to process

1655 Bag on, Bag off complete

1656 Inside and outside rounds signed off by SOS.

1702 bagging off and bagging on 3842463

1814 Operations notifying operations center that bag off will not be performed. 3842463 will not be bagged on.

9-18-13 1818 9-18-13 Relieved by OCO Terri Coleman - Orlando, H SMITH

119 ff

No further entries this page

9-18-13 DAYSHIFT

0602 Reviewed the shift turnover checklist and assumed the WCRR SOM position John Guardgrado

0630 Completed attending the pre-job brief conducted by the SOS - (Gilbert). Updates were provided in regards to the facility - There were two leaks noted on Nightshift - One by the scale, and the other by the portable CAM. The Safety topic discussed was sharps and the horsetail/plastic cutter (highly contaminated) and to take precaution when handling. There is a scheduled transfer out. Drum movements were discussed. Roles and Responsibilities were assigned. The SOM called the ALARA Center to evaluate why the glove change expander is not working properly, awaiting evaluation.

0710 Discussed with Area G SOM, daily POD activities.

0730 RP-1 identified the PCM-2 requires a foot board change out. The techs were notified. Work will be scheduled between drums.

0801 Operators informed the Operations Center that the large forktruck is noted with Error Code 6, and will not move. An FSR was submitted and notification was made to Jack, he will notify the crafts.

0820 Inside Operations report bagging off 1 daughter and bagging on another and continue to process.

0850 Inside Operations report bag off completed

0955 Inside Operations report initiating bag off and bag on of Parent 5862241

0956 Crafts entered the Yard upon receiving RWP brief and escort to scope the fork truck. Upon review there was a micro switch which was not engaging. Upon starting fork truck, the micro switch engaged and started the fork truck. Craft and planner will order another micro switch. IWD and Work Package 44621202 Equip Servicing Yard Fork truck was not required.

1004 CSE- Art Crawford provided documentation on Level Determination for the 8" round Filters - noting ML-3 and the spacers, gaskets, and glue - ML-4. as a result copies were provided to the SOS for the Level B custodian, and the Operations Center Operator for placement into the file.

1024 Bag offs reported completed (NOTED) parent drum 5841240 generated 2 daughters

1136 Inside Operations report bagging off 1 daughter and bagging on another. and continue processing of parent drum 5862241

1145 Completed reviewing 5 work packages - 1 RWP requires updating

1230 Completed daily telephone calling facility update with OM, SOM, PM.

9/18/13 WCRR 505 LOG Book

0600 Assuming Position [illegible]

0615 Conducted shift brief discussed the drum that is currently bagged on Also Roof Is Leaking again need to watch bubble on Roof And be Aware of wet slippery surfaces.

0635 Concluded shift brief.

0657 Operators entering 50-69 to start processing

0800 CE entering to scope drum lift.

0801 Operators notified forklift unsafe Error code #6 showing up som has been notified

0826 Bagging off 1 daughter bagging on Another And continuing

0850 Bag on/off Complete

0935 Maintenance entering 50-69 to scope forklift

0953 Bagging off Bagging on 5862241

1030 Bag on/off complete

1101 starting movement out of 50-69

1132 Bagging off 1 daughter bagging on Another end continuing

1156 Bag on/off complete

1254 Starting Move Into 50-69.

1314 Move in Complete.

1400 Bagging off and bagging on 5853899

1438 Bag on/off complete

1450 BCA's pausing work due to water on scale hill Perform smears.

1501 Smears are NDA ok to proceede

1513 Started rounds.

1645 Bagging off 1 daughter bagging on Another And continuing to process

1655 bag on/off complete

1656 Inside and outside Rounds signed off

1814 Relieved by Clayton Mullins.

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-RTR2-13-0113
Examination Date:	9/24/2013
Waste Container ID:	68337
Video/Audio Recorded Media Number:	LA-RTR2-13-0113 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 13
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3110
Waste Stream I.D.:	LA-MIN02-V.001
Waste Container Weights:	Gross Wt.: 165.5 kg Tare Wt.: 33.4 kg Net Wt.: 132.1 kg
Rigid Liner and Liner Vent Description:	Liner: [X] No [ ] Yes Lid: [X] No [ ] Yes Type: [ ] 30-mil [ ] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [ ] Yes [X] N/A Punctured: [X] No [ ] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [ ] No [X] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 2 layers
Volume Utilization Percentage:	85 %

CCP Radiography Data Sheet

Waste Container ID: 68337

Section 3: Container Inventory and Comments (Detailed descriptions)

IM:

AM:

OM: Scrap lead

OI:

C:

R:

XPM: Plastic bags, liner lid

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP): Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	5.0
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	5.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	122.1
Soils (S):	
Total WMP Weight:	132.1

CCP Radiography Data Sheet

Waste Container ID: 68337

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

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

RTR Operator:		
Eddie Rios Thad Hasselstrom	Eddie Rios Thad Hasselstrom	9-24-13 9/24/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	68337	Count Sequence Number:	23658
Operator:	D3PW2DK1\operator		
Assay Start:	9/26/2013 12:30:02 PM		
Description 1:	1LANDA1849		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6, Not Precision		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 132.0 kg	Net:	132.0 kg
Container:	Volume: 208.0 l	Full:	85.0 %
Density:	0.750 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: 23658
Assay Instrument: MCS HENC #1
Analysis Method: CCP-TP-063 v 15
Item ID: 68337

Batch Number: 1LANDA1849
Location: LANL TA-54
Software Version: NDA 2000 V.4.0
Analysis Date: 9/26/2013

Net Weight	132000.0 g		
Pu mass	1.49E+001	+- 2.94E+000	g
TRU Alpha Activity	5.31E+000	+- 2.07E+000	Ci
TRU Activity Concentration	4.02E+004	+- 1.57E+004	nCi/g
Pu-239 Equivalent Activity	5.37E+000	+- 2.07E+000	Ci
Pu-239 FGE	1.84E+001	+- 3.11E+000	g
Decay heat	1.74E-001	+- 6.88E-002	W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	7.30E-007
U233	<LLD	<LLD	0.00E+000	6.65E-003
U234	1.15E-001	7.13E-004	1.50E-004	0.00E+000
U235	8.17E+000	1.77E-005	3.72E-006	3.16E-006
NP237	7.24E-002	5.10E-005	9.88E-006	3.27E-006
PU238	2.02E-002	3.45E-001	1.38E-001	1.64E-002
U238	1.08E+004	3.64E-003	7.04E-004	1.50E-004
PU239	1.30E+001	8.08E-001	1.80E-001	3.84E-002
PU240	1.74E+000	3.95E-001	1.04E-001	1.88E-002
AM241	1.10E+000	3.76E+000	2.06E+000	5.66E-002
PU241	4.25E-002	4.38E+000	1.02E+000	2.08E-001
PU242	8.88E-002	3.51E-004	1.10E-004	0.00E+000
AM243	1.33E-004	2.65E-005	5.55E-006	7.83E-006

Errors quoted at 1.000 sigma

Operator: Brit Lupton Date: 10-1-13

ITR: [illegible] Date: 10.1.13

Automated Independent Technical Review

Count Sequence Number: 23658 Batch Number: 1LANDA1849
Counter ID: MCS HENC #1
Container ID: 68337
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 9/26/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis No Add-a-Source warnings.	Ok
Section 2 - Passive Neutron Analysis Analysis Status: No errors. No Warnings Reported.	Ok
Section 3 - Data Combiner Analysis Override enabled; Gamma data specified as input. Analysis Status: Override enabled; data marked not available but were used. Results taken from Quantitative Gamma data. Results comparison test passed.	Results taken from quantitative gamma data.
Section 4 - MGA Analysis Results are marked as invalid.	MGA analysis failed. FRAM results applied. FRAM results attached.
Section 5 - Gamma Analysis Analysis Status: No errors. Total U mass is greater than the upper limit of 500.0 g. Ratio of Pu-239 414 to 129 keV line activities is above the limit of 2.50 Spectrum Validity Check engine has suggested data review.	Ok U235/U238 verified by AK and gamma spectrum. Self absorption correction used. Results consistent with neutron. After EA review, spectrum valid.

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

Expert Review by: Sherri Chambers Date: 9-30-13

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **68337**

BDR Number: **LA13FG2106**

Sampling Date: **10/24/2013**

S 841240

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	289.53	
74-82-8	Methane	142.14	U
67-56-1	Methanol	35.23	U
60-29-7	Ethyl Ether	0.96	U
75-35-4	1,1-Dichloroethylene	6.38	U
67-64-1	Acetone	18.08	U
75-34-3	1,1-Dichloroethane	4.08	U
156-59-2	cis-1,2-Dichloroethene	0.76	U
78-93-3	Methyl ethyl ketone	11.73	U
110-82-7	Cyclohexane	5.10	U
71-43-2	Benzene	1.77	U
107-06-2	1,2-Dichloroethane	3.66	U
71-36-3	1-Butanol	1.84	U
108-10-1	Methyl isobutyl ketone	9.82	U
108-88-3	Toluene	8.02	U
108-90-7	Chlorobenzene	4.10	U
100-41-4	Ethylbenzene	3.57	U
108-38-3/106-42-3	m- and p-Xylene	1.92	U
95-47-6	o-Xylene	2.10	U
108-67-8	1,3,5-Trimethylbenzene	1.96	U
95-63-6	1,2,4-Trimethylbenzene	2.13	U

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

InstName : Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\131024c\
Data File : 68337.D
Acq On : 24 Oct 2013 2:12 pm (#1); 24-Oct-13, 14:11:27 (#2)
Operator : NW
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Oct 24 14:20:01 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	3.535	96	5239398	205.75 ppmv	0.02
15) Chlorobenzene-d5	5.845	117	4060243	177.50 ppmv	-0.02
Target Compounds					Qvalue
1) Hydrogen	1.622	GC1	2177m	289.53 ppmv	

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

CCP Radiography Data Sheet

S841240

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0113
Examination Date:	9/24/2013
Waste Container ID:	68387
Video/Audio Recorded Media Number:	LA-RTR2-13-0113 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 13
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3110
Waste Stream I.D.:	LA-MIN02-V.001
Waste Container Weights:	Gross Wt.: 166.5 kg Tare Wt.: 33.4 kg Net Wt.: 133.1 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: 68387

Section 3: Container Inventory and Comments (Detailed descriptions)

IM:

AM:

OM:

OI:

C:

R:

XPM: Plastic bags

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP): Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	3.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	130.1
Soils (S):	
Total WMP Weight:	133.1

CCP Radiography Data Sheet

Waste Container ID: 68387

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

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

RTR Operator:

Print Name	Signature	Date
Eddie Rios Thad Hasselstrom	Eddie Rios Thad Hasselstrom	9-24-13 9/24/2013

NDA 2000 Assay Report

Item Information

Item ID:	68387	Count Sequence Number:	16570
Operator:	DCLTD231\Operator		
Assay Start:	9/26/2013 11:34:48 AM		
Description 1:	2LANDA1228		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gal Drum		
Weight:	Net: 133.0 kg	Net:	133.0 kg
Container:	Volume: 208.0 l	Full:	70.0 %
Density:	0.910 kg /l		

System Configuration

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

Errors quoted at 1.000 sigma

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number: 16570
Assay Instrument: HENC #2
Analysis Method: CCP-TP-063 v 15
Item ID: 68387

Batch Number: 2LANDA1228
Location: LANL TA-54
Software Version: NDA 2000 V.4.0
Analysis Date: 9/26/2013

Net Weight	133000.0 g	
Pu mass	8.25E+001 +-	1.73E+001 g
TRU Alpha Activity	1.41E+001 +-	3.76E+000 Ci
TRU Activity Concentration	1.06E+005 +-	2.83E+004 nCi/g
Pu-239 Equivalent Activity	1.45E+001 +-	3.76E+000 Ci
Pu-239 FGE	8.18E+001 +-	1.72E+001 g
Decay heat	4.54E-001 +-	1.24E-001 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	1.53E-006
U233	<LLD	<LLD	0.00E+000	1.11E-002
U234	1.99E-001	1.24E-003	2.76E-004	0.00E+000
U235	1.42E+001	3.06E-005	6.82E-006	6.12E-006
NP237	9.46E-002	6.67E-005	1.45E-005	5.94E-006
PU238	5.19E-002	8.87E-001	2.82E-001	1.12E-002
U238	2.91E+004	9.78E-003	2.12E-003	1.73E-004
PU239	7.18E+001	4.45E+000	1.06E+000	5.60E-002
PU240	1.02E+001	2.31E+000	5.78E-001	2.90E-002
AM241	1.87E+000	6.41E+000	3.55E+000	7.13E-002
PU241	2.72E-001	2.80E+001	6.94E+000	3.52E-001
PU242	1.83E-001	7.21E-004	2.93E-004	0.00E+000
AM243	1.91E-004	3.81E-005	8.83E-006	1.31E-005

Errors quoted at 1.000 sigma

Operator: _____ Date: 9·27·13

ITR: _____ Date: 9.27.13

Automated Independent Technical Review

Count Sequence Number: 16570 Batch Number: 2LANDA1228
Counter ID: HENC #2
Container ID: 68387
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 9/26/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis	
Add-a-Source WARNINGS:	
Add-a-Source correction factor is less than one.	OK
Section 2 - Passive Neutron Analysis	
Analysis Status: No errors.	OK
Ones Rate Analysis complete with warnings.	
- Error calculating the Ones Rate Pu-240 Effective MDA.	Not data affecting.
Section 3 - Data Combiner Analysis	
Override enabled; Gamma data specified as input.	Results taken from quantitative gamma data.
Analysis Status: Override enabled; data marked not available but were used.	
Results taken from Quantitative Gamma data.	
Results comparison test passed.	
Section 4 - MGA Analysis	
Expert review is recommended; the following validity tests failed:	
Normalized fit value (1.16) is greater than allowed (1.15).	After EA review, MGA valid.
Fit value (2.99) is greater than allowed (2.50).	After EA review, MGA valid.
Pu239 weight percent is outside limits [92.5, 95.0].	MT-54,53.
Note: The measured and declared isotopics are inconsistent.	

Comments	Disposition
Section 5 - Gamma Analysis Analysis Status: No errors.	
U-235 mass is greater than the upper limit of 10.0 g.	U235 verified by EA on gamma spectrum. Results valid.
Total U mass is greater than the upper limit of 500.0 g.	U238 verified by EA on gamma spectrum. Results valid.
Ratio of Pu-239 414 to 129 keV line activities is above the limit of 2.50	After EA review, results valid.
Miscellaneous	No additional nuclides contributing to 95% of the radiological hazard identified.

Expert Review by: [illegible] Date: 9/27/13

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **68387**

BDR Number: **LA13FG12106**

Sampling Date: **10/22/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	162.89	
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	0.57	
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\131022c\
Data File : 68387.D
Acq On : 22 Oct 2013 2:38 pm (#1); 22 Oct 2013 2:37 pm (#2)
Operator : SA
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Oct 22 14:48:36 2013
Quant Method : C:\msdchem\1\METHODS\VOCGAS.M
Quant Title : Flammable Gas Analysis for Transportation Only
QLast Update : Wed May 22 12:06:27 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
3) Fluorobenzene	4.063	96	7334952	207.75 ppmv	0.00
15) Chlorobenzene-d5	6.639	117	5303394	178.75 ppmv	0.00
Target Compounds					Qvalue
1) Hydrogen	1.907	GC1	46465m	162.89 ppmv	
12) Benzene	3.723	78	17291	0.57 ppmv	96

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

S841251

S841251

Containe 747024

File Options Reports Help

S841251

747024	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

S841251

- S841251
  - LA00000069280
    - LASB50431
  - LA00000069248 -EMPTY
  - LA00000069298

Working Copy
Date: 1-24-14

ATTACHMENT 1
Page 1 of 4

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: S841251

6.2[4] Date Processed: 1-26-14

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

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

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

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

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

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

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

4.3[6] ($) Stationary Fire Watch has been established: ☑ N/A
(> 300 PE-Ci Equivalent Combustible)
(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] / [signature] 1228886 / 1-26-14
Waste Handling Tech (print) Signature Z # Date

ATTACHMENT 1
Page 2 of 4

4.1[6][B] Parent Waste Container No.: S841251

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

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

6.2[5][B]/ 6.2[6] Total Parent Drum Weight (lb) 562.6 lb

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

6.2[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.: S 841251

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	69298	69280		
10.1[4]	Daughter Drum Filter No.	AN-520	AN-514	N/A	
10.1[4]	Daughter Drum Bag Filter No.	L-11715	L-11734		
10.1[4]	Daughter Drum Purchase Order No.	501892	501892		
10.1[13][C]	WCG Fire Watch Stationed		☐ YES	☐ NO	☑ N/A
10.1[14][C][d]3/11.1[3]	WCG Fire Watch Secured		☐ YES	☐ NO	☑ N/A
10.2[4]	POC bag-on bag: Manufacturer				
	Model No.				
	Serial No.				
	Date of Manufacture				
10.2[5]	POC ID No				
10.2[7][B]/10.2[6]	POC Item Description	N/A		N/A	
10.2[13]	POC Assembly closed per Manufacturer's instructions. (Initial and Z#)				
10.2[14]	POC Assembly Gross Weight (lb)				
10.2[15]	POC Rad. Survey Results (mrem/hr)				
10.3[3][A]	Approx. Containerized Liquid Vol./Units				
10.3[5][A]	Free Liquid Volume/Units	3-gallons			
10.3[7][A]	Opaque/Non-penetrable Item Description:	lead shielding	lead shielding		
10.3[9][A]	PCB-contaminated Waste Description		N/A		
10.3[9][B]	PCB Item ID No.			N/A	
10.3[10]	Remaining Waste Description	SEE COMMENTS	SEE Comments		
10.3[13]/10.4[10]/ 10.5[4]/10.6[10]	Daughter Drum % Full (%)	100%	30%		
10.5[3]/10.6[2]	Description Waste Added During Processing	Stuff out Bags Kitty litter	Stuff out Bags Kitty litter		

ATTACHMENT 1
Page 4 of 4

4.1[6][B] Parent Waste Container No.: S[illegible]/254

Comments: Plastic, Room Trash, Nitrate salts, Kitty litter, LEAD SHIELDING

11.1[1] Performed By: BRIAN GALLEGOS / [illegible] / 267129 / 1-26-14
Waste Handling Tech (print) Signature Z # Date

11.1[8] Reviewed By: Gilbert Mat[illegible] / [illegible] / 1452551 / 2/1/14 / 700
SOS or designee (print) Signature Z # Date/Time

Working Copy
Date: 1-16-14

69248

ATTACHMENT 2
Page 1 of 1

WCRRF OVERPACK DRUM ASSEMBLY PREPARATION DATA SHEET

5.[3] Overpack drum information:

Purchase Order No.: 501893
Lot No.: 244438
Manufacture Date: 13

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

	Filtered Vent	2-in. Bung
M&TE No.:	101310	036245
Cal. Expiration Date:	11-12-14	8-5-14
Tolerance:	±4% cw ±6% ccw	±3% cw ±6% ccw

Overpack filtered vent information:

Manufacturer: 1/16/14 501893 NUCFIL
Model No.: 1/16/14 0244438 013
Serial No.: HL 854
Manufacture Date: 8-11

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

5. [11] Performed By: GERALD ESPINOZA / HOWARD SMITH — 237720 1-16-14 / 1226731 1/16/14
Waste Handling Technician (print) Signature Z# Date

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

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

Comments: N/C

8.1[1] Performed By: GERALD ESPINOZA / HOWARD SMITH — 237720 1-16-14 / 1226731 1/16/14
Waste Handling Technician (print) Signature Z# Date

8.1[6] Reviewed By: Gilbert Martinez — 149235 2/4/14
Supervisor or designee (print) Signature Z# Date

Working Copy
Date: 1-24-14w

ATTACHMENT 5
Page 1 of 1

WCRRF OVERPACK DRUM CLOSURE DATA SHEET

7.[17] Overpack Drum Unique Identifier No.: 69248

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

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

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

Performed By: Federico Rebolledo / [signature] 1228861 1-26-14
Waste Handling Technician (print) Signature Z # Date

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

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

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

7.[34][D] 85-gal overpack drum gross weight (lb): 169.8 lb

Comments: N/C

8.1[1] Performed By: Brian Gallegos / [signature] 1267129 1-26-14
Waste Handling Technician (print) Signature Z # Date

8.1[7] Reviewed By: Gilbert Martinez / [signature] 1872351 2/4/14
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 1
Page 1 of 2

Working Copy
Date: 1/24/14 HS

WCRRF DRUM PREPARATION DATA SHEET

5.[34][E] Drum ID No.: 69280

5.[3] Drum information:
Purchase Order No.: 501892
Lot No.: 0244449
Manufacture Date: 2013

5.[17] Drum Liner Bag/Filter Assembly:
Manufacturer: BOP
Model No.: 6CPVC-1.5-2SPVC
Serial No.: L 11734
Manufacture Date: 6/13

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

	Filtered Vent	2 in. Bung
M&TE No.:	101310	036245
Cal. Expiration Date:	11/12/14	8/5/14
Range:	40-200 in-lb	16-80 ft-lb
Tolerance (+/-):	±4% cw ±6% ccw	±3% cw ±6% ccw

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

Performed By: Joe Romero (Operator (print)) [signature] (Signature) 109702 (Z #) 1-24-14 (Date)

5.[23] Filtered vent information:
Manufacturer: NUCFIL
Model No.: 019DS
Serial No.: AN-514
Manufacture Date: 1/13

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

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

5.[30] Scale File ID number: 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.: 69280

Comments: N/C

5.[35] Performed By: Joe Romero (Operator (print)) [signature] (Signature) 1109704 (Z #) 1/24/14 (Date)

7.1[4] Reviewed By: Gilbert Martinez (Supervisor or designee (print)) [signature] (Signature) N93351 (Z #) 2/4/14 (Date)

ATTACHMENT 2
Page 1 of 2

WCRRF DRUM CLOSURE DATA SHEET

6.[3] Drum ID No.: 69280

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

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

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

Performed By: Federico Arbulete / [signature] / 1228804 / 1-26-14
Operator (print) Signature Z # Date

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

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

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

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

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

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

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

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

ATTACHMENT 2
Page 2 of 2

6.[3] Drum ID No.: 69280

6.[26] Scale File ID number: 019065

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

6.[28] Drum gross weight: 236.2 lbs

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

Comments: N/C

6.[32] Performed By: BRIAN GALLEGOS (Operator (print)) [signature] (Signature) 267179 (Z #) 1-26-14 (Date)

7.1[4] Reviewed By: Gilbert Martinez (Supervisor or designee (print)) [signature] (Signature) 145235 (Z #) 2/4/14 (Date)

Working Copy
Date: 1-22-14

ATTACHMENT 1
Page 1 of 2

WCRRF DRUM PREPARATION DATA SHEET

5.[34][E] Drum ID No.: 69298

5.[3] Drum information:
Purchase Order No.: 501892
Lot No.: 0244449
Manufacture Date: 2013

5.[17] Drum Liner Bag/Filter Assembly:
Manufacturer: BOP
Model No.: 6 cpvc-1.5-2.5 pvc
Serial No.: L-11715
Manufacture Date: 01/13

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

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

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

Performed By: Andrew H. Romero (Operator (print)) | Andrew H Romero (Signature) | 1187006 (Z #) | 01/22/14 (Date)

5.[23] Filtered vent information:
Manufacturer: NucFil
Model No.: 019DS
Serial No.: AN-520
Manufacture Date: 01/13

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

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

5.[30] Scale File ID number: 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.: 69298

Comments: N/C

5.[35] Performed By: Andrew H. Romero (Operator (print)) Andrew H. Romero (Signature) 1152061 (Z #) 02/24/14 (Date)

7.1[4] Reviewed By: Gilbert Martinez (Supervisor or designee (print)) (Signature) 142351 (Z #) 2/4/14 (Date)

ATTACHMENT 2
Page 1 of 2

WCRRF DRUM CLOSURE DATA SHEET

6.[3] Drum ID No.: 69298

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

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

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

Performed By: Frederick Bachleda / [signature] / 12285261 / 1-26-14
Operator (print) / Signature / Z # / Date

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

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

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

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

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

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

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

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

ATTACHMENT 2
Page 2 of 2

6.[3] Drum ID No.: 69298

6.[26] Scale File ID number: 019065

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

6.[28] Drum gross weight: 447.2 lbs

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

Comments: N/C

6.[32] Performed By: BRIAN GALLEGOS / [signature] / 267129 / 1-26-14
Operator (print) Signature Z # Date

7.1[4] Reviewed By: Gilbert Martinez / [signature] / 114923 / 2/4/14
Supervisor or designee (print) Signature Z # Date

Working Copy
Date: 1-24-14

ATTACHMENT 3
Page 1 of 1

WCRRF PARENT 55-GAL DRUM PREPARATION DATA SHEET

6.3[21] Prepared Parent 55-Gal Drum Number: 9841251

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): 479.6

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

Comments: N/C

8.1[1] Performed By: [illegible] / [signature] 123884 / 1-26-14
Waste Handling Technician (print) Signature Z # Date

8.1[7] Reviewed By: Gilbert Martin / [signature] 1422251 2/4/14
Supervisor of designee (print) Signature Z # Date

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

8.1[8][D] Approved by: Gilbert Martin / [signature] 1422251 2/4/14 1605
SOS/SOM or designee (print) Signature Z # Date Time

1937 SP72

LTP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Planning and Technical Solutions

Container ID: S841251 Container Type: 85 GAL DRUM Gross Weight (lbs): 500.7555
Total PE-Ci Activity: 1.62E+01 Equivalent Combustible PE-Ci: 6.06E+00
Total Fissile Gram Equivalents: 1.71E+02 Total Surface Dose Rate (mrem/hr): 2
EPA Code(s): D007; D008; D009
Waste Description: Nitrate salts

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

Drum venting and gas sampling completed on 2/27/13 and Attachment 3 of DOP-1030 is attached. RTR pre-screen indicated liquid and lead liner in the drum.

Potential Safety Risks: Nitrate salt drums often contain free liquids and are packaged in individual plastic bags. Net weight is ~3616 lbs. and generator data shows 12 items of nitrate salts with weights ranging from ~10-50 lbs.

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

IHS Representative

Potential IHS Safety Risks: May contain D007, D008, + D009 May also contain unknown liquid.

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

LTP Engineering

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

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

TRU Remediation Operations

Potential Safety Risks: Use Proper PPE And Kitty Liter Ratio

Performed By: Gilbert Martinez (TRU Operations (Print)) | Signature | 1149235 (Z#) | 12/6/13 (Date)

Operations Manager or designee

Processing Determination: ☒ Accept ☐ Reject
OM or designee Comments: Do not push or press on waste with hands. Use heavyweight gloves during processing. Use proper tool for the task being performed.

Approved By: Jose Jerez (OM or designee (Print)) | Signature | 221452 (Z#) | 12/6/13 (Date)

Noncertified TRU Waste Drum Item Information

DrumID: 019557

Item No	ItemID	Process Status	Net Wt (kg)	Matrix	Meas Code	SNM (g)	MT	Auth (Pg/Ln)		Comments
1	RR40A		4.550	NITRATE SALTS		1.52	52	6/14	G468	
2	MX5-39A		22.730	NITRATE SALTS		28.51	52	6/14	G468	
3	RR41A		2.950	NITRATE SALTS		4.9	52	6/14	G468	
4	LR-42A		22.250	NITRATE SALTS		40.9	53	6/14	G468	
5	LR-46A		11.820	NITRATE SALTS		5.84	52	6/14	G468	
6	LR-42A-A		4.550	NITRATE SALTS		1.71	52	6/14	G468	
7	LR-43-A		20.680	NITRATE SALTS		70.37	52	6/14	G468	
8	LR-45A		12.840	NITRATE SALTS		4.28	52	6/14	G468	
9	LR-47NE1A		14.200	NITRATE SALTS		7.07	52	6/14	G468	
10	LR-44NW1		16.870	NITRATE SALTS		13.02	52	6/14	G468	
11	LR-45-NW1		14.550	NITRATE SALTS		1.54	52	6/14	G468	
12	LR-45-NE2		18.410	NITRATE SALTS		3.1	52	6/14	G468	

Noncertified Waste Drum Material Summary

Gross Wt (kg): 227.1

Material Type	SNM (grams)	Items Net Wt (kg)
52	141.86	144.15
53	40.9	22.25
Totals	182.76	166.40

ATTACHMENT 3
Page 1 of 3

TA-54 AREA G DRUM VENTING DATA SHEET

7.[2] Waste Container Unique Identifier: 3841251

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

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

55-gal drum: ☑ SAT ☐ UNSAT ☐ N A

85-gal drum: ☐ SAT ☐ UNSAT ☑ N A

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

7.[9]

Head Space Gas sample results:	85-gal (☑ N A)	55-gal (☐ N A)
Hydrogen	____ %	0.209502 %
Methane	____ ppm	0.000 ppm
VOC	____ ppm	45.43 ppm
Filter Vent Unique Identifier No.:	____	AN-370
Filter Vent Installed:		
Stub Stem (e.g., NucFil-007S)	☐ (☑ N A)	☐ (☑ N A)
Short Stem (e.g., NucFil-7DS)	☐ (☑ N A)	☐ (☑ N A)
Long Stem (e.g., NucFil-08DS)	☐ (☑ N A)	☑ (☐ N A)

ATTACHMENT 3
Page 2 of 3

7 [2] Waste Container Unique Identifier: S841251

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

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

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

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

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

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

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

ATTACHMENT 3
Page 3 of 3

7 [2] Waste Container Unique Identifier: S841251

7 [11][B][f] Number of WIPP-approved filtered vents installed:
- 85-gal Waste Container _____ ☑ N A
- 55-gal Waste Container _____ ☑ N A

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

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

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

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

7 [13][A] (S) 55-gal waste containers to be transferred to WCRRF satisfy the following criteria (WCRRF SAC 5.10.2.3.4.a): ☑ SAT ☐ UNSAT ~~☑~~ N A
- Hydrogen concentration less than or equal to 2.4% (24,000 ppm)
- VOC less than or equal to 5,250 ppm

12/5/13

Comments: N/A

7 [11][M] 7 [23] Performed By: Chris Vigil — 163082 — 2-27-13
LTP-DDP Supervisor designee (Print) Signature Date

10 [3] Overhead space heaters ON and thermostat set ☐ SAT ☑ UNSAT

10 [4] Reviewed by: Chris Vigil — 163082 — 2-27-13
LTP-DDP Supervisor designee (print) Signature Date

ATTACHMENT 2
Page 1 of 2

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

5.[3] 6.[3]

Waste Container Unique Identifier: 8841251
PE-Ci Content: 16.16420176
PE-Ci Equivalent Combustible content: 14.22449755
FGE content 171.00666665
Weight (lb) 500.7555
Outermost Waste Container configuration:
☑ Vented 85-gal ☐ Unvented 85-gal ☐ Unvented 55-gal

5.[3]/6.[3] Performed By: Chris Vigil [signature] 163082 2-27-13
LTP-DDP Supervisor designee (Print) Signature Z # Date

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

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

6.[8] (S) Drum-lid restraint inspected for degradation (e.g., no indication of cracked parts, missing fasteners, loose or frayed parts, excessive wear, or unusual deformation): (SAC 5.6.4.5.1) ☐ SAT ☐ UNSAT ☑ N/A

ATTACHMENT 2
Page 2 of 2

5.[3] 6.[3] Waste Container Unique Identifier: S841251

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

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

(CS)

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

Comments: N/A

5.[19] 6.[28] Performed By: Chris Vigil [signature] 163082 2-27-13
LTP-DDP Supervisor/designee (Print) Signature Z# Date

10.1[3] Reviewed by Chris Vigil [signature] 163082 2-27-13
LTP-DDP Supervisor/designee (Print) Signature Z# Date

10.1[6] Acceptance criteria satisfied: ☑ YES ☐ NO

10.1[8] Approved by Chris Vigil [signature] 163082 2-27-13
SOS SOM or designee (Print) Signature Z# Date Time 1145

DVS Gas Determination Results Report

Date: 2/27/2013

Waste Container Number: S841251

Batch Number: DVS2130227

Filter Type Installed: 08DS

Number of Filters Installed: 1

Flammable Volatile Organic Compounds (VOCs)

Compound	Concentration (ppmV)	Upper Calibration Range (ppmV)	Exceeds Calibration (Y/N)	Calculated Value (if exceeds calibration)
Methanol	36.82	1591.00	N	N/A
Diethyl Ether	0	503.00	N	N/A
1,1 Dichloroethene	0	402.80	N	N/A
Acetone	6.79	1502.00	N	N/A
1,1-Dichloroethane	0	400.80	N	N/A
Cis 1,2-Dichloroethene	0	400.20	N	N/A
Methyl Ethyl Ketone	0	1503.00	N	N/A
Cyclohexane	0	497.30	N	N/A
Benzene	1.82	1492.00	N	N/A
1,2-Dichloroethane	0	400.80	N	N/A
N-Butyl Alcohol	0	200.20	N	N/A
Methyl Isobutyl Ketone	0	501.90	N	N/A
Toluene	0	1491.00	N	N/A
Chlorobenzene	0	186.60	N	N/A
Ethylbenzene	0	100.00	N	N/A
m,p-Xylene	0	100.09	N	N/A
o-Xylene	0	100.30	N	N/A
1,3,5-Trimethylbenzene	0	50.64	N	N/A
1,2,4-Trimethylbenzene	0	50.17	N	N/A

Flammable Tentative Identified Compounds (TIC)

Compound	Concentration (ppmV)	CAS Number
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

Total Flammable VOCs	45.43	I.V.R. Intial and Date	JAB 2/27/13

Compound	Concentration		Upper Calibration Range		Exceeds Calibration (Y/N)
Hydrogen	0.209502	%	6.45	%	N
Methane	0.000	ppm	15990.00	ppm	N

Comments:

AN-370

Joey Eisele — DVS Operator Print Name

Signature

2/27/13 — Date

1-26-14
0400 Assuming WCRRF operations center Chelonde
0414 Starting outside rounds and inside rounds.
0415 Pre JCB being conducted by SOS.
0437 completed outside.
0440 Item 43 in OCS, POD in place, okay to proceed per CSE da
0450 Inside rounds complete.
0454 Rounds signed off by SOS.
0710 made change to operations, WCRRF yard and TA50 69
0820 Starting to dump 3 drums then will be bagging on and off.
0830 Starting movement out of 50-69.
0832 will only be dumping 2 drums one has contamination.
0838 movement out of 50-69 complete
0915 dumping complete, bagged on 3841251.
0926 ~~Bag on, Bag off complete~~ 01-26-14 Drum 68847 had 10 Rd on sides of drum.
1018 Starting movement into 50-69.
1023 Bagging off 2 daughters, Bagging on 68854
1035 late entry at 820 SOS referring to centre that drum bagged on did not have a filter on the 30 gallon. The 85 gallon filter had gone thru all 3 drums. 55 had no vent
1034 movement into 50-69 complete.
1134 Starting movement out of 50-69.
1147 movement out of 50 69 complete.
1159 late entry. Bag on, Bag off complete at 1100. Card
1235 Bagging off 1 daughter, Bagging on another
1247 Bag on, Bag off complete of daughter.
1440 Dumping SWB
1500 Starting outside rounds
1530 Dumping complete, Bagging off. Bagging on 3833344, Pumpsc
1548 Bag on, Bag off complete
1552 ~~Starting~~ 01-26-14 Starting inside rounds.
1616 Item 43 in OCS, POD in place, okay to proceed per CSE document
1630 Inside rounds complete.
1638 Bagging off 1 daughter, Bagging on another.
-Continued on next page-

1-24-14 — Continued from previous page

1442 Bag on, Bag off complete of daughters.
1735 Bagging off, bagging on ~~9833344~~ 3852876
1744 Starting movement into 50-69
1800 Bag on, Bag off complete.
1801 Permission granted from OM to leave drum on the WCG.
1821 Completed movement into 50-69
1822 Starting movement out of 50-69
1830 ~~1833~~ 1-24-14 Movement out complete
1832 mode change to warm, TA50-69 and WCRRF yard
HW 1-24-14 1840 End of day WCRRF OCD position secure. CLOC and

No further entries this page

1/20/14 WCRR SOM

0600 Assumed the WCRR SOM position. K

0608 Verified 50-69 temp @ 69°F w/ electric heaters energized. Thermostat at 77°F

0637 Completed pre-job brief conducted by SOS - G. Martinez. Discussed issue at end of day concerning long shank filters installed on 85 gal drums. Operators to obtain list of drums to be processed w/ filters installed - directed not to move any into 50-69 until verified that long shank filters are not installed. Have drum on WCG ready to process and will move SWB 10133 into facility for denesting.

0710 Completed Mode Change: WCRR yard / Bldg 50-69 from Warm / Warm to Operations / Operations.

0832 While performing denesting operations of 3 drums, one of them resulted w/ 10K dpm alpha contamination (drum # 68847) - closed back up.

0838 Operators completed move out of 4 drums from 50-69 to transportainers

0915 Completed denesting ops - completed all bag offs for parent # 537001 (1 daughter total). Bagged on drum # 5841251.

0930 Informed by SOS working @ Dome 412 that worker became ill while working in CA. Operator exited area and is taking a break - will not reenter area today.

0940 Sent energy request for 412 grp work in Area G to MSS scheduler and Area G SOM. MSS being contacted by Ops Center to start up 412 generator.

1100 Completed all bag offs for parent # 5841251 (2 daughters total) Bagged on drum # 68854

1210 SOS reported that last 1/3 of waste in drum currently being processed is difficult to remove. Items are packed tight w/ plastic just tearing - nothing able to get a grab on w/ tools. Looking for other tool attachments to complete.

1247 Completed bag off of 1 daughter, continuing to process

1400 Material in bottom of drum 68854 reported as solidified rubber-type material - such as strippable RadCon / Decon paint. Will not come out of drum. Drum will be bagged off and overpacked into 85 gal DM for RTR at Area G to determine if any PID's remain.

continued on next page. →

1/24/14 WCRR SOM continued

1400 continued SOS reported that all usable PID's were removed from drum. OM notified.

1548 SWB 10133 has been denested of 2 drums. Completed all bag offs for parent # 68854 (3 daughters). Bagged on 5833344

1650 ~~LAG~~ LRG 1/24/14 Approved Shift Order # WCRR-SH-14-002 R0 To ensure long shank WIPP filters are not installed on 85 gal waste drums received @ WCRR. Shift order to be active tomorrow morning - turning over to oncoming SOM.

1710 Update for Area G operations - completed SWB build in 412 - did not have time to start GAP work in Dome 224. Generator and heaters will be secured @ COB today and current plan for operations for Monday + Tuesday is still to be worked per PM and OM.

1800 Completed all bag offs for parent # 5833344 (~~2~~ 3 daughters total) bagged on ~~5852876~~ LRG 1/24/14 5852876. Have OM permission to leave bagged on overnight.

1830 All movements in/out of 50-69 completed. All drums which can be processed ((2) SP72's and (4) SP3's) have been moved into 50-69.

1832 Completed Mode Change: WCRR Yard / Bldg 50-69 from Operations / Operations to Warm / Warm.

1835 Verified HVA-001 heater is working properly. 50-69 thermostat is set to 77° F.

1900 Secured the SOM position.

No further entries this page
LRG

PROJECT NAME WORK SOS LOG Book NOTEBOOK NO.

Best Available Copy

1/26/04

0600 Assuming SOS Position All [illegible]
0615 Starting Rounds
0615 Conducting Pre Job Discussed drum Inside Also talked about denesting SWB.
0632 Pre Job complete.
0659 Round signoff off.
0710 Mode change complete WCRT In operations.
0820 Starting to denest 3 drums then bagging on
0828 Starting Movement out of 50-69
0832 Will only be denesting 2 Drums one drum had high Counts of Removable Contamination lid was put back on.
0838 Movement out of 50-69 complete
0915 denesting complete Bagging on 58412-51
0926 Drum 68847 has 10 Rad/hr on side
1018 starting movement out Into 50-69
1023 bagging off 2 daughters bagging on 68854
1025 Movement In complete
1030 starting move out of 50-69
1042 Move out complete
1159 late entry bag unload complete @ 1100
1235 bagging off a daughter bagging on another
1242 Bag on Bags off complete
1446 Depositing Slab
1500 Starting Rounds
1550 denesting Complete Bagging off for 51223-41 1
1556 Bag unload complete.
1632 Bagging off of daughter bagging on Another
1642 Bag on load complete
1735 Bagging off for 58528-26
1744 Starting movement Into 50-69
1800 Bag unload complete
1811 Finishing [illegible] to leave drum bagged on
1811 Completed Move In
1812 Started move out of 50-69
1830 Movement Complete
1832 Mode Change Complete WCRT In operations
1835 End of day Securing position [illegible]

No Further entries on this page

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

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-14-0013
Examination Date:	1/30/2014
Waste Container ID:	69280
Video/Audio Recorded Media Number:	LA-RTR2-14-0013 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.: 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:	40 %

CCP Radiography Data Sheet

Waste Container ID: 69280

Section 3: Container Inventory and Comments (Detailed descriptions)

IM:

AM:

OM: Scrap lead

OI:

C:

R:

XPM: Plastic bags

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP): Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	6.0
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	4.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	64.6
Soils (S):	
Total WMP Weight:	74.6

CCP Radiography Data Sheet

Waste Container ID: 69280

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		1/30/2014
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	69280	Count Sequence Number:	16940
Operator:	DCLTD231\Operator		
Assay Start:	1/31/2014 3:46:44 PM		
Description 1:	2LANDA1262		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gal Drum		
Weight:	Net: 74.6 kg	Net:	74.6 kg
Container:	Volume: 208.0 l	Full:	40.0 %
Density:	0.900 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:	16940	Batch Number:	2LANDA1262
Assay Instrument:	HENC #2	Location:	LANL TA-54
Analysis Method:	CCP-TP-063 v 15	Software Version:	NDA 2000 V.4.0
Item ID:	69280	Analysis Date:	1/31/2014

Net Weight	74600.0 g			
Pu mass	7.40E+001	+-	2.25E+001	g
TRU Alpha Activity	1.76E+001	+-	8.55E+000	Ci
TRU Activity Concentration	2.36E+005	+-	1.15E+005	nCi/g
Pu-239 Equivalent Activity	1.78E+001	+-	8.55E+000	Ci
Pu-239 FGE	6.94E+001	+-	2.24E+001	g
Decay heat	5.75E-001	+-	2.84E-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	1.23E-006
U233	<LLD	<LLD	0.00E+000	9.96E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	3.06E-006
NP237	1.66E-001	1.17E-004	2.51E-005	2.54E-006
PU238	9.45E-003	1.62E-001	5.72E-002	1.66E-003
U238	<LLD	<LLD	0.00E+000	5.03E-005
PU239	6.90E+001	4.28E+000	1.39E+000	4.39E-002
PU240	4.86E+000	1.10E+000	3.90E-001	1.13E-002
AM241	3.52E+000	1.21E+001	8.42E+000	1.52E-001
PU241	9.66E-002	9.95E+000	3.52E+000	1.02E-001
PU242	2.30E-002	9.08E-005	3.21E-005	0.00E+000
AM243	4.79E-004	9.59E-005	2.10E-005	1.36E-005

Errors quoted at 1.000 sigma

Operator: _____ Date: 2.4.14

ITR: _____ Date: 2-5-14

Automated Independent Technical Review

Count Sequence Number: 16940
Batch Number: 2LANDA1262
Counter ID: HENC #2
Container ID: 69280
Waste Matrix Code: Homo Sol. S3000
Count Type:
Sequence Type:
Assay Date: 1/31/2014

Comments	Disposition
Section 1 - Add-A-Source Analysis	
Add-a-Source WARNINGS:	
Add-a-Source correction factor is less than one.	Ok
Add-a-Source correction factor was set to one.	Ok
Add-a-Source correction factor is less than n-sigma * the correction factor error.	Ok
Section 2 - Passive Neutron Analysis	
Analysis Status: No errors.	Ok
Ones Rate Analysis complete with warnings.	
- Error calculating the Ones Rate Pu-240 Effective MDA.	Not data affecting.
Section 3 - Data Combiner Analysis	
Override enabled; Gamma data specified as input.	Results taken from quantitative gamma data.
Results taken from Quantitative Gamma data.	
Results comparison test passed.	
Section 4 - MGA Analysis	MGA analysis failed. AK isotopics applied. The AK information utilized was provided by Steve Schafer, AKE, and consists of data from CCP-AK-LANL-006, AK Source Document M237. MT-52,53.
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: 2-3-14

Waste Container ID: **69280**

BDR Number: **LA14FG2052**

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

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	245.37	
74-82-8	Methane	142.14	U
67-56-1	Methanol	35.23	U
60-29-7	Ethyl Ether	0.96	U
75-35-4	1,1-Dichloroethylene	6.38	U
67-64-1	Acetone	18.08	U
75-34-3	1,1-Dichloroethane	4.08	U
156-59-2	cis-1,2-Dichloroethene	0.76	U
78-93-3	Methyl ethyl ketone	11.73	U
110-82-7	Cyclohexane	5.10	U
71-43-2	Benzene	1.77	U
107-06-2	1,2-Dichloroethane	3.66	U
71-36-3	1-Butanol	1.84	U
108-10-1	Methyl isobutyl ketone	9.82	U
108-88-3	Toluene	8.02	U
108-90-7	Chlorobenzene	4.10	U
100-41-4	Ethylbenzene	3.57	U
108-38-3/106-42-3	m- and p-Xylene	1.92	U
95-47-6	o-Xylene	2.10	U
108-67-8	1,3,5-Trimethylbenzene	1.96	U
95-63-6	1,2,4-Trimethylbenzene	2.13	U

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

InstName : Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\140404c\
Data File : 69280.D
Acq On : 4 Apr 2014 2:44 pm (#1); 04-Apr-14, 14:43:49 (#2)
Operator : NW
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 04 14:52:16 2014
Quant Method : C:\msdchem\1\METHODS\VOCGAS.M
Quant Title : Flammable Gas Analysis
QLast Update : Mon Aug 26 13:12:56 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
3) Fluorobenzene	3.545	96	3349360	205.75 ppmv	0.03
15) Chlorobenzene-d5	5.848	117	2684266	177.50 ppmv	-0.01
Target Compounds					Qvalue
1) Hydrogen	1.627	GC1	1845m	245.37 ppmv	

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

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-14-0013
Examination Date:	1/30/2014
Waste Container ID:	69298
Video/Audio Recorded Media Number:	LA-RTR2-14-0013 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.: 203.0 kg Tare Wt.: 33.4 kg Net Wt.: 169.6 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: 69298

Section 3: Container Inventory and Comments (Detailed descriptions)

IM:

AM:

OM: Scrap lead

OI:

C: Tape roll

R:

XPM: Plastic bags, plastic lid

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP): Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	5.0
Other Inorganic Materials (OI)	
Cellulosics (C):	0.1
Rubber (R):	
Plastics (waste materials) (XPM):	4.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	160.5
Soils (S):	
Total WMP Weight:	169.6

CCP Radiography Data Sheet

Waste Container ID: 69298

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:

Print Name	Signature	Date
Benito Maestas	B. Maestas	1/30/2014

S841251

NDA 2000 Assay Report

Item Information

Item ID:	69298	Count Sequence Number:	16939
Operator:	DCLTD231\Operator		
Assay Start:	1/31/2014 3:03:19 PM		
Description 1:	2LANDA1262		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gal Drum		
Weight:	Net: 170.0 kg	Net:	170.0 kg
Container:	Volume: 208.0 l	Full:	95.0 %
Density:	0.860 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:	16939	Batch Number:	2LANDA1262
Assay Instrument:	HENC #2	Location:	LANL TA-54
Analysis Method:	CCP-TP-063 v 15	Software Version:	NDA 2000 V.4.0
Item ID:	69298	Analysis Date:	1/31/2014

Net Weight	170000.0 g		
Pu mass	1.31E+002	+-	3.84E+001 g
TRU Alpha Activity	2.26E+001	+-	3.64E+000 Ci
TRU Activity Concentration	1.33E+005	+-	2.14E+004 nCi/g
Pu-239 Equivalent Activity	2.29E+001	+-	3.64E+000 Ci
Pu-239 FGE	1.23E+002	+-	3.83E+001 g
Decay heat	7.32E-001	+-	1.18E-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	1.37E-006
U233	<LLD	<LLD	0.00E+000	1.35E-002
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	7.45E-006
NP237	1.87E-001	1.32E-004	2.76E-005	3.40E-006
PU238	1.79E-002	3.06E-001	1.05E-001	2.84E-003
U238	<LLD	<LLD	0.00E+000	5.17E-005
PU239	1.22E+002	7.56E+000	2.37E+000	7.02E-002
PU240	8.59E+000	1.95E+000	6.71E-001	1.81E-002
AM241	3.73E+000	1.28E+001	2.68E+000	2.55E-001
PU241	1.71E-001	1.76E+001	6.06E+000	1.63E-001
PU242	4.06E-002	1.60E-004	5.52E-005	0.00E+000
AM243	7.82E-004	1.56E-004	3.30E-005	1.81E-005

Errors quoted at 1.000 sigma

Operator: _____ Date: 2.4.14

ITR: _____ Date: 2-5-14

Automated Independent Technical Review

Count Sequence Number: 16939
Batch Number: 2LANDA1262
Counter ID: HENC #2
Container ID: 69298
Waste Matrix Code: Homo Sol. S3000
Count Type:
Sequence Type:
Assay Date: 1/31/2014

Comments	Disposition
Section 1 - Add-A-Source Analysis No Add-a-Source warnings.	Ok
Section 2 - Passive Neutron Analysis Analysis Status: No errors.	Ok
FGE is greater than the upper limit of 200.00 Ones Rate Analysis complete with warnings. - Error calculating the Ones Rate Pu-240 Effective MDA.	Neutron results suspect. Gamma results applied.
Section 3 - Data Combiner Analysis Override enabled; Gamma data specified as input. Results taken from Quantitative Gamma data. Results comparison test passed.	Results taken from quantitative gamma data.
Section 4 - MGA Analysis Results are marked as invalid.	MGA analysis failed. AK isotopics applied. The AK information utilized was provided by Steve Schafer, AKE, and consists of data from CCP-AK-LANL-006, AK Source Document M237. MT-52,53.
Section 5 - Gamma Analysis Analysis Status: No errors.	Ok
Miscellaneous	No additional nuclides contributing to 95% of the radiological hazard identified.

Expert Review by: Sheri Chamberlin Date: 2-3-14

Waste Container ID: **69298**

BDR Number: **LA14FG2052**

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

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	319.05	
74-82-8	Methane	142.14	U
67-56-1	Methanol	35.23	U
60-29-7	Ethyl Ether	0.96	U
75-35-4	1,1-Dichloroethylene	6.38	U
67-64-1	Acetone	18.08	U
75-34-3	1,1-Dichloroethane	4.08	U
156-59-2	cis-1,2-Dichloroethene	0.76	U
78-93-3	Methyl ethyl ketone	11.73	U
110-82-7	Cyclohexane	5.10	U
71-43-2	Benzene	1.77	U
107-06-2	1,2-Dichloroethane	3.66	U
71-36-3	1-Butanol	1.84	U
108-10-1	Methyl isobutyl ketone	9.82	U
108-88-3	Toluene	8.02	U
108-90-7	Chlorobenzene	4.10	U
100-41-4	Ethylbenzene	3.57	U
108-38-3/106-42-3	m- and p-Xylene	1.92	U
95-47-6	o-Xylene	2.10	U
108-67-8	1,3,5-Trimethylbenzene	1.96	U
95-63-6	1,2,4-Trimethylbenzene	2.13	U

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

InstName : Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\140404c\
Data File : 69298.D
Acq On : 4 Apr 2014 2:33 pm (#1); 04-Apr-14, 14:32:38 (#2)
Operator : NW
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 04 14:41:07 2014
Quant Method : C:\msdchem\1\METHODS\VOCGAS.M
Quant Title : Flammable Gas Analysis
QLast Update : Mon Aug 26 13:12:56 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
3) Fluorobenzene	3.558	96	3467396	205.75	ppmv	0.04
15) Chlorobenzene-d5	5.868	117	2750226	177.50	ppmv	0.00
Target Compounds						Qvalue
1) Hydrogen	1.625	GC1	2399m	319.05	ppmv	

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

S841292

S841292

Container 768841

File Options Reports Help

S841292

768841	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

S841292

- S841292
  - LA00000068484
  - LA00000068473
  - LA00000068439 – EMPTY

Working Copy
Date: 9-30-13

ATTACHMENT 1
Page 1 of 4

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: S841292

6.2[4] Date Processed: 9/30/13

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: N/A

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

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

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

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

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

4.3[7 [A] Parent Waste Container degraded, loss of integrity, or weighs greater than 468 lb but less than or equal to 624 lb: 9-30-13
☐ YES ☑ NO ☑ N/A

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

Performed By: [illegible] [signature] [illegible] 9-30-13
Waste Handling Tech (print) Signature Z # Date

ATTACHMENT 1
Page 2 of 4

4.1[6][B] Parent Waste Container No.: 5 841292

5.[18] Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable: 408.0 lb

6.2[5][A] Parent Drum Lead Blanket Weight (lb): 23.0 lb

6.2[5][B]/ 6.2[6] Total Parent Drum Weight (lb) 431.0 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.: 5841292

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	68473	68484		
10.1[4]	Daughter Drum Filter No.	LM 292	LM-291	N	
10.1[4]	Daughter Drum Bag Filter No.	L-10312	L-10314		A
10.1[4]	Daughter Drum Purchase Order No.	501578	501578		
10.1[13][C]	WCG Fire Watch Stationed		☐ YES	☐ NO	☑ N/A
10.1[14][C][d]3/11.1[3]	WCG Fire Watch Secured		☐ YES	☐ NO	☑ N/A
10.2[4]	POC bag-on bag: Manufacturer				
	Model No.				
	Serial No.				
	Date of Manufacture				
10.2[5]	POC ID No				
10.2[7][B]/10.2[6]	POC Item Description		N	A	
10.2[13]	POC Assembly closed per Manufacturer's instructions. (Initial and Z#)				
10.2[14]	POC Assembly Gross Weight (lb)				
10.2[15]	POC Rad. Survey Results (mrem/hr)				
10.3[3][A]	Approx. Containerized Liquid Vol./Units				
10.3[5][A]	Free Liquid Volume/Units	3 galons	1½ galon		
10.3[7][A]	Opaque/Non-penetrable Item Description:	lead shielding	lead shielding		
10.3[9][A]	PCB-contaminated Waste Description		N	A	
10.3[9][B]	PCB Item ID No.				
10.3[10]	Remaining Waste Description	See Comments	See Comments		
10.3[13]/10.4[10]/ 10.5[4]/10.6[10]	Daughter Drum % Full (%)	80%	100%		N A
10.5[3]/10.6[2]	Description Waste Added During Processing	Kitty Litter plastic absorbent Bags. glove & Gloves	Kitty litter Room trash plastic strout Bags		

ATTACHMENT 1
Page 4 of 4

4.1[6][B] Parent Waste Container No.: 5841292

Comments: leached solids, N.trate salts, lead shielding poly liner, 3 gallons PH-4 liquid, plastic, glove Box gloves, kitty litter, Room trash

11.1[1] Performed By: Adam Segovia [signature] 1276102 / 9-30-13
Waste Handling Tech (print) Signature Z # Date

11.1[8] Reviewed By: Clayton Mullins [signature] 1240092 10/1/13 0351
SOS or designee (print) Signature Z # Date/Time

Working Copy
Date: 9-18-13

ATTACHMENT 2
Page 1 of 1

WCRRF OVERPACK DRUM ASSEMBLY PREPARATION DATA SHEET

5.[3] Overpack drum information:

Purchase Order No.: 501563
Lot No.: 0258567
Manufacture Date: 13

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

	Filtered Vent	2-in. Bung
M&TE No.:	100216	059369
Cal. Expiration Date:	12-18-13	12-18-13
Tolerance:	+/- 4% CW +/- 6% CCW	+/- 5% CW +/- 6% CCW

Overpack filtered vent information:

Manufacturer: NUCFIL
Model No.: 013
Serial No.: JL-906
Manufacture Date: 01/11

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

5. [11] Performed By: IAN MARQUEZ / [signature] Z76224 / 9-18-13
Waste Handling Technician (print) Signature Z # Date

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

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

Comments: N/C

8.1[1] Performed By: IAN MARQUEZ / [signature] Z76224 / 9-18-13
Waste Handling Technician (print) Signature Z # Date

8.1[6] Reviewed By: Clayton Mullins / [signature] 241094 / 10/1/13
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 5
Page 1 of 1

Working Copy
Date: 9-30-13

WCRRF OVERPACK DRUM CLOSURE DATA SHEET

7.[17] Overpack Drum Unique Identifier No.: 68439

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

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

Performed By: Federico Arboleda / [signature] / 1228826 / 9-30-13
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): 166.4 lb

Comments: n/a

8.1[1] Performed By: Edward Martinez / [signature] / 239911 / 9-30-13
Waste Handling Technician (print) Signature Z# Date

8.1[7] Reviewed By: Clayton Mullins / [signature] / 240092 / 10/1/13
Supervisor or designee (print) Signature Z# Date

Working Copy
Date: 9-26-13

ATTACHMENT 1
Page 1 of 2

WCRRF DRUM PREPARATION DATA SHEET

5.[34][E] Drum ID No.: 684473

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

5.[17] Drum Liner Bag/Filter Assembly:
Manufacturer: BOP
Model No.: 6 CPVC 1.5-2 SPRC
Serial No.: L-10312
Manufacture Date: 5/13

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

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

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

Performed By: Zachary Archuleta [signature] 1228026 9-26-13
Operator (print) Signature Z # Date

5.[23] Filtered vent information:
Manufacturer: Nucfil
Model No.: 019-DS
Serial No.: LM 292
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.: 68473

Comments: N/C

5.[35] Performed By: Frederico Arbuleta / [signature] / 1228826 / 9-26-13
Operator (print) Signature Z # Date

7.1[4] Reviewed By: Clayton Miller / [signature] / 240092 / 10/1/13
Supervisor or designee (print) Signature Z # Date

Working Copy
Date: 9/30/13

ATTACHMENT 2
Page 1 of 2

WCRRF DRUM CLOSURE DATA SHEET

6.[3] Drum ID No.: 608473

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

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

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

Performed By: [illegible] / [signature] / [illegible] / 9-30-13
Operator (print) Signature Z # Date

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

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

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

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

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

Performed By: N/A / / /
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.: 68473

6.[26] Scale File ID number: 019065

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

6.[28] Drum gross weight: 279.2 lbs

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

Comments: N/C

6.[32] Performed By: MICHAEL MONTOYA (Operator (print)) [signature] (Signature) 1191352 (Z #) 9/30/13 (Date)

7.1[4] Reviewed By: Clayton Mullins (Supervisor or designee (print)) [signature] (Signature) 1241092 (Z #) 10/1/13 (Date)

Working Copy
Date: 9-24-13 cw

ATTACHMENT 1
Page 1 of 2

WCRRF DRUM PREPARATION DATA SHEET

5.[34][E] Drum ID No.: 68484

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

5.[17] Drum Liner Bag/Filter Assembly:
Manufacturer: BOP
Model No.: 6 CAVC 1.5-2 SPVC
Serial No.: L-10314
Manufacture Date: 5/13

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

	Filtered Vent	2 in. Bung
M&TE No.:	100216	0383169
Cal. Expiration Date:	12-18-13	12-18-13
Range in ft-lb:	40-200	10-80
Tolerance:	+/- 4% cw +/- 6% ccw	+/- 3% cw +/- 6% ccw

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

Performed By: [illegible] / [signature] [illegible] 9-26-13
Operator (print) Signature Z # Date

5.[23] Filtered vent information:
Manufacturer: Nucfil
Model No.: 019 DS
Serial No.: CM-291
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.: 68484

Comments: N/C

5.[35] Performed By: Frederico Dobleto / [signature] T228824 9-26-13
Operator (print) Signature Z # Date

7.1[4] Reviewed By: Clayton Mullis / [signature] 240090 10/1/13
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 2
Page 1 of 2

Working Copy
Date: 9-30-13

WCRRF DRUM CLOSURE DATA SHEET

6.[3] Drum ID No.: 68484

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

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

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

Performed By: [illegible] / [signature] / [illegible] / 9-30-13
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:	N/A	N/A
Range in ft-lb:		
Tolerance:		

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

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

6.[17][C] 2 in. bung plug torque value: _____ 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.: 68484

6.[26] * Scale File ID number: 019065 *

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

6.[28] Drum gross weight: 401.4 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] / 1239911 / 9-30-13
Operator (print) Signature Z # Date

7.1[4] Reviewed By: Clayton Mullins / [signature] / 240092 / 10/1/13
Supervisor or designee (print) Signature Z # Date

72
MR
6.10.12

WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Production Control

Container ID: S841292 Container Type: 55-GAL Gross Weight (lbs): 426
Inner Seal #: 019544 Filter Prefix: LAVC Filter Serial #: 00255
AK Waste Stream: LA-MHD01.001 Certified RTR BDR: No BDR
TWSR Comments: LEACHED SOLIDS MST 12 RM 434
Total PE-Ci Activity: 9.93E+00 Equivalent Combustible PE-Ci: 3.72E+00 AM-241 PE-Ci: 8.06E-01
Total Fissile Gram Equivalents: 109.7 Total Surface Dose Rate (mrem/hr): 2
EPA Code(s): None
NCR RTR/NDA Comment: None
RTR Pre-Screen Date: 6/13/2007 Comment: Liquids, Impenetrable Obj, Liquid Location: 23
Certified RTR Comment: None

Prohibited Items: ☒ Sealed > 4 Liters ☑ Liquid ☒ Pressurized Container ☑ Impenetrable Item ☒ Other
Security Determination: ☑ Green ☐ Yellow
Remediation Determination: ☑ VE 10/31/12 ☑ 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 GPA Codes D007, D008, and D009 are on the label. A minimum of 1.2 volumes of kitty litter/zeolite must be mixed with 1.0 volume of nitrate salts

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

WDP Engineering

SUSAN RAMSEY 100681 10/31/12

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: 366 lb. Eleven items ranging from 15 lb to 36 lb.
Drums w/ nitrate salts may contain undocumented liquids.
May require RWP for >1000 and <10000 mrem/hr @ 30 cm
Drum may have lead liner

Performed By: Valerie Rhodes (WDP Engineering (Print)) Signature 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: Do not push or press on waste with hands. Use Kevlar gloves when processing waste.
Processing Determination: ☑ Accept ☐ Reject
TRU Remediation Operations Comments: Use proper mixture of kitty litter to waste in accordance with the procedure.
Performed By: Jose Jorez (TRU Remediation Operations (Print)) Signature 21452 Z Number 11-28-12 Date

LL Z#249750 12/11/12
IHS Review. Jackson, Amalland CSP, may contain Pb, Cr, Hg
11/5/12

Noncertified TRU Waste Drum Item Information

DrumID: 019544

Item No	ItemID	Process Status	Net Wt (kg)	Matrix	Meas Code	SNM (g)	MT	Auth (Pg/Ln)		Comments
1	LR-47-NE2		12.390	NITRATE SALTS		10.81	52	6/14	G468	
2	RR-48-URNW1		6.590	NITRATE SALTS		2.49	52	6/14	G468	
3	OX107-50A		18.180	NITRATE SALTS		7.31	52	6/14	G468	
4	OX108-51A		7.270	NITRATE SALTS		5.54	52	6/14	G468	
5	OX106-49A		14.320	NITRATE SALTS		45.8	52	6/14	G468	
6	LR-47-NW1		11.360	NITRATE SALTS		7.91	52	6/14	G468	
7	LR-52-NE1		14.550	NITRATE SALTS		6.44	52	6/14	G468	
8	OX106-49B		12.950	NITRATE SALTS		17.44	52	6/14	G468	
9	LR-52-NW1		16.140	NITRATE SALTS		8.45	52	6/14	G468	
10	OX109-53A		9.320	NITRATE SALTS		2.6	52	6/14	G468	
11	RB-54URNE1		6.820	NITRATE SALTS		1.74	52	6/14	G468	

Noncertified Waste Drum Material Summary

Gross Wt (kg): 193.4

Material Type	SNM (grams)	Items Net Wt (kg)
52	116.53	129.89
Totals	116.53	129.89

ATTACHMENT 1
Page 1 of 1

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

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

	72	72	72	72	72	72
Container No. (5.[1])	S825021	S833931	S841292	S823221	S832150	S824660
Filtered Vent Type (5.[1])	72	72	72	72	72	72
WIPP-Approved Filtered Vent (5.[2])	☑ SAT ☐ UNSAT	☑ SAT ☐ UNSAT	☑ SAT ☐ UNSAT	☑ SAT ☐ UNSAT	☑ SAT ☐ UNSAT	☑ SAT ☐ UNSAT
Total CCP VOC value (< 7,000 ppm) (5.[4])	Ø ppm	Ø ppm	Ø ppm	Ø ppm	245 ppm	Ø ppm
Hydrogen Reading (< 64,000 ppm) (5.[5])	123.62 ppm	435.44 ppm	Ø ppm	409.31 ppm	614.31 ppm	382.91 ppm
Methane Reading (< 16,000 ppm) (5.[5])	Ø ppm	Ø ppm	Ø ppm	Ø ppm	Ø ppm	Ø ppm

5.[7] Certified CCP Technician:

Performed By: Erik Loechell (CCP (Print)) , 234183 (Z#)

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

Comments: N/a

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

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

6.1[2][B]/ 6.1[3] Performed By: Alicia Herrera (Waste Handling Operator (print)) [signature] (Signature) 198480 (Z#), 4/2/12 (Date)

InstName : Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\120329c\
Data File : S841292.D
Acq On : 29 Mar 2012 2:00 pm (#1); 29-Mar-12, 14:00:07 (#2)
Operator : SA
Sample :
Misc : 55 GALLON LFL DRUM THROUGH FILTER, 72 FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 29 14:09:13 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	3.583	96	4309982	209.00 ppmv	-0.04
15) Chlorobenzene-d5	5.906	117	2817180	185.50 ppmv	-0.04

Target Compounds Qvalue

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

vocgas.m Thu Mar 29 14:09:24 2012

09-30-13

0555 Assuming WCRRF CCO position - Melanie
0614 Pre-job being conducted by SCS.
0747 Starting outside rounds.
0755 Starting inside rounds.
0759 Item #19 is unsat, FSR in place, okay to proceed
0814 Item #56 is unsat, FSR in place. okay to proceed.
0828 Item #72 is unsat, FSR in place, okay to proceed.
0831 Inside rounds complete.
0835 late entry outside rounds complete 0824 C Melanie
0925 Inside and outside rounds signed off by SCS.
0927 notified by operator that the conduit wires on the portable arm is exposed, i P2, Circuit 31. SCS and SOM have been notified. Okay to proceed.
0956 Starting glove changes on station 2, 3, 4 left and right.
0959 Item #56 and #72 are not unsat, they are SAT.
1131 Glove changes are complete station 2, 3 and 4.
1140 Mode change has been performed TM50-69 and WCRR yard in operations. Procedure chain work is released
1147 Starting movement into 50-69
1158 movement complete into 50-69.
1220 Starting to dinest
1231 Operators suspending dinesting due to inner drum having liquid.
1348 Starting movement into 50-69
1411 Completed movement into 50-69.
1450 Bagging on 3841292
1520 Bag on is complete.
1539 Starting outside rounds
1555 Starting inside rounds
1556 Item #19 is unsat, FSR in place OK to proceed.
1559 outside rounds complete.
1615 Item 63 is CES, PAD in place OK to proceed per CSE documentation.
1625 Inside rounds complete.
-Continued on next page - Melanie

9-30-13 . continued in next page - Orlando
1435 Bagging off 1 daughter, bagging on 1 daughter
1454 inside and outside rounds signed off by SIS
1456 Bag on, Bag off complete of 1 daughter continuing to
PRCOD
1719 Starting movement into 5C49
1737 movement complete into 5C49.
9-30-13 PM 1800 Being relieved by CAO Terri Coleman - Orlando

No further entries this page.

9-30-13 Dayshift

0557 Reviewed the shift turnover checklist and logbooks and assumed the SOM position John Guadagnoli

0655 Completed attending the pre-job brief conducted by the SOS (Gilbert). The safety topic was teamwork. The Energy Solutions PM and SOM discussed response memo - provided by LTP/PM. in regards to forthcoming attachment A from DOE write up. Operators took all points - seriously, and requested new clocks and repair of facility, Examples were: Items on Rounds unsat, roof leaking and in repair, and lightening protection system has deficiencies. We assured them, these are being prioritized. Nightshift turnover identified 1 torque wrench broke - and another needs to be procured, Stations 2L, and 3R require changing - prior to operations starting today, and the versa lift requires a load test sticker.

0710 Completed daily call in with AREA G SOM updating POD activities.

0837 Completed observing operators check gloves on WCG, restock supplies and perform inspections on drum handling equipment. Minor housekeeping was also conducted. Personnel were wearing leather gloves while restocking. The versa-lift was identified with an inspection sticker indicating good thru 9/14.

0930 Inside PIC notified the OCD and SOM that one piece of conduit holding electrical wire is disconnected and shows the inside wire there is no metal exposed from the wires. An ESR has been submitted. Currently there is no danger to operations. OIM was notified

1000 Completed discussions with LLW/WMC coordinator an NNSS point of contact Jose Ortega and ES/PM. Discussion focused on steps required to transfer/Certify waste to NNSS, which include: Verify waste profiles, ensure ST-99 has PO#s, NNSS can not receive LLM and per procedure, containers are packaged appropriately to include no prohibited items.

1002 AHG 9-30-13 ~~Prob~~ Late entry for 0956hrs - inside Operators initiate glove changes for stations 2, 3, and 4 - both sets. each - 6 ~~pair~~ total AHG 9-30-13

1131 Inside Operations report glove changes are completed.

1140 Mode change: 50/69 and Yard transition from Cold/Warm to Operations/Operations

1214 Conducted ~~monthly~~ daily phone call with OM, PM and others AHG 9-30-13

1215 Late entry for 1158 - The movement into 50/69 is noted completed

1220 Operations initiate denesting of Parent 5882904

9-30-13 Dayshift continued.

1231 Inside Operations report condensation noted between the 55 gallon drum and the 85 gallon drum. The drum was previously reported to not have any liquid. As a result, the lid was put back on and notification made to RP-1 and SOM and OM. The SOS was initiating another movement into the facility.

1348 Operations initiate movement into 50/69 - Parent Drum 5841292

1411 Operations completed the movement into 50/69.

1445 The SOM, OM and RP-1 Engineer discussed determining where liquid came from. Also the RTR tape was played for RP-1 and SOS RP-1 will initiate smears of condensation, and will let them AIR DRY and provide results

1447 Operations report initiating bag on of parent drum 5841292

1520 Operations report bag on completed of Parent drum 5841292

1533 Operator AID #50-10-01 R-29 was reviewed and approved for updating with a calibrated torque wrench to replace the broken one.

1537 All RCRA inspection forms were reviewed and approved for today.

1654 Completed review and sign off of RWP-2012-0015 - it would have expired by midnight tonight - this was extended for 3 months The new expiration date is 12-30-13.

1655 Operations report bag-off of one daughter and continue to process

1810 Conducted shift turnover check with on-coming SOM.

1815 Relieved of SOM duties by R. Axtell John Guadagnoli

No further Entries this page

9.30.13

WCRR SOS LOG BOOK

0600 Assuming SOS Position [illegible]

0615 Conducted shift brief discussed Glove change's needed Prior to Going operational had operators do Inspections on All Glove's then we will start the High PE-Ci drums

0645 Concluded shift brief

0747 Started Rounds Operators cleaning Gloves And Inspecting

0925 Reviewed Inside And outside Rounds.

0927 Notified the Inside Personel About A broken conduit wire Inside exposed. All Insulation Is on wires some notified ok to continue FSR to Replace

0956 Starting Glove Changes on station 2, 3 And 4 Both

1131 Glove Changes Complete.

1140 Mode Change Complete WCMF In operations.

1147 Starting Move Into 50-69

1158 Move In Complete

1220 Starting denesting

1231 Operators suspending denest due to liquid on Inside of 85.

1348 Starting move In to 50-69

1411 Move In Complete.

1450 Bagging on 5841292

1520 Bag on Complete

1539 Started Rounds

1635 Bagging off 1 daughter bagging on Another

1654 Reviewed Inside And outside Rounds

1656 Bag on lott Complete Continuing to Process

1719 Starting Move Into 50-69

1737 Move Into 50-69 Complete

1805 Operator's exiting Facility.

HG 1815 Relieved by Clayton Mullins [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-RTR2-13-0117
Examination Date:	10/21/2013
Waste Container ID:	68473
Video/Audio Recorded Media Number:	LA-RTR2-13-0117 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 14
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3110
Waste Stream I.D.:	LA-MIN02-V.001
Waste Container Weights:	Gross Wt.: 127.0 kg Tare Wt.: 33.4 kg Net Wt.: 93.6 kg
Rigid Liner and Liner Vent Description:	Liner: [X] No [ ] Yes Lid: [X] No [ ] Yes Type: [ ] 30-mil [ ] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [ ] Yes [X] N/A Punctured: [X] No [ ] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [ ] No [X] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 2 layers
Volume Utilization Percentage:	70 %

CCP Radiography Data Sheet

Waste Container ID: 68473

Section 3: Container Inventory and Comments (Detailed descriptions)

IM:

AM:

OM: Scrap lead

OI:

C:

R: Leaded rubber gloves

XPM: Plastic bags, liner lid

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP): Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	5.0
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	2.5
Plastics (waste materials) (XPM):	3.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	83.1
Soils (S):	
Total WMP Weight:	93.6

CCP Radiography Data Sheet

Waste Container ID: 68473

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

RTR Operator:

Eric Lyles		10/21/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	68473	Count Sequence Number:	23738
Operator:	D3PW2DK1\operator		
Assay Start:	10/29/2013 9:08:15 AM		
Description 1:	1LANDA1855		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 93.6 kg	Net:	93.6 kg
Container:	Volume: 208.0 l	Full:	70.0 %
Density:	0.640 kg /l		

System Configuration

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

Errors quoted at 1.000 sigma

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number:	23738	Batch Number:	1LANDA1855
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:	68473	Analysis Date:	10/29/2013

Net Weight	93600.0 g		
Pu mass	1.97E+001	+-	3.24E+000 g
TRU Alpha Activity	3.99E+000	+-	1.39E+000 Ci
TRU Activity Concentration	4.26E+004	+-	1.48E+004 nCi/g
Pu-239 Equivalent Activity	4.03E+000	+-	1.39E+000 Ci
Pu-239 FGE	1.94E+001	+-	3.05E+000 g
Decay heat	1.30E-001	+-	4.61E-002 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	5.73E-002	4.04E-005	7.11E-006	2.10E-006
PU238	1.80E-003	3.08E-002	5.07E-003	3.46E-005
PU239	1.85E+001	1.15E+000	1.89E-001	1.29E-003
PU240	1.18E+000	2.68E-001	4.42E-002	3.02E-004
AM241	7.41E-001	2.54E+000	1.37E+000	4.17E-002
PU241	2.26E-002	2.33E+000	3.84E-001	2.62E-003
PU242	3.94E-003	1.56E-005	2.56E-006	0.00E+000
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	5.02E-007
U233	<LLD	<LLD	0.00E+000	4.17E-003
U234	1.77E-002	1.10E-004	3.12E-005	0.00E+000
U235	1.26E+000	2.73E-006	7.72E-007	1.85E-006
U238	<LLD	<LLD	0.00E+000	1.97E-005
AM243	1.00E-004	2.00E-005	3.82E-006	5.11E-006

Errors quoted at 1.000 sigma

Operator: _____ Date: 10/31/13

ITR: _____ Date: 10-31-13

Automated Independent Technical Review

Count Sequence Number: 23738 Batch Number: 1LANDA1855
Counter ID: MCS HENC #1
Container ID: 68473
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 10/29/2013

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

Expert Review by: Sheri Chandler Date: 10-30-13

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **68473**

BDR Number: **LA13FG2109**

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

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	201.35	
74-82-8	Methane	142.14	U
67-56-1	Methanol	35.23	U
60-29-7	Ethyl Ether	0.96	U
75-35-4	1,1-Dichloroethylene	6.38	U
67-64-1	Acetone	18.08	U
75-34-3	1,1-Dichloroethane	4.08	U
156-59-2	cis-1,2-Dichloroethene	0.76	U
78-93-3	Methyl ethyl ketone	11.73	U
110-82-7	Cyclohexane	5.10	U
71-43-2	Benzene	1.77	U
107-06-2	1,2-Dichloroethane	3.66	U
71-36-3	1-Butanol	1.84	U
108-10-1	Methyl isobutyl ketone	9.82	U
108-88-3	Toluene	8.02	U
108-90-7	Chlorobenzene	4.10	U
100-41-4	Ethylbenzene	3.57	U
108-38-3/106-42-3	m- and p-Xylene	1.92	U
95-47-6	o-Xylene	2.10	U
108-67-8	1,3,5-Trimethylbenzene	1.96	U
95-63-6	1,2,4-Trimethylbenzene	2.13	U

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

InstName : Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\131030C\
Data File : 68473.D
Acq On : 30 Oct 2013 10:17 am (#1); 30-Oct-13, 10:16:44 (#2)
Operator : EL
Sample :
Misc : 55 Gallon Drum Through Filter (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Oct 30 10:26:11 2013
Quant Method : C:\msdchem\1\METHODS\VOCGAS.M
Quant Title : Flammable Gas Analysis
QLast Update : Mon Aug 26 13:12:56 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
3) Fluorobenzene	3.548	96	5032122	205.75	ppmv	0.03
15) Chlorobenzene-d5	5.848	117	3867150	177.50	ppmv	-0.01
Target Compounds						Qvalue
1) Hydrogen	1.619	GC1	1514m	201.35	ppmv	

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

CCP Radiography Data Sheet

S841292

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:	68484
Video/Audio Recorded Media Number:	LA-RTR2-13-0116 C&D
Procedure and Revision No.:	CCP-TP-053 Rev. 14
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3110
Waste Stream I.D.:	LA-MIN02-V.001
Waste Container Weights:	Gross Wt.: 182.0 kg Tare Wt.: 33.4 kg Net Wt.: 148.6 kg
Rigid Liner and Liner Vent Description:	Liner: [X] No [ ] Yes Lid: [X] No [ ] Yes Type: [ ] 30-mil [ ] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [ ] Yes [X] N/A Punctured: [X] No [ ] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [ ] No [X] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 1 layer
Volume Utilization Percentage:	90 %

CCP Radiography Data Sheet

Waste Container ID: 68484

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

Section 4: Packaging Material and Waste Material Parameters	
Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP): Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	20.0
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	3.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	125.6
Soils (S):	
Total WMP Weight:	148.6

CCP Radiography Data Sheet

Waste Container ID: 68484

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:	68484	Count Sequence Number:	23724
Operator:	D3PW2DK1\operator		
Assay Start:	10/25/2013 3:38:46 PM		
Description 1:	1LANDA1853		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 149.0 kg	Net:	149.0 kg
Container:	Volume: 208.0 l	Full:	90.0 %
Density:	0.800 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:	23724	Batch Number:	1LANDA1853
Assay Instrument:	MCS HENC #1	Location:	LANL TA-54
Analysis Method:	CCP-TP-063 v 15	Software Version:	NDA 2000 V.4.0
Item ID:	68484	Analysis Date:	10/25/2013

Net Weight	149000.0 g		
Pu mass	1.34E+002	+- 2.57E+001	g
TRU Alpha Activity	2.06E+001	+- 5.69E+000	Ci
TRU Activity Concentration	1.38E+005	+- 3.82E+004	nCi/g
Pu-239 Equivalent Activity	2.07E+001	+- 5.69E+000	Ci
Pu-239 FGE	1.24E+002	+- 2.33E+001	g
Decay heat	6.63E-001	+- 1.88E-001	W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	1.70E-001	1.20E-004	2.41E-005	5.02E-006
PU238	1.88E-002	3.22E-001	6.18E-002	3.27E-005
PU239	1.22E+002	7.53E+000	1.45E+000	7.64E-004
PU240	1.21E+001	2.75E+000	5.27E-001	2.78E-004
AM241	2.91E+000	9.98E+000	5.48E+000	9.61E-002
PU241	8.86E-002	9.12E+000	1.75E+000	9.25E-004
PU242	1.65E-001	6.51E-004	1.25E-004	0.00E+000
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	1.22E-006
U233	<LLD	<LLD	0.00E+000	1.01E-002
U234	4.80E-002	2.99E-004	9.30E-005	0.00E+000
U235	3.42E+000	7.40E-006	2.30E-006	5.11E-006
U238	9.26E+002	3.11E-004	6.86E-005	8.49E-005
AM243	3.29E-004	6.58E-005	1.38E-005	1.24E-005

Errors quoted at 1.000 sigma

Operator: D. R. Date: 10.29.13

ITR: Marla Eg Date: 10.29.13

Automated Independent Technical Review

Count Sequence Number: 23724 Batch Number: 1LANDA1853
Counter ID: MCS HENC #1
Container ID: 68484
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 10/25/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis No Add-a-Source warnings.	Ok
Section 2 - Passive Neutron Analysis Analysis Status: No errors. Ones Rate Analysis complete with warnings. - Error calculating the Ones Rate Pu-240 Effective MDA.	Ok Not data affecting.
Section 3 - Data Combiner Analysis Override enabled; Passive Neutron Pu and Gamma U data specified as input. Analysis Status: Override enabled; data marked not available but were used. Pu results taken from Passive Neutron data, U from Quantitative Gamma data. Results comparison test passed.	Passive Neutron Pu and Gamma U data specified as input.
Section 4 - MGA Analysis Results are marked as invalid.	MGA analysis failed. FRAM results applied. FRAM results attached.
Section 5 - Gamma Analysis Analysis Status: No errors. Total U mass is greater than the upper limit of 500.0 g.	U235/U238 verified by gamma spectrum. Results valid.

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

Expert Review by: Sheri Chandler Date: 10-28-13

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **68484**

BDR Number: **LA13FG2108**

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

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	570.14	
74-82-8	Methane	142.14	U
67-56-1	Methanol	35.23	U
60-29-7	Ethyl Ether	0.96	U
75-35-4	1,1-Dichloroethylene	6.38	U
67-64-1	Acetone	18.08	U
75-34-3	1,1-Dichloroethane	4.08	U
156-59-2	cis-1,2-Dichloroethene	0.76	U
78-93-3	Methyl ethyl ketone	11.73	U
110-82-7	Cyclohexane	5.10	U
71-43-2	Benzene	1.77	U
107-06-2	1,2-Dichloroethane	3.66	U
71-36-3	1-Butanol	1.84	U
108-10-1	Methyl isobutyl ketone	9.82	U
108-88-3	Toluene	8.02	U
108-90-7	Chlorobenzene	4.10	U
100-41-4	Ethylbenzene	3.57	U
108-38-3/106-42-3	m- and p-Xylene	1.92	U
95-47-6	o-Xylene	2.10	U
108-67-8	1,3,5-Trimethylbenzene	1.96	U
95-63-6	1,2,4-Trimethylbenzene	2.13	U

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

InstName : Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\131029c\
Data File : 68484.D
Acq On : 29 Oct 2013 1:47 pm (#1); 29-Oct-13, 13:46:58 (#2)
Operator : NW
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Oct 29 13:55:45 2013
Quant Method : C:\msdchem\1\METHODS\VOCGAS.M
Quant Title : Flammable Gas Analysis
QLast Update : Mon Aug 26 13:12:56 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
3) Fluorobenzene	3.594	96	5292593	205.75	ppmv	0.08
15) Chlorobenzene-d5	5.894	117	4164461	177.50	ppmv	0.03
Target Compounds						Qvalue
1) Hydrogen	1.622	GC1	4287m	570.14	ppmv	

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

S841314

S841314

Containe 747295

File Options Reports Help

S841314

747295	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

S841314

S841314

- LA00000068364 - EMPTY
- LA00000068414
- LA00000068411

Working Copy
Date: 9-24-180

ATTACHMENT 1
Page 1 of 4

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: 5841314

6.2[4] Date Processed: 9-24-13

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: 10-14-14

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

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

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

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

Performed By: BRIAN GALLEGOS / Bi [signature] / 267129 9-24-13
Waste Handling Tech (print) Signature Z # Date

ATTACHMENT 1
Page 2 of 4

4.1[6][B]	Parent Waste Container No.:	5841314
5.[18]	Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable:	439.0 lb
6.2[5][A]	Parent Drum Lead Blanket Weight (lb):	120.0 lb
6.2[5][B]/ 6.2[6]	Total Parent Drum Weight (lb)	559.0 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.: 3841314

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	68411	68414	N	
10.1[4]	Daughter Drum Filter No.	LM-255	LM-258		
10.1[4]	Daughter Drum Bag Filter No.	L-11531	L-6776	A	
10.1[4]	Daughter Drum Purchase Order No.	501578	501578		
10.1[13][C]	WCG Fire Watch Stationed		☐ YES	☐ NO	☑ N/A
10.1[14][C][d]3/11.1[3]	WCG Fire Watch Secured		☐ YES	☐ NO	☑ N/A
10.2[4]	POC bag-on bag: Manufacturer				
	Model No.				
	Serial No.				
	Date of Manufacture				
10.2[5]	POC ID No			N/A	
10.2[7][B]/10.2[6]	POC Item Description				
10.2[13]	POC Assembly closed per Manufacturer's instructions. (Initial and Z#)				
10.2[14]	POC Assembly Gross Weight (lb)				
10.2[15]	POC Rad. Survey Results (mrem/hr)				
10.3[3][A]	Approx. Containerized Liquid Vol./Units	N/A		N	
10.3[5][A]	Free Liquid Volume/Units	3GALLONS		A	
10.3[7][A]	Opaque/Non-penetrable Item Description:	Lead Shielding	Lead		
10.3[9][A]	PCB-contaminated Waste Description		N	A	
10.3[9][B]	PCB Item ID No.				
10.3[10]	Remaining Waste Description	SEE Comments	See comments	N	
10.3[13]/10.4[10]/ 10.5[4]/10.6[10]	Daughter Drum % Full (%)	60%	100%		A
10.5[3]/10.6[2]	Description Waste Added During Processing	Kitty Litter Stop out Bags	Plastic Kitty Litter		

ATTACHMENT 1
Page 4 of 4

4.1[6][B] Parent Waste Container No.: 5841314

Comments: Kitty Litter, Plastic, Lead Shielding, Nitrate Salts, 1 Polyliner Lid

11.1[1] Performed By: Adam Sosoria [signature] 276202 / 9-25-13
Waste Handling Tech (print) Signature Z # Date

11.1[8] Reviewed By: Clayton Mullins [signature] 240092 / 9/25/13 2026
SOS or designee (print) Signature Z # Date/Time

ATTACHMENT 2
Page 1 of 1

7/15/13 CW

WCRRF OVERPACK DRUM ASSEMBLY PREPARATION DATA SHEET

5.[3] Overpack drum information:

* Purchase Order No.:	501323 *
Lot No.:	0238025
Manufacture Date:	2013

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

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

Overpack filtered vent information:

Manufacturer:	Nucfil
Model No.:	013
Serial No.:	SL-1885
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: Frederick Arbulda / [signature] 1228826 / 7-15-13
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: Frederick Arbulda / [signature] 1228826 / 7-15-13
Waste Handling Technician (print) Signature Z # Date

8.1[6] Reviewed By: Clayton Mullins / [signature] 240092 / 9/25/13
Supervisor or designee (print) Signature Z # Date

UET
Working Copy
Date: 9-25-13

ATTACHMENT 5
Page 1 of 1

WCRRF OVERPACK DRUM CLOSURE DATA SHEET

7.[17] Overpack Drum Unique Identifier No.: 68364

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

M&TE No.: 038370
Cal. Expiration Date: 8-2-14
Range in ft-lb: 10-80
Tolerance: +/-3% cw +/-6% ccw

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

Performed By: ADAM SEGOVIA / [signature] / 276702 / 9-25-13
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): 170.8 lb

Comments: N/C

8.1[1] Performed By: ADAM SEGOVIA / [signature] / 276702 / 9-25-13
Waste Handling Technician (print) Signature Z # Date

8.1[7] Reviewed By: Clayton Mullins / [signature] / 240092 / 9/25/13
Supervisor or designee (print) Signature Z # Date

Working Copy
Date: 9-17-13 W

ATTACHMENT 1
Page 1 of 2

WCRRF DRUM PREPARATION DATA SHEET

5.[34][E] Drum ID No.: 68411*

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

5.[17] Drum Liner Bag/Filter Assembly:
Manufacturer: BOP
Model No.: 6CPVC 1.5-2 SPVC
Serial No.: L-11531
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: Frederico Archuleta / [signature] 122882 / 9-17-13
Operator (print) Signature Z # Date

5.[23] Filtered vent information:
Manufacturer: Nucfil
Model No.: 09DS
Serial No.: LM-255
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.: 68411

Comments: N/C

5.[35] Performed By: Frederico Archuleta [signature] 1223824 9-17-13
Operator (print) Signature Z # Date

7.1[4] Reviewed By: Clayton Mullins [signature] 240091 9/25/13
Supervisor or designee (print) Signature Z # Date

Working Copy
Date: 9-24-13 NP

ATTACHMENT 2
Page 1 of 2

WCRRF DRUM CLOSURE DATA SHEET

6.[3] Drum ID No.: 68411

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

M&TE No.: 038370
Cal. Expiration Date: 8-2-14
Range in ft-lb: 10-80
Tolerance: +/-3% cw +/-6% ccw

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

Performed By: Adam Segovia (Operator (print)) Adam Segovia (Signature) R767021 (Z #) 9-24-13 (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: N/A (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.: 68411

6.[26] Scale File ID number: 019065

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

6.[28] Drum gross weight: 238.2 lbs

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

Comments: N/C

6.[32] Performed By: Adam Segovia (Operator (print)) Adam Segovia (Signature) 2267021 (Z #) 9-24-13 (Date)

7.1[4] Reviewed By: Clayton Mullins (Supervisor or designee (print)) CA (Signature) 1240092 (Z #) 9/25/13 (Date)

ATTACHMENT 1
Page 1 of 2

Working Copy
Date: 9-17-13

WCRRF DRUM PREPARATION DATA SHEET

5.[34][E] Drum ID No.: 68414

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

5.[17] Drum Liner Bag/Filter Assembly:
Manufacturer: BOP
Model No.: 6CPVC 1.5-2 SPVC
Serial No.: L-6776
Manufacture Date: 1/13

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

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

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

Performed By: MICHAEL MONTOYA [signature] 1R1352 / 9/17/13
Operator (print) Signature Z # Date

5.[23] Filtered vent information:
Manufacturer: NUCFIL
Model No.: 019DS
Serial No.: LM-258
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.: 68414

Comments: N/C

5.[35] Performed By: MICHAEL MONTOYA (Operator (print)) [signature] (Signature) 191352 (Z #) 9/17/13 (Date)

7.1[4] Reviewed By: Clayton Mullins (Supervisor or designee (print)) [signature] (Signature) 240091 (Z #) 9/25/13 (Date)

Working Copy
Date: 9-17-13w

ATTACHMENT 2
Page 1 of 2

WCRRF DRUM CLOSURE DATA SHEET

6.[3] Drum ID No.: 684114

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

M&TE No.: 058370
Cal. Expiration Date: 8-2-14
Range in ft-lb: 10-80
Tolerance: +/-3%cw +/-6%ccw

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

Performed By: ADAM SEGOVIA / Adam Segovia / 1276202 / 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:		
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.: 68C/C1

6.[26] Scale File ID number: 019065

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

6.[28] Drum gross weight: 4394 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) Z767021 (Z #) 9-24-13 (Date)

7.1[4] Reviewed By: Clayton Mullins (Supervisor or designee (print)) [signature] (Signature) 240092 (Z #) 9/25/13 (Date)

Working Copy
Date: 9-24-13

ATTACHMENT 3
Page 1 of 1

WCRRF PARENT 55-GAL DRUM PREPARATION DATA SHEET

6.3[21] * Prepared Parent 55-Gal Drum Number: S841314 *

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): 439.0

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

Comments: N/C

8.1[1] Performed By: BRIAN GALLEGOS / [signature] / 267129 9-24-13
Waste Handling Technician (print) Signature Z # Date

8.1[7] Reviewed By: Clayton Mullins / [signature] / 240098 9/25/13
Supervisor or designee (print) Signature Z # Date

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

8.1[8][D] Approved by: Randy Axtell / [signature] / 109165 / 9/24/13 / 0524
SOS/SOM or designee (print) Signature Z # Date Time

WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

SP70

Production Control

Container ID: S841314 Container Type: 55-GAL Gross Weight (lbs): 460
Inner Seal #: 019543 Filter Prefix: LAVC Filter Serial #: 04217
Waste Stream: LA-MHD01.001 Certified RTR BDR: No BDR
TWSR Comments: LEACHED RESIDUE MST 12
Total PE-Ci Activity: 1.32E+01 Equivalent Combustible PE-Ci: 4.94E+00 AM-241 PE-Ci: 1.07E+00
Total Fissile Gram Equivalents: 145.4 Total Surface Dose Rate (mrem/hr): 2
EPA Code(s): D007; D008; D009
NCR RTR/NDA Comment: None
RTR Pre-Screen Date: 5/23/2007 Comment: Liquids, Impenetrable Obj Liquid Location: 19
Certified RTR Comment: None
Prohibited Items: ☑ Sealed > 4 Liters ☑ Liquid ☑ Pressurized Container ☑ Impenetrable Item ☑ Other
Security Determination: 2 we 1/22/13 ☑ Green ☐ Yellow
Remediation Determination: ☐ VE ☑ PID ☐ Split ☑ Repack
Estimated 30-cm Dose Rate (mrem/hr): ☐ <100 ☐ >100 and <1,000 ☑ >1,000 and <10,000 ☐ >10,000
TRUCON Code: Production Control Comments: Ensure EPA Codes D007, D008, and D009 are on the label. A minimum of 1.2 volumes of kitty litter/zeolite must be mixed with 1.0 volume of nitrate salts.

Performed By: Susan Ramsey / Signature / 100681 / 12/20/12
Production Control (Print) Z Number Date

WDP Engineering

Chemicals Present (e.g., pyrophorics, acids, bases, shock sensitive, organic liquids, peroxides, crown ethers): ☐ Yes ☑ No ☐ Unknown
Processing Determination: ☑ Accept ☐ Reject
WDP Engineering Comments: Nitrate Salts
Wet Wt: 400# Generator info shows 11 items of nitrate salts, weights range from 5-48#. No RTR BDR. Nitrate salts are typically packaged in plastic bags; undocumented liquids +/or debris may be present. RTR PS shows prohibited liquids + impenetrable item(s). No chemicals identified. Applicable waste codes for chromium, lead, + mercury. Nitrate salts require repack w/ admixture.

Performed By: Valerie Rhodes / Valerie Rhodes / 112609 / 1/23/13
WDP Engineering (Print) Signature Z Number Date

TRU Remediation Operations

☑ Waste Container Information Evaluated ☐ Less Than 170 lbs ☐ RTR Video Available
Other Specific Safety Concerns: Do not push or press on waste with hands. Use heavy duty gloves during processing.
Processing Determination: ☑ Accept ☐ Reject
TRU Remediation Operations Comments: USE Proper PPE Mix Ratio

Performed By: G mh / [signature] / 149255 / 6/18/13
TRU Remediation Operations (Print) Signature Z Number Date
Jose Jerez 221452 6/22/13
11/6 Review. Jolly Anaflam CSP, may contain Pb, Ag + Cr
1-29-13

Noncertified TRU Waste Drum Item Information

DrumID: 019543

Item No	ItemID	Process Status	Net Wt (kg)	Matrix	Meas Code	SNM (g)	MT	Auth (Pg/Ln)		Comments
1	G468		2.270	NITRATE SALTS		3.61	52	6/14	G468	
2	LR-57NE1		19.320	NITRATE SALTS		15.	52	6/14	G468	
3	LR59VRNW1		12.100	NITRATE SALTS		6.78	52	6/14	G468	
4	LR-60NE1		11.590	NITRATE SALTS		27.67	52	6/14	G468	
5	LR-58NE1		16.820	NITRATE SALTS		19.34	52	6/14	G468	
6	LR-58NW1		9.550	NITRATE SALTS		4.94	52	6/14	G468	
7	OX10953NW1		21.820	NITRATE SALTS		43.91	52	6/14	G468	
8	LR-59VRNW2		12.270	NITRATE SALTS		7.91	52	6/14	G468	
9	OX11061NW1		12.950	NITRATE SALTS		9.04	52	6/14	G468	
10	LR-59VRNE1		16.130	NITRATE SALTS		11.75	52	6/14	G468	
11	OX11061NE1		10.450	NITRATE SALTS		4.59	52	6/14	G468	

Noncertified Waste Drum Material Summary

Gross Wt (kg): 208.6

Material Type	SNM (grams)	Items Net Wt (kg)
52	154.54	145.27
Totals	154.54	145.27

ATTACHMENT 1
Page 1 of 1

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

5.[1] Sample Date: 4/11/13

Container No. (5.[1])	S841314					
Container type sampled (e.g., 55-gal, 85-gal, 110-gal, or SWB) (5.[1])	55-Gal					
Filtered Vent Type (5.[1])	C77					
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])	247.48 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: Sevie Aragon / 237975
CCP (Print) Z#

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

Comments:

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

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

6.1[3] Performed By: Susan Ramsey / Susan S. Ramsey / 100481 / 5/21/13
Waste Handling Operator (print) Signature Z# Date

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\130411c\
Data File : S841314.D
Acq On : 11 Apr 2013 1:38 pm (#1); 11 Apr 2013 1:37 pm (#2)
Operator : SA
Sample :
InstName : Unit 8
Misc : 55 GALLON LFL THROUGH UNOBSTRUCTED 072 (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Apr 11 15:50:21 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	1984474	206.00	ppm	0.00
15) Chlorobenzene-d5	5.940	117	1793523	179.50	ppm	0.00
Target Compounds						Qvalue
1) Hydrogen	5.227	GC1	73501m	297.48	ppm	

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

Vocgas.m Thu Apr 11 15:50:30 2013

9-24-13 - Continued from previous page - Clelands
1150 Bag on, bag off complete.
1204 SOS conducting briefing on wearing appropriate PPE when performing Job duties.
1220 briefing to ES personnel is concluded.
1238 Operator # 14 has returned from OCmed with restrictions) can not enter Hy 9-24-13 Rad areas and will have to return to OCmed in a week. Filing EP-WCRR-RM-EOP-0309.
1400 Starting to dilute 2 drums then will be bagging on 3851739.
1416 Lowering vehicle across gates to start unloading of transport vehicle.
1450 Dewesting and bag on is complete.
1611 Bagging off 1 daughter, Bagging on 1 daughter and continuing to process.
1625 Being relieved by OCO-Howard-Smith-Clelands
1625 ASSUMING OCO POSITION AT WCRRF H SMITH
1635 STARTING INSIDE ROUNDS
1647 STARTING OUTSIDE ROUNDS
1654 ITEM #19 OUTSIDE ROUNDS UNSAT, OKAY TO PROCEED PER CSE DOCUMENTATION
1700 ITEM #63 INSIDE ROUNDS OOS, OKAY TO PROCEED, PER CSE DOCUMENTATION
1705 OUTSIDE ROUNDS COMPLETED
1706 VEHICLE ACCESS GATES RESTORED, SHIPMENT INTO TRSO-194/75 IS COMPLETE
1706 COMPLETE INSIDE ROUNDS
1710 OUTSIDE ROUNDS REVIEWED BY SOS AND SOM
1718 BAGGING OFF 1 DAUGHTER, BAGGING ON 5841314
1720 INSIDE ROUNDS REVIEWED BY SOS AND SOM
1750 BAG OFF COMPLETE
9/24/13 2300 RELIEVED BY OCO TERRI COLEMAN - H SMITH
RPA

NO FURTHER ENTRIES ON THIS PAGE

9-24-13

1806 Assuming WCRR operations center. - JColeman
1824 Pre-job being conducted by SOS.
1841 Pre-job concluded.
1842 Procedure driven work is released.
2008 Operators entering 5069 to process drum #5841314.
2128 SOS reports that IH is inside 5069 and has found that the extension cord to the portable CAM has a broken prong and that the prong is stuck in the electrical socket. SOM notified.
2200 Bagging off 1 daughter, bagging on another daughter.
2215 Bag off/on complete. PPE check is Sat.
1154 Operators out for lunch.
9-25-13 0104 Operators back from lunch.
0140 Submitted an FSR to remove the extension cord prong from the electrical receptacle. FSR# 112172.
0230 Beginning inside rounds.
0235 Beginning outside rounds.
0248 Item #63 is OOS, okay to proceed per CSE documentation.
0249 Inside rounds complete.
0255 Item #19 is unsat, okay to proceed, FSR in place.
0257 Outside rounds complete.
0310 Denoting, bagging off 1 daughter, then bagging on 5881570
0342 Both rounds reviewed by SOS.
0412 Bag off/on, denoting complete.
0420 Operator 38 states his nose began to bleed while he was working in 5069. RCTs instructed him to leave the area.
0519 Initiating a drum movement from 5069 to a transportainer
0555 Drum movement out of 5069 complete.
0630 Relieved by OCO Clarissa Velarde, JColeman

No further entries this page.

9-24-13 DAYSHIFT.

continued 1116 of any contamination. Notification / updates were provided to the OM. The OM is notifying the FOD, Project Manager, and DOE.

1121 Operations inside completed the bag off of the parent Drum 5821203 which generated 2 daughters.

1204 The SOS briefs the operators on the proper use of PPE

1220 The briefs are concluded by the SOS

1238 The operator returns from OCC Med. noting ~~at~~ that all counts were NDA. The operator will be restricted from entering contamination and Hi Rad Areas for 1 week. The EOP-0309-R3 was exited by the OCO.

1253 SOS/SOM/ESH discussed putting appropriate hazard controls into an ILOD which allows Energy Solutions personnel to adjust the 85 gallon drum grabber with concurrence from the maintenance manager. The SOS will brief operators and document the briefing transcript.

1330 Operators enter the area to continue processing

1400 Inside Operators initiate bag offs and denesting, and bag on of Parent Drum ~~5831~~ 5851739

1450 Operations completed bag-offs and bags on of Parent successfully

1630 Completed observing Operators and RCTs remove drums from the Transfer Vehicle and stage for transfer to the transportainer. Appropriate PPE was worn and complied. Operators performed inspection of drums utilizing the procedure. One drum was noted as 20 mrem at contact. All drums over 5 mrem were being flagged with chandeliers.

1631 Late Entry for 1611 inside Operations report Bag off of 1 daughter and Bag On another

1716 The transfer to the transportainer was noted completed.

1718 Inside Operators report bag off of a daughter and Parent Drum 5851739 which generated 2 Daughters, and bag on of Parent Drum 5841314

1805 Conducted shift turnover with Nightshift SOM

1812 Relieved of SOM position John Guadagnoli

No further Entries this page

9/24/13 Nightshift

1812 Reviewed shift turnover checklist and assumed WCRR SOM position.

1815 Attended pre job brief conducted by SOS - noted that Nightshift Operations watchbill is approved and posted. Safety topic was wearing of proper PPE when working w/ sharps and materials w/ edges. SOS encourages wearing leather gloves at all times except when high dexterity gloves are called for. IH covered MSDS sheet for new liquid neutralizing agent to be used in processing acid/base liquids. Updated operators on Fume Hood alarm function - operators requested correct way to silence/reset alarm be procedularized since not all operators know how to.

2128 Notified by SOS that extension cord providing power to portable CAM unit had its grounding plug break off in electrical receptacle. Operators taking extension cord out of service and replacing. FSR being submitted for receptacle prong removal.

2215 Completed bag off of 1 daughter - continuing to process.

1154 Operators breaking for lunch

9/25/13 0104 Resuming Operations.

0412 All bag offs completed for Parent #5841314 (2 daughters total) Completed denesting and bag on of drum #5881570.

0420 Notified of Operator getting a bloody nose in 50-69 while working - RCT's directed person to exit area. Operator was told to stay out of area for rest of the shift.

0519 Operators starting a move out of 9 drums from 50-69 to transportainers.

0554 Completed movement of drums.

0610 Relieved by J. Guadagnolo as SOM.

No further entries this page

9.24.13 Continued From previous Page

1635 Started rounds.

1706 Shipment In to 50-69 From G Complete.

1718 Bagging off /on 5841314

1720 Reviewed Inside And outside Rounds.

1750 Bag on /off complete.

1805 Operators exiting 50-69.

1810 Relieved by Clayton Mullins

HG

No Further entries on this Page

9/24/13 WCRR SOS Log Book

1811 Assuming SOS position. CA

1824 Starting Pre-Job, discussed potentials for shoulder and back strains as well as having a new neutralizer and ~~where~~ cm 9/24/13 wearing proper PPE at all times.

1841 Pre-Job complete.

2128 Notified by operators inside that IH found that the extension cord to the portable CAM by the WCG has a broken prong, which is stuck in the electrical socket in the wall. SOM notified as well.

2200 Bagging off 1st daughter, bagging on a 2nd.

2215 Bag off/on complete.

0104 FSR has been submitted ~~the~~ cm 9-25-13 to remove the broken prong from the extension cord, #112172.

0310 Bagging off 2nd daughter, denesting and bagging on 5881570.

0342 Signed off on the rounds.

0412 Bag off/on complete, as well as denesting.

0420 Tech 38 reports of a nose bleed while inside 50-69, RCT's ~~instruc~~ cm 9-25-13 instructed him to leave the area.

HG 0519 Starting movement out of 50-69.

0554 Move out is complete.

0610 Relieved by Gilbert Martinez. 9/25/13 CA

No Further Entries on this Page

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0115
Examination Date:	9/26/2013
Waste Container ID:	68411
Video/Audio Recorded Media Number:	LA-RTR2-13-0115 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.: 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:	60 %

CCP Radiography Data Sheet

Waste Container ID: 68411

Section 3: Container Inventory and Comments (Detailed descriptions)
IM:
AM:
OM:
OI:
C:
R:
XPM: Plastic bags, 90 mil liner lid
OR:
IN: Homogeneous solids
S:

Section 4: Packaging Material and Waste Material Parameters	
Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP): Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	6.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	68.6
Soils (S):	
Total WMP Weight:	74.6

CCP Radiography Data Sheet

Waste Container ID: 68411

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

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

RTR Operator:

M. Simmons/ E. Rios		9/26/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	68411	Count Sequence Number:	23684
Operator:	D3PW2DK1\operator		
Assay Start:	10/3/2013 11:53:52 AM		
Description 1:	1LANDA1851		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6, Not Precision		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 74.6 kg	Net:	74.6 kg
Container:	Volume: 208.0 l	Full:	60.0 %
Density:	0.600 kg /l		

System Configuration

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

Errors quoted at 1.000 sigma

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number:	23684	Batch Number:	1LANDA1851
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:	68411	Analysis Date:	10/3/2013

Net Weight	74600.0 g		
Pu mass	1.60E+001	+- 2.52E+000	g
TRU Alpha Activity	3.34E+000	+- 1.18E+000	Ci
TRU Activity Concentration	4.48E+004	+- 1.58E+004	nCi/g
Pu-239 Equivalent Activity	3.38E+000	+- 1.18E+000	Ci
Pu-239 FGE	1.51E+001	+- 2.36E+000	g
Decay heat	1.09E-001	+- 3.91E-002	W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	4.01E-002	2.83E-005	4.81E-006	1.92E-006
PU238	1.46E-003	2.50E-002	3.94E-003	3.44E-005
PU239	1.50E+001	9.31E-001	1.47E-001	1.28E-003
PU240	9.60E-001	2.18E-001	3.43E-002	2.99E-004
AM241	6.33E-001	2.17E+000	1.17E+000	4.35E-002
PU241	1.84E-002	1.90E+000	2.99E-001	2.61E-003
PU242	3.20E-003	1.26E-005	1.99E-006	0.00E+000
CO60	1.28E-010	1.45E-007	3.11E-008	6.56E-008
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	5.10E-007
U233	<LLD	<LLD	0.00E+000	3.90E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	1.17E-006
U238	<LLD	<LLD	0.00E+000	1.64E-005
AM243	9.68E-005	1.94E-005	3.60E-006	4.91E-006

Errors quoted at 1.000 sigma

Operator: _____ Date: 10/8/13

ITR: _____ Date: 10·9·13

Automated Independent Technical Review

Count Sequence Number: 23684 Batch Number: 1LANDA1851
Counter ID: MCS HENC #1
Container ID: 68411
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 10/3/2013

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

Expert Review by: Bart B. Marah Date: 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: **68411**

BDR Number: **LA13FG2106**

Sampling Date: **10/24/2013**

S841314

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	116.64	
74-82-8	Methane	142.14	U
67-56-1	Methanol	35.23	U
60-29-7	Ethyl Ether	0.96	U
75-35-4	1,1-Dichloroethylene	6.38	U
67-64-1	Acetone	18.08	U
75-34-3	1,1-Dichloroethane	4.08	U
156-59-2	cis-1,2-Dichloroethene	0.76	U
78-93-3	Methyl ethyl ketone	11.73	U
110-82-7	Cyclohexane	5.10	U
71-43-2	Benzene	1.77	U
107-06-2	1,2-Dichloroethane	3.66	U
71-36-3	1-Butanol	1.84	U
108-10-1	Methyl isobutyl ketone	9.82	U
108-88-3	Toluene	8.02	U
108-90-7	Chlorobenzene	4.10	U
100-41-4	Ethylbenzene	3.57	U
108-38-3/106-42-3	m- and p-Xylene	1.92	U
95-47-6	o-Xylene	2.10	U
108-67-8	1,3,5-Trimethylbenzene	1.96	U
95-63-6	1,2,4-Trimethylbenzene	2.13	U

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

InstName : Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\131024c\
Data File : 68411.D
Acq On : 24 Oct 2013 12:32 pm (#1); 24-Oct-13, 12:31:50 (#2)
Operator : NW
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Oct 24 12:40:53 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	5537375	205.75	ppmv	0.04
15) Chlorobenzene-d5	5.868	117	4243774	177.50	ppmv	0.00
Target Compounds						Qvalue
1) Hydrogen	1.623	GC1	877m	116.64	ppmv	

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

CCP Radiography Data Sheet

5841314

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-HERTR-13-0109
Examination Date:	10/4/2013
Waste Container ID:	68414
Video/Audio Recorded Media Number:	LA-HERTR-13-0109 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.: 199.5 kg Tare Wt.: 33.4 kg Net Wt.: 166.1 kg
Rigid Liner and Liner Vent Description:	Liner: [X] No [ ] Yes Lid: [X] No [ ] Yes Type: [ ] 30-mil [ ] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [ ] Yes [X] N/A Punctured: [X] No [ ] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [ ] No [X] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 2 layers
Volume Utilization Percentage:	95 %

CCP Radiography Data Sheet

Waste Container ID: 68414

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):	45.0
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	8.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	113.1
Soils (S):	
Total WMP Weight:	166.1

CCP Radiography Data Sheet

Waste Container ID: 68414

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		10/4/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	68414	Count Sequence Number:	23729
Operator:	D3PW2DK1\operator		
Assay Start:	10/28/2013 11:12:29 AM		
Description 1:	1LANDA1854		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 166.0 kg	Net:	166.0 kg
Container:	Volume: 208.0 l	Full:	95.0 %
Density:	0.840 kg /l		

System Configuration

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

Errors quoted at 1.000 sigma

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number:	23729	Batch Number:	1LANDA1854
Assay Instrument:	MCS HENC #1	Location:	LANL TA-54
Analysis Method:	CCP-TP-063 v 15	Software Version:	NDA 2000 V.4.0
Item ID:	68414	Analysis Date:	10/28/2013

Net Weight	166000.0 g		
Pu mass	1.07E+002	+- 3.32E+001	g
TRU Alpha Activity	3.03E+001	+- 1.57E+001	Ci
TRU Activity Concentration	1.82E+005	+- 9.48E+004	nCi/g
Pu-239 Equivalent Activity	3.05E+001	+- 1.57E+001	Ci
Pu-239 FGE	1.04E+002	+- 3.31E+001	g
Decay heat	9.90E-001	+- 5.23E-001	W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	2.08E-006
U233	<LLD	<LLD	0.00E+000	1.62E-002
U234	6.90E-002	4.29E-004	1.41E-004	0.00E+000
U235	4.92E+000	1.06E-005	3.50E-006	7.54E-006
NP237	3.38E-001	2.38E-004	4.92E-005	8.08E-006
PU238	9.74E-003	1.67E-001	5.91E-002	2.44E-003
U238	1.67E+003	5.60E-004	1.26E-004	1.43E-004
PU239	1.00E+002	6.20E+000	2.05E+000	9.07E-002
PU240	6.40E+000	1.45E+000	5.22E-001	2.12E-002
AM241	6.54E+000	2.24E+001	1.56E+001	5.09E-001
PU241	1.22E-001	1.26E+001	4.54E+000	1.84E-001
PU242	2.13E-002	8.43E-005	3.03E-005	0.00E+000
AM243	5.43E-004	1.09E-004	2.34E-005	2.04E-005

Errors quoted at 1.000 sigma

Operator: D. R. E. Date: 10-30-13

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

Automated Independent Technical Review

Count Sequence Number: 23729 Batch Number: 1LANDA1854
Counter ID: MCS HENC #1
Container ID: 68414
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 10/28/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis	
Add-a-Source WARNINGS:	
Add-a-Source correction factor was set to one.	Ok
Add-a-Source correction factor is less than n-sigma * the correction factor error.	Ok
Section 2 - Passive Neutron Analysis	
Analysis Status: No errors.	Ok
NCC Pu mass was above calibration range.	Multiplication in drum. Neutron results rejected. Gamma results applied.
Add-a-Source reals correction factor uncert. above calib. upper limit.	
FGE is greater than the upper limit of 200.00	
The Standard NCC Pu effective mass exceeds the Upper Calibration Limit.	
No roots found within the limits while determining the Standard NCC Pu Mass, Chose largest positive root.	
Ones Rate Analysis complete with warnings.	
- Error calculating the Ones Rate Pu-240 Effective MDA.	Not data affecting.

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. Total U mass is greater than the upper limit of 500.0 g. Spectrum Validity Check engine has suggested data review.	Ok U235/U238 verified by gamma spectrum. Results valid. After EA review, spectrum valid.
Miscellaneous	No additional nuclides contributing to 95% of the radiological hazard identified.

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

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **68414**

BDR Number: **LA13FG2119**

Sampling Date: **11/22/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	90.37	U
74-82-8	Methane	142.14	U
67-56-1	Methanol	35.23	U
60-29-7	Ethyl Ether	0.96	U
75-35-4	1,1-Dichloroethylene	6.38	U
67-64-1	Acetone	18.08	U
75-34-3	1,1-Dichloroethane	4.08	U
156-59-2	cis-1,2-Dichloroethene	0.76	U
78-93-3	Methyl ethyl ketone	11.73	U
110-82-7	Cyclohexane	5.10	U
71-43-2	Benzene	1.77	U
107-06-2	1,2-Dichloroethane	3.66	U
71-36-3	1-Butanol	1.84	U
108-10-1	Methyl isobutyl ketone	9.82	U
108-88-3	Toluene	8.02	U
108-90-7	Chlorobenzene	4.10	U
100-41-4	Ethylbenzene	3.57	U
108-38-3/106-42-3	m- and p-Xylene	1.92	U
95-47-6	o-Xylene	2.10	U
108-67-8	1,3,5-Trimethylbenzene	1.96	U
95-63-6	1,2,4-Trimethylbenzene	2.13	U

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

InstName : Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\131122c\
Data File : 68414.D
Acq On : 22 Nov 2013 1:45 pm (#1); 22-Nov-13, 13:45:17 (#2)
Operator : SA
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Nov 22 13:54:12 2013
Quant Method : C:\msdchem\1\METHODS\VOCGAS.M
Quant Title : Flammable Gas Analysis
QLast Update : Mon Aug 26 13:12:56 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
3) Fluorobenzene	3.539	96	4187550	205.75 ppmv	0.02
15) Chlorobenzene-d5	5.848	117	3300391	177.50 ppmv	-0.01

Target Compounds	Qvalue

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

S841320

S841320

Container Profile 747118

File Options Reports Help

S841320

747118	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

S841320

- S841320
  - LA00000068367 – EMPTY
  - LA00000068394
  - LA00000068468
  - LA00000068467

Working Copy
Date: 9-26-13 DS

ATTACHMENT 1
Page 1 of 4

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: S841320

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

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

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

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

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

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

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

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

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

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

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

Performed By: Brandon Chavez / [signature] 1204742 / 9-26-13
Waste Handling Tech (print) Signature Z # Date

ATTACHMENT 1
Page 2 of 4

4.1[6][B]	Parent Waste Container No.: 5841320	
5.[18]	Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable:	428.6 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)	428.6 lb
6.2[7]	**($)** Total Parent Drum Weight < 624 lb (SR 4.5.1):	☑ SAT ☐ UNSAT
6.2[17][D]	Drum lift hinge pin retaining clip replaced.	N/A / / Initials Z# Date

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

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

ATTACHMENT 1
Page 3 of 4

4.1[6][B] Parent Waste Container No.: 8841320

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	68468	68467	N	
10.1[4]	Daughter Drum Filter No.	LM-280	LM-290		
10.1[4]	Daughter Drum Bag Filter No:	~~L-6735~~	L-6728	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.	~~6CPCL52SPC~~			
	Serial No.	L-6702			
	Date of Manufacture	1-13			
10.2[5]	POC ID No	68394			
10.2[7][B]/10.2[6]	POC Item Description	Nitrate Salts			
10.2[13]	POC Assembly closed per Manufacturer's instructions. (Initial and Z#)	BC 204742		A	
10.2[14]	POC Assembly Gross Weight (lb)	345.8			
10.2[15]	POC Rad. Survey Results (mrem/hr)	1000.5	N		
10.3[3][A]	Approx. Containerized Liquid Vol./Units	N A			
10.3[5][A]	Free Liquid Volume/Units	2 gal			
10.3[7][A]	Opaque/Non-penetrable Item Description:	Lead SHIELDING	LEAD SHIELDING		
10.3[9][A]	PCB-contaminated Waste Description	N A	N A		
10.3[9][B]	PCB Item ID No.				
10.3[10]	Remaining Waste Description	see comments	see comments		
10.3[13]/10.4[10]/ 10.5[4]/10.6[10]	Daughter Drum % Full (%)	100%	50%		
10.5[3]/10.6[2]	Description Waste Added During Processing	Plastic	plastic		

ATTACHMENT 1
Page 4 of 4

4.1[6][B] Parent Waste Container No.: S841320

Comments: Plastic, Lead, Nitrate Salts, Kitty Litter,

11.1[1] Performed By: BRIAN GALLEGOS / [signature] / 261129 / 9-26-13
Waste Handling Tech (print) Signature Z # Date

11.1[8] Reviewed By: Gilbert Martinez [signature] / 149235 / 9-30-13 0945
SOS or designee (print) Signature Z # Date/Time

Working Copy
Date: 7-3-13

ATTACHMENT 2
Page 1 of 1

WCRRF OVERPACK DRUM ASSEMBLY PREPARATION DATA SHEET

5.[3] Overpack drum information:

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

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

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

Overpack filtered vent information:

Manufacturer: NUCFIL
Model No.: 013
Serial No.: JL-1819
Manufacture Date: 10/11

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

5. [11] Performed By: MICHAEL MONTOYA [signature] M1352 / 7-03-13
Waste Handling Technician (print) Signature Z# Date

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

5. [18] 2-in. bung plug torque value: 120 ft-lb

Comments: N/C

8.1[1] Performed By: MICHAEL MONTOYA [signature] M1352 / 7-03-13
Waste Handling Technician (print) Signature Z# Date

8.1[6] Reviewed By: Gilbert Martinez [signature] 14928 9.30.13
Supervisor or designee (print) Signature Z# Date

UET: Working Copy
Date: 9-26-13

ATTACHMENT 5
Page 1 of 1

WCRRF OVERPACK DRUM CLOSURE DATA SHEET

7.[17] Overpack Drum Unique Identifier No.: 68367

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

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

Performed By: Brian Gallegos / B. Gallegos / 2067129 9-26-13
Waste Handling Technician (print) Signature Z# Date

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

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

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

7.[34][D] 85-gal overpack drum gross weight (lb): 167.8 lb

Comments: N/C

8.1[1] Performed By: Brian Gallegos / B. Gallegos / 2067129 9-26-13
Waste Handling Technician (print) Signature Z# Date

8.1[7] Reviewed By: Gilbert Martinez / [signature] / 149235 9-30-13
Supervisor or designee (print) Signature Z# Date

Date: 9-24-13cw

ATTACHMENT 1
Page 1 of 2

WCRRF DRUM PREPARATION DATA SHEET

5.[34][E] Drum ID No.: 68467

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 5PUC
Serial No.: L-6728
Manufacture Date: 1/13

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

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

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

Performed By: Brandon Chavez / [signature] RAHN219-24-13
Operator (print) Signature Z # Date

5.[23] Filtered vent information:
Manufacturer: NUCFil
Model No.: 01PDS
Serial No.: LM-290
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.: 68467

Comments: N/C

5.[35] Performed By: Brandon Chacz / [signature] 104782 9-24-13
Operator (print) Signature Z # Date

7.1[4] Reviewed By: Gilbert Martinez [signature] 149235 9.30.13
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 2
Page 1 of 2

WCRRF DRUM CLOSURE DATA SHEET

6.[3] Drum ID No.: 68467

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

M&TE No.: 038370
Cal. Expiration Date: 8-2-14
Range in ft-lb: 10-80
Tolerance: ±3%CW ±6%CCW

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

Performed By: Brandon Chavez / [signature] 2047112 / 9-26-13
Operator (print) Signature Z # Date

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

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

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

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

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

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

6.[17][C] 2 in. bung plug torque value: N/A 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.: 68467

6.[26] Scale File ID number: 019065

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

6.[28] Drum gross weight: 270.2 lbs

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

Comments: N/C

6.[32] Performed By: BRIAN GALLEGOS / [signature] / 267129 9-26-13
Operator (print) Signature Z # Date

7.1[4] Reviewed By: Gilbert Martinez [signature] 14259 9-30-13
Supervisor or designee (print) Signature Z # Date

Working Copy
Date: 9-24-13

ATTACHMENT 1
Page 1 of 2

WCRRF DRUM PREPARATION DATA SHEET

5.[34][E] Drum ID No.: 68468

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.: 6CPUC1.5-25PUC
Serial No.: L-6725
Manufacture Date: 1/13

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

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

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

Performed By: Brandon Chavez / [signature] 2011127 / 9-24-13
Operator (print) Signature Z# Date

5.[23] Filtered vent information:
Manufacturer: NUCFil
Model No.: 019DS
Serial No.: LM-280
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.: 68468

Comments: N/C

5.[35] Performed By: Brandon Chavez / [signature] 107742 / 9-24-13
Operator (print) Signature Z # Date

7.1[4] Reviewed By: Gilbert Martinez [signature] 149255 9.30.13
Supervisor or designee (print) Signature Z # Date

9-26-13

ATTACHMENT 2
Page 1 of 2

WCRRF DRUM CLOSURE DATA SHEET

6.[3] Drum ID No.: 68468

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

M&TE No.: 038370
Cal. Expiration Date: 8-2-14
Range in ft-lb: 10-80
Tolerance: ±3%cw ±6%ccw

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

Performed By: Brandon Chavez / 204742 / 9-26-13
Operator (print) Signature Z # Date

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

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

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

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

N/A

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.: 68468

6.[26] Scale File ID number: 019065

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

6.[28] Drum gross weight: 342.0 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: Brandon Chavez / [signature] / 134772 / 9-26-13
Operator (print) Signature Z # Date

7.1[4] Reviewed By: Gilbert Martinez / [signature] / 149235 / 9.30.13
Supervisor or designee (print) Signature Z # Date

WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

1437
SP72

Production Control

Container ID: S841320 Container Type: 55-GAL Gross Weight (lbs): 453
Inner Seal #: 019668 Filter Prefix: None Filter Serial #: None
AK Waste Stream: LA-MHD01.001 Certified RTR BDR: LA-RTR2-08-0192
TWSR Comments: LEACHED SOLIDS MST 12
Total PE-Ci Activity: 7.57E+00 Equivalent Combustible PE-Ci: 2.84E+00 AM-241 PE-Ci: 6.14E-01
Total Fissile Gram Equivalents: 83.6 Total Surface Dose Rate (mrem/hr): 2
EPA Code(s): [redacted] D009
NCR RTR/NDA Comment: CCP: run at HERTR-OTHER
RTR Pre-Screen Date: 6/12/2007 Comment: NA
Certified RTR Comment: Impenetrables
Prohibited Items: ☐ Sealed > 4 Liters ☐ Liquid ☐ Pressurized Container ☑ Impenetrable Item ☑ Other
Security Determination: ☑ Green ☐ Yellow
Remediation Determination: ☐ VE ☑ PID ☐ Split ☑ Repack
Estimated 30-cm Dose Rate (mrem/hr): ☐ <100 ☐ >100 and <1,000 ☑ >1,000 and <10,000 ☐ >10,000
TRUCON Code: Production Control Comments: Ensure EPA Codes D007, D008, and D009 are on the label. A minimum of 1.2 volumes of kitty litter/zeolite must be mixed with 1.0 volume of nitrate salts.

Performed By: Susan Ramsey (Production Control (Print)) / Susan Ramsey (Signature) / 100681 (Z Number) / 11/20/12 (Date)

WDP Engineering

Chemicals Present (e.g., pyrophorics, acids, bases, shock sensitive, organic liquids, peroxides, crown ethers): ☐ Yes ☑ No ☐ Unknown
Processing Determination: ☑ Accept ☐ Reject
WDP Engineering Comments: Nitrate Salts
Net Wt: 393#. Generator info shows 10 items of nitrate salts, with weights ranging from 12-51#. RTR BDR shows, lead shielding, plastic bags, + impenetrable material. It also indicates that the waste description/matrix could not be verified. Nitrate salts require repack with admixture; waste codes for lead, chromium, + mercury are applicable. Undocumented liquids are commonly present.

Performed By: Valerie Rhodes (WDP Engineering (Print)) / Valerie Rhodes (Signature) / 112609 (Z Number) / 1/7/13 (Date)

TRU Remediation Operations

☑ Waste Container Information Evaluated ☐ Less Than 170 lbs ☐ RTR Video Available
Other Specific Safety Concerns: Do not push or press on waste with hands. Use hexarmor gloves during processing.
Processing Determination: ☑ Accept ☐ Reject
TRU Remediation Operations Comments: Use proper ratio of kitty litter to waste in accordance with the procedure.
Performed By: Jose Jerez (TRU Remediation Operations (Print)) / Jose Jerez (Signature) / 221102 (Z Number) / 2-5-13 (Date)

ROBINSAUT RSC 272995 2-11-13
IHS REVIEW: RB 206362 11.26.12 NOTES: D007 = Chromium
D008 = Lead

Noncertified TRU Waste Drum Item Information

DrumID: 019668

Item No	ItemID	Process Status	Net Wt (kg)	Matrix	Meas Code	SNM (g)	MT	Auth (Pg/Ln)		Comments
1	OX11163NW1		15.230	NITRATE SALTS		12.12	52	6/14	G468	
2	LR-62NE1		11.590	NITRATE SALTS		4.42	52	6/14	G468	
3	RR-64VRNE1		5.740	NITRATE SALTS		2.71	52	6/14	G468	
4	OX11061NE2		16.590	NITRATE SALTS		13.73	52	6/14	G468	
5	LR-62NE2		12.730	NITRATE SALTS		6.71	52	6/14	G468	
6	LR-62NW1		7.500	NITRATE SALTS		1.34	52	6/14	G468	
7	LR-62NE3		6.820	NITRATE SALTS		2.63	52	6/14	G468	
8	LR-62NW2		23.410	NITRATE SALTS		30.07	52	6/14	G468	
9	OX11266NE1		23.680	NITRATE SALTS		11.51	52	6/14	G468	
10	LR-65NW1		23.180	NITRATE SALTS		6.	52	6/14	G468	

Noncertified Waste Drum Material Summary

Gross Wt (kg): 205.6

Material Type	SNM (grams)	Items Net Wt (kg)
52	91.24	146.47
Totals	91.24	146.47

1 9 7 7 0 7 1

SPM2

Attachment 2 – CCP Radiography Data Sheet

Page 1 of 3

☑ RTR Examination ☐ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID and Location:	LANL
Batch Number:	LA-RTR2-08-0192
Examination Date:	12/11/08
Waste Container ID:	S841320
Video/Audio Recorded Media Number:	LA-RTR2-08-0192 A
Procedure and Revision No.:	CCP-TP-053 Rev. 6
NCR(s) associated with the container? (e.g., Prohibited Items)	☐ NO ☑ YES NCR No.: NCR-LANL-1173-08 NCR No.: N/A

Container Type:	55 Gallon Drum
TRUCON Code:	LA225
Waste Matrix Code:	S5400
Waste Stream I.D.:	LA-MHD01.001
Waste Container Weights:	Gross Wt: 193.4 kg. Tare Wt: 35.1 kg. Net Wt: 158.3 kg.
Rigid Liner and Liner Vent Description: (e.g., "90 mil liner – NO Lid" or "NO Liner")	90mil Liner - Punctured Lid
Number of Layers of Confinement:	Appears to be 0 layers
Volume Utilization Percentage:	90 %

Attachment 2 – CCP Radiography Data Sheet (Continued)

Page 2 of 3

Waste Container ID: S841320

Section 3: Container Inventory and Comments (Detailed descriptions)
Lead shielding
Plastic bags
Impenetrable material

Section 4: Packaging Material and Waste Mass of Packaging	
Packaging Material	Estimated Weight (kg)
Steel (ST):	27.7
Plastics (PP):	7.4
Others:	0.0
Total Packaging Weight:	35.1
Waste Material Parameter:	Estimated Weight (kg)
Iron-based Metal / Alloys (IM):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	157.3
Other Inorganic Materials (OI):	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	1.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	
Soils (S):	
Total WMP Weight:	158.3

Attachment 2 – CCP Radiography Data Sheet (Continued)

Page 3 of 3

Waste Container ID: S841320

	Yes	No	N/A
Is there liquid in the container?	☐	☑	
Is there any liquid in the waste, including internal containers, that **DOES NOT** meet the criteria of residual (waste shall contain as little residual liquid as is reasonably achievable by pouring, pumping and/or aspirating, and internal containers shall contain less than 1 inch or 2.5 centimeters of liquid in the bottom of the container)?	☐	☐	☑
Is the total volume of liquid in the container **GREATER** than 1% of the container?	☐	☐	☑
Is there detectable 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 polychlorinated biphenyls (PCBs) not authorized under an EPA PCB waste disposal authorization?	☐	☑	
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐	☑	
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☑	☐	
Are there heat-sealed bags (unvented) GREATER than 4 liters and LESS than 390 square inches in the waste?	☐	☑	
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 (blocked or braced) for heavy and/or sharp objects?	☐	☑	

Comments:
NCR-LANL-1173-08: This drum contains impenetrable material. The waste matrix code and waste stream description could not be verified. Waste material parameters and weight estimates are based on portions of the drum which could be examined.

RTR Operator:

Pete Lucchini		12/11/08
Print Name	Signature	Date

Attachment 1: LEL/VOC Sample Record

Torque Wrench Information (If Used)				☒ N/A
Serial/ID Number:		Cal. Due Date:	Torque Wrench Cal. Within Due Date (initials):	

	Container Number:	5841300							
	Container Type (SWB, 110-Gal, 85-Gal, or 55-Gal):	55 GAL.							
LEL Sample Information	LEL Reading (%)	N/A							
	($) Initial to Verify one of the following MultiRAE Reading (If Applicable): • < 10% LEL with no justification • 10% to 18% with justification	N/A							
	($) Initial to Verify < 8,000 ppm Hydrogen CCP Mass Spec Reading (If Applicable)	[illegible]				N/A			
	Initial to Verify < 10,600 ppm Methane CCP Mass Spec Reading (If Applicable)	[illegible]							
VOC Sample Information	VOC Reading (ppm)	34.67							
	($) Initial to Verify < 2,000 ppm MultiRAE Reading (If Applicable)	N/A							
	($) Initial to Verify < 7,000 ppm CCP Mass Spec Reading (If Applicable)	[illegible]							
	Filter Type:	72							
	WIPP Approved (SAT/UNSAT):	SAT							
	Filter Torque Value:*	N/A							

*No torque value required for 072/073 filters – Write "N/A' as applicable

Justification for a range of 10% to 18% of the LEL using a MultiRAE Plus Monitor: _____

The SOS or SOM shall review Attachment 1 to this procedure and ensure that they have been satisfactorily completed.

Signature [illegible] Date 10-28-09 Time 1700

Attachment 1: LEL/VOC Sample Record (Sample Results Using the MultiRAE Plus Monitor)

Sample Date: 10/26/09

MultiRAE Plus Monitor Information (If Used)

Serial/ID Number: _____ Calibration Performed Within 30 Days

VOC Calibration Date: _____ Initials: _____

LEL Calibration Date: _____ Initials: _____

N/A

Pre-Use Performance Check (Bump Test):

a) VOC Value _____ VOC value is ≥ 90 PPM but ≤ 110 PPM (SAT/UNSAT) Initials: _____

b) %LEL Value _____ %LEL value is ≥ 45% LFL but ≤ 55% LFL (SAT/UNSAT) Initials: _____

Post-Use Performance Check (Bump Test):

a) VOC Value _____ VOC value is ≥ 90 PPM but ≤ 110 PPM (SAT/UNSAT) Initials: _____

b) %LEL Value _____ %LEL value is ≥ 45% LFL but ≤ 55% LFL (SAT/UNSAT) Initials: _____

Certified CCP Technician(s) Information and Data (If Used)

Name (Print)	Signature	Z Number
Erik Lockell	Erik Lockell	234183

CCP Hydrogen LEL/LFL (ppm): 1609

CCP Methane LEL/LFL (ppm): Ø

Benzene		Chlorobenzene		Cyclohexane		1,1-Dichloroethane		1,2-Dichloroethane	
1,1-Dichloroethane		Cis-1,2-Dichloroethylene		Ethyl benzene		Ethyl ether		Toluene	
1,2,4-Trimethylbenzene		1,3,5-Trimethylbenzene		m-Xylene		o-Xylene		p-Xylene	
Acetone		1-Butalnol		Methanol	34.67	Methyl ethyl Ketone		Methyl isobutyl Ketone	

Total CCP VOC value (ppm): 34.67

InstName : Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\091020c\
Data File : S841320.D
Acq On : 20 Oct 2009 3:06 pm (#1); 20-Oct-09, 15:03:46 (#2)
Operator : SCH
Sample :
Misc : 55 GALLON LFL DRUM FROM UNDER DRUM LID (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Oct 20 15:19:24 2009
Quant Method : C:\msdchem\1\METHODS\vocgas.m
Quant Title : Flammable Gas Analysis
QLast Update : Tue Aug 25 13:16:42 2009
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
3) Fluorobenzene	7.422	96	4604572	210.00	ppmv	0.07
15) Chlorobenzene-d5	11.369	117	3912111	183.75	ppmv	0.07
Target Compounds						Qvalue
1) Hydrogen	3.389	GC1	12589	1609.91	ppmv	100
4) Methanol	3.181	31	55878m	34.67	ppmv	

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

vocgas.m Tue Oct 20 15:19:36 2009

184
9-24-13

0605 Assuming WCRRF Operations Center Orlando
0615 The job being conducted by SCS
0645 Operators entering SC-69, Procedure driver work is relea
0759 Bagging off, Bagging on S841320
0915 Bag on, Bag off complete. had a brief pause then continued while performing bag on.
1141 Bagging off 1 daughter and a PCC, will continue to process drum.
1210 Bag on, Bag off complete
1225 Being relieved by CCC - Howard Smith - Orlando
1225 ASSUMING CCC POSITION HASMITH
1240 OPERATORS EXIT BUILDING FOR LUNCH
1300 OPERATORS ENTER BUILDING TASC-69 TO CONTINUE PROCESSING
1359 BAGGING OFF 1 DAUGHTER, BAGGING ON 5842234
1431 BAG OFF COMPLETE
1435 STARTING OUTSIDE ROUNDS
1440 BEING RELIEVED BY SCS C VELARDE - H SMITH
1441 Assuming WCRRF Operations Center - Orlando
1446 Starting inside rounds.
1500 Item #13 is SCS, PCD in place. Okay to proceed per USE documentation.
1503 Item #19 is unsat, FSE in place, okay to proceed
1508 Completed outside rounds.
1568 Inside rounds complete.
1533 Bagging off 1 daughter, bagging one daughter continuing process.
1559 Bag on Bag off complete.
1612 Inside and outside rounds signed off by SCS.
1655 Bagging of daughter and PCC, Bagging on 9885021
1735 Bag on, off complete
1741 Starting movement out of SC-69
1810 Movement complete out of SC-69.
9-24-13 1810 Relieved by CCC Team CC Limon - Orlando
HM

NC Carter [illegible]

9-26-13 DAYSHIFT

0614 Reviewed the shift turnover checklist and assumed the SOM position John Guadagnoli

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

0644 Procedure driven work is released.

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

0712 Completed daily facility update with AREA G SOM.

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

0800 Inside operators report bag offs completed and bag on of Parent S841320

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

0928 Late Entry for 0915, Bag on and bagoff complete.

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

1225 OCO being relieved by H. Smith -

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

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

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

1353 Bagging off 1 daughter and bagging on S842234

1431 Bag off complete

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

1559 Operators report bag off of 1 daughter and bag on of another was completed

1655 Bagging off 1 daughter and 1 POC and bagging on Parent S825021

1734 Bag off and Bag on Completed.

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

1805 Completed conducting shift turnover checklist and relieved by the oncoming SOM R. Axtel John Guadagnoli

(no further entries this page)

26 Gm
G:28.13 9-26-13

WCRR SOS LOG Book

0600 Assuming SOS Position [illegible] mg
0615 Conducting shift brief.
0635 Concluded shift brief
0645 operator entering Facility
0759 Bagging off /on 5841320
0915 Bag on/off Complete had pause then continued bag off
1141 Bagging off /daughter And Poc And continuing.
1210 Bag on/off complete
1240 Operators Exiting For Lunch.
1300 Operators Entering 50-69
1355 Bagging off /Daughter Bagging on 5842234
1431 Bag on/off complete
1435 Starting Rounds
1533 Bagging off /daughter bagging on another continuing
1559 Bag on/off complete.
1612 Reviewed Inside And outside Rounds.
1655 bagging off /on 5825021
1735 bag on /off complete.
1746 started move out of 50-69.
1810 Move out complete
HG 1815 Relieved by Clayton mollins [illegible]

no Further entry on this Page.

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0116
Examination Date:	10/4/2013
Waste Container ID:	68394
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.: 157.0 kg Tare Wt.: 145.1 kg Net Wt.: 11.9 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:	55 %

CCP Radiography Data Sheet

Waste Container ID: 68394

Section 3: Container Inventory and Comments (Detailed descriptions)

IM:

AM:

OM: Scrap lead

OI:

C:

R:

XPM: Plastic bags

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	109.0
Plastics (PP): Rigid Liner/Lid Liner Bag (Inside POC)	8.1
Other: Fiberboard (CP), Liner/Sleeve(Inside POC)	28.0
Total Packaging Weight	145.1
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	0.5
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	3.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	8.4
Soils (S):	
Total WMP Weight:	11.9

CCP Radiography Data Sheet

Waste Container ID: 68394

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:	68394	Count Sequence Number:	23723
Operator:	D3PW2DK1\operator		
Assay Start:	10/25/2013 2:55:32 PM		
Description 1:	1LANDA1853		
Description 2:	POC 157.0		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 11.9 kg	Net:	11.9 kg
Container:	Volume: 208.0 l	Full:	95.0 %
Density:	0.654 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:	23723	Batch Number:	1LANDA1853
Assay Instrument:	MCS HENC #1	Location:	LANL TA-54
Analysis Method:	CCP-TP-063 v 15	Software Version:	NDA 2000 V.4.0
Item ID:	68394	Analysis Date:	10/25/2013

Net Weight	11900.0 g		
Pu mass	3.46E+001	+-	1.59E+001 g
TRU Alpha Activity	4.82E+000	+-	1.09E+000 Ci
TRU Activity Concentration	4.05E+005	+-	9.19E+004 nCi/g
Pu-239 Equivalent Activity	4.89E+000	+-	1.09E+000 Ci
Pu-239 FGE	3.32E+001	+-	1.59E+001 g
Decay heat	1.55E-001	+-	3.44E-002 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
SR90	5.69E-009	7.85E-007	4.89E-007	0.00E+000
CS137	9.04E-009	7.85E-007	4.89E-007	5.06E-007
U233	<LLD	<LLD	0.00E+000	4.05E-003
U234	1.16E-002	7.21E-005	2.53E-005	0.00E+000
U235	8.27E-001	1.79E-006	6.25E-007	1.75E-006
NP237	4.36E-002	3.08E-005	5.47E-006	1.19E-006
PU238	3.17E-003	5.41E-002	2.74E-002	9.47E-004
U238	<LLD	<LLD	0.00E+000	1.73E-005
PU239	3.25E+001	2.02E+000	9.85E-001	3.53E-002
PU240	2.08E+000	4.72E-001	2.40E-001	8.25E-003
AM241	6.64E-001	2.28E+000	4.10E-001	1.20E-001
PU241	3.98E-002	4.10E+000	2.09E+000	7.17E-002
PU242	6.93E-003	2.74E-005	1.39E-005	0.00E+000
AM243	1.90E-004	3.80E-005	6.99E-006	5.66E-006

Errors quoted at 1.000 sigma

Operator: D. R. [illegible] Date: 10-29-13

ITR: Marla [illegible] Date: 10-29-13

Automated Independent Technical Review

Count Sequence Number: 23723
Batch Number: 1LANDA1853
Counter ID: MCS HENC #1
Container ID: 68394
Waste Matrix Code: Homo Sol. S3000
Count Type:
Sequence Type:
Assay Date: 10/25/2013

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

Waste Container ID: **68394**

BDR Number: **LA13FG2123**

Sampling Date: **12/5/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	227.29	
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\131205c\
Data File : 68394.D
Acq On : 5 Dec 2013 12:42 pm (#1); 05-Dec-13, 12:41:48 (#2)
Operator : NW
Sample :
Misc : POC THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Dec 05 12:50:14 2013
Quant Method : C:\msdchem\1\METHODS\VOCGAS.M
Quant Title : Flammable Gas Analysis
QLast Update : Mon Aug 26 13:12:56 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
3) Fluorobenzene	3.571	96	4007187	205.75 ppmv	0.05
15) Chlorobenzene-d5	5.874	117	3099739	177.50 ppmv	0.01
Target Compounds					Qvalue
1) Hydrogen	1.606	GC1	1709m	227.29 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:	68467
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.: 122.5 kg Tare Wt.: 33.4 kg Net Wt.: 89.1 kg
Rigid Liner and Liner Vent Description:	Liner: [X] No [ ] Yes Lid: [X] No [ ] Yes Type: [ ] 30-mil [ ] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [ ] Yes [X] N/A Punctured: [X] No [ ] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [ ] No [X] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 1 layer
Volume Utilization Percentage:	60 %

CCP Radiography Data Sheet

Waste Container ID: 68467

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):	20.0
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	3.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	66.1
Soils (S):	
Total WMP Weight:	89.1

CCP Radiography Data Sheet

Waste Container ID: 68467

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:            68467              Count Sequence Number:  23722
Operator:           D3PW2DK1\operator
Assay Start:        10/25/2013  1:56:12 PM
Description 1:      1LANDA1853
Description 2:      N/A
Location:           LANL TA-54
Comment:            AK-6
Matrix Type:        Homo Sol. S3000
Container Type:     55 gallon drum
Weight:             Net:        89.1   kg        Net:    89.1 kg
Container:          Volume:    208.0   l        Full:    60.0 %
Density:                         0.710 kg /l


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

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

Errors quoted at  1.000 sigma
```

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number: 23722
Assay Instrument: MCS HENC #1
Analysis Method: CCP-TP-063 v 15
Item ID: 68467

Batch Number: 1LANDA1853
Location: LANL TA-54
Software Version: NDA 2000 V.4.0
Analysis Date: 10/25/2013

Net Weight	89100.0 g		
Pu mass	1.32E+002	+- 1.94E+001	g
TRU Alpha Activity	1.75E+001	+- 5.53E+000	Ci
TRU Activity Concentration	1.96E+005	+- 6.21E+004	nCi/g
Pu-239 Equivalent Activity	1.78E+001	+- 5.53E+000	Ci
Pu-239 FGE	1.25E+002	+- 1.82E+001	g
Decay heat	5.62E-001	+- 1.83E-001	W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	1.39E-001	9.83E-005	1.83E-005	3.70E-006
PU238	1.20E-002	2.06E-001	3.03E-002	3.22E-005
PU239	1.23E+002	7.65E+000	1.13E+000	1.20E-003
PU240	7.89E+000	1.79E+000	2.64E-001	2.81E-004
AM241	2.29E+000	7.84E+000	5.41E+000	1.44E-001
PU241	1.51E-001	1.56E+001	2.30E+000	2.44E-003
PU242	2.63E-002	1.04E-004	1.53E-005	0.00E+000
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	9.74E-007
U233	<LLD	<LLD	0.00E+000	7.56E-003
U234	2.77E-002	1.73E-004	5.28E-005	0.00E+000
U235	1.98E+000	4.27E-006	1.31E-006	3.10E-006
U238	<LLD	<LLD	0.00E+000	3.54E-005
AM243	9.22E-004	1.84E-004	3.49E-005	1.01E-005

Errors quoted at 1.000 sigma

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

ITR: Martha [signature] Date: 10.29.13

Automated Independent Technical Review

Count Sequence Number: 23722 Batch Number: 1LANDA1853
Counter ID: MCS HENC #1
Container ID: 68467
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 10/25/2013

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

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

Expert Review by: Sherri Chandler Date: 10-28-13

Waste Container ID: **68467**

BDR Number: **LA13FG2108**

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

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\131029c\
Data File : 68467.D
Acq On : 29 Oct 2013 2:55 pm (#1); 29-Oct-13, 14:54:31 (#2)
Operator : NW
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Oct 29 15:03:02 2013
Quant Method : C:\msdchem\1\METHODS\VOCGAS.M
Quant Title : Flammable Gas Analysis
QLast Update : Mon Aug 26 13:12:56 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
3) Fluorobenzene	3.591	96	5139245	205.75	ppmv	0.07
15) Chlorobenzene-d5	5.891	117	4051075	177.50	ppmv	0.03

Target Compounds	Qvalue

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

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0116
Examination Date:	10/4/2013
Waste Container ID:	68468
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.: 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 1 layer
Volume Utilization Percentage:	75 %

CCP Radiography Data Sheet

Waste Container ID: 68468

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):	20.0
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	5.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	95.6
Soils (S):	
Total WMP Weight:	120.6

CCP Radiography Data Sheet

Waste Container ID: 68468

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

5841320

NDA 2000 Assay Report

Item Information

Item ID:	68468	Count Sequence Number:	23721
Operator:	D3PW2DK1\operator		
Assay Start:	10/25/2013 1:12:33 PM		
Description 1:	1LANDA1853		
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:	75.0 %
Density:	0.780 kg /l		

System Configuration

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

Errors quoted at 1.000 sigma

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number: 23721
Assay Instrument: MCS HENC #1
Analysis Method: CCP-TP-063 v 15
Item ID: 68468

Batch Number: 1LANDA1853
Location: LANL TA-54
Software Version: NDA 2000 V.4.0
Analysis Date: 10/25/2013

Net Weight	121000.0 g		
Pu mass	5.39E+001	+-	1.71E+001 g
TRU Alpha Activity	9.78E+000	+-	3.25E+000 Ci
TRU Activity Concentration	8.08E+004	+-	2.68E+004 nCi/g
Pu-239 Equivalent Activity	9.86E+000	+-	3.25E+000 Ci
Pu-239 FGE	4.99E+001	+-	1.70E+001 g
Decay heat	3.17E-001	+-	1.07E-001 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	8.45E-007
U233	<LLD	<LLD	0.00E+000	6.97E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	1.99E-006
NP237	8.94E-002	6.31E-005	1.25E-005	3.41E-006
PU238	1.13E-002	1.94E-001	1.09E-001	3.20E-003
U238	<LLD	<LLD	0.00E+000	3.00E-005
PU239	4.97E+001	3.08E+000	1.06E+000	5.08E-002
PU240	4.11E+000	9.33E-001	3.25E-001	1.54E-002
AM241	1.63E+000	5.57E+000	3.05E+000	6.87E-002
PU241	4.75E-002	4.90E+000	1.69E+000	8.08E-002
PU242	6.92E-002	2.73E-004	1.12E-004	0.00E+000
AM243	6.64E-004	1.33E-004	2.67E-005	9.36E-006

Errors quoted at 1.000 sigma

Operator: D. R. E. Date: 10.29.13

ITR: Martha Gr Date: 10.29.13

Automated Independent Technical Review

Count Sequence Number: 23721
Batch Number: 1LANDA1853
Counter ID: MCS HENC #1
Container ID: 68468
Waste Matrix Code: Homo Sol. S3000
Count Type:
Sequence Type:
Assay Date: 10/25/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis No Add-a-Source warnings.	Ok
Section 2 - Passive Neutron Analysis Analysis Status: No errors.	Ok
Ones Rate Analysis complete with warnings. - Error calculating the Ones Rate Pu-240 Effective MDA.	Not data affecting.
Section 3 - Data Combiner Analysis Override enabled; Gamma data specified as input. Results taken from Quantitative Gamma data. Results comparison test passed.	Results taken from quantitative gamma data.
Section 4 - MGA Analysis Results are marked as invalid.	MGA analysis failed. FRAM results applied. FRAM results attached.
Section 5 - Gamma Analysis Analysis Status: No errors.	Ok
Miscellaneous	No additional nuclides contributing to 95% of the radiological hazard identified.

Expert Review by: Sheri Chambers Date: 10-28-13

Waste Container ID: **68468**

BDR Number: **LA13FG2108**

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

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	264.66	
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 : 68468.D
Acq On : 29 Oct 2013 2:43 pm (#1); 29-Oct-13, 14:42:28 (#2)
Operator : NW
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Oct 29 14:50:53 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	5037196	205.75	ppmv	0.04
15) Chlorobenzene-d5	5.858	117	3940545	177.50	ppmv	0.00
Target Compounds						Qvalue
1) Hydrogen	1.620	GC1	1990m	264.66	ppmv	

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

S841627

S841627

Container 753796

File Options Reports Help

S841627

753796	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

S841627

- S841627
  - LA00000069616
  - LA00000069553
  - LA00000069681 -EMPTY

Working Copy
Date: 4-24-14 JL

ATTACHMENT 1
Page 1 of 4

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: S841627

6.2[4] Date Processed: 4-24-14

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

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

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

4.3[5][B] ($) Three 1-Liter containers carbon spheroids or MET-L-X in WCG: (SAC 5.10.1.7.1) BC 4-24-14 (Initial and Date)

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

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

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

Performed By: Brandon Chavez [signature] 1084712 4-24-14
Waste Handling Tech (print) Signature Z # Date

ATTACHMENT 1
Page 2 of 4

4.1[6][B]	Parent Waste Container No.:	S 841627
5.[18]	Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable:	446.0 lb
6.2[5][A]	Parent Drum Lead Blanket Weight (lb):	135.0 lb ☐ N/A
6.2[5][B]/ 6.2[6]	Total Parent Drum Weight (lb)	581.0 lb
6.2[7]	($) Total Parent Drum Weight < 624 lb (SR 4.5.1):	☑ SAT ☐ UNSAT
6.2[16]	Retaining clips in place	☑ SAT ☐ UNSAT
6.2[18][D]	Drum lift hinge pin retaining clip replaced. ____ / ____ / ____ (Initials / Z# / Date)	☑ N/A

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

N/A

EWMO-FOD (print) Signature Z # / Date

ATTACHMENT 1
Page 3 of 4

4.1[6][B] Parent Waste Container No.: S841627

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	69616	69553		
10.1[4]	Daughter Drum Filter No.	KM-308	KM-333	N	
10.1[4]	Daughter Drum Bag Filter No.	L-10219	L-11721	A	
10.1[4]	Daughter Drum Purchase Order No.	501578	501578		
10.1[19][C]	WCG Fire Watch Stationed		☐ YES	☐ NO	☑ N/A
10.1[20][C][d]3/11.1[3]	WCG Fire Watch Secured		☐ YES	☐ NO	☑ N/A
10.2[4]	POC bag-on bag: Manufacturer				
	Model No.				
	Serial No.				
	Date of Manufacture				
10.2[5]	POC ID No	N	N		
10.2[6]/10.2[7][B]	POC Item Description	A	A		
10.2[13]	POC Assembly closed per Manufacturer's instructions. (Initial and Z#)				
10.2[14]	POC Assembly Gross Weight (lb)				
10.2[15]	POC Rad. Survey Results (mrem/hr)			N	
10.3[3][A]	Approx. Containerized Liquid Vol./Units				
10.3[5][A]	Free Liquid Volume/Units	4 gal			
10.3[7][A]	Opaque/Non-penetrable Item Description:	Lead SHIELDING	LEAD SHIELDING		A
10.3[9][A]	PCB-contaminated Waste Description	N A	N A		
10.3[9][B]	PCB Item ID No.				
10.3[10]	Remaining Waste Description	SEE COMMENTS	SEE COMMENTS		
10.3[13]/10.4[10]/ 10.5[4]/10.6[10]	Daughter Drum % Full (%)	100%	40%		
10.5[3]/10.6[2]	Description Waste Added During Processing	Plastic kitty litter	PLASTIC KITTY LITTER		

ATTACHMENT 1
Page 4 of 4

4.1[6][B] Parent Waste Container No.: S 841627

Comments: Liquid, Lead, nitrate solids, THAT WAS NEAUTRALIZED,

11.1[1] Performed By: BRIAN GALLEGOS / Bri Gallegos / 267129 4-24-14
Waste Handling Tech (print) Signature Z # Date

11.1[8] Reviewed By: Clayton Mellish CA / 240092 / 4/25/14 1452
SQS or designee (print) Signature Z # Date/Time

Working Copy
Date: 4-23-14

ATTACHMENT 1
Page 1 of 1

WCRRF OVERPACK DRUM ASSEMBLY PREPARATION DATA SHEET

5.[3] Overpack drum information:

Purchase Order No.: 501893
Lot No.: 02444438
Manufacture Date: 2013

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

	Filtered Vent	2-in. Bung
M&TE No.:	101310	026245
Cal. Expiration Date:	11-12-14	08-05-14
Tolerance:	+/-4% cw + +/-6% ccw	+/-3% cw + +/-6% ccw

Overpack filtered vent information:

Manufacturer: Nucfil
Model No.: 013
Serial No.: HL-921
Manufacture Date: 8-11

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

5. [11] Performed By: James Sahl / [signature] / 116662 / 04-23-14
Waste Handling Technician (print) Signature Z # Date

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

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

Comments: N/c

8.1[1] Performed By: James Sahl / [signature] / 116662 / 04-23-14
Waste Handling Technician (print) Signature Z # Date

8.1[6] Reviewed By: Clayton Mallins / [signature] / 124007 / 4/25/14
Supervisor or designee (print) Signature Z # Date

Working Copy
Date: 4-24-14 JC

ATTACHMENT 4
Page 1 of 1

WCRRF OVERPACK DRUM CLOSURE DATA SHEET

7.[17] Overpack Drum Unique Identifier No.: 69681

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

M&TE No.: 038376
Cal. Expiration Date: 8-2-14
Range in ft-lb: 16-80
Tolerance: ±3%cw ±6%ccw

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

Performed By: Brian Gallegos [signature] 1267129 4-24-14
Waste Handling Technician (print) Signature Z # Date

7.[26] Overpack drum closure ring torque value: 40 ft-lb

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

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

7.[34][D] 85-gal overpack drum gross weight (lb): 170.4 lb

Comments: N/C

8.1[1] Performed By: Brian Gallegos [signature] 1267129 4-24-14
Waste Handling Technician (print) Signature Z # Date

8.1[7] Reviewed By: Clayton Mullins [signature] 1240071 4/25/14
Supervisor or designee (print) Signature Z # Date

Working Copy
Date: 3-3-14

ATTACHMENT 1
Page 1 of 2

WCRRF DRUM PREPARATION DATA SHEET

5.[34][E] Drum ID No.: 69583

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

5.[17] Drum Liner Bag/Filter Assembly:
Manufacturer: BOP
Model No.: 6CPre1.5-2SPVC
Serial No.: L-11721
Manufacture Date: 7/13

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

	Filtered Vent	2 in. Bung
M&TE No.:	101310	036245
Cal. Expiration Date:	11/12/14	8/5/14
Range:	40-200 in-lb	16-80 ft-lb
Tolerance (+/-):	+/-4% CW +/-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] Z0174213-3-14
Operator (print) Signature Z # Date

5.[23] Filtered vent information:
Manufacturer: NUCFIL
Model No.: 019DS
Serial No.: KM-333
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.: 69553

Comments: N/C

5.[35] Performed By: Brandon Chavez / [signature] Z# [illegible] Date 3-14

Operator (print) Signature

7.1[4] Reviewed By: Clayton Mullins / [signature] Z# 1240091 Date 4/25/14

Supervisor or designee (print) Signature

ATTACHMENT 2
Page 1 of 2

WCRRF DRUM CLOSURE DATA SHEET

6.[3] Drum ID No.: 69553

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

M&TE No.: 038370
Cal. Expiration Date: 8-02-14
Range: 16-80 ft-lb
Tolerance (+/-): ±3% CW ±6% CCW

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

Performed By: Brian Gallegos / Bri Gallegos / 2671249 4-24-14
Operator (print) Signature Z # Date

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

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

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

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

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

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

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

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

ATTACHMENT 2
Page 2 of 2

6.[3] Drum ID No.: 69553

6.[26] Scale File ID number: 019065

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

6.[28] Drum gross weight: 227.2 lbs

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

Comments: N/C

6.[32] Performed By: Brian Gallegos (Operator (print)) / [signature] (Signature) / 1267124 (Z #) / 4-24-14 (Date)

7.1[4] Reviewed By: Clayton Mullins (Supervisor or designee (print)) / [signature] (Signature) / 1240092 (Z #) / 4/25/14 (Date)

Working Copy
Date: 4-3-14

ATTACHMENT 1
Page 1 of 2

WCRRF DRUM PREPARATION DATA SHEET

5.[34][E] Drum ID No.: 69616

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

5.[17] Drum Liner Bag/Filter Assembly:
Manufacturer: BOP
Model No.: 6cpvc-1.5-2 Spvc
Serial No.: L-10219
Manufacture Date: 5/13

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

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

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

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

5.[23] Filtered vent information:
Manufacturer: Nucf.1
Model No.: 019DS
Serial No.: KM308
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.: L-10219

Comments: N/C

5.[35] Performed By: Steven Mondragon (Operator (print)) | Steven Mondragon (Signature) | 1047141 (Z #) | 4-3-13 (Date)

7.1[4] Reviewed By: Clayton Mullins (Supervisor or designee (print)) | CA (Signature) | 1240092 (Z #) | 4/25/14 (Date)

ATTACHMENT 2
Page 1 of 2

WCRRF DRUM CLOSURE DATA SHEET

6.[3] Drum ID No.: 696/6

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

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

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

Performed By: MICHAEL MONTOYA / [signature] / 191352 / 4/24/14
Operator (print) Signature Z # Date

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

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

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

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

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

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

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

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

ATTACHMENT 2
Page 2 of 2

6.[3] Drum ID No.: 69616

6.[26] Scale File ID number: 019065

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

6.[28] Drum gross weight: 4360 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 (Operator (print)) [signature] (Signature) 1267129 (Z #) 4-24-14 (Date)

7.1[4] Reviewed By: Clayton Mullins (Supervisor or designee (print)) [signature] (Signature) 1241097 (Z #) 4/25/14 (Date)

Working Copy
Date: 4-24-14

ATTACHMENT 2
Page 1 of 1

WCRRF PARENT 55-GAL DRUM PREPARATION DATA SHEET

6.3[21] Prepared Parent 55-Gal Drum Number: 5841627

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): 446.6

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

Comments: N/C

8.1[1] Performed By: Brandon Chavez / [signature] 125772 / 14-24-14
Waste Handling Technician (print) Signature Z # Date

8.1[7] Reviewed By: Clayton Mullins / [signature] 124000M 4/25/14
Supervisor or designee (print) Signature Z # Date

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

8.1[8][D] Approved by: Jose Jerez / [signature] 122152 4/25/14 1500
SOS/SOM or designee (print) Signature Z # Date Time

Inspected Non-GG

1937

SP72

LTP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Planning and Technical Solutions

Container ID: S841627 Container Type: 85 GAL DRUM Gross Weight (lbs): 526.491
Total PE-Ci Activity: 1.05E+01 Equivalent Combustible PE-Ci: 3.92E+00
Total Fissile Gram Equivalents: 1.16E+02 Total Surface Dose Rate (mrem/hr): 6
EPA Code(s): D007; D008; D009
Waste Description: Nitrate salts

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

RTR pre-screen indicates ~6 gallons of liquid in the drum.

Potential Safety Risks: Nitrate salt drums often contain free liquids and are packaged in individual plastic bags. Net weight is ~332 lbs. and generator data shows 10 items of nitrate salts with weights ranging from ~21-68 lbs.

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

IHS Representative

Potential IHS Safety Risks: Many Contain D007, D008 and D009 Contact free liquids, and other hazard Note

Performed By: Johnny Smallwood (IHS Representative (Print)) | Signature | 174155 (Z#) | 8-27-13 (Date)

LTP Engineering

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

Engineering Comments: NA

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

TRU Remediation Operations

Potential Safety Risks: Use proper tools and PPE when processing, as well as ~~correct~~ cm 2-12-14 correct amount of kitty liter, 3 to 1.

Performed By: Clayton Mullins (TRU Operations (Print)) | Signature | 240092 (Z#) | 3/12/14 (Date)

Operations Manager or designee

Processing Determination: ☑ Accept ☐ Reject

OM or designee Comments: Do not push or press on waste with hands. Use heavyweight gloves when processing. Ensure all liquids are remediated.

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

Noncertified TRU Waste Drum Item Information

DrumID: 019686

Item No	ItemID	Process Status	Net Wt (kg)	Matrix	Meas Code	SNM (g)	MT	Auth (Pg/Ln)		Comments
1	OX11786NW1		16.480	NITRATE SALTS		36.66	52	6/14	G468	
2	OX11786NE1		30.800	NITRATE SALTS		28.17	52	6/14	G468	
3	OX11887NW1		10.910	NITRATE SALTS		8.26	52	6/14	G468	
4	LR88-S		21.360	NITRATE SALTS		21.17	52	6/14	G468	
5	LR-90NW1		9.320	NITRATE SALTS		2.49	52	6/14	G468	
6	LR-90NE1		10.690	NITRATE SALTS		4.41	52	6/14	G468	
7	LR-91NW1		19.090	NITRATE SALTS		7.61	52	6/14	G468	
9	LR-93NE1		17.270	NITRATE SALTS		7.95	52	6/14	G468	
10	LR93NW1		14.890	NITRATE SALTS		6.06	52	6/14	G468	

Noncertified Waste Drum Material Summary

Gross Wt (kg): 210.2

Material Type	SNM (grams)	Items Net Wt (kg)
52	122.78	150.81
Totals	122.78	150.81

ATTACHMENT 1
Page 1 of 1

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

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

Container No. (5.[1])	S841627					
Container type sampled (e.g., 55-gal, 85-gal, 110-gal, or SWB) (5.[1])	55-Gal (over packed in 85-Gal)					
Filtered Vent Type (5.[1])	072					
Filtered Vent Unobstructed (5.[1])	☑ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT
WIPP-Approved Filtered Vent (5.[2])	☑ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ 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])	540.98 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: Daria Aragon (CCP (Print)), 237975 (Z#)

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

Comments:
Email from Erik Loechell verifies container was sampled through 55 gallon based on filter information.
(BS) 3/4/14

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

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

6.1[3] Performed By: Susan Ramsey (Waste Handling Operator (print)), [signature] (Signature), 100681 (Z#), 6/30/13 (Date) 3 pw

InstName : Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\130529c\
Data File : S841627.D
Acq On : 29 May 2013 1:19 pm (#1); 29-May-13, 13:18:21 (#2)
Operator : SA
Sample :
Misc : 85 GAL LFL THROUGH UNOBSTRUCTED-072 (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 29 15:10:43 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	3.610	96	4104023	201.25	ppmv	0.04
15) Chlorobenzene-d5	5.930	117	3594022	177.00	ppmv	0.03
Target Compounds						Qvalue
1) Hydrogen	1.608	GC1	3845m	540.98	ppmv	

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

vocgas.m Wed May 29 15:10:50 2013

4-24-14

0545 Assuming WCRR operations center - Kolenan

0558 Beginning outside rounds. Air quality arrived to perf weekly stack monitoring.

0610 Weekly stack monitoring complete.

0614 Beginning inside rounds

0615 ~~Beginning~~ JC 4-24-14 Pre-job being conducted by SOS.

0617 Outside rounds complete.

0625 ~~0635~~ Pre-job concluded.

0637 Initiating a drum movement from 50-69 to a transportainer. Inside rounds complete.

0656 Both rounds reviewed by SOS.

0710 Drum movement out of 50-69 complete. All inventory has been removed from 50-69.

0724 mode changed to cold in 50-69 and warm in WCRRF yard.

0730 Permission granted to stage drums for the shipment out to Area G.

0758 Permission granted to lower the vehicle access gates to load transfer vehicle.

0823 Personnel entering 50-69 to perform WO# 464523-01 (Back Hoe preventer).

0827 Personnel entering 50-69 to perform WO# 479272-01 (Annual Safety shower/eyewash).

0837 Personnel entering WCRRF to perform WO# 484110-01 (lock shop support for boiler # 2 door and SW gate.)

0838 Personnel entering 50-69 to perform WO# 466885-01 (Electrical support and manipulate breakers).

0859 WO# 466885-01 complete.

0901 Transportainers secure. Transfer vehicle loaded.

0906 Vehicle access gates restored.

0913 Personnel entering 50-69 to perform WO# 481464-01 (Quarterly exhaust stack-003.)

0916 WO# 479272-01 complete.

0917 WO# 464523-01 complete.

0918 Late entry - at 0910, WO# 466885-01 complete JC

1018 WO# 481464-01 complete.

Continued on next page - Kolenan

4-24-14 Continued from previous page. JCleman
1032 Currently waiting on parts to complete WO#484110-01.
JC 4-24-14 ~~Mode changed to operations in WCRRF yard and 5069.~~
1140 WO#484110-01 complete.
1141 Mode changed to operations in WCRRF yard and 5069.
1143 Initiating a drum movement from transportainer to 5069.
1144 Late entry - at 1041, test execute complete. Surveillance 4.1.1 performed. (JC)
1154 Drum movement into 5069 complete.
1204 Denesting 2 drums.
1225 Denesting complete. Bagging on S841627.
(JC) 1238 Bag on complete.
1326 Beginning inside rounds.
1357 Inside rounds complete.
1358 Bagging off 2 daughters, bagging on 68998.
1437 Bag off/on complete. PPE check is Set.
1452 Beginning outside rounds.
1504 Notified by PIC inside that RCT's are sending tech 35 out to change his PPE due to sweating through them.
1514 Outside rounds complete
1534 Bagging off 2 daughters and placing port cover on.
1542 Removed caution tag #5014-0006
1549 Initiating a drum movement from transportainer to 5069. Test execute complete, Surveillance 4.1.1 performed.
1559 Drum movement into 5069 complete.
1605 Bag off complete. Everything is in a safe configuration.
1613 Mode change complete. WCRRF yard and 5069 in Warm standby.
4-24-14 1632 End of day. CCC position secure. JCleman

No further entries this page.

4/24/14 WCRR SOM continued

1039 (Q) Exhaust Stack PM's completed. Signed off work package - DMT completed included in PMI All work orders completed w/ exception of Lock Shop Support - will need to reschedule installation of new locks on Boiler doors.

1041 Lock Shop on site - report it will take 10-15 minutes to change locks. Allowing them to complete work.

1045 Air Quality contacted Ops center concerning FE-003 exhaust stack monitor having a low reading for flow

1139 Lock shop completed work on Boiler doors. Work package closed out

~~1140~~ 1141 HG 4/24/14 Completed Mode Change: WCRR Yard/Bldg 50-69 from Warm/Cold to Operations/Operations

1154 Completed movement of 4 drums into 50-69

1230 Attended weekly team meeting w/ PM, OM, SOM's and others.

1238 Completed bag off of drum # 5841627

1245 Late Entry @ 1130 Discussed FE-003 w/ OSE chris Palmer concerning stack monitoring system which he ~~[illegible]~~ HG 4/24/14 verified was fixed is not part of the Safety System Range VSS => VSS is operable despite problems w/ stack monitoring. Discussed w/ Deborah Archuleta of Air Emissions and received e-mail from her manager Dave Fuenes that operations may continue - they will adjust w/ flow temperature calculations - also coordinate w/ MSS to look at system.

1325 Verified w/ IH that Be storage signs were removed from the transportainers yesterday. Ops Center was not aware at the time.

1437 Completed all bag offs for parent # 5841627 2 daughters total Completed bag off of drum # 68998

1605 Completed all bag offs for parent # 68998 2 daughters total. WCG drum port cover in place WCG in safe configuration.

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

1630 Secured the SOM position

↳ Further entries this page HG

Best Available Copy

4/24/14 WCRRF SOS Log Book

0600 Assuming SOS position. CM

" - Starting Pre-Job, discussed going into cold standby for maintenance Also went over schedule for next week and resuming operations after maintenance.

0630 Pre-Job complete.

0637 Started movement out of 50-69.

0656 Signed off on the rounds.

0710 Move out complete

0724 Mode change complete WCRRF yard in Warm Standby and 50-69 in Cold Standby.

0730 Starting shipment out of WCRRF.

0823 Starting work Back Flow Preventer, 464523-01

0821 Starting annual safety shower/eye wash, 479272-01.

0837 Starting work for boiler #2 door and SW gate latch, 484110-1.

0907 Shipment out of WCRRF complete

0910 Breaker manipulation complete

0911 Late entry @ 0838 starting work for electricians to manipulate breakers for forklift charger, 406885-01

0913 Starting quarterly exhaust stack calibration, 481464-01

0916 Annual safety shower/eye wash complete

0917 Back Flow Preventer complete.

1018 Exhaust stack calibration complete.

1141 Mode change complete, WCRRF yard and 50-69 are now in Operations.

1143 Starting movement into 50 69.

1154 Move in complete.

1204 Denesting 2 drums.

1225 Denesting complete, bagging on 5841627.

1238 Bag on complete.

58 ~~1320~~ 4-24-14 Bagging off 2 daughters, bagging on 68998.

1437 Bag off/on complete.

1534 Bagging off 2 daughters, placing port cover on. Signed off on the rounds.

Continued on next page. CMullins

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-HERTR-14-0051
Examination Date:	4/30/2014
Waste Container ID:	69553
Video/Audio Recorded Media Number:	LA-HERTR-14-0051 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.: 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:	50 %

Waste Container ID: 69553

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

Section 4: Packaging Material and Waste Material Parameters	
Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP): Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	5.0
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	2.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	62.6
Soils (S):	
Total WMP Weight:	69.6

CCP Radiography Data Sheet

Waste Container ID: 69553

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

RTR Operator:

Eddie Rios	Eddie Rios	4/30/2014
Print Name	Signature	Date

5841627

NDA 2000 Assay Report

Item Information

Item ID:	69553	Count Sequence Number:	24626
Operator:	D3PW2DK1\operator		
Assay Start:	4/30/2014 4:17:15 PM		
Description 1:	1LANDA1936		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 69.6 kg	Net:	69.6 kg
Container:	Volume: 208.0 l	Full:	50.0 %
Density:	0.670 kg /l		

System Configuration

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

Errors quoted at 1.000 sigma

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number:	24626	Batch Number:	1LANDA1936
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:	69553	Analysis Date:	4/30/2014

Net Weight	69600.0 g		
Pu mass	6.54E+001	+-	1.87E+001 g
TRU Alpha Activity	1.22E+001	+-	5.21E+000 Ci
TRU Activity Concentration	1.75E+005	+-	7.49E+004 nCi/g
Pu-239 Equivalent Activity	1.23E+001	+-	5.21E+000 Ci
Pu-239 FGE	6.17E+001	+-	1.87E+001 g
Decay heat	3.95E-001	+-	1.73E-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	8.87E-007
U233	<LLD	<LLD	0.00E+000	9.21E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	2.39E-006
NP237	1.26E-001	8.91E-005	1.61E-005	3.82E-006
PU238	5.95E-003	1.02E-001	3.36E-002	1.04E-003
U238	<LLD	<LLD	0.00E+000	2.89E-005
PU239	6.14E+001	3.81E+000	1.16E+000	3.88E-002
PU240	3.92E+000	8.91E-001	2.99E-001	9.07E-003
AM241	2.15E+000	7.38E+000	5.07E+000	1.69E-001
PU241	7.34E-002	7.56E+000	2.53E+000	7.69E-002
PU242	1.31E-002	5.17E-005	1.74E-005	0.00E+000
AM243	4.70E-003	9.39E-004	1.72E-004	1.18E-005

Errors quoted at 1.000 sigma

Operator: [signature] Date: 5/1/14

ITR: [signature] Date: 5.2.14

Automated Independent Technical Review

Count Sequence Number: 24626 Batch Number: 1LANDA1936
Counter ID: MCS HENC #1
Container ID: 69553
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 4/30/2014

Comments	Disposition
Section 1 - Add-A-Source Analysis	
Add-a-Source WARNINGS:	
Add-a-Source correction factor was set to one.	Ok
Add-a-Source correction factor is less than n-sigma * the correction factor error.	Ok
Section 2 - Passive Neutron Analysis	
Analysis Status: No errors.	Ok
Ones Rate Analysis complete with warnings.	
- Error calculating the Ones Rate Pu-240 Effective MDA.	Not data affecting.
Section 3 - Data Combiner Analysis	
Override enabled; Gamma data specified as input.	Results taken from quantitative gamma data.
Results taken from Quantitative Gamma data.	
Results comparison test passed.	
Section 4 - MGA Analysis	MGA analysis failed. AK isotopics applied. The AK information utilized was provided by Steve Schafer, AKE, and consists of data from CCP-AK-LANL-006, AK Source Document M237. MT-52.
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: 5-1-14

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-HERTR-14-0051
Examination Date:	4/30/2014
Waste Container ID:	69616
Video/Audio Recorded Media Number:	LA-HERTR-14-0051 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 14
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3110
Waste Stream I.D.:	LA-MIN02-V.001
Waste Container Weights:	Gross Wt.: 198.0 kg Tare Wt.: 33.4 kg Net Wt.: 164.6 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: 69616

Section 3: Container Inventory and Comments (Detailed descriptions)

IM: Scrap metal, hand tool

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):	3.0
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	23.0
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	3.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	135.6
Soils (S):	
Total WMP Weight:	164.6

CCP Radiography Data Sheet

Waste Container ID: 69616

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

RTR Operator:

Eddie Rios	Eddie Rios	4/30/2014
Print Name	Signature	Date

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

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

Item ID:            69616              Count Sequence Number:  24620
Operator:           D3PW2DK1\operator
Assay Start:        4/30/2014  11:43:49 AM
Description 1:      1LANDA1936
Description 2:      N/A
Location:           LANL TA-54
Comment:            AK-6
Matrix Type:        Homo Sol. S3000
Container Type:     55 gallon drum
Weight:             Net:       165.0   kg        Net:   165.0 kg
Container:          Volume:    208.0   l        Full:    90.0 %
Density:                         0.880 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:	24620	Batch Number:	1LANDA1936
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:	69616	Analysis Date:	4/30/2014

Net Weight	165000.0 g		
Pu mass	6.60E+001	+-	2.58E+001 g
TRU Alpha Activity	9.52E+000	+-	3.65E+000 Ci
TRU Activity Concentration	5.77E+004	+-	2.21E+004 nCi/g
Pu-239 Equivalent Activity	9.65E+000	+-	3.65E+000 Ci
Pu-239 FGE	6.22E+001	+-	2.58E+001 g
Decay heat	3.07E-001	+-	1.20E-001 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	8.03E-007
U233	<LLD	<LLD	0.00E+000	9.03E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	2.58E-006
NP237	1.00E-001	7.06E-005	1.50E-005	3.89E-006
PU238	6.00E-003	1.03E-001	4.47E-002	1.10E-003
U238	<LLD	<LLD	0.00E+000	2.62E-005
PU239	6.19E+001	3.84E+000	1.60E+000	4.11E-002
PU240	3.96E+000	8.98E-001	3.95E-001	9.62E-003
AM241	1.36E+000	4.68E+000	3.26E+000	1.83E-001
PU241	7.40E-002	7.62E+000	3.35E+000	8.16E-002
PU242	1.32E-002	5.22E-005	2.29E-005	0.00E+000
AM243	3.30E-003	6.59E-004	1.41E-004	1.22E-005

Errors quoted at 1.000 sigma

Operator: Jim Barton Date: 5/1/14

ITR: Mark Gr Date: 5.2.14

Automated Independent Technical Review

Count Sequence Number: 24620
Batch Number: 1LANDA1936
Counter ID: MCS HENC #1
Container ID: 69616
Waste Matrix Code: Homo Sol. S3000
Count Type:
Sequence Type:
Assay Date: 4/30/2014

Comments	Disposition
Section 1 - Add-A-Source Analysis No Add-a-Source warnings.	Ok
Section 2 - Passive Neutron Analysis Analysis Status: No errors.	Ok
Ones Rate Analysis complete with warnings. - Error calculating the Ones Rate Pu-240 Effective MDA.	Not data affecting.
Section 3 - Data Combiner Analysis Override enabled; Gamma data specified as input. Results taken from Quantitative Gamma data. Results comparison test passed.	Results taken from quantitative gamma data.
Section 4 - MGA Analysis Results are marked as invalid.	MGA analysis failed. AK isotopics applied. The AK information utilized was provided by Steve Schafer, AKE, and consists of data from CCP-AK-LANL-006, AK Source Document M237. MT-52.
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: 5-1-14

S842181

S842181

Container Profile 753814

File Options Reports Help

S842181

753814	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

Genealogy

S842181

- S842181
  - LA00000068589 - EMPTY
  - LA00000068552 - WIPP
  - LA00000068540 — LANL
    - LASB02210
  - LA00000068583 — WCS
    - LASB50037
  - LA00000068577 - WIPP
  - LA00000068553 - LANL
    - LASB02220

Working Copy
Date: 11-4-13 JL

ATTACHMENT 1
Page 1 of 4

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: S842181

6.2[4] Date Processed: 11-04-13

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

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

4.1[6][B] Parent Waste Container RCRA Designations: 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 11-04-13
Waste Handling Tech (print) Signature Z # Date

ATTACHMENT 1
Page 2 of 4

4.1[6][B] Parent Waste Container No.: 5842181

5.[18] Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable: 422.8 lb

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

6.2[5][B]/ 6.2[6] Total Parent Drum Weight (lb) 422.8 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. _____ / _____ / _____
Initials Z# Date

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

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

ATTACHMENT 1
Page 3 of 4

4.1[6][B] Parent Waste Container No.: 5842431

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	68553	68540	68552	N/A
10.1[4]	Daughter Drum Filter No.	LM-307	LM-351	LM-371	
10.1[4]	Daughter Drum Bag Filter No.	L-10371	L-10310	L-11503	
10.1[4]	Daughter Drum Purchase Order No.	501578	501578	501578	
10.1[13][C]	WCG Fire Watch Stationed		☐ YES	☐ NO	☑ N/A
10.1[14][C][d]3/11.1[3]	WCG Fire Watch Secured		☐ YES	☐ NO	☑ N/A
10.2[4]	POC bag-on bag: Manufacturer	BOP	BOP	N/A	N/A
	Model No.	6cpvc1.5-25PK	6cpvc1.5-25PK		
	Serial No.	L-6731	L-6765		
	Date of Manufacture	1/13	3/12		
10.2[5]	POC ID No	68577	68583		
10.2[7][B]/10.2[6]	POC Item Description	NITRATE SALTS	NITRATE SALTS		
10.2[13]	POC Assembly closed per Manufacturer's instructions. (Initial and Z#)	BG267129	BG267129		
10.2[14]	POC Assembly Gross Weight (lb)	418.8	382.4		
10.2[15]	POC Rad. Survey Results (mrem/hr)	1000	1300		
10.3[3][A]	Approx. Containerized Liquid Vol./Units	N/A	N/A	N/A	
10.3[5][A]	Free Liquid Volume/Units		1 Gallon		
10.3[7][A]	Opaque/Non-penetrable Item Description:		Lead Shielding	Lead Shielding	
10.3[9][A]	PCB-contaminated Waste Description	N/A	N/A	N/A	
10.3[9][B]	PCB Item ID No.				
10.3[10]	Remaining Waste Description	SEE COMMENTS	See comments	See Comments	
10.3[13]/10.4[10]/ 10.5[4]/10.6[10]	Daughter Drum % Full (%)	40%	10%	50%	
10.5[3]/10.6[2]	Description Waste Added During Processing	KITTY LITTER	Plastics Litter hex cover	Plastics & Litter	

ATTACHMENT 1
Page 4 of 4

4.1[6][B] Parent Waste Container No.: S842181

Comments: Nitrate Salts, Polytheve for liner, kitty litter absorbents, Stub-at bags, lead lining, hex-armor Gloves. Free liquid had a PH of 8 & was neutralized to a 8 & absorbed.

11.1[1] Performed By: Justin Cyler / [signature] / 1266456 / 11-4-13
Waste Handling Tech (print) Signature Z# Date

11.1[8] Reviewed By: Joe Sever / [signature] / 221452 / 11/5/13 1000
SOS or designee (print) Signature Z# Date/Time

Working Copy
Date: 10-31-13

ATTACHMENT 2
Page 1 of 1

WCRRF OVERPACK DRUM ASSEMBLY PREPARATION DATA SHEET

5.[3] Overpack drum information:

Purchase Order No.:	501563
Lot No.:	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:	Nucfil
Model No.:	10-31-13 ~~JL 920~~ 013
Serial No.:	JL-920
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 ESPINOZA [signature] 1237724 10/31/13
Waste Handling Technician (print) Signature Z# Date

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

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

Comments: N/C

8.1[1] Performed By: GERALD ESPINOZA [signature] 1237724 10/31/13
Waste Handling Technician (print) Signature Z# Date

8.1[6] Reviewed By: Jose Jerez [signature] 1221452 11/6/13
Supervisor or designee (print) Signature Z# Date

ATTACHMENT 5
Page 1 of 1

Working Copy
Date: 11/4/13 HS

WCRRF OVERPACK DRUM CLOSURE DATA SHEET

7.[17] Overpack Drum Unique Identifier No.: 68589

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% CWI ±6% CWI

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

Performed By: BRIAN GALLEGOS / [signature] / 261129 11-04-13
Waste Handling Technician (print) Signature Z# Date

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

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

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

7.[34][D] 85-gal overpack drum gross weight (lb): 184.2 lb

Comments: N/C

8.1[1] Performed By: Edward Martinez / [signature] / 238991 11/5/13
Waste Handling Technician (print) Signature Z# Date

8.1[7] Reviewed By: Jose Perez / [signature] / 221452 11/6/13
Supervisor or designee (print) Signature Z# Date

Working Copy
Date: 10-21-13

ATTACHMENT 1
Page 1 of 2

WCRRF DRUM PREPARATION DATA SHEET

5.[34][E] Drum ID No.: 68540

5.[3] Drum information:
Purchase Order No.: 501578
Lot No.: 240999
Manufacture Date: 2013

5.[17] Drum Liner Bag/Filter Assembly:
Manufacturer: 1308
Model No.: 6CPVC1.5-2SPVC
Serial No.: L-10310
Manufacture Date: 8/13

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

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

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

Performed By: BRIAN GALLEGOS / [signature] 467128 10-21-13
Operator (print) Signature Z# Date

5.[23] Filtered vent information:
Manufacturer: NUCFIL
Model No.: 0190S
Serial No.: LM-381
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.: 68540

Comments: N/c

5.[35] Performed By: BRIAN GALLEGOS / [illegible] / 267179 10-21-13
Operator (print) Signature Z # Date

7.1[4] Reviewed By: [illegible] / [illegible] / 1221452 / 11 6 13 0155
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 2
Page 1 of 2

WCRRF DRUM CLOSURE DATA SHEET

6.[3] Drum ID No.: 68540

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%rdw

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

Performed By: Justin Lopez (Operator (print)) / (Signature) 1266481 (Z #) (Date)

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

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

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

	Filtered Vent	2 in. Bung
M&TE No.:		
Cal. Expiration Date:	N/A	N/A
Range in 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: Justin Lopez (Operator (print)) / (Signature) 1266481 (Z #) 11-4-13 (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.: 65546

6.[26] Scale File ID number: 519065

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

6.[28] Drum gross weight: 85 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: Justin Lopez / [signature] 1266961 11-4-13
Operator (print) Signature Z # Date

7.1[4] Reviewed By: Jose Jerez / [signature] 1224521 11-5-13
Supervisor or designee (print) Signature Z # Date

Working Copy
Date: 10-21-13

ATTACHMENT 1
Page 1 of 2

WCRRF DRUM PREPARATION DATA SHEET

5.[34][E] Drum ID No.: 68552

5.[3] Drum information:
Purchase Order No.: 501578
Lot No.: 240899
Manufacture Date: 2013

5.[17] Drum Liner Bag/Filter Assembly:
Manufacturer: BOP
Model No.: 16cpuc1.525pvc
Serial No.: L-11503
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] / 1004742 / 10-21-13
Operator (print) Signature Z# Date

5.[23] Filtered vent information:
Manufacturer: NUCFIL
Model No.: 0190S
Serial No.: LM-371
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.: 68552

Comments: N/C

5.[35] Performed By: Brandon Chavez / [signature] / 1201248 / 10-21-13
Operator (print) / Signature / Z # / Date

7.1[4] Reviewed By: Jose Jerez / [signature] / 122142 / 11-6-13
Supervisor or designee (print) / Signature / Z # / Date

ATTACHMENT 2
Page 1 of 2

WCRRF DRUM CLOSURE DATA SHEET

6.[3] Drum ID No.: 08352

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

M&TE No.: 038364
Cal. Expiration Date: 12-18-13
Range in ft-lb: 1680
Tolerance: -3 cw to 6 ccw

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

Performed By: Justin Cofer / [signature] / Weir / 413
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: N/A
Operator (print) Signature Z # Date

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

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

ATTACHMENT 2
Page 2 of 2

6.[3] Drum ID No.: 68552

6.[26] Scale File ID number: 019065

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

6.[28] Drum gross weight: 286.6 lbs

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

Comments: N/A

6.[32] Performed By: Justin Lopez / [signature] / 1268456 / 11-4-13
Operator (print) / Signature / Z # / Date

7.1[4] Reviewed By: Jose Jerez / [signature] / 1221452 / 11-6-13
Supervisor or designee (print) / Signature / Z # / Date

ATTACHMENT 1
Page 1 of 2

Working Copy
Date: 10-21-13

WCRRF DRUM PREPARATION DATA SHEET

5.[34][E] Drum ID No.: 68553

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

5.[17] Drum Liner Bag/Filter Assembly:
Manufacturer: BOP
Model No.: 6CPVC 1.5-2SPVC
Serial No.: L-10371
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: MICHAEL MONTOYA / [signature] 191352 / 10-21-13
Operator (print) Signature Z # Date

5.[23] Filtered vent information:
Manufacturer: NUCFIL
Model No.: 019DS
Serial No.: LM-307
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.: 68553

Comments: N/C

5.[35] Performed By: MICHAEL MONTOYA [signature] 191352 / 10-21-13
Operator (print) Signature Z # Date

7.1[4] Reviewed By: Jose Tejez [signature] 122142 / 11-5-13
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 2
Page 1 of 2

WCRRF DRUM CLOSURE DATA SHEET

6.[3] Drum ID No.: 68553

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 / 04-14
Operator (print) Signature Z # Date

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

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

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

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

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

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

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

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

ATTACHMENT 2
Page 2 of 2

6.[3] Drum ID No.: 68553

6.[26] Scale File ID number: 019065

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

6.[28] Drum gross weight: 118.2 lbs

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

Comments: N/C

6.[32] Performed By: Brian Gallegos / [signature] / 267129 / 11-04-13
Operator (print) Signature Z # Date

7.1[4] Reviewed By: Jose Perez / [signature] / 122452 / 11-5-13
Supervisor or designee (print) Signature Z # Date

SP 72

ATTACHMENT 1

WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Production Control

Container ID: S842181 Container Type: 55-GAL Gross Weight (lbs): 431
Inner Seal #: 010991 Filter Prefix: LAVC Filter Serial #: 04781
AK Waste Stream: LA-MHD01.001 Certified RTR BDR: No BDR ✓
TWSR Comments: LEACHED SOLIDS MST 12 NITRATE SALTS
Total PE-Ci Activity: 1.70E+00 Equivalent Combustible PE-Ci: 6.47E-01 AM-241 PE-Ci: No data
Total Fissile Gram Equivalents: 20.8 Total Surface Dose Rate (mrem/hr): 32
EPA Code(s): None ✓
NCR RTR/NDA Comment: None
RTR Pre-Screen Date: 4/19/2007 Comment: Impenetrable Obj.
Certified RTR Comment: None
Prohibited Items: ☐ Sealed > 4 Liters ☐ Liquid ☐ Pressurized Container ☑ Impenetrable Item ☐ Other
Estimated 30-cm Dose Rate (mrem/hr): ☑ <100 ☑ >100 and <1,000 ☐ >1,000 and <10,000 ☐ >10,000
Remediation Determination: ☑ Green RLS 2.17.13 ☑ Yellow ☑ VE RW 10/31/12 ☐ PID ☐ Split ☑ Repack
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 / R.W. Jones / 117434 / 12.9.10
Production Control (Print) / Signature / Z Number / Date
SUSAN RAMSEY / Susan S. Ramsey / 100681 / 10/31/12

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. NO INDICATION OF LIQUID ON RTR PRE-SCREEN. SEND TO CERT RTR TO CONFIRM ABSENCE OF LIQUID OR TO GET ESTIMATE OF QUANTITY.

Performed By: ROBERT L. GRIFFIS / Robert L. Griffis / 130552 / 10-2-10
WDP Engineering (Print) / Signature / Z Number / Date

TRU Operations

☑ Waste Container Information Evaluated ☐ Less Than 170 lbs ☐ RTR Video Available
Other Specific Safety Concerns: 58.6 kg 62.5 kg metal TOO HEAVY
Do not push or press on waste with hands. Use Hexar mar gloves
Processing Determination: ☑ Accept ☐ Reject
TRU Operations Comments: Use proper mixture of kitty litter to waste in accordance with the procedure. 11-28-12
Performed By: Robert Rios / Robert Rios / 092205 / 12-17-16
TRU Operations (Print) Jose Jerez / Signature / Z Number / Date
Jose Jerez / 221452 / 11-28-12

Production Control

TRU Transfer Number: Date:

IHS Review - Jeffery Smallwood CSP, may contain Pb, Cr, Hg.
Ok Z# 249750 12/11/12

Noncertified TRU Waste Drum Item Information

DrumID: 010991

Item No	ItemID	Process Status	Net Wt (kg)	Matrix	Meas Code	SNM (g)	MT	Auth (Pg/Ln)		Comments
1	IXFS-648F2		58.860	NITRATE SALTS		13.71	52	5/11	G468	
2	IXFS-649F1		62.050	NITRATE SALTS		7.95	52	5/11	G468	
3	IXFS-650FD		2.050	NITRATE SALTS		0.31	52	5/11	G468	

Noncertified Waste Drum Material Summary

Gross Wt (kg): 195.5

Material Type	SNM (grams)	Items Net Wt (kg)
52	21.97	122.96
Totals	21.97	122.96

SP12

ATTACHMENT 1
Page 1 of 2

HYDROGEN/VOC SAMPLING USING GAS CHROMATOGRAPHY DATA SHEET

7.[1] Sample Date: 2/3/10

7.[7] Certified CCP Technician:

CCP (Print)	Signature	Z #	Date
Raymond Gallegos	Ray Gallegos	123772	2/10/10

CCP (Print)	Signature	Z #	Date

Container No. (7.[1]):	S845273	58114	S842181
Container Type (SWB, 110/85/55-gal) (7.[1]):	55-Gal	55-Gal	55 Gal
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		5.02	
1-Butanol			
Methanol		8.59	
Methyl ethyl ketone			
Methyl isobutyl ketone			
Total CCP VOC value (ppm) (7.[11]):	Ø	13.61	Ø

ATTACHMENT 1
Page 2 of 2

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

Container Number (7.[1]):	5845273	58114	5842181
Hydrogen Reading (ppm) (7.[10]):	Ø ppm	163.37 ppm	111.24 ppm
Methane Reading (ppm) (7.[10]):	Ø ppm	Ø ppm	Ø ppm
Total VOC Reading (ppm) (7.[11]):	Ø ppm	13.61 ppm	Ø ppm
Filter Type (7.[9][F][c]/7.[9][G][a]):	72	13	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	030725	N/A
Torque Wrench Calibration Due Date (7.[9][F][a]/7.[9][G][a]):	N/A	8/26/10	N/A
Torque Wrench Tolerance (7.[9][F][a]/7.[9][G][a]):	N/A	± 4%	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: N/C

11.1[1] Performed By: Alicia Herrera [signature] 198450 2/10/10
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: [illegible] [signature] [illegible]
11.1[8] Waste Handling Supervisor (print) Signature Z # Date

2.11.10

InstName : Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\100203c\
Data File : S842181.D
Acq On : 3 Feb 2010 10:44 am (#1); 03-Feb-10, 10:41:44 (#2)
Operator : RG
Sample :
Misc : 55 GALLON LFL DRUM FROM UNDER DRUM LID (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Feb 03 10:57:16 2010
Quant Method : C:\msdchem\1\METHODS\vocgas.m
Quant Title : Flammable Gas Analysis
QLast Update : Tue Feb 02 13:19:25 2010
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
3) Fluorobenzene	7.353	96	2248181	206.00	ppmv	0.09
15) Chlorobenzene-d5	11.307	117	1800677	180.25	ppmv	0.11
Target Compounds						Qvalue
1) Hydrogen	3.499	GC1	973m	111.24	ppmv	

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

vocgas.m Wed Feb 03 10:57:31 2010

RG
MANUAL INTEGRATION
2/3/2010

11-4-13

0600 ASSUMING WCRR OPERATION CENTER — HSMITH

0610 STARTING PRE JOB BRIEFING, DISCUSSING NEW RWP'S, SAFETY CONCERNS WITH GLOVEBOX WINDOWS AND STAFFING.

0705 PRE-JOB COMPLETED

0747 STARTING INSIDE ROUNDS

0801 ITEM #63 ODS PERMISSION TO PROCEED, PER CSE DOCUMENTATION

0820 INSIDE ROUNDS COMPLETED

0850 STARTING SHIPMENT OUT TO AREA G

0852 GENERATOR - ODS DUE TO PARTS & FSR IN EFFECT

0907 STARTING ~~NG~~ 11/4/13 HS GLOVE CHANGES STATIONS #1,2,7 &

0914 ~~ROUND~~ 11-4-13 HS OUTSIDE ROUNDS REVIEWED BY SOS

1012 SHIPMENT COMPLETE, TRANSPORTAINER DOOR CLOSED & LATCHED

1015 VEHICLE BARRIER RESTORE

1050 GLOVE BOX GLOVE CHANGES COMPLETED

1057 OUTSIDE ROUNDS REVIEWED BY SOS

1155 RP-1 NOTIFIED OPERATION CENTER TECH 41 OBTAINED BROKEN SKIN ON FINGER, OCC MED NOTIFIED OPERATOR BEING TRANSFER FOR OBSERVATION, ENTERED PROCEDURE EP-WCRR-RM-EOP-0309 PER SOM.

1200 ~~SHIPMENT~~ 11-4-13 HS MOVEMENT INTO TA50-69 FROM TA50-197/75 IS COMPLETE

1240 DOE NOTIFIED OF INJURY TO TECH 41 BY SOM

1301 EXITING EP-WCRR-RM-EOP-0309, OPERATOR RETURNS FROM OCC. MED, COUNT NDA WITH RESTRICTIONS FROM GLOVEBOX WORK AND FOLLOW UP VISIT.

1325 STARTING SHIPMENT INTO TA50-194/75 FROM TA54, PERMISSION GRANTED TO LOWER VEHICLE ACCESS GATE.

1340 BAGGING ON S813676

1359 BAGGING ON COMPLETED

1440 STARTING INSIDE ROUNDS

1446 ITEM #63 INSIDE ROUNDS ODS, OR TO PROCEED PER CSE DOCUMENTATION. — HS 11/4/13 CONTINUED ON NEXT PAGE HSMITH

11/4/13 CONTINUED FROM PREVIOUS PAGE.
1452 INSIDE ROUNDS COMPLETED
1454 BAGGING OFF DAUGHTER. BAGGING ON DAUGHTER AND CONTINUE TO PROCESS
1515 1130 LATE ENTRY ~~BADGE~~ HS 11/4/13 STARTING
AG 11-4-13 MOVEMENT INTO TA 50-69 HS
1613 INSIDE ROUNDS REVIEWED BY SOS
1615 BAGGING OFF DAUGHTER, BAGGING ON S842181
1627 SHIPMENT COMPLETED FROM TA-54, VEHICLE ACCESS GATES RESTORED.
1640 STARTING OUTSIDE ROUNDS
1645 BAG ON - BAG OFF COMPLETE
1653 COMPLETED OUTSIDE ROUNDS
1653 POC ON THE BOX
1700 OUTSIDE ROUNDS REVIEWED BY SOS
1727 BAGGING OFF ONE DAUGHTER AND 2 POC'S AND CONTINUING TO PROCESS
1815 BAG OFF COMPLETE
11-4-13 BEING RELIEVED BY OCO CLAYTON MULLINS - H SMITH
HS

NO FURTHER ENTRIES ON THIS PAGE H SMITH

11-4-13 Dayshift

0600 Reviewed the SOM logbook and assumed the SOM turnover checklist and assumed the WCRR SOM position for the [illegible]

0653 Completed attending the pre-job brief conducted by Gilbert (the SOS). The safety message discussed was workplace ACTIVE SHOOTER. There is a scheduled transfer in and out of WCRRF. The shift orders Manual drum movements WCRR-SH-003-R2 and Precautions to prevent bag tears WCRR-SH-005 R0 are in effect. The ES/PM discussed the current status of the WCRRF Generator and in the event of a power loss, Operations would follow ACP-0205 - Loss of Power. Personnel will perform glove box inspections and per shift turnover, stations 2, 7, 8, and possibly station 1 both pair require changing. Operators were briefed to the RWP-2012-0015

0705 Completed the daily phone call. Statusing the FOD activities for WCRRF

0745 Discussed with OM and procurement specialist - ordering of lead windows. Jack indicated that the specialist will obtain word today if the vendor can supply the lead windows with the tolerances indicated. Also discussed ordering thinner lead windows and doubling them up. Jack with get back to us on the method of ordering which benefits WCRRF

0850 PIT arrives for inspection and transfer out from WCRRF to AREA 4

0900 PIT completes inspection of drums and staging and loading is initiated

0907 Inside operators initiate glove changes on stations 1, 2, 7, and 8

1020 PIT exits/completes the transfer out of WCRR and backs up for the transfer to WCRR; 18 drums to be received, 22 drums were transferred out.

1050 Operations completed glove box glove changes on both pair at stations 1, 2, 7, & 8.

1100 Operators outside initiate movement in, of 3 Parent Drums.

1127 Made Change: WCRR YARD and 50/60 Facility transition from WARM/COLD to Operations/Operations - Procedural driven work is released.

1155 Notification was made to the Operations Center and SOM that an operator in the AI BAG AREA while prepping drums and wearing mechanical gloves had received a scrape on his right hand index finger between the 1st and second knuckle. The area is an RBA, the surface skin was removed ~ 1/4" diameter and there was no blood. EOP 0509 - injured person minor was entered, notification was made to the OM, PM, and ES/PM. The operator was transported to OCC Med for a wound count. The OM will notify DOE

1204 Participated in the daily noon phone call, providing facility update to OM/SOM/ES

1210 OM reports DOE was notified

1301 Operator returns from OCC Med, wound count is NDA - noted as First Aid and

11-4-13 Dayshift (Cont.)

1301 cont. operator is restricted from performing glove box work, he will need to keep it secluded until healed and report back to OCC MED as soon as it is healed or at 7 days. Other work can continue in WCRR YARD by operator. The OCO exited EDP-0309 Injured Person

1340 Operators inside initiated bag on of Parent drum 5813676.

1359. Operators inside indicate bag on completed.

1415 Follow up was conducted with the scraped knuckle injury, ES/IH evaluated PPE and determined appropriate PPE was worn. The operator overtightened the band, which caused a release and the hands came together and the 1st finger on right hand came in contact with the ∠ piece of metal which is utilized to cut the excess band material. Lessons Learned - do not overtighten and ES will brief their personnel at WCRRF during pre job brief.

1454 Inside Operators initiated bag off of daughter and bag on and will continue to process.

1550 Notified by DOE and RP-1 - that Tec Rep Roberto and representative Rad Tec Rep from TA-55 will perform a radiological assessment at WCRRF on 11-5-13 - during day shift - No other details available.

1615 Inside Operations report bagging off a daughter and bagging on Parent 5842181

1627 The transfer of drums from the transfer truck to the transport vehicle was completed - all TRU Drums secured. Production Inventory is initiating acceptance in WCATS.

1653 Inside operator reports POC identified on the box.

1737 Inside operators report bagging off 1 daughter and 2 Pacs which will leave the Parent drum 30% full.

1745 initiated shift turnover checklist for oncoming SOM. R. Axtel

1755 Completed shift turnover with Oncoming SOM R. Axtel and relieved of SOM duties by R Axtell [signature]

OK 11-5-13

No further entries this page
[signature]

11/4/13 Nightshift

1755 Reviewed shift turnover checklist and assumed WCRR SOM.

1806 Approved and posted Nightshift operations watchbill.

1820 Due to Lightening entered the 30/30 rule - Suspended outdoor operations per EP-WCRR-RM-AOP-0207 Severe Weather.

1845 Prejob brief conducted by SOS completed. Discussed today's injured personnel and importance of wearing proper PPE - injury could have been much worse. Operators instructed not to tighten banding causing slipping of the tool. Covered active shift orders and briefed operators to status of the emergency diesel generator and how it will affect facility status should we lose AC power.

1940 Exited severe weather AOP.

2137 Entered severe weather restrictions - 30/30 rule for lightening per EP-WCRR-RM-AOP-0207. Outside ops suspended.

2146 Completed bag off of another daughter - continuing to process.

2207 Exited severe weather AOP.

11/5/13 0015 Operators breaking for lunch

0050 Due to lightening entering EP-WCRR-RM-AOP-0207 Severe Weather and 30/30 rule Outside ops suspended.

0130 Resuming operations. Exiting severe weather AOP.

0320 Completed bag off of all drums for parent # 5842181 (3 daughters & 2 POC's). Bigged on drum # 5853771.

0600 Reviewed the AM roundsheets

0623 Approved and posted the Day shift Operations watchbill.

11/5/13 0630 Relieved by L. Julbert as SOM.

No further entries this page

3

PROJECT NAME WCRR SOS LOG BOOK NOTEBOOK NO.

11-4-13

0600 Assuming SOS Position [illegible]
0615 Performed shift Brief went over RWP's talked about lead windows
0710 Shift Brief Concluded. operators will have to change out Gloves
0747 Started Rounds
0850 starting shipment out to Area G
0907 starting Glove Changes station 1, 2, 7 and 8
1012 shipment out Complete
1050 Glove Change Complete
1057 Inside and outside Round Reviewed
1155 RP-1 notified Tech 41 obtained some broken skin of finger Occ med notified operator will be transported entered Procedure EP-WCRR-RM-EOP-0309
1156 Late entric starting shipment Into SO-69 @ 1130 Also made Change complete WCRRF In operation's @ 1127 [illegible] 11/4/13
1200 Movement In Complete- Late entry started move In @ 1130 [illegible] 11/4/13
1240 DOE notified By SOM of Injury
1301 Operator returned From occ med with Restrictions Friday EP-WCRR-RM-EOP-0309.
1375 Starting Shipment In to WCRRF From Area G.
1340 Bagging on S812676
1359 Bag on complete
1440 Starting Rounds
1454 Bagging off Daughter Bagging on Another.
1615 Bagging off 1 Daughter Bagging on S842181
1627 Shipment complete from G to WCRR
1645 Bag on left complete
1700 Reviewed Inside And outside Rounds
1727 Bagging off one Daughter And 2 PUCs And Continuing
1810 Bag off complete
1815 Relieved by JOSE Jerez [illegible]

No Further entries on this Page

SIGNATURE DATE 20
READ AND UNDERSTOOD DATE 20

4

PROJECT NAME WLRR 305 Log Book NOTEBOOK NO.

11/4/18

1800 Assuming 305 position for the evening, conducted turnover with off going 305 Gilbert Martinez.

1815 Starting Pre-Job brief. Off going 305 briefing status of glove box, Parent currently bagged on has approximately 200# remaining to process. Safety topic discussed wearing the proper leather gloves for the task being performed. Discussed operator incident when pulling bending on Parent when prepping. also discussed Ergo evaluation performed by IH and 40 lb. kitty litter bags, bags need to weigh around 20 pounds. Also discussed that we will be short-~~staff~~ handed operators due to training that operators need to take during the day.

1820 Entering 30/30 due to lightning and thunder

1845 Concluded Pre-Job brief

1905 Continuing 30/30 for lightning

1940 30/30 no longer in effect, operators headed to the back to finish processing Parent that is bagged on.

2130 Bagging off one daughter bagging on another daughter to continue processing. Operators needing to replace Hexarmour gloves, Gloves are reading above 80 m/hr and are also curled up and cannot be moved.

2137 Starting 30/30, suspending all outside operations, inside operations continuing.

2146 Bag on / off complete.

2200 Inventory control operator explaining that he is having problems with the empty daughters that are being generated. It appears that they were moved in but not completely prepped in the WERS system and he is having to contact unit help so that he can create them in the system to create daughters. Appears that it is a problem with the units not syncing completely when the daughter drums are prepped.

2205 30/30 lifted outside operations can resume.

0015 Operators breaking for lunch

0050 Starting 30/30 for lightning suspending outside operations.

0130 Operators returning from lunch to continue processing. 30/30 lifted outside operations can resume

0155 Outside rounds have been reviewed and signed.

0205 Bagging off one daughter and parent, Bagging on 5853771

0320 Bag on Bag off complete.

0541 Inside rounds reviewed and signed.

0615 Securing 305 position for the evening turning over to oncoming 550 Pavel Blain.

No further entries on this Page.

SIGNATURE _____ DATE _____ 20

READ AND UNDERSTOOD _____ DATE _____ 20

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-14-0004
Examination Date:	1/13/2014
Waste Container ID:	68540
Video/Audio Recorded Media Number:	LA-RTR2-14-0004 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 14
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA225
Waste Matrix Code:	S5400
Waste Stream I.D.:	LA-MHD01.001
Waste Container Weights:	Gross Wt.: 38.5 kg Tare Wt.: 33.4 kg Net Wt.: 5.1 kg
Rigid Liner and Liner Vent Description:	Liner: [X] No [ ] Yes Lid: [ ] 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:	20 %

CCP Radiography Data Sheet

Waste Container ID: 68540

Section 3: Container Inventory and Comments (Detailed descriptions)

IM:

AM:

OM: Scrap lead

OI:

C: Leather gloves

R:

XPM: 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):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	0.1
Other Inorganic Materials (OI)	
Cellulosics (C):	3.0
Rubber (R):	
Plastics (waste materials) (XPM):	1.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	1.0
Soils (S):	
Total WMP Weight:	5.1

CCP Radiography Data Sheet

Waste Container ID: 68540

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

Comments: N/A

RTR Operator:

Aaron Elliott	[signature]	1/13/2014
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	68540	Count Sequence Number:	24121
Operator:	D3PW2DK1\operator		
Assay Start:	1/15/2014 3:28:12 PM		
Description 1:	1LANDA1891		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Debris S5000		
Container Type:	55 gallon drum		
Weight:	Net: 5.1 kg	Net:	5.1 kg
Container:	Volume: 208.0 l	Full:	20.0 %
Density:	0.120 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

CD6/17/14 038

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number:	24121	Batch Number:	1LANDA1891
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:	68540	Analysis Date:	1/15/2014

Net Weight	5100.0 g	
Pu mass	4.04E-001 +-	1.29E-001 g
TRU Alpha Activity	2.94E-001 +-	8.48E-002 Ci
TRU Activity Concentration	5.77E+004 +-	1.66E+004 nCi/g
Pu-239 Equivalent Activity	2.95E-001 +-	8.48E-002 Ci
Pu-239 FGE	3.83E-001 +-	1.21E-001 g
Decay heat	9.73E-003 +-	2.82E-003 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	0.00E+000	0.00E+000	0.00E+000	3.18E-007
PU238	3.69E-005	6.31E-004	2.01E-004	6.18E-004
PU239	3.80E-001	2.35E-002	7.51E-003	2.30E-002
PU240	2.43E-002	5.51E-003	1.76E-003	5.39E-003
AM241	7.72E-002	2.65E-001	8.44E-002	2.59E-001
PU241	4.60E-004	4.74E-002	1.51E-002	4.64E-002
PU242	8.10E-005	3.20E-007	1.02E-007	0.00E+000
CO60	2.24E-011	2.53E-008	6.06E-009	1.99E-008
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	1.09E-007
U233	<LLD	<LLD	0.00E+000	6.71E-004
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	1.91E-007
U238	<LLD	<LLD	0.00E+000	2.47E-006
AM243	1.10E-004	2.20E-005	1.99E-006	9.32E-007

Errors quoted at 1.000 sigma

Operator: _____ Date: 6-11-14

ITR: _____ Date: 6/11/14

CS 6/19/14 039

Automated Independent Technical Review

Count Sequence Number: 24121
Batch Number: 1LANDA1891
Counter ID: MCS HENC #1
Container ID: 68540
Waste Matrix Code: Debris S5000
Count Type:
Sequence Type:
Assay Date: 1/15/2014

Comments	Disposition
Section 1 - Add-A-Source Analysis	
Add-a-Source WARNINGS:	
Add-a-Source correction factor is less than one.	Ok
Add-a-Source correction factor was set to one.	Ok
Section 2 - Passive Neutron Analysis	
Analysis Status: No errors.	Ok
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.
Results are marked as invalid.	
Section 5 - Gamma Analysis	
Analysis Status: No errors.	Ok
Density is outside range (0.02 to 2.10 g/cc) or fill height is below 30%.	Fill height acceptable, neutron results applied.

040 06/17/14

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. Marat Date: 6/5/14

041 ca 6/12/14

Waste Container ID: **68540**

BDR Number: **LA14FG2007**

Sampling Date: **1/21/2014**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	90.37	U
74-82-8	Methane	142.14	U
67-56-1	Methanol	35.23	U
60-29-7	Ethyl Ether	0.96	U
75-35-4	1,1-Dichloroethylene	6.38	U
67-64-1	Acetone	18.08	U
75-34-3	1,1-Dichloroethane	4.08	U
156-59-2	cis-1,2-Dichloroethene	0.76	U
78-93-3	Methyl ethyl ketone	11.73	U
110-82-7	Cyclohexane	5.10	U
71-43-2	Benzene	1.77	U
107-06-2	1,2-Dichloroethane	3.66	U
71-36-3	1-Butanol	1.84	U
108-10-1	Methyl isobutyl ketone	9.82	U
108-88-3	Toluene	8.02	U
108-90-7	Chlorobenzene	4.10	U
100-41-4	Ethylbenzene	3.57	U
108-38-3/106-42-3	m- and p-Xylene	1.92	U
95-47-6	o-Xylene	2.10	U
108-67-8	1,3,5-Trimethylbenzene	1.96	U
95-63-6	1,2,4-Trimethylbenzene	2.13	U

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

InstName : Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\140121c\
Data File : 68540.D
Acq On : 21 Jan 2014 12:29 pm (#1); 21-Jan-14, 12:29:15 (#2)
Operator : DE
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jan 21 12:38:16 2014
Quant Method : C:\msdchem\1\METHODS\VOCGAS.M
Quant Title : Flammable Gas Analysis
QLast Update : Mon Aug 26 13:12:56 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
3) Fluorobenzene	3.574	96	2939502	205.75 ppmv	0.06
15) Chlorobenzene-d5	5.878	117	2352754	177.50 ppmv	0.02

Target Compounds	Qvalue

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

CCP Radiography Data Sheet

5842181

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0125
Examination Date:	11/7/2013
Waste Container ID:	68552
Video/Audio Recorded Media Number:	LA-RTR2-13-0125 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 14
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3110
Waste Stream I.D.:	LA-MIN02-V.001
Waste Container Weights:	Gross Wt.: 130.0 kg Tare Wt.: 33.4 kg Net Wt.: 96.6 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: 68552

Section 3: Container Inventory and Comments (Detailed descriptions)

IM: Utility knives, hand tool

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):	0.5
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	10.0
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	6.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	80.1
Soils (S):	
Total WMP Weight:	96.6

CCP Radiography Data Sheet

Waste Container ID: 68552

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	11/7/2013

NDA 2000 Assay Report

Item Information

Item ID:	68552	Count Sequence Number:	23811
Operator:	D3PW2DK1\operator		
Assay Start:	11/8/2013 12:58:11 PM		
Description 1:	1LANDA1862		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 96.6 kg	Net:	96.6 kg
Container:	Volume: 208.0 l	Full:	65.0 %
Density:	0.710 kg /l		

System Configuration

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

Errors quoted at 1.000 sigma

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number:	23811	Batch Number:	1LANDA1862
Assay Instrument:	MCS HENC #1	Location:	LANL TA-54
Analysis Method:	CCP-TP-063 v 15	Software Version:	NDA 2000 V.4.0
Item ID:	68552	Analysis Date:	11/8/2013

Net Weight	96600.0 g			
Pu mass	6.82E+000	+-	1.36E+000	g
TRU Alpha Activity	3.31E+000	+-	1.53E+000	Ci
TRU Activity Concentration	3.42E+004	+-	1.58E+004	nCi/g
Pu-239 Equivalent Activity	3.32E+000	+-	1.53E+000	Ci
Pu-239 FGE	6.44E+000	+-	1.36E+000	g
Decay heat	1.09E-001	+-	5.08E-002	W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	5.55E-007
U233	<LLD	<LLD	0.00E+000	4.66E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	1.37E-006
NP237	5.14E-002	3.62E-005	6.79E-006	2.17E-006
PU238	6.23E-004	1.07E-002	2.64E-003	5.78E-004
U238	<LLD	<LLD	0.00E+000	1.25E-005
PU239	6.40E+000	3.97E-001	8.41E-002	2.15E-002
PU240	4.09E-001	9.28E-002	2.37E-002	5.04E-003
AM241	8.18E-001	2.80E+000	1.53E+000	5.04E-002
PU241	7.82E-003	8.06E-001	2.05E-001	4.37E-002
PU242	1.37E-003	5.39E-006	1.37E-006	0.00E+000
AM243	1.08E-003	2.16E-004	4.08E-005	6.36E-006

Errors quoted at 1.000 sigma

Operator: Sam Barton Date: 11/11/13

ITR: Maria Ezra Date: 11-12-13

Automated Independent Technical Review

Count Sequence Number: 23811 Batch Number: 1LANDA1862
Counter ID: MCS HENC #1
Container ID: 68552
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 11/8/2013

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

Waste Container ID: **68552**

BDR Number: **LA13FG2118**

Sampling Date: **11/21/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	90.37	U
74-82-8	Methane	142.14	U
67-56-1	Methanol	35.23	U
60-29-7	Ethyl Ether	0.96	U
75-35-4	1,1-Dichloroethylene	6.38	U
67-64-1	Acetone	18.08	U
75-34-3	1,1-Dichloroethane	4.08	U
156-59-2	cis-1,2-Dichloroethene	0.76	U
78-93-3	Methyl ethyl ketone	11.73	U
110-82-7	Cyclohexane	5.10	U
71-43-2	Benzene	1.77	U
107-06-2	1,2-Dichloroethane	3.66	U
71-36-3	1-Butanol	1.84	U
108-10-1	Methyl isobutyl ketone	9.82	U
108-88-3	Toluene	8.02	U
108-90-7	Chlorobenzene	4.10	U
100-41-4	Ethylbenzene	3.57	U
108-38-3/106-42-3	m- and p-Xylene	1.92	U
95-47-6	o-Xylene	2.10	U
108-67-8	1,3,5-Trimethylbenzene	1.96	U
95-63-6	1,2,4-Trimethylbenzene	2.13	U

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

InstName : Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\131121c\
Data File : 68552.D
Acq On : 21 Nov 2013 2:21 pm (#1); 21-Nov-13, 14:20:25 (#2)
Operator : NW
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Nov 21 14:28:52 2013
Quant Method : C:\msdchem\1\METHODS\VOCGAS.M
Quant Title : Flammable Gas Analysis
QLast Update : Mon Aug 26 13:12:56 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
3) Fluorobenzene	3.545	96	4255983	205.75	ppmv	0.03
15) Chlorobenzene-d5	5.855	117	3308762	177.50	ppmv	0.00

Target Compounds	Qvalue

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

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-14-0003
Examination Date:	1/9/2014
Waste Container ID:	68553
Video/Audio Recorded Media Number:	LA-RTR2-14-0003 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 14
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA225
Waste Matrix Code:	S5400
Waste Stream I.D.:	LA-MHD01.001
Waste Container Weights:	Gross Wt.: 53.5 kg Tare Wt.: 33.4 kg Net Wt.: 20.1 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:	45 %

CCP Radiography Data Sheet

Waste Container ID: 68553

Section 3: Container Inventory and Comments (Detailed descriptions)

IM: Scrap metal

AM:

OM: Scrap lead

OI:

C:

R:

XPM: Plastic bags, plastic lid

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP): Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	0.1
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	0.2
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	6.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	13.8
Soils (S):	
Total WMP Weight:	20.1

CCP Radiography Data Sheet

Waste Container ID: 68553

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

Comments: N/A

RTR Operator:

Print Name	Signature	Date
Benito Maestas	[signature]	1/9/2014

NDA 2000 Assay Report

Item Information

Item ID:	68553	Count Sequence Number:	24092
Operator:	D3PW2DK1\operator		
Assay Start:	1/13/2014 10:49:49 AM		
Description 1:	1LANDA1889		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Debris S5000		
Container Type:	55 gallon drum		
Weight:	Net: 20.1 kg	Net:	20.1 kg
Container:	Volume: 208.0 l	Full:	45.0 %
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:	24092	Batch Number:	1LANDA1889
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:	68553	Analysis Date:	1/13/2014

Net Weight	20100.0 g			
Pu mass	2.31E+000	+-	2.27E-001	g
TRU Alpha Activity	1.83E+000	+-	8.66E-001	Ci
TRU Activity Concentration	9.11E+004	+-	4.31E+004	nCi/g
Pu-239 Equivalent Activity	1.84E+000	+-	8.66E-001	Ci
Pu-239 FGE	2.78E+000	+-	2.56E-001	g
Decay heat	6.05E-002	+-	2.88E-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	3.34E-007
U233	<LLD	<LLD	0.00E+000	2.47E-003
U234	1.28E-002	7.98E-005	1.63E-005	0.00E+000
U235	9.16E-001	1.98E-006	4.06E-007	1.06E-006
NP237	3.87E-002	2.73E-005	2.82E-006	1.10E-006
PU238	2.11E-004	3.61E-003	5.95E-004	2.82E-004
U238	<LLD	<LLD	0.00E+000	6.88E-006
PU239	2.17E+000	1.35E-001	1.40E-002	1.05E-002
PU240	1.39E-001	3.15E-002	5.53E-003	2.47E-003
AM241	4.84E-001	1.66E+000	8.65E-001	2.53E-002
PU241	2.63E-003	2.71E-001	4.76E-002	2.12E-002
PU242	4.63E-004	1.83E-006	3.21E-007	0.00E+000
AM243	1.01E-003	2.02E-004	2.14E-005	3.51E-006

Errors quoted at 1.000 sigma

Operator: _____ Date: 1.15.14

ITR: _____ Date: 1.15.14

Automated Independent Technical Review

Count Sequence Number: 24092 Batch Number: 1LANDA1889
Counter ID: MCS HENC #1
Container ID: 68553
Waste Matrix Code: Debris S5000 Count Type:
Sequence Type: Assay Date: 1/13/2014

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

Expert Review by: Sheri Chamberlain Date: 1-14-14

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **68553**

BDR Number: **LA14FG2007**

Sampling Date: **1/21/2014**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	90.37	U
74-82-8	Methane	142.14	U
67-56-1	Methanol	35.23	U
60-29-7	Ethyl Ether	0.96	U
75-35-4	1,1-Dichloroethylene	6.38	U
67-64-1	Acetone	18.08	U
75-34-3	1,1-Dichloroethane	4.08	U
156-59-2	cis-1,2-Dichloroethene	0.76	U
78-93-3	Methyl ethyl ketone	11.73	U
110-82-7	Cyclohexane	5.10	U
71-43-2	Benzene	1.77	U
107-06-2	1,2-Dichloroethane	3.66	U
71-36-3	1-Butanol	1.84	U
108-10-1	Methyl isobutyl ketone	9.82	U
108-88-3	Toluene	8.02	U
108-90-7	Chlorobenzene	4.10	U
100-41-4	Ethylbenzene	3.57	U
108-38-3/106-42-3	m- and p-Xylene	1.92	U
95-47-6	o-Xylene	2.10	U
108-67-8	1,3,5-Trimethylbenzene	1.96	U
95-63-6	1,2,4-Trimethylbenzene	2.13	U

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

InstName : Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\140121c\
Data File : 68553.D
Acq On : 21 Jan 2014 12:41 pm (#1); 21-Jan-14, 12:40:42 (#2)
Operator : DE
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jan 21 12:50:18 2014
Quant Method : C:\msdchem\1\METHODS\VOCGAS.M
Quant Title : Flammable Gas Analysis
QLast Update : Mon Aug 26 13:12:56 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
3) Fluorobenzene	3.561	96	2912969	205.75 ppmv	0.04
15) Chlorobenzene-d5	5.864	117	2316169	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-RTR2-13-0125
Examination Date:	11/7/2013
Waste Container ID:	68577
Video/Audio Recorded Media Number:	LA-RTR2-13-0125 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 14
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3110
Waste Stream I.D.:	LA-MIN02-V.001
Waste Container Weights:	Gross Wt.: 189.5 kg Tare Wt.: 145.1 kg Net Wt.: 44.4 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: 68577

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):	44.4
Soils (S):	
Total WMP Weight:	44.4

CCP Radiography Data Sheet

Waste Container ID: 68577

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	11/7/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	68577	Count Sequence Number:	23807
Operator:	D3PW2DK1\operator		
Assay Start:	11/8/2013 9:36:17 AM		
Description 1:	1LANDA1862		
Description 2:	POC 189.5		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 44.4 kg	Net:	44.4 kg
Container:	Volume: 208.0 l	Full:	95.0 %
Density:	0.819 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:	23807	Batch Number:	1LANDA1862
Assay Instrument:	MCS HENC #1	Location:	LANL TA-54
Analysis Method:	CCP-TP-063 v 15	Software Version:	NDA 2000 V.4.0
Item ID:	68577	Analysis Date:	11/8/2013

Net Weight	44400.0 g		
Pu mass	6.71E+000	+-	1.57E+000 g
TRU Alpha Activity	9.63E+000	+-	5.02E+000 Ci
TRU Activity Concentration	2.17E+005	+-	1.13E+005 nCi/g
Pu-239 Equivalent Activity	9.65E+000	+-	5.02E+000 Ci
Pu-239 FGE	6.38E+000	+-	1.57E+000 g
Decay heat	3.19E-001	+-	1.67E-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	1.07E-006
U233	<LLD	<LLD	0.00E+000	1.04E-002
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	3.42E-006
NP237	1.46E-001	1.03E-004	2.09E-005	4.54E-006
PU238	6.13E-004	1.05E-002	2.94E-003	9.72E-004
U238	<LLD	<LLD	0.00E+000	2.10E-005
PU239	6.30E+000	3.90E-001	9.73E-002	3.62E-002
PU240	4.03E-001	9.14E-002	2.62E-002	8.47E-003
AM241	2.66E+000	9.14E+000	5.02E+000	1.19E-001
PU241	7.70E-003	7.93E-001	2.27E-001	7.35E-002
PU242	1.34E-003	5.31E-006	1.52E-006	0.00E+000
AM243	6.39E-003	1.28E-003	2.62E-004	1.46E-005

Errors quoted at 1.000 sigma

Operator: Jim Barton Date: 11/11/13

ITR: Martha Gr Date: 11-12-13

Automated Independent Technical Review

Count Sequence Number: 23807
Batch Number: 1LANDA1862
Counter ID: MCS HENC #1
Container ID: 68577
Waste Matrix Code: Homo Sol. S3000
Count Type:
Sequence Type:
Assay Date: 11/8/2013

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

Expert Review by: Sherri Chandler Date: 11-11-13

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **68577**

BDR Number: **LA13FG2123**

Sampling Date: **12/5/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	585.84	
74-82-8	Methane	142.14	U
67-56-1	Methanol	35.23	U
60-29-7	Ethyl Ether	0.96	U
75-35-4	1,1-Dichloroethylene	6.38	U
67-64-1	Acetone	18.08	U
75-34-3	1,1-Dichloroethane	4.08	U
156-59-2	cis-1,2-Dichloroethene	0.76	U
78-93-3	Methyl ethyl ketone	11.73	U
110-82-7	Cyclohexane	5.10	U
71-43-2	Benzene	1.77	U
107-06-2	1,2-Dichloroethane	3.66	U
71-36-3	1-Butanol	1.84	U
108-10-1	Methyl isobutyl ketone	9.82	U
108-88-3	Toluene	8.02	U
108-90-7	Chlorobenzene	4.10	U
100-41-4	Ethylbenzene	3.57	U
108-38-3/106-42-3	m- and p-Xylene	1.92	U
95-47-6	o-Xylene	2.10	U
108-67-8	1,3,5-Trimethylbenzene	1.96	U
95-63-6	1,2,4-Trimethylbenzene	2.13	U

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

InstName : Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\131205c\
Data File : 68577.D
Acq On : 5 Dec 2013 1:15 pm (#1); 05-Dec-13, 13:14:41 (#2)
Operator : NW
Sample :
Misc : POC THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Dec 05 13:23:12 2013
Quant Method : C:\msdchem\1\METHODS\VOCGAS.M
Quant Title : Flammable Gas Analysis
QLast Update : Mon Aug 26 13:12:56 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
3) Fluorobenzene	3.565	96	3899293	205.75	ppmv	0.05
15) Chlorobenzene-d5	5.868	117	3011773	177.50	ppmv	0.00
Target Compounds						Qvalue
1) Hydrogen	1.613	GC1	4405m	585.84	ppmv	

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

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0125
Examination Date:	11/7/2013
Waste Container ID:	68583
Video/Audio Recorded Media Number:	LA-RTR2-13-0125 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 14
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3110
Waste Stream I.D.:	LA-MIN02-V.001
Waste Container Weights:	Gross Wt.: 174.0 kg Tare Wt.: 145.1 kg Net Wt.: 28.9 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:	75 %

CCP Radiography Data Sheet

Waste Container ID: 68583

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):	28.9
Soils (S):	
Total WMP Weight:	28.9

CCP Radiography Data Sheet

Waste Container ID: 68583

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	11/7/2013
Print Name	Signature	Date

5842181

NDA 2000 Assay Report

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

Item ID:	68583	Count Sequence Number:	23813
Operator:	D3PW2DK1\operator		
Assay Start:	11/8/2013 2:29:30 PM		
Description 1:	1LANDA1862		
Description 2:	POC 174.0		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 28.9 kg	Net:	28.9 kg
Container:	Volume: 208.0 l	Full:	95.0 %
Density:	0.740 kg /l		

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

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

Errors quoted at 1.000 sigma

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number:	23813	Batch Number:	1LANDA1862
Assay Instrument:	MCS HENC #1	Location:	LANL TA-54
Analysis Method:	CCP-TP-063 v 15	Software Version:	NDA 2000 V.4.0
Item ID:	68583	Analysis Date:	11/8/2013

Net Weight	28900.0 g		
Pu mass	2.20E+000	+-	5.26E-001 g
TRU Alpha Activity	5.59E+000	+-	2.96E+000 Ci
TRU Activity Concentration	1.93E+005	+-	1.02E+005 nCi/g
Pu-239 Equivalent Activity	5.59E+000	+-	2.96E+000 Ci
Pu-239 FGE	2.11E+000	+-	5.25E-001 g
Decay heat	1.85E-001	+-	9.83E-002 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	7.57E-007
U233	<LLD	<LLD	0.00E+000	6.40E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	2.02E-006
NP237	8.68E-002	6.12E-005	1.17E-005	3.03E-006
PU238	2.01E-004	3.44E-003	9.78E-004	6.65E-004
U238	<LLD	<LLD	0.00E+000	1.53E-005
PU239	2.07E+000	1.28E-001	3.25E-002	2.48E-002
PU240	1.32E-001	3.00E-002	8.72E-003	5.79E-003
AM241	1.58E+000	5.42E+000	2.96E+000	6.98E-002
PU241	2.53E-003	2.60E-001	7.56E-002	5.03E-002
PU242	4.41E-004	1.74E-006	5.06E-007	0.00E+000
AM243	1.77E-003	3.54E-004	6.85E-005	9.08E-006

Errors quoted at 1.000 sigma

Operator: Jim Benton Date: 11/11/13

ITR: Mark [illegible] Date: 11-12-13

Automated Independent Technical Review

Count Sequence Number: 23813 Batch Number: 1LANDA1862
Counter ID: MCS HENC #1
Container ID: 68583
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 11/8/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis No Add-a-Source warnings.	Ok
Section 2 - Passive Neutron Analysis Analysis Status: No errors. Ones Rate Analysis complete with warnings. - Error calculating the Ones Rate Pu-240 Effective MDA.	Ok Not data affecting.
Section 3 - Data Combiner Analysis Override enabled; Gamma data specified as input. Results taken from Quantitative Gamma data. Results comparison test failed.	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: 11-11-13

Waste Container ID: **68583**

BDR Number: **LA13FG2130**

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

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\131218c\
Data File : 68583.D
Acq On : 18 Dec 2013 2:55 pm (#1); 18-Dec-13, 14:54:25 (#2)
Operator : EL
Sample :
Misc : POC Through Filter (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Dec 18 15:02:45 2013
Quant Method : C:\msdchem\1\METHODS\VOCGAS.M
Quant Title : Flammable Gas Analysis
QLast Update : Mon Aug 26 13:12:56 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
3) Fluorobenzene	3.561	96	3410659	205.75 ppmv	0.04
15) Chlorobenzene-d5	5.871	117	2715954	177.50 ppmv	0.00

Target Compounds	Qvalue

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

S842213

S842213

Container H... 760814

File Options Reports Help

S842213

760814	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

S842213

- S842213
  - LA00000068339 – WIPP
  - LA00000068315 – WCS
    - LASB02204
  - LA00000068370 – EMPTY

ATTACHMENT 1
Page 1 of 4

WCRRF WCG WASTE PROCESSING DATA SHEET 9-9-13

4.1[6][B] Parent Waste Container No.: 5842213

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

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

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

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

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

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

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

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

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

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

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

Performed By: Brandon Chavez / [signature] 2047212 9-9-13
Waste Handling Tech (print) Signature Z # Date

ATTACHMENT 1
Page 2 of 4

4.1[6][B] Parent Waste Container No.: S84/2213

5.[18] Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable: 332.4 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) 332.4 lb

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

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

Initials Z# Date

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

EWMO-FOD (print) Signature Z # Date

ATTACHMENT 1
Page 3 of 4

4.1[6][B] Parent Waste Container No.: S843213

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	68315			
10.1[4]	Daughter Drum Filter No.	NL-536		N	
10.1[4]	Daughter Drum Bag Filter No.	L-6691			
10.1[4]	Daughter Drum Purchase Order No.	3-13		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	BOP			
	Model No.	6cpve1.52spvc			
	Serial No.	L-8159			
	Date of Manufacture	3-13		N	
10.2[5]	POC ID No	68339			
10.2[7][B]/10.2[6]	POC Item Description	Nitrate salts		A	
10.2[13]	POC Assembly closed per Manufacturer's instructions. (Initial and Z#)	BC 204742			
10.2[14]	POC Assembly Gross Weight (lb)	368.8			
10.2[15]	POC Rad. Survey Results (mrem/hr)	600.5			
10.3[3][A]	Approx. Containerized Liquid Vol./Units	N/A			
10.3[5][A]	Free Liquid Volume/Units	3 gal			
10.3[7][A]	Opaque/Non-penetrable Item Description:	Lead		N	
10.3[9][A]	PCB-contaminated Waste Description	N/A			
10.3[9][B]	PCB Item ID No.			A	
10.3[10]	Remaining Waste Description	See Comments			
10.3[13]/10.4[10]/ 10.5[4]/10.6[10]	Daughter Drum % Full (%)	100%			
10.5[3]/10.6[2]	Description Waste Added During Processing	plastic			

ATTACHMENT 1
Page 4 of 4

4.1[6][B] Parent Waste Container No.: 5842213

Comments: plastic, Lead, Kitty Litter, nitrate salts

11.1[1] Performed By: Bsundar Chavez / [signature] 2017212 / 9-9-13
Waste Handling Tech (print) Signature Z # Date

11.1[8] Reviewed By: G [illegible] / [signature] 149235 / 9/10/13 1740
SOS or designee (print) Signature Z # Date/Time

Working Copy
Date: 9/9/13 HS

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.:	100216	038369
Cal. Expiration Date:	12-18-13	12-18-13
Tolerance:	±4%CW ±7%CCW	±3%CW ±6%CCW

Overpack filtered vent information:

Manufacturer: NUCFIL
Model No.: 019DS
Serial No.: EK-1118
Manufacture Date: 5-10

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

5. [11] Performed By: Brandon Chavez / [signature] 1204742 / 9-9-13
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: Brandon Chavez / [signature] 1204742 / 9-9-13
Waste Handling Technician (print) Signature Z # Date

8.1[6] Reviewed By: G Mk / [signature] 1492357 / 9/10/13
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 5
Page 1 of 1

Working Copy

WCRRF OVERPACK DRUM CLOSURE DATA Date: 9/9/13 HS C

7.[17] Overpack Drum Unique Identifier No.: 68370

7.[23] Overpack drum closure ring torque wrench information:
M&TE No.: 038373
Cal. Expiration Date: 9-1-13
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: Brandon Chacez / [signature] R047021 9-9-13
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): 168.6 lb

Comments: n/c

8.1[1] Performed By: Brandon Chacez / [signature] R047021 9-9-13
Waste Handling Technician (print) Signature Z # Date

8.1[7] Reviewed By: GMk / [signature] M5235 9/10/13
Supervisor or designee (print) Signature Z # Date

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

Drum ID#: 68315

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 #: 501327
Lot #: 02377720
Date of Manufacture: 2013

2. Drum Liner Bag/Filter Assembly:

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

RECORD bag filter information:

Manufacturer: BOD
Model #: 60PC 1.5 25PVC
Serial #: L-6093
Date of Manufacture: 3/13

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

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

4. Install Lid/Drum Filter

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

RECORD drum filter information:

Manufacturer: NUCFIL
Model #: 9403
Serial #: KL 832
Date of Manufacture: 11/11

RECORD torque wrench information:

Filter torque wrench:		Jam Nut / Bung torque wrench:	
M&TE ID #:	100218	M&TE ID #:	038369
Cal Expiration Date:	12-18-13	Cal Expiration Date:	12-18-13
Range (ft-lbs or in-lbs):	40 - 200	Range (ft-lbs or in-lbs):	10 - 80
Tolerance:	+/- 4% CW +/- 6% CCW	Tolerance:	+/- 3% CW +/- 6% CCW

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

☑ Yes ☐ No

Print Name: Tim Mangham Signature: [signature] Z#: 276208

5. Weigh Drum Assembly

RECORD weight information

Tare witght (lbs) 76.6
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: Tim Mangham Operator Sign: [signature] Z#: 276208 Date: 8-15-13

Verifier Print: Brandon Chavez Verifier Sign: [signature] Z#: 201747 Date: 9-9-13

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

DRUM ID#: 68315

1. LID INSTALLATION

NOTE: Install lid per manufacturer's instructions

✓ Mount lid with filter directly over drum seam.

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

✓ Engage bolt and nut and torque per manufactures instructions

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

✓ Tighten jam nut.

Record torque wrench information:

MT&E #: 038373

Cal expiration date 9/11/13

Range/ Value (ft-lbs): 10-50

--- 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) 359.0

Scale ID#: 079065

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

4. FINALIZE DOCUMENTATION

✓ Have RCT monitor drum prior to moving to storage area

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

✓ Complete TWSR.

Operator Print/Sign: GERMAN ESPINOZA Date 9.

Verifier Print/Sign: Edward Mayes Date

WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

No [illegible] SP72

Production Control

Container ID: S842213 Container Type: 55-GAL Gross Weight (lbs): 354

Inner Seal #: 015323 Filter Prefix: LAVC Filter Serial #: 04612

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

TWSR Comments: LEACHED SOLIDS MST 12 R 434

Total PE-Ci Activity: 1.68E+01 Equivalent Combustible PE-Ci: 6.29E+00 AM-241 PE-Ci: 1.45E+00

Total Fissile Gram Equivalents: 179.0 Total Surface Dose Rate (mrem/hr): 1

EPA Code(s): D007; D008; D009

NCR RTR/NDA Comment: None

RTR Pre-Screen Date: 7/12/2007 Comment: Liquids Liquid Location: 17

Certified RTR Comment: None

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

Security Determination: ☑ Green ☐ Yellow

Remediation Determination: ☐ VE ☑ PID ☐ Split ☑ Repack

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

TRUCON Code: Production Control Comments: Ensure EPA Codes D007, D008, and D009 are on the label. A minimum of 1.2 volumes of kitty litter/zeolite must be mixed with 1.0 volume of nitrate salts.

Performed By: Susan Ramsey (Production Control (Print)) / Signature: [signature] / 100681 (Z Number) / 12/20/12 (Date)

WDP Engineering

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

Processing Determination: ☑ Accept ☐ Reject

WDP Engineering Comments: likely Nitrate Salts

Net Wt: 294#, Generator TWSR shows leached solids from room 434, indicating waste likely consists of nitrate salts. No individual items or weights identified. No RTR BDR. Nitrate salts are typically packaged in plastic bags; undocumented liquids, &/or debris may be present. RTR PS shows prohibited liquids. Presence of chemicals unknown (no generator info). Applicable waste codes are for chromium, lead & mercury. Nitrate salts require repack w/ admixture.

Performed By: Valerie Rhodes (WDP Engineering (Print)) / Signature: [signature] / 112609 (Z Number) / 1/23/13 (Date)

TRU Remediation Operations

☒ Waste Container Information Evaluated JT 6-22-13 ☐ Less Than 170 lbs ☐ RTR Video Available

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

Processing Determination: ☑ Accept ☐ Reject

TRU Remediation Operations Comments: USE Proper PPE Mike Kelo

Performed By: G Mt (TRU Remediation Operations (Print)) / Signature: [signature] / 149235 (Z Number) / 6/19/13 (Date)

Jose Jerez / [signature] / 221452 / 6/22/13

IHS Review - Johnny Smallwood CSP, May Contain Pb, Hg + Cr 1-29-13

ATTACHMENT 1
Page 1 of 1

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

5.[1] Sample Date: 5/16/13

Container No. (5.[1])	S842243					
Container type sampled (e.g., 55-gal, 85-gal, 110-gal, or SWB) (5.[1])	55-Gal					
Filtered Vent Type (5.[1])	072					
Filtered Vent Unobstructed (5.[1])	☑ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT
WIPP-Approved Filtered Vent (5.[2])	☑ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT
Total CCP VOC value (< 7,000 ppm) (5.[4])	0 ppm	ppm	ppm	ppm	ppm	ppm
Hydrogen Reading (< 64,000 ppm) (5.[5])	3148.69 ppm	ppm	ppm	ppm	ppm	ppm
Methane Reading (< 16,000 ppm) (5.[5])	0 ppm	ppm	ppm	ppm	ppm	ppm

NA

5.[7] Certified CCP Technician:

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

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

Comments:

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

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

6.1[3] Performed By: SUSAN RAMSEY (Waste Handling Operator (print)), [signature] (Signature), 100681 (Z #), 5/20/13 (Date)

InstName Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\130516c\
Data File : S842213.D
Acq On : 16 May 2013 1:43 pm (#1); 16-May-13, 13:43:04 (#2)
Operator : SA
Sample :
Misc : 55 GAL LFL THROUGH UNOBSTRUCTED 072 (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 16 14:29:07 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	3.584	96	4663685	201.25 ppmv	0.02
15) Chlorobenzene-d5	5.920	117	4025746	177.00 ppmv	0.02
Target Compounds					Qvalue
1) Hydrogen	1.601	GC1	22379m	3148.69 ppmv	

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

vocgas.m Thu May 16 14:29:17 2013

0700 Assuming WCRRF Operations Center - Velarde
0735 Assuming WCRRF OPERATIONS CENTER IN TRAINING HSMITH
0600 PRE JOB CONDUCTED BY SDS
0615 PRE JOB CONCLUDED
0650 OUTSIDE ROUNDS STARTED
0655 INSIDE ROUNDS STARTED, OPERATORS ENTERING TA 50-69
0658 ITEM #19 OUTSIDE ROUNDS UNSAT, FSR IN PLACE, OKAY
0720 TO PROCEED PER CSE DOCUMENTATION
0727 OUTSIDE ROUNDS COMPLETED
ETEM #63 DOS INSIDE ROUNDS, ROD IN PLACE OKAY
TO PROCEED PER CSE DOCUMENTATION
0735 INSIDE ROUNDS COMPLETE
0744 INSIDE ROUNDS & OUTSIDE ROUNDS SIGNED OFF BY ~~SDS~~ 9/9/13 HS
SDS
0758 MODE CHANGE WCRRF & TA50-69 TO OPERATIONS
0800 BEGIN MOVEMENT FROM TA50-175/94 TO TA50-69
0817 MOVEMENT COMPLETE INTO TA50-69
0823 BAGGING ON S842213
0835 WILL NOT BAG ON S842213 DUE TO BAG BEING
~~TORN~~ 9/9/13 HS TORN BY DRUMLIFT, WILL BAG ON S852145
9/9/13 HS 0943 BAG ON COMPLETE,
1052 OCO VELARDE OFF SITE, OCO CLAYTON MULLINS ASSUMMING
OPS CENTER
1103 BAGGING OFF 1 DAUGHTER, BAGGING ON 1 DAUGHTER
AND CONTINUING ON THE SAME DRUM
1130 OCO CLARISSA VELARDE ASSUMMING OPERATIONS CENTER
1131 BAG OFF COMPLETE
1231 OPERATORS LEAVE BUILDING BREAK FOR LUNCH
1224 OPERATORS RE-ENTER BUILDING TO PROCESS
1405 BAG OFF, BAG ON #S842213
1459 BAG OFF COMPLETE
1552 STARTED INSIDE ROUNDS
1600 STARTING OUTSIDE ROUNDS
1615 ITEM #19 UNSAT, FSR IN PLACE, OK TO PROCEED ~~FSR IN PLACE~~ 9/9/13 HS
1616 9/9/13 HS ITEM #63 INSIDE ROUNDS ~~0035~~ 9/9/13 HS UNSAT OK TO PROCEED
PER CSE DOCUMENTATION + CONTINUE ON NEXT PAGE HS

9/9/13 CONTINUE FROM PREVIOUS PAGE. G SMITH
1620 COMPLETE OUTSIDE ROUNDS
1624 COMPLETE INSIDE ROUNDS
1654 BAGGING OFF, BAGGING ON POC, CONTINUING ON SAME DRUM
1657 BOTH ROUNDS REVIEWED BY SDS
1710 BAG OFF COMPLETE
1726 BAGGING LAST DRUM OF THE DAY, PUTTING ON PORT COVERS
1753 BAG OFF COMPLETE
1805 OPERATORS EXIT BUILDING TA50-69.
1811 SHIFT TURNOVER WITH OCD TERRI COLEMAN
9-9-13 Cleaned

no further entries this page

9-9-13 DAYSHIFT

0554 Reviewed the shift turnover checklist and assumed the SOM position from Guadagnoli.

0638 Completed attending the pre-job brief conducted by the SOS (Gilbert) - The safety topic was Niagara Safety driving and speed limits. Roles and responsibilities were assigned. It was noted that 20 drums are scheduled to transfer to AREA G. The monthly valve alignment 4.2.4 is scheduled for 9-10-13. The SOM reminded the operators that there are two Shift Orders in effect. WCRR SH-13-003 Re Manual Drum Movements and WCRR-SH-13-005 Re Precautions to Prevent Drum Tears.

0708 Completed the daily PRD call in with AREA G - SOM

0735 Production Inventory reports that WCATS is not recording Accumulation Start dates, Cost Codes or Ship categories in TWSRs for transfers. WCATS Techs have been notified.

0748 All records inside and out were completed and reviewed.

0758 Mode Change: 50/59 underpack transition Cold/Warm to Operations/Operations.

0817 The movement into 50/59 was completed 4 parent drums -

0835 The transfer scheduled from WCRR to AREA G was cancelled due to the TWSRs not having all information recorded in WCATS. Also the transfer coming up from AREA G "scheduled for tomorrow" is noted to not have all the radiological data in WCATS. Technicians/RP-Lor PPT may have to perform this function. The OM was notified.

0917 Completed review and sign off of work package 4HB096-1 Load Test the Versa Lift in the ARCTIC

0943 The 1st bag on was completed, after prepping the drum was 3832145

1015 Confirmed with production inventory that TWSRs will be corrected with WCATS support and the transfer out is expected to be conducted

1127 Completed review with the procedure writer - review of DOP-0202. The Shift Orders will be incorporated, and the standing order 1127 will be cancelled - Destructive of 50/59 using FRY - to be cancelled

1131 Operations inside reported completion of Bag off of one daughter and bag on another and continued to process.

1220 Completed daily phone call update to OM, SOM, RP.

1326 Discussed with Jack and CSE Jack's window placement on exterior of the WCF - (small windows) and utilization of safety tempered glass on the inside of the glass on the "WCF", - The CSE (Jack)

(Continued on next page)

9-9-13 Dayshift (Continued)

1326 (cont.) requested photos taken with clips (if available) of the small windows and large windows of the WCG. Notification of the request was made to the on-duty SOS (Gilbert).

1405 Inside Operations report bagging off and bagging on SR412213

1558 Operations initiated bag on and bag off of Naughtidum and will continue to process.

1636 Operations initiate Bag off and Bag on of PCC and continue.

1710 Bag on complete - continue to process.

1725 Operations initiated final bag off of PCC and will place the pallet wrap onto the WCG.

1750 Per discussion with Production Inventory all TASKs are up to date and the transfer from WCPR to AREA 6 is scheduled to perform. Operation will need to verify Red label information is entered into the WCATS prior to the transfer from AREA 6 to WCPR.

1753 Bag off and part was installed noted - completed.

1801 Conducted shift checklist and discussed facility updates

1812 Secured the dayshift 9AM position

Joe Douglas Patrick this page

9.9.13 WCRR SOS LOG BOOK

0600 Assuming SOS Position [illegible]

0015 Conducted shift Brief Discussed Vehicle SAFTEY Also Discussed call in's And there will only be 2 persons on vaction at one time. All call in's will be taken be FS OM Darrel Blain.

0700 Shift brief complete

0747 Signed off Inside and outside Rounds.

0748 Operator notified Cannot Perform Scale verification due to not having ~~wats~~ weights

0754 Weight were Pushed In one weight did not have tag head to Find another to complete verification.

0815 Weight was Found And moved in.

0816 ~~0750~~ late entrie ~~mde~~ change Complete WCRRF In operations. 0758

late entrie Started Move Into facility 0800

0817 Movement Complete Into 50-69.

0823 Bagging on 5842213

0835 operators noted not bagging on 5842213 will bag in 5832145

0943 bag on complete

1052 OCO Clarissa Velarde Leaving temporarly OCO Clayton Mullins will stand watch

1113 bagging off / daughter Bagging on Another And Continuing

1130 OCO Clarissa Velarde is back

1131 bag off complete

1230 breaking for Lunch

1226 operators reentering facility

1405 Bag off / on 5842213

1439 bag off / on Complete

1552 started Rounds

1656 bagging off / on a POC Continuing Drum

1657 reviewed Inside and outside Rounds

1710 Bag off Complete

1726 bagging off last drum putting on Port cover.

1755 Bag off Complete.

1810 Shift turn over with JOSE JEREZ

no Further entries on this page

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-HERTR-13-0101
Examination Date:	9/17/2013
Waste Container ID:	68315
Video/Audio Recorded Media Number:	LA-HERTR-13-0101 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 13
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3110
Waste Stream I.D.:	LA-MIN02-V.001
Waste Container Weights:	Gross Wt.: 163.0 kg Tare Wt.: 33.4 kg Net Wt.: 129.6 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: 68315

Section 3: Container Inventory and Comments	(Detailed descriptions)
IM:	
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):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	25.0
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	4.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	100.6
Soils (S):	
Total WMP Weight:	129.6

CCP Radiography Data Sheet

Waste Container ID: 68315

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

RTR Operator:

Michael Simmons		9/17/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	68315	Count Sequence Number:	16558
Operator:	DCLTD231\Operator		
Assay Start:	9/24/2013 1:56:38 PM		
Description 1:	2LANDA1226		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gal Drum		
Weight:	Net: 130.0 kg	Net:	130.0 kg
Container:	Volume: 208.0 l	Full:	75.0 %
Density:	0.830 kg /l		

System Configuration

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

Errors quoted at 1.000 sigma

014
CJ 6/24/14

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number: 16558
Assay Instrument: HENC #2
Analysis Method: CCP-TP-063 v 15
Item ID: 68315

Batch Number: 2LANDA1226
Location: LANL TA-54
Software Version: NDA 2000 V.4.0
Analysis Date: 9/24/2013

Net Weight	130000.0 g		
Pu mass	1.96E+002	+-	5.73E+001 g
TRU Alpha Activity	2.67E+001	+-	4.49E+000 Ci
TRU Activity Concentration	2.05E+005	+-	3.45E+004 nCi/g
Pu-239 Equivalent Activity	2.75E+001	+-	4.49E+000 Ci
Pu-239 FGE	1.87E+002	+-	5.71E+001 g
Decay heat	8.80E-001	+-	1.43E-001 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	5.31E-007
U233	<LLD	<LLD	0.00E+000	1.65E-002
U234	6.57E-002	4.09E-004	9.54E-005	0.00E+000
U235	4.68E+000	1.01E-005	2.36E-006	6.78E-006
NP237	2.95E-001	2.08E-004	4.29E-005	2.54E-005
PU238	1.79E-002	3.06E-001	1.05E-001	1.98E-003
U238	<LLD	<LLD	0.00E+000	3.46E-005
PU239	1.83E+002	1.13E+001	3.54E+000	7.33E-002
PU240	1.27E+001	2.87E+000	9.84E-001	1.86E-002
AM241	3.55E+000	1.22E+001	2.57E+000	1.26E-001
PU241	2.60E-001	2.68E+001	9.18E+000	1.73E-001
PU242	5.69E-002	2.25E-004	7.70E-005	0.00E+000
CM243	1.05E-005	5.16E-004	1.06E-004	2.49E-005
CM244	7.42E-003	6.04E-001	1.31E-001	3.40E-001

Errors quoted at 1.000 sigma

Operator: DRC Date: 6.4.14

ITR: Brut Tuplitz Date: 6-5-14

015
CS 6/24/14

Automated Independent Technical Review

Count Sequence Number: 16558
Batch Number: 2LANDA1226
Counter ID: HENC #2
Container ID: 68315
Waste Matrix Code: Homo Sol. S3000
Count Type:
Sequence Type:
Assay Date: 9/24/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis	
Add-a-Source WARNINGS:	
Add-a-Source correction factor is less than n-sigma * the correction factor error.	Ok
Section 2 - Passive Neutron Analysis	
Analysis Status: No errors.	Ok
NCC Pu mass was above calibration range.	Cm244 in drum. Neutron results rejected. Gamma results applied.
FGE is greater than the upper limit of 200.00	
The Standard NCC Pu effective mass exceeds the Upper Calibration Limit.	
No roots found within the limits while determining the Standard NCC Pu Mass, Chose largest positive root.	
Ones Rate Analysis complete with warnings.	
- Error calculating the Ones Rate Pu-240 Effective MDA.	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.	

OK
CJ 6/24/14

Comments	Disposition
Section 4 - MGA Analysis Results are marked as invalid.	MGA analysis failed. AK isotopics applied. The AK information utilized was provided by Steve Schafer, AKE, and consists of data from CCP-AK-LANL-006, AK Source Document M237. MT-52,53.
Section 5 - Gamma Analysis Analysis Status: No errors.	Ok
Miscellaneous	No additional nuclides contributing to 95% of the radiological hazard identified. Pu239 FGE >200g with 2*TMU but <325g. Am-241 direct reported from gamma results.

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

017
CJ 6/24/14

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **68315**

BDR Number: **LA13FG12133**

Sampling Date: **12/20/2013**

5842213

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	3.39	U
74-82-8	Methane	6.56	U
67-56-1	Methanol	3.82	
60-29-7	Ethyl Ether	0.12	U
75-35-4	1,1-Dichloroethylene	0.20	U
67-64-1	Acetone	0.42	U
75-34-3	1,1-Dichloroethane	0.72	U
156-59-2	cis-1,2-Dichloroethene	0.09	U
78-93-3	Methyl ethyl ketone	0.90	U
110-82-7	Cyclohexane	0.59	U
71-43-2	Benzene	0.37	
107-06-2	1,2-Dichloroethane	0.56	U
71-36-3	1-Butanol	0.38	U
108-10-1	Methyl isobutyl ketone	0.66	U
108-88-3	Toluene	0.93	U
108-90-7	Chlorobenzene	0.67	U
100-41-4	Ethylbenzene	0.59	U
108-38-3/106-42-3	m- and p-Xylene	0.38	U
95-47-6	o-Xylene	0.36	U
108-67-8	1,3,5-Trimethylbenzene	0.65	U
95-63-6	1,2,4-Trimethylbenzene	0.78	U

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

Quantitation Report (QT Reviewed)

InstName : FGA Unit 12

Data Path : C:\msdchem\1\DATA\131220c\
Data File : 68315.D
Acq On : 20 Dec 2013 2:03 pm
Operator : SA
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Dec 20 14:18:05 2013
Quant Method : C:\msdchem\1\METHODS\VOCGAS.M
Quant Title : Flammable Gas Analysis for Transportation Only
QLast Update : Tue Dec 03 09:52:38 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
3) Fluorobenzene	4.060	96	7454288	207.75	ppmv	0.00
15) Chlorobenzene-d5	6.636	117	6097325	178.75	ppmv	0.00
Target Compounds						Qvalue
4) Methanol	0.834	31	1503m	3.82	ppmv	
12) Benzene	3.720	78	11204	0.37	ppmv #	88

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

40
~~42~~
EL 1-15-14

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0109
Examination Date:	9/13/2013
Waste Container ID:	68339
Video/Audio Recorded Media Number:	LA-RTR2-13-0109 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.: 167.5 kg Tare Wt.: 145.1 kg Net Wt.: 22.4 kg
Rigid Liner and Liner Vent Description:	Liner: [ ] No [X] Yes Lid: [ ] No [X] Yes Type: [ ] 30-mil [X] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [X] Yes [ ] N/A Punctured: [ ] No [X] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [X] No [ ] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 2 layers
Volume Utilization Percentage:	60 %

CCP Radiography Data Sheet

Waste Container ID: 68339

Section 3: Container Inventory and Comments (Detailed descriptions)

IM:

AM:

OM:

OI:

C:

R:

XPM: Plastic bag

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	109.0
Plastics (PP): Rigid Liner/Lid; Plastic Liner Bag (Inside POC)	8.1
Other: Fiberboard (CP); Fiberboard Liner Sleeve (Inside POC)	28.0
Total Packaging Weight	145.1
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	1.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	21.4
Soils (S):	
Total WMP Weight:	22.4

CCP Radiography Data Sheet

Waste Container ID: 68339

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, liner is vented.

RTR Operator:

Michael Simmons		9/13/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	68339	Count Sequence Number:	16586
Operator:	DCLTD231\Operator		
Assay Start:	10/2/2013 1:17:32 PM		
Description 1:	2LANDA1229		
Description 2:	POC - Gross Wt. = 167.5 Kg		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gal Drum		
Weight:	Net: 22.4 kg	Net:	22.4 kg
Container:	Volume: 208.0 l	Full:	95.0 %
Density:	0.707 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: 16586
Assay Instrument: HENC #2
Analysis Method: CCP-TP-063 v 15
Item ID: 68339

Batch Number: 2LANDA1229
Location: LANL TA-54
Software Version: NDA 2000 V.4.0
Analysis Date: 10/2/2013

Net Weight	22400.0 g		
Pu mass	5.65E+001	+-	1.93E+001 g
TRU Alpha Activity	6.76E+000	+-	2.14E+000 Ci
TRU Activity Concentration	3.02E+005	+-	9.55E+004 nCi/g
Pu-239 Equivalent Activity	6.90E+000	+-	2.14E+000 Ci
Pu-239 FGE	5.31E+001	+-	1.92E+001 g
Decay heat	2.16E-001	+-	6.96E-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	4.61E-007
U233	<LLD	<LLD	0.00E+000	5.54E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	1.75E-006
NP237	4.34E-002	3.06E-005	5.69E-006	1.48E-006
PU238	7.24E-003	1.24E-001	4.84E-002	1.09E-003
U238	<LLD	<LLD	0.00E+000	1.27E-005
PU239	5.28E+001	3.27E+000	1.19E+000	2.88E-002
PU240	3.65E+000	8.29E-001	3.24E-001	7.30E-003
AM241	7.38E-001	2.53E+000	1.75E+000	1.09E-001
PU241	7.50E-002	7.72E+000	3.02E+000	6.79E-002
PU242	1.13E-002	4.47E-005	1.75E-005	0.00E+000
AM243	3.29E-004	6.57E-005	1.25E-005	8.35E-006

Errors quoted at 1.000 sigma

Operator: _____ Date: 10·3·13

ITR: _____ Date: 10·4·13

Automated Independent Technical Review

Count Sequence Number: 16586 Batch Number: 2LANDA1229
Counter ID: HENC #2
Container ID: 68339
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 10/2/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis Add-a-Source WARNINGS: Add-a-Source correction factor is less than one.	Ok
Section 2 - Passive Neutron Analysis Analysis Status: No errors. Ones Rate Analysis complete with warnings. - Error calculating the Ones Rate Pu-240 Effective MDA.	Ok Not data affecting.
Section 3 - Data Combiner Analysis Override enabled; Gamma data specified as input. Results taken from Quantitative Gamma data. Results comparison test passed.	Results taken from quantitative gamma data.
Section 4 - MGA Analysis Results are marked as invalid.	MGA analysis failed. AK isotopics applied. The AK information utilized was provided by Steve Schafer, AKE, and consists of data from CCP-AK-LANL-006, AK Source Document M237. MT-52,53.
Section 5 - Gamma Analysis Analysis Status: No errors.	Ok
Miscellaneous	No additional nuclides contributing to 95% of the radiological hazard identified.

Expert Review by: Sherri Chandler Date: 10-3-13

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **68339**

BDR Number: **LA13FG2113**

Sampling Date: **11/5/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	588.63	
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\131105C\
Data File : 68339.D
Acq On : 5 Nov 2013 12:15 pm (#1); 05-Nov-13, 12:14:30 (#2)
Operator : SA
Sample :
Misc : POC THROUGH FILTER
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Nov 05 12:23:04 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	3.571	96	5216897	205.75 ppmv	0.05
15) Chlorobenzene-d5	5.871	117	4029339	177.50 ppmv	0.00
Target Compounds					Qvalue
1) Hydrogen	1.622	GC1	4426m	588.63 ppmv	

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

VOCGAS.M Wed Nov 06 12:29:41 2013

S842234

S842234

Container F 54223

File Options Reports Help

S842234

754223	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

S842234

S842234

- LA00000068444 -EMPTY
- LA00000068435
- LA00000068465
- LA00000068466

Working Copy
Date: 9-26-13

ATTACHMENT 1
Page 1 of 4

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: 5842734

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

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

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

4.1[6][B] Parent Waste Container RCRA Designations: 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] (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: 10-14-14

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: ☑ 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 / [signature] / 267129 9-26-13
Waste Handling Tech (print) Signature Z # Date

ATTACHMENT 1
Page 2 of 4

4.1[6][B] Parent Waste Container No.: S842234

5.[18] Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable: 379.4 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) 379.4 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.: S842234

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	68466	68465	N/A	
10.1[4]	Daughter Drum Filter No.	LM-278	LM-284		
10.1[4]	Daughter Drum Bag Filter No.	L-10317	L-10344		
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.	UCPK1.5-25PVC			
	Serial No.	L-6738			
	Date of Manufacture	1/13			
10.2[5]	POC ID No	68435			
10.2[7][B]/10.2[6]	POC Item Description	NITRATE SALTS			
10.2[13]	POC Assembly closed per Manufacturer's instructions. (Initial and Z#)	BG 267129	N/A		
10.2[14]	POC Assembly Gross Weight (lb)	359.2			
10.2[15]	POC Rad. Survey Results (mrem/hr)	1000			
10.3[3][A]	Approx. Containerized Liquid Vol./Units	N/A	N/A		
10.3[5][A]	Free Liquid Volume/Units	5 GALLONS	1 LITER		
10.3[7][A]	Opaque/Non-penetrable Item Description:	LEAD SHIELDING	LEAD SHIELDING		
10.3[9][A]	PCB-contaminated Waste Description	N/A	N/A		
10.3[9][B]	PCB Item ID No.				
10.3[10]	Remaining Waste Description	SEE COMMENTS	SEE COMMENTS		
10.3[13]/10.4[10]/ 10.5[4]/10.6[10]	Daughter Drum % Full (%)	80%	100%		
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.: S842234

Comments: ROOM TRASH, PLASTICS, NITRATE SALTS, KITTY LITTER, LEAD SHIELDING

11.1[1] Performed By: BRIAN GALLEGOS / [signature] / 1267129 / 9-26-13
Waste Handling Tech (print) Signature Z# Date

11.1[8] Reviewed By: Gilberto Warden / [signature] / 1493351 / 9-30-13 0955
SOS or designee (print) Signature Z# Date/Time

Working Copy

ATTACHMENT 2
Page 1 of 1

WCRRF OVERPACK DRUM ASSEMBLY PREPARATION DATA SHEET

5.[3] Overpack drum information:

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

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

	Filtered Vent	2-in. Bung
M&TE No.:	100216	038369
Cal. Expiration Date:	12/18/13	12/18/13
Tolerance:	± 40/BCW ± 6% CCW	± 3% CW ± 6% CCW

Overpack filtered vent information:

Manufacturer: NUCFIL ~~OT~~ AKR 09/18/13
Model No.: 013
Serial No.: JL907
Manufacture Date: 10/11

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

5. [11] Performed By: Brandon Chavez / [signature] R047142 9-18-13
Waste Handling Technician (print) Signature Z # Date

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

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

Comments: N/C

8.1[1] Performed By: Brandon Chavez / [signature] R047142 / 9-18-13
Waste Handling Technician (print) Signature Z # Date

8.1[6] Reviewed By: Gilbert Martinez [signature] [signature] 9-30-13
Supervisor or designee (print) Signature Z # Date

Working Copy
Date: 9-26-13

ATTACHMENT 5
Page 1 of 1

WCRRF OVERPACK DRUM CLOSURE DATA SHEET

7.[17] Overpack Drum Unique Identifier No.: 68444

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 / B. Gallegos / 267129 9-26-13
Waste Handling Technician (print) Signature Z# Date

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

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

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

7.[34][D] 85-gal overpack drum gross weight (lb): 171.4 lb

Comments: N/C

8.1[1] Performed By: Brian Gallegos / B. Gallegos / 267129 9-26-13
Waste Handling Technician (print) Signature Z# Date

8.1[7] Reviewed By: Gilbert Martinez / [signature] / 149225 9-30-13
Supervisor or designee (print) Signature Z# Date

ATTACHMENT 1
Page 1 of 2

Working Copy
Date: 9-24-13

WCRRF DRUM PREPARATION DATA SHEET

5.[34][E] Drum ID No.: 68465

5.[3] Drum information:
Purchase Order No.: 501588
Lot No.: 0240999
Manufacture Date: 2013

5.[17] Drum Liner Bag/Filter Assembly:
Manufacturer: BOP
Model No.: 6c PVC 1.5 - 2 PVC
Serial No.: 6-10244
Manufacture Date: 6/13

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

	Filtered Vent	2 in. Bung
M&TE No.:	100216	028269
Cal. Expiration Date:	12/18/13	12/18/13
Range in ft-lb:	40-200	10/80
Tolerance:	+/- 4% cw & 6% ccw	+-3% cw & 6% ccw

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

Performed By: Brandon Chavez / [signature] 204742 9-24-13
Operator (print) Signature Z # Date

5.[23] Filtered vent information:
Manufacturer: NucFil
Model No.: 019DS
Serial No.: 6M284
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.: 68465

Comments:

5.[35] Performed By: Brandon Chavez / [signature] 204742 / 9-24-13
Operator (print) Signature Z # Date

7.1[4] Reviewed By: Gilbert Martinez / [signature] 14925 9.30.13
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 2
Page 1 of 2

9.26.13

WCRRF DRUM CLOSURE DATA SHEET

6.[3] Drum ID No.: 68465

6.[9] 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

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 9-26-13
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: N/A / / / /
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.: 68465

6.[26] Scale File ID number: 019065

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

6.[28] Drum gross weight: 4004 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 / 2671729 9-26-13
Operator (print) Signature Z # Date

7.1[4] Reviewed By: Gilbert Martinez / M. / 149275 9.30.13
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 1
Page 1 of 2

WCRRF DRUM PREPARATION DATA SHEET

5.[34][E] Drum ID No.: 68466

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.: GCPUC 1.5-25PUC
Serial No.: L-10317
Manufacture Date: 5/13

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

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

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

Performed By: Brandon Chavez / [signature] 204282 / 9-24-13
Operator (print) Signature Z # Date

5.[23] Filtered vent information:
Manufacturer: NUCFIL
Model No.: 019DS
Serial No.: LM-278
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.: 68466

Comments: N/C

5.[35] Performed By: Brandon Chavez / [signature] 204742 / 9-24-13
Operator (print) Signature Z # Date

7.1[4] Reviewed By: Gilbert Martinez / [signature] 149235 9.30.13
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 2
Page 1 of 2

9.24.13 CW

WCRRF DRUM CLOSURE DATA SHEET

6.[3] Drum ID No.: 684666

6.[9] 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

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

Performed By: BRIAN GALLEGOS / Brian Gallegos / 267129 / 9-27-13
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: N/A / / /
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.: 68466

6.[26] Scale File ID number: 019065

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

6.[28] Drum gross weight: 2466 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] / 1261129 / 9.26.13
Operator (print) Signature Z # Date

7.1[4] Reviewed By: Gilbert Martinez / [signature] / 149235 / 9.30.13
Supervisor or designee (print) Signature Z # Date

72
NR
6.00.12

WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Production Control

Container ID: S842234 Container Type: 55-GAL Gross Weight (lbs): 394
Inner Seal #: 015226 Filter Prefix: LAVC Filter Serial #: 02178
AK Waste Stream: LA-MHD01.001 Certified RTR BDR: No BDR
TWSR Comments: LEACHED SOLIDS MST 12 RN 434 SALTS
Total PE-Ci Activity: 8.52E+00 Equivalent Combustible PE-Ci: 3.20E+00 AM-241 PE-Ci: 6.92E-01
Total Fissile Gram Equivalents: 94.1 Total Surface Dose Rate (mrem/hr): 1
EPA Code(s): None
NCR RTR/NDA Comment: None
RTR Pre-Screen Date: 5/29/2007 Comment: Liquids, Impenetrable Obj, Liquid Location: 22"
Certified RTR Comment: None
Prohibited Items: ☒ Sealed > 4 Liters ☑ Liquid ☒ Pressurized Container ☑ Impenetrable Item ☒ Other
Security Determination: ☑ Green ☐ Yellow
Remediation Determination: ~~☐ VE~~ 10/31/12 ☑ PID ☐ Split ☑ Repack
Estimated 30-cm Dose Rate (mrem/hr): ☐ <100 ☐ >100 and <1,000 ☑ >1,000 and <10,000 ☐ >10,000
TRUCON Code: LA125M Production Control Comments: Ensure EPA Codes D007, D008, and D009 are on the label. A minimum of 1.2 volumes of kitty litter zeolite must be mixed with 1.0 volume of nitrate salts.
Performed By: R. W. Jones (Production Control (Print)) Signature 117434 Z Number 12.8.11 Date
SUSAN RAMSEY Signature 1006681 Z Number 10/31/12 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: Leached solids - nitrate salts
Net Wt: 334 lb, Twelve items from 5 lb to 54 lb
Drums w/ nitrate salts may contain undocumented liquids
May require RWP for >1000 and <10000 mrem/hr @ 30 cm
Drum may have lead liner
Performed By: Valerie Rhodes (WDP Engineering (Print)) Signature 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: Do not push or press on waste with hands. Use kevlar glove when processing waste.
Processing Determination: ☑ Accept ☐ Reject
TRU Remediation Operations Comments: Use proper mixture of kitty litter to waste in accordance with the procedure
Performed By: Jose Jerez (TRU Remediation Operations (Print)) Signature 221452 Z Number 11-29-12 Date
DK Z# 249750 12/1/12
IHG Review [illegible] CSR, may contain Pb, Hg, Cr

Noncertified TRU Waste Drum Item Information

DrumID: 015226

Item No	ItemID	Process Status	Net Wt (kg)	Matrix	Meas Code	SNM (g)	MT	Auth (Pg/Ln)	Comments
1	IXFS950FA		4.090	NITRATE SALTS		0.66	52	6/11	G468
1	IXFS-934-FA		24.320	NITRATE SALTS		5.25	52	6/11	G468
2	IXFS937FA		10.450	NITRATE SALTS		7.87	52	6/11	G468
3	IXFS935FA		2.270	NITRATE SALTS		1.64	52	6/11	G468
4	IXFS938FA		9.090	NITRATE SALTS		25.49	52	6/11	G468
5	IXFS939FA		6.360	NITRATE SALTS		12.42	52	6/11	G468
6	IXFS942FA		8.640	NITRATE SALTS		0.2	52	6/11	G468
7	IXFS943FA		4.700	NITRATE SALTS		22.25	52	6/11	G468
8	G465-B		6.600	NITRATE SALTS		11.95	52	6/11	G468
9	I9450X51A		11.200	NITRATE SALTS		0.64	52	6/11	G468
10	IXFS948FA		7.270	NITRATE SALTS		2.57	52	6/11	G468
12	IXFS949FI		11.590	NITRATE SALTS		9.11	52	6/11	G468

Noncertified Waste Drum Material Summary

Gross Wt (kg): 178.6

Material Type	SNM (grams)	Items Net Wt (kg)
52	100.05	106.58
Totals	100.05	106.58

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])	S872449	S793718	S832140	S833037	S832330	S842234
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 / 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 : S842234.D
Acq On : 29 Mar 2012 3:43 pm (#1); 29-Mar-12, 15:42:34 (#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 15:51:25 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	3.651	96	3756860	209.00 ppmv	0.03
15) Chlorobenzene-d5	5.964	117	2573995	185.50 ppmv	0.02
Target Compounds					Qvalue
1) Hydrogen	1.613	GC1	2089m	282.85 ppmv	

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

vocgas.m Thu Mar 29 15:51:32 2012

9.26.13

0005 Assuming WCRRF Operations Center - Clelands
0615 The job being conducted by SOS
0645 Operators entering 5069, Procedure during work is released
0759 Bagging off, Bagging on 3841320
0915 Bag on, Bag off complete. had a brief pause then continued while performing bag on.
1141 Bagging off 1 daughter and a POC, will continue to process drum.
1210 Bag on, Bag off complete
1225 Being relieved by OCO - Howard Smith - Clelands
1225 ASSUMING OCO POSITION HASMITH
1240 OPERATORS EXIT BUILDING FOR LUNCH
1300 OPERATORS ENTER BUILDING TAGOUT TO CONTINUE PROCESSING
1353 BAGGING OFF 1 DAUGHTER, BAGGING ON 5842234
1431 BAG OFF COMPLETE
1435 STARTING OUTSIDE ROUNDS
1440 BEING RELIEVED BY OCO C VELARDE - H SMITH
1441 Assuming WCRRF Operations Center - Clelands
1446 Starting inside rounds.
1500 Item #13 is OOS, POD in place. okay to proceed per CSE documentation.
1503 Item #19 is unset, FSE in place, okay to proceed.
1506 Completed outside rounds.
1508 Outside rounds complete.
1533 Bagging off 1 daughter, bagging one daughter continuing to process.
1559 Bag on Bag off complete
1612 Inside and outside rounds signed off by SOS.
1653 Bagging off daughter and POC, Bagging on 3885021
1735 Bag on, off complete
1741 Starting movement out of 5C-69.
1810 movement complete out of 5C-69.
9.26.13 1810 Release by OCO Terri Coleman - Clelands.
HA

no further entries complete.

9-26-13 DAYSHIFT

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

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

0644 Procedure driven work is released.

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

0712 Completed daily facility update with AREA G SOM.

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

0800 Inside operators report bag offs completed and bag on of Parent S841320

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

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

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

1225 OCO being relieved by H. Smith -

1300 Elmo came to the [illegible] and requested to take photos of Rm 102 of 50/69 and received RWP brief.

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

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

1353 Bagging off 1 daughter and bagging on S842234

1431 Bag off complete

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

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

1655 Bagging off 1 daughter and 1 POC and bagging on Parent S825021

1734 Bag off and Bag on Completed.

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

1805 Completed conducting shift turnover checklist and relieved by the oncoming SOM R. Axtel John [illegible]

26 Cum
G.E.S.S. 13 grades

WCRR SOS LOG Book

0600 Assuming SOS Position [illegible]
0615 Conducting shift brief.
0635 Concluded shift brief
0645 operator entering Facility
0759 Bagging off /on 5841320
0915 Bag on/off Complete had pause then continued bag off
1141 Bagging off /daughter And Pec And continuing.
1210 Bag on/off complete
1240 Operators Exiting For Lunch.
1300 Operators Entering SD-69
1355 Bagging off /Daughter Bagging on 5842234
1431 Bag on/off complete
1435 Starting Rounds
1533 Bagging off /daughter bagging on another continuing
1559 Bag on/off complete.
1612 Reviewed Inside And outside Rounds.
1655 bagging off /on 5825021
1735 bag on /off complete.
1746 started move out of SD-69.
1810 Move out complete
RLG 1815 Relieved by Clayton Mollins [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-RTR2-13-0116
Examination Date:	10/4/2013
Waste Container ID:	68435
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.: 154.0 kg Tare Wt.: 145.1 kg Net Wt.: 8.9 kg
Rigid Liner and Liner Vent Description:	Liner: [ ] No [X] Yes Lid: [ ] No [X] Yes Type: [ ] 30-mil [X] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [X] Yes [ ] N/A Punctured: [ ] No [X] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [X] No [ ] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 2 layers
Volume Utilization Percentage:	50 %

CCP Radiography Data Sheet

Waste Container ID: 68435

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):	3.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	5.9
Soils (S):	
Total WMP Weight:	8.9

CCP Radiography Data Sheet

Waste Container ID: 68435

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

5847234

NDA 2000 Assay Report

Item Information

Item ID:	68435	Count Sequence Number:	16607
Operator:	DCLTD231\Operator		
Assay Start:	10/22/2013 3:27:10 PM		
Description 1:	2LANDA1232		
Description 2:	POC (154.0)		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gal Drum		
Weight:	Net: 8.9 kg	Net:	8.9 kg
Container:	Volume: 208.0 l	Full:	95.0 %
Density:	0.639 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:	16607	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:	68435	Analysis Date:	10/22/2013

Net Weight	8900.0 g		
Pu mass	2.54E+001	+-	4.50E+000 g
TRU Alpha Activity	3.41E+000	+-	8.74E-001 Ci
TRU Activity Concentration	3.83E+005	+-	9.82E+004 nCi/g
Pu-239 Equivalent Activity	3.46E+000	+-	8.74E-001 Ci
Pu-239 FGE	2.40E+001	+-	4.23E+000 g
Decay heat	1.09E-001	+-	2.89E-002 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	3.44E-002	2.43E-005	4.25E-006	9.77E-007
PU238	2.32E-003	3.97E-002	7.04E-003	3.58E-005
PU239	2.39E+001	1.48E+000	2.62E-001	1.33E-003
PU240	1.53E+000	3.46E-001	6.13E-002	3.12E-004
AM241	4.49E-001	1.54E+000	8.32E-001	3.01E-002
PU241	2.92E-002	3.01E+000	5.33E-001	2.71E-003
PU242	5.09E-003	2.01E-005	3.56E-006	0.00E+000
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	3.58E-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	1.23E-006
U238	<LLD	<LLD	0.00E+000	9.74E-006
AM243	1.68E-004	3.37E-005	6.07E-006	5.12E-006

Errors quoted at 1.000 sigma

Operator: D E G Date: 10.23.13

ITR: Marla Eg Date: 10.23.13

Automated Independent Technical Review

Count Sequence Number: 16607 Batch Number: 2LANDA1232
Counter ID: HENC #2
Container ID: 68435
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 10/22/2013

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

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

Expert Review by: Sherri Chamberlain Date: 10-23-13

Attachment 4 -- Flammable Gas Analysis Form

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

Waste Container ID: **68435**

BDR Number: **LA13FG2115**

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

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	518.14	
74-82-8	Methane	142.14	U
67-56-1	Methanol	35.23	U
60-29-7	Ethyl Ether	0.96	U
75-35-4	1,1-Dichloroethylene	6.38	U
67-64-1	Acetone	18.08	U
75-34-3	1,1-Dichloroethane	4.08	U
156-59-2	cis-1,2-Dichloroethene	0.76	U
78-93-3	Methyl ethyl ketone	11.73	U
110-82-7	Cyclohexane	5.10	U
71-43-2	Benzene	1.77	U
107-06-2	1,2-Dichloroethane	3.66	U
71-36-3	1-Butanol	1.84	U
108-10-1	Methyl isobutyl ketone	9.82	U
108-88-3	Toluene	8.02	U
108-90-7	Chlorobenzene	4.10	U
100-41-4	Ethylbenzene	3.57	U
108-38-3/106-42-3	m- and p-Xylene	1.92	U
95-47-6	o-Xylene	2.10	U
108-67-8	1,3,5-Trimethylbenzene	1.96	U
95-63-6	1,2,4-Trimethylbenzene	2.13	U

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

InstName : Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\131113c\
Data File : 68435.D
Acq On : 13 Nov 2013 2:53 pm (#1); 13-Nov-13, 14:53:00 (#2)
Operator : NW
Sample :
Misc : POC THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Nov 13 15:01:27 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	3.535	96	4399295	205.75 ppmv	0.02
15) Chlorobenzene-d5	5.848	117	3440790	177.50 ppmv	-0.01
Target Compounds					Qvalue
1) Hydrogen	1.547	GC1	3896m	518.14 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:	68465
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.: 173.5 kg Tare Wt.: 33.4 kg Net Wt.: 140.1 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:	85 %

CCP Radiography Data Sheet

Waste Container ID: 68465

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):	20.0
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	2.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	118.1
Soils (S):	
Total WMP Weight:	140.1

CCP Radiography Data Sheet

Waste Container ID: 68465

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:	68465	Count Sequence Number:	23711
Operator:	D3PW2DK1\operator		
Assay Start:	10/24/2013 2:22:35 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: 140.0 kg	Net:	140.0 kg
Container:	Volume: 208.0 l	Full:	85.0 %
Density:	0.790 kg /l		

System Configuration

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

Errors quoted at 1.000 sigma

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number: 23711
Assay Instrument: MCS HENC #1
Analysis Method: CCP-TP-063 v 15
Item ID: 68465

Batch Number: 1LANDA1852
Location: LANL TA-54
Software Version: NDA 2000 V.4.0
Analysis Date: 10/24/2013

Net Weight	140000.0 g		
Pu mass	3.19E+001	+-	6.70E+000 g
TRU Alpha Activity	1.13E+001	+-	4.92E+000 Ci
TRU Activity Concentration	8.06E+004	+-	3.51E+004 nCi/g
Pu-239 Equivalent Activity	1.14E+001	+-	4.92E+000 Ci
Pu-239 FGE	3.01E+001	+-	6.68E+000 g
Decay heat	3.70E-001	+-	1.63E-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	1.11E-006
U233	<LLD	<LLD	0.00E+000	8.71E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	2.45E-006
NP237	1.41E-001	9.97E-005	1.99E-005	4.26E-006
PU238	2.91E-003	4.98E-002	1.28E-002	1.21E-003
U238	<LLD	<LLD	0.00E+000	2.29E-005
PU239	2.99E+001	1.86E+000	4.14E-001	4.50E-002
PU240	1.91E+000	4.34E-001	1.15E-001	1.05E-002
AM241	2.61E+000	8.94E+000	4.90E+000	8.82E-002
PU241	3.66E-002	3.77E+000	9.98E-001	9.15E-002
PU242	6.38E-003	2.52E-005	6.66E-006	0.00E+000
AM243	1.08E-003	2.16E-004	4.36E-005	1.19E-005

Errors quoted at 1.000 sigma

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

ITR: Marla [illegible] Date: 10.29.13

Automated Independent Technical Review

Count Sequence Number: 23711 Batch Number: 1LANDA1852
Counter ID: MCS HENC #1
Container ID: 68465
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 10/24/2013

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

Expert Review by: [signature] Date: 10/29/13

029

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **68465**

BDR Number: **LA13FG12108**

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

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	430.72	
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 : 68465.D
Acq On : 25 Oct 2013 2:17 pm (#1); 25 Oct 2013 2:16 pm (#2)
Operator : SA
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Oct 25 14:25:56 2013
Quant Method : C:\msdchem\1\METHODS\VOCGAS.M
Quant Title : Flammable Gas Analysis for Transportation Only
QLast Update : Wed May 22 12:06:27 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
3) Fluorobenzene	4.063	96	7475099	207.75	ppmv	0.00
15) Chlorobenzene-d5	6.639	117	5567789	178.75	ppmv	0.00
Target Compounds						Qvalue
1) Hydrogen	1.903	GC1	122863m	430.72	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:	68466
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.: 112.5 kg Tare Wt.: 33.4 kg Net Wt.: 79.1 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:	70 %

CCP Radiography Data Sheet

Waste Container ID: 68466

Section 3: Container Inventory and Comments (Detailed descriptions)

IM: Razor blade, drum lid

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):	2.1
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	5.0
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	4.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	68.0
Soils (S):	
Total WMP Weight:	79.1

CCP Radiography Data Sheet

Waste Container ID: 68466

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:	68466	Count Sequence Number:	23708
Operator:	D3PW2DK1\operator		
Assay Start:	10/24/2013 12:08:19 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: 79.1 kg	Net:	79.1 kg
Container:	Volume: 208.0 l	Full:	70.0 %
Density:	0.540 kg /l		

System Configuration

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

Errors quoted at 1.000 sigma

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number:	23708	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:	68466	Analysis Date:	10/24/2013

Net Weight	79100.0 g		
Pu mass	9.90E+000	+-	1.66E+000 g
TRU Alpha Activity	3.40E+000	+-	1.43E+000 Ci
TRU Activity Concentration	4.30E+004	+-	1.81E+004 nCi/g
Pu-239 Equivalent Activity	3.42E+000	+-	1.43E+000 Ci
Pu-239 FGE	9.35E+000	+-	1.56E+000 g
Decay heat	1.11E-001	+-	4.76E-002 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	5.52E-002	3.89E-005	6.21E-006	1.92E-006
PU238	9.05E-004	1.55E-002	2.59E-003	3.30E-005
PU239	9.30E+000	5.76E-001	9.66E-002	1.23E-003
PU240	5.94E-001	1.35E-001	2.26E-002	2.87E-004
AM241	7.79E-001	2.67E+000	1.43E+000	4.35E-002
PU241	1.14E-002	1.17E+000	1.97E-001	2.50E-003
PU242	1.98E-003	7.83E-006	1.31E-006	0.00E+000
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	4.93E-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	1.13E-006
U238	<LLD	<LLD	0.00E+000	9.28E-006
AM243	3.86E-004	7.71E-005	1.25E-005	5.14E-006

Errors quoted at 1.000 sigma

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

ITR: Maria [illegible] Date: 10.29.13

Automated Independent Technical Review

Count Sequence Number: 23708 Batch Number: 1LANDA1852
Counter ID: MCS HENC #1
Container ID: 68466
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 10/24/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis No Add-a-Source warnings.	OK
Section 2 - Passive Neutron Analysis Analysis Status: No errors. 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.
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: 10/29/13

Waste Container ID: **68466**

BDR Number: **LA13FG2107**

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

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	162.92	
74-82-8	Methane	142.14	U
67-56-1	Methanol	35.23	U
60-29-7	Ethyl Ether	0.96	U
75-35-4	1,1-Dichloroethylene	6.38	U
67-64-1	Acetone	18.08	U
75-34-3	1,1-Dichloroethane	4.08	U
156-59-2	cis-1,2-Dichloroethene	0.76	U
78-93-3	Methyl ethyl ketone	11.73	U
110-82-7	Cyclohexane	5.10	U
71-43-2	Benzene	1.77	U
107-06-2	1,2-Dichloroethane	3.66	U
71-36-3	1-Butanol	1.84	U
108-10-1	Methyl isobutyl ketone	9.82	U
108-88-3	Toluene	8.02	U
108-90-7	Chlorobenzene	4.10	U
100-41-4	Ethylbenzene	3.57	U
108-38-3/106-42-3	m- and p-Xylene	1.92	U
95-47-6	o-Xylene	2.10	U
108-67-8	1,3,5-Trimethylbenzene	1.96	U
95-63-6	1,2,4-Trimethylbenzene	2.13	U

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

InstName : Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\131028c\
Data File : 68466.D
Acq On : 28 Oct 2013 10:48 am (#1); 28-Oct-13, 10:48:11 (#2)
Operator : EL
Sample :
Misc : 55 Gallon Drum Through Filter (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Oct 28 10:56:49 2013
Quant Method : C:\msdchem\1\METHODS\VOCGAS.M
Quant Title : Flammable Gas Analysis
QLast Update : Mon Aug 26 13:12:56 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
3) Fluorobenzene	3.552	96	5254594	205.75 ppmv	0.03
15) Chlorobenzene-d5	5.858	117	4058101	177.50 ppmv	0.00
Target Compounds					Qvalue
1) Hydrogen	1.615	GC1	1225m	162.92 ppmv	

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

S842463

S842463

Container Pr 60635

File Options Reports Help

S842463

760635	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

S842463

- S842463
  - LA00000068408 - LANL
    - LASB02198
  - LA00000068380 - WIPP
  - LA00000068396 - LANL
    - LASB50109
  - LA00000068420 - EMPTY

ATTACHMENT 1
Page 1 of 4

working Copy
Date: 9/18/13

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: S842463

6.2[4] Date Processed: 9-18-13

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

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

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

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

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

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

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

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

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

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

Performed By: [illegible] / [signature] 122854 9-18-13
Waste Handling Tech (print) Signature Z # Date

ATTACHMENT 1
Page 2 of 4

4.1[6][B] Parent Waste Container No.: S842463

5.[18] Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable: 408.8 lb

6.2[5][A] Parent Drum Lead Blanket Weight (lb): 120.00 lb

6.2[5][B]/ 6.2[6] Total Parent Drum Weight (lb) 528.8 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:

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

ATTACHMENT 1
Page 3 of 4

4.1[6][B] Parent Waste Container No.: S842463

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	68380	68408		
10.1[4]	Daughter Drum Filter No.	KL-529	LM-268	N	
10.1[4]	Daughter Drum Bag Filter No.	L-6593	L-6670		A
10.1[4]	Daughter Drum Purchase Order No.	501578	501678		
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.	6CPVC15-26PVC			
	Serial No.	L-6700			
	Date of Manufacture	1-13			
10.2[5]	POC ID No	D0525-68396			
10.2[7][B]/10.2[6]	POC Item Description	Nitrate SALTS		N	A
10.2[13]	POC Assembly closed per Manufacturer's instructions. (Initial and Z#)	JG 276702			
10.2[14]	POC Assembly Gross Weight (lb)	330.4			
10.2[15]	POC Rad. Survey Results (mrem/hr)	2R			
10.3[3][A]	Approx. Containerized Liquid Vol./Units				
10.3[5][A]	Free Liquid Volume/Units	3GALLONS			
10.3[7][A]	Opaque/Non-penetrable Item Description:	Lead Shielding	Lead Shielding		
10.3[9][A]	PCB-contaminated Waste Description		N	A	
10.3[9][B]	PCB Item ID No.				
10.3[10]	Remaining Waste Description	Nitrate SALTS See comments	See comments	N	A
10.3[13]/10.4[10]/ 10.5[4]/10.6[10]	Daughter Drum % Full (%)	100%	50%		
10.5[3]/10.6[2]	Description Waste Added During Processing	Kitty Litter Plastic Stub outs	Kitty Litter Plastic Stub out		

ATTACHMENT 1
Page 4 of 4

4.1[6][B] Parent Waste Container No.: S842463

Comments: Nitrate Salts Kitty Litter Stout Bags
Lead Shielding. 3 GALLONS of Free liquid Liquid was an Acid unable to
Nutralize Solidified with Kitty Litter

11.1[1] Performed By: Adam Segovia [signature] R207021 9-19-13
Waste Handling Tech (print) Signature Z # Date

11.1[8] Reviewed By: Jose Perez [signature] R21432 9-19-13 0525
SOS or designee (print) Signature Z # Date/Time

Working Copy
Date: 9-18-13

ATTACHMENT 2
Page 1 of 1

WCRRF OVERPACK DRUM ASSEMBLY PREPARATION DATA SHEET

5.[3] Overpack drum information:

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

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

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

Overpack filtered vent information:

Manufacturer: NucFil
Model No.: 013
Serial No.: JL-912
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: Adam Sosvia [signature] 276202 9-18-13
Waste Handling Technician (print) Signature Z # Date

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

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

Comments: N/C

8.1[1] Performed By: [signature] Adam Sosvia [signature] 276202 9-18-13
Waste Handling Technician (print) Signature Z # Date

8.1[6] Reviewed By: Joe Jerez [signature] 121452 9-19-13
Supervisor or designee (print) Signature Z # Date

Working Copy
Date:_____

ATTACHMENT 5
Page 1 of 1

WCRRF OVERPACK DRUM CLOSURE DATA SHEET

7.[17] Overpack Drum Unique Identifier No.: 684120

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

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

Performed By: ADAM SEGOVIA (Waste Handling Technician (print)) (Signature) 226702 (Z #) 9-19-13 (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: 019069
Platform scale calibration expiration date: 10-14-14

7.[34][D] 85-gal overpack drum gross weight (lb): 166.2 lb

Comments: N/C

8.1[1] Performed By: ADAM SEGOVIA (Waste Handling Technician (print)) (Signature) 226702 (Z #) 9-19-13 (Date)

8.1[7] Reviewed By: JOSE JEREZ (Supervisor or designee (print)) (Signature) 224452 (Z #) 9-19-13 (Date)

ATTACHMENT 1
Page 1 of 2

Working Copy
Date: 9-10-13

WCRRF DRUM PREPARATION DATA SHEET

5.[34][E] Drum ID No.: 68380

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

5.[17] Drum Liner Bag/Filter Assembly:
Manufacturer: BOP
Model No.: GCPVC 1.5 - 25PVC
Serial No.: L-6893
Manufacture Date: 1-13

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

	Filtered Vent	2 in. Bung
M&TE No.:	100216	038369
Cal. Expiration Date:	12-18-13	12-16-13
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: Jim Marquez | [signature] | 122629 | 9-11-13
Operator (print) | Signature | Z# | Date

5.[23] Filtered vent information:
Manufacturer: NUCFIL
Model No.: 019 01
Serial No.: KL - 509
Manufacture Date: 11/11

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

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

5.[30] Scale File ID number: 019065

ATTACHMENT 1
Page 2 of 2

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

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

5.[34][E] Drum ID No.: 68350

Comments: N/C

5.[35] Performed By: IAN MAZURKE / [signature] / 276701 / 9-11-13
Operator (print) Signature Z # Date

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

ATTACHMENT 1
Page 1 of 2

Working Copy
Date: 9-17-13

WCRRF DRUM PREPARATION DATA SHEET

5.[34][E] Drum ID No.: 68408

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.: 6 CAVC 1.5-2 SPVC
Serial No.: L-6670
Manufacture Date: 01/13

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

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

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

Performed By: Federico Arbolaez / [signature] / 122826 / 9-17-13
Operator (print) Signature Z # Date

5.[23] Filtered vent information:
Manufacturer: Nucfil
Model No.: 019 DS
Serial No.: LM-268
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.: 68408

Comments: N/C

5.[35] Performed By: Frederico Arbolete / [signature] 12265261 9-17-13
Operator (print) Signature Z # Date

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

WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

19th SP72

Production Control

Container ID: S842463 Container Type: 55-GAL Gross Weight (lbs): 437
Inner Seal #: 015212 Filter Prefix: None Filter Serial #: None
Waste Stream: LA-MHD01.001 Certified RTR BDR: No BDR
TWSR Comments: LEACHED SOLIDS MST 12 RM 434
Total PE-Ci Activity: 1.24E+01 Equivalent Combustible PE-Ci: 4.65E+00 AM-241 PE-Ci: 1.06E+00
Total Fissile Gram Equivalents: 133.0 Total Surface Dose Rate (mrem/hr): 3
EPA Code(s): D007; D008; D009
NCR RTR/NDA Comment: None
RTR Pre-Screen Date: 6/23/2007 Comment: Impenetrable Obj.
Certified RTR Comment: None
Prohibited Items: ☐ Sealed > 4 Liters ☐ Liquid ☐ Pressurized Container ☑ Impenetrable Item ☐ Other
Security Determination: ☑ Green ☐ Yellow
Remediation Determination: ☐ VE ☑ PID ☐ Split ☑ Repack
Estimated 30-cm Dose Rate (mrem/hr): ☐ <100 ☐ >100 and <1,000 ☑ >1,000 and <10,000 ☐ >10,000
TRUCON Code: Production Control Comments: Ensure EPA Codes D007, D008, and D009 are on the label. A minimum of 1.2 volumes of kitty litter/zeolite must be mixed with 1.0 volume of nitrate salts.

Performed By: Susan Ramsey (Production Control (Print)) / Signature / 100681 (Z Number) / 12/20/12 (Date)

WDP Engineering

Chemicals Present (e.g., pyrophorics, acids, bases, shock sensitive, organic liquids, peroxides, crown ethers): ☐ Yes ☒ No ☐ Unknown
Processing Determination: ☒ Accept ☐ Reject
WDP Engineering Comments: Nitrate Salts
Net Wt: 377# Generator info shows 14 items of nitrate salts; weights range from 4-27#. No RTR BDR. Nitrate salts are typically packaged in plastic bags; undocumented liquids t/or debris may be present. RTR PS shows impenetrable item(s). No chemicals identified. Applicable waste codes are for chromium, lead, + mercury. Nitrate salts require repack w/ admixture

Performed By: Valerie Rhodes (WDP Engineering (Print)) / Valerie Rhodes (Signature) / 112609 (Z Number) / 1/23/13 (Date)

TRU Remediation Operations

☒ Waste Container Information Evaluated ☐ Less Than 170 lbs ☐ RTR Video Available
Other Specific Safety Concerns: Do not push or press on waste with hands. Use heavyweight gloves during processing.
Processing Determination: ☒ Accept ☐ Reject
TRU Remediation Operations Comments: USE Proper PPE Mix Ratio

Performed By: GMK (TRU Remediation Operations (Print)) / Signature / 149235 (Z Number) / 6/19/13 (Date)
Joe Jerez 221452 6/22/13

HS Review [illegible] CSP, may contain Pb, Hg + Cr
1-29-13

Noncertified TRU Waste Drum Item Information

DrumID: 015212

Item No	ItemID	Process Status	Net Wt (kg)	Matrix	Meas Code	SNM (g)	MT	Auth (Pg/Ln)	Comments
1	IXFS944FA		1.820	NITRATE SALTS		0.	54	6/11	G468
2	IXFS947FA		1.820	NITRATE SALTS		0.	54	6/11	G468
3	IXFS956FA		1.820	NITRATE SALTS		0.	52	6/11	G468
4	IXFS952FA		2.930	NITRATE SALTS		1.17	52	6/11	G468
5	IXFS958FA		6.620	NITRATE SALTS		27.08	52	6/11	G468
6	I961OX52A		6.360	NITRATE SALTS		6.91	53	6/11	G468
7	IXFS967FA		12.050	NITRATE SALTS		4.72	52	6/11	G468
8	JXFS968FA			NITRATE SALTS		25.37	52	6/11	G468
9	IXFS962FA		11.140	NITRATE SALTS		0.	52	6/11	G468
10	IXFS952FA		5.000	NITRATE SALTS		6.73	52	6/11	G468
11	IXFS963FA		7.270	NITRATE SALTS		0.	52	6/11	G468
12	IXFS960FA		2.570	NITRATE SALTS		0.	52	6/11	G468
13	IXFS971FA		9.550	NITRATE SALTS		0.	52	6/11	G468
14	IXFS954FA		3.640	NITRATE SALTS					

Noncertified TRU Waste Drum Item Information

DrumID: 015232

Item No	ItemID	Process Status	Net Wt (kg)	Matrix	Meas Code	SNM (g)	MT	Auth (Pg/Ln)	Comments
1	9780X54FC		199.700	Pu CEMENT		19.03	53	6/11	G465

Noncertified Waste Drum Material Summary

Gross Wt (kg): 267.7

Material Type	SNM (grams)	Items Net Wt (kg)

ATTACHMENT 1
Page 1 of 1

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

5.[1] Sample Date: 5/21/13

Container No. (5.[1])	S842463					
Container type sampled (e.g., 55-gal, 85-gal, 110-gal, or SWB) (5.[1])	55-Gal					
Filtered Vent Type (5.[1])	72					
Filtered Vent Unobstructed (5.[1])	☑ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT
WIPP-Approved Filtered Vent (5.[2])	☑ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT N/A	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT
Total CCP VOC value (< 7,000 ppm) (5.[4])	0 ppm	ppm	ppm	ppm	ppm	ppm
Hydrogen Reading (< 64,000 ppm) (5.[5])	1720.40 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:

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

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

6.1[3] Performed By: Susan Ramsey (Waste Handling Operator (print)), Susan S. Ramsey (Signature), 110681 (Z#), 5/22/13 (Date)

InstName : Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\130521c\
Data File : S842463.D
Acq On : 21 May 2013 1:44 pm (#1); 21-May-13, 13:43:34 (#2)
Operator : SA
Sample :
Misc : 55 GAL LFL DRUM THROUGH UNOBSTRUCTED 72 (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 21 13:53:50 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	3.487	96	4269517	201.25	ppmv	-0.08
15) Chlorobenzene-d5	5.842	117	3632324	177.00	ppmv	-0.06
Target Compounds						Qvalue
1) Hydrogen	1.600	GC1	12229m	1720.60	ppmv	

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

vocgas.m Tue May 21 13:53:56 2013

9-18-13

1818 Assuming WCRR operation center - T Coleman
1819 Pre-job being conducted by SOS.
1836 Pre-job concluded.
1925 Operators entering 5069 to begin bagoff, and clean GB.
2053 Bagging off second daughter of drum #5853899, bagging on drum #5842463.
2120 Initiating a drum movement from transportainer to 5069.
2125 Bagoff/on complete.
2135 Drum movement out of transportainer in 5069 complete.
2218 Initiating a drum movement from 5069 to a transportainer.
2233 Drum movement out of 5069 complete.
0008 Operators out for lunch.
0030 Entering EPWCRR-RM-AOP-0207 for severe weather.
0058 Beginning 30 minute wait again for thunder.
0128 Exiting EPWCRR-RM-AOP-0207.
0130 Beginning outside rounds.
0136 Operators back from lunch
0142 Item #19 is unsat, okay to proceed, FSR in place.
0155 Outside rounds complete.
0303 Bagging off 2 daughters and 1 POC, bagging on 5852923.
0400 Bag off/on complete.
0430 Beginning inside rounds.
0451 Item #63 is OOS, okay to proceed per CSE documentation.
0452 Inside rounds complete.
0516 Both rounds reviewed by SOS.
9-19-13 0600 Relieved by DCO Clarissa Velarde, T Coleman

No further entries this page.

9/18/13 Night Shift

1802 Reviewed shift turnover checklist and assumed WCRR SOM position.

1803 Approved and posted the night shift operations watchbill.

1815 Attended pre job brief conducted by SOS. Safety topic by IH was continued rains w/ effects on road conditions and driving hazards. Discussed current conditions in the lab - Need to complete bag offs for 5853899, have a 55 and an 85 gal drum inside to process.

2125 All bag offs completed for drum # 5853899 (2 daughters total) and drum # 5842463 is bagged on.

2135 Operations completed moving 3 drums from ~~50-69 to transportainers~~ transportainers to 50-69 for processing.

2233 Operations completed moving 6 drums from 50-69 to transportainers.

2240 Operators notified SOS & IH that liquid in drum that is being processed would not mix w/ neutralization agent. Operators will continue absorbing w/ Kitty litter and make comment on Attachment 1.

9/19/13 0008 Operators breaking for lunch

0030 Entered EP-WCRR-RM-AOP-0207 for severe weather due to lightning.

0128 Exited severe weather restrictions.

0136 Resuming operations

0400 Completed all bag offs for parent # 5842463 (2 daughters and 1 POC total) Bagged on 5852923.

0502 Completed Quarterly review of LO/TO Binder

9/19/13 0614 Relieved by J. Guadagnolo.

No further entries this page

9/18/13 WCRR SOS Log Book

1815 Assuming SOS position. CA

1818 Starting Pre-Job, discussed the road wash outs due to heavy rain and potential low spots flooding.

1835 Pre-Job complete.

2020 Relieved by Jose Jerez on 9/18/13. CA

2020 Assuming SOS position for the evening. Performed Turnover with Clayton Mullins. JJ

2033 Bagging off one daughter Bagging on 5842463

2125 Bag on/off complete

2135 Moving Fav Parent 55 gallon from transportainer into 50-69 complete

2218 Initiating Daughter drum movement from 50-69 to Transportainer

2233 Drum movement out of 50-69 complete.

2245 Operators reporting that the liquids are not draining the neutralizer being added. Directed the operators to make a notation of this on the attachment description.

0030 Operators breaking for lunch.

0130 Operators returning from lunch and continuing to process.

0303 Bagging off 2 daughters and 1 POC, Bagging on 5852923

0400 Bag on Bag off complete.

0516 Reviewed and signed inside and outside rounds.

0600 Securing SOS position for the day, turning over SOS duties to Gilbert Martinez. JJ

GM 9-18-13

Do further entries on next page.

CCP Radiography Data Sheet

5842463

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0113
Examination Date:	9/24/2013
Waste Container ID:	68380
Video/Audio Recorded Media Number:	LA-RTR2-13-0113 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 13
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3110
Waste Stream I.D.:	LA-MIN02-V.001
Waste Container Weights:	Gross Wt.: 186.0 kg Tare Wt.: 33.4 kg Net Wt.: 152.6 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: 68380

Section 3: Container Inventory and Comments (Detailed descriptions)

IM: Metal hardware

AM:

OM:

OI:

C:

R: Rubber gloves

XPM: Plastic bags, liner lid

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP): Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	0.1
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	3.0
Plastics (waste materials) (XPM):	5.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	144.5
Soils (S):	
Total WMP Weight:	152.6

CCP Radiography Data Sheet

Waste Container ID: 68380

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

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

RTR Operator:		
Eddie Rios Thad Hasselstrom	Eddie Rios Thad Hasselstrom	9-24-13 9/24/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	68380	Count Sequence Number:	16564
Operator:	DCLTD231\Operator		
Assay Start:	9/25/2013 11:31:21 AM		
Description 1:	2LANDA1227		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gal Drum		
Weight:	Net: 153.0 kg	Net:	153.0 kg
Container:	Volume: 208.0 l	Full:	95.0 %
Density:	0.770 kg /l		

System Configuration

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

Errors quoted at 1.000 sigma

006
CJ 6/17/14

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number: 16564
Assay Instrument: HENC #2
Analysis Method: CCP-TP-063 v 15
Item ID: 68380

Batch Number: 2LANDA1227
Location: LANL TA-54
Software Version: NDA 2000 V.4.0
Analysis Date: 9/25/2013

Net Weight	153000.0 g		
Pu mass	9.86E+001	+-	2.89E+001 g
TRU Alpha Activity	1.84E+001	+-	2.92E+000 Ci
TRU Activity Concentration	1.21E+005	+-	1.91E+004 nCi/g
Pu-239 Equivalent Activity	1.88E+001	+-	2.92E+000 Ci
Pu-239 FGE	9.27E+001	+-	2.88E+001 g
Decay heat	6.08E-001	+-	9.46E-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	1.01E-006
U233	<LLD	<LLD	0.00E+000	1.14E-002
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	3.70E-006
NP237	2.31E-001	1.63E-004	3.22E-005	1.86E-005
PU238	9.02E-003	1.54E-001	5.29E-002	1.38E-003
U238	<LLD	<LLD	0.00E+000	2.81E-005
PU239	9.22E+001	5.72E+000	1.79E+000	5.11E-002
PU240	6.28E+000	1.43E+000	4.89E-001	1.27E-002
AM241	3.25E+000	1.11E+001	2.26E+000	9.57E-002
PU241	1.31E-001	1.35E+001	4.63E+000	1.20E-001
PU242	1.98E-002	7.80E-005	2.68E-005	0.00E+000
CM243	3.42E-006	1.67E-004	3.32E-005	1.68E-005
CM244	3.48E-003	2.83E-001	7.07E-002	2.25E-001

Errors quoted at 1.000 sigma

Operator: _____ Date: 6-5-14

ITR: _____ Date: 6-9-14

067
08 6/17/14

Automated Independent Technical Review

Count Sequence Number: 16564 Batch Number: 2LANDA1227
Counter ID: HENC #2
Container ID: 68380
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 9/25/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis	
No Add-a-Source warnings.	Ok
Section 2 - Passive Neutron Analysis	
Analysis Status: No errors.	Ok
NCC Pu mass was above calibration range.	Cm244 in drum. Neutron results rejected. Gamma results applied.
FGE is greater than the upper limit of 200.00	
The Standard NCC Pu effective mass exceeds the Upper Calibration Limit.	
No roots found within the limits while determining the Standard NCC Pu Mass, Chose largest positive root.	
Ones Rate Analysis complete with warnings.	
- Error calculating the Ones Rate Pu-240 Effective MDA.	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

008 CD 6/12/14

Comments	Disposition
Cosmic Ray Rejection Analysis complete with warnings. - The CRR High-Z mass Mass Variance is negative, High-Z mass Uncertainty set to zero so analysis could continue.	Ok
Section 3 - Data Combiner Analysis Override enabled; Gamma data specified as input. Results taken from Quantitative Gamma data. Results comparison test passed.	Results taken from quantitative gamma data.
Section 4 - MGA Analysis Results are marked as invalid.	MGA analysis failed. AK isotopics applied. The AK information utilized was provided by Steve Schafer, AKE, and consists of data from CCP-AK-LANL-006, AK Source Document M237. MT-52,53,54
Section 5 - Gamma Analysis Analysis Status: No errors.	Ok
Miscellaneous	No additional nuclides contributing to 95% of the radiological hazard identified. Am-241 direct reported from gamma results.

Expert Review by: Bart B Marsh Date: 6/3/14

009
CJ 6/17/14

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **68380**

BDR Number: **LA13FG2111**

Sampling Date: **11/1/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	416.67	
74-82-8	Methane	142.14	U
67-56-1	Methanol	35.23	U
60-29-7	Ethyl Ether	0.96	U
75-35-4	1,1-Dichloroethylene	6.38	U
67-64-1	Acetone	18.08	U
75-34-3	1,1-Dichloroethane	4.08	U
156-59-2	cis-1,2-Dichloroethene	0.76	U
78-93-3	Methyl ethyl ketone	11.73	U
110-82-7	Cyclohexane	5.10	U
71-43-2	Benzene	1.77	U
107-06-2	1,2-Dichloroethane	3.66	U
71-36-3	1-Butanol	1.84	U
108-10-1	Methyl isobutyl ketone	9.82	U
108-88-3	Toluene	8.02	U
108-90-7	Chlorobenzene	4.10	U
100-41-4	Ethylbenzene	3.57	U
108-38-3/106-42-3	m- and p-Xylene	1.92	U
95-47-6	o-Xylene	2.10	U
108-67-8	1,3,5-Trimethylbenzene	1.96	U
95-63-6	1,2,4-Trimethylbenzene	2.13	U

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

InstName : Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\131101c\
Data File : 68380.D
Acq On : 1 Nov 2013 10:00 am (#1); 01-Nov-13, 10:00:17 (#2)
Operator : SA
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Nov 01 10:08:44 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	3.516	96	5436857	205.75 ppmv	0.00
15) Chlorobenzene-d5	5.842	117	4017403	177.50 ppmv	-0.02
Target Compounds					Qvalue
1) Hydrogen	1.611	GC1	3133m	416.67 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-RTR2-13-0135
Examination Date:	12/12/2013
Waste Container ID:	68396
Video/Audio Recorded Media Number:	LA-RTR2-13-0135 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 14
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA225
Waste Matrix Code:	S5400
Waste Stream I.D.:	LA-MHD01.001
Waste Container Weights:	Gross Wt.: 150.0 kg Tare Wt.: 145.1 kg Net Wt.: 4.9 kg
Rigid Liner and Liner Vent Description:	Liner: [ ] No [X] Yes Lid: [ ] No [X] Yes Type: [ ] 30-mil [X] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [X] Yes [ ] N/A Punctured: [ ] No [X] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [X] No [ ] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 2 layers
Volume Utilization Percentage:	45 %

CCP Radiography Data Sheet

Waste Container ID: 68396

Section 3: Container Inventory and Comments (Detailed descriptions)

IM: Scrap metal

AM:

OM:

OI:

C: Tape roll

R:

XPM: Plastic bags

OR:

IN:

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):	2.7
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	
Other Inorganic Materials (OI)	
Cellulosics (C):	0.2
Rubber (R):	
Plastics (waste materials) (XPM):	2.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	
Soils (S):	
Total WMP Weight:	4.9

CCP Radiography Data Sheet

Waste Container ID: 68396

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	12/12/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	68396	Count Sequence Number:	24002
Operator:	D3PW2DK1\operator		
Assay Start:	12/17/2013 9:40:23 AM		
Description 1:	1LANDA1881		
Description 2:	POC 150.0		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Debris S5000		
Container Type:	55 gallon drum		
Weight:	Net: 4.9 kg	Net:	4.9 kg
Container:	Volume: 208.0 l	Full:	95.0 %
Density:	0.619 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:	24002	Batch Number:	1LANDA1881
Assay Instrument:	MCS HENC #1	Location:	LANL TA-54
Analysis Method:	CCP-TP-063 v 15	Software Version:	NDA 2000 V.4.0
Item ID:	68396	Analysis Date:	12/17/2013

Net Weight	4900.0 g		
Pu mass	1.66E+001	+-	7.47E+000 g
TRU Alpha Activity	3.61E+000	+-	6.32E-001 Ci
TRU Activity Concentration	7.36E+005	+-	1.29E+005 nCi/g
Pu-239 Equivalent Activity	3.65E+000	+-	6.32E-001 Ci
Pu-239 FGE	1.56E+001	+-	7.45E+000 g
Decay heat	1.17E-001	+-	2.03E-002 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
SR90	5.69E-009	7.85E-007	4.81E-007	0.00E+000
CS137	9.03E-009	7.85E-007	4.81E-007	4.49E-007
U233	<LLD	<LLD	0.00E+000	3.48E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	1.01E-006
NP237	4.53E-002	3.19E-005	5.51E-006	1.77E-006
PU238	1.52E-003	2.59E-002	1.30E-002	4.85E-004
U238	<LLD	<LLD	0.00E+000	1.02E-005
PU239	1.55E+001	9.62E-001	4.62E-001	1.80E-002
PU240	1.06E+000	2.40E-001	1.20E-001	4.49E-003
AM241	6.94E-001	2.38E+000	4.14E-001	1.06E-001
PU241	2.09E-002	2.15E+000	1.07E+000	4.01E-002
PU242	4.99E-003	1.97E-005	9.86E-006	0.00E+000
CM243	2.67E-007	1.31E-005	3.05E-006	6.43E-006

Errors quoted at 1.000 sigma

Operator: _____ Date: 12/19/13

ITR: _____ Date: 12·19·13

Automated Independent Technical Review

Count Sequence Number: 24002 Batch Number: 1LANDA1881
Counter ID: MCS HENC #1
Container ID: 68396
Waste Matrix Code: Debris S5000 Count Type:
Sequence Type: Assay Date: 12/17/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis No Add-a-Source warnings.	Ok
Section 2 - Passive Neutron Analysis Analysis Status: No errors.	Ok
Ones Rate Analysis complete with warnings. - Error calculating the Ones Rate Pu-240 Effective MDA.	Not data affecting.
Section 3 - Data Combiner Analysis Override enabled; Gamma data specified as input. Results taken from Quantitative Gamma data. Results comparison test passed.	Results taken from quantitative gamma data.
Section 4 - MGA Analysis Results are marked as invalid.	MGA analysis failed. AK isotopics applied. The AK information utilized was provided by Steve Schafer, AKE, and consists of data from CCP-AK-LANL-006, AK Source Document M237. MT-52,53,54
Section 5 - Gamma Analysis Analysis Status: No errors.	Ok
Miscellaneous	No additional nuclides contributing to 95% of the radiological hazard identified.

Expert Review by: Sheri Chamberlin Date: 12-18-13

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **68396**

BDR Number: **LA14FG2008**

Sampling Date: **1/22/2014**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	143.23	
74-82-8	Methane	142.14	U
67-56-1	Methanol	37.27	
60-29-7	Ethyl Ether	0.96	U
75-35-4	1,1-Dichloroethylene	6.38	U
67-64-1	Acetone	18.08	U
75-34-3	1,1-Dichloroethane	4.08	U
156-59-2	cis-1,2-Dichloroethene	0.76	U
78-93-3	Methyl ethyl ketone	11.73	U
110-82-7	Cyclohexane	5.10	U
71-43-2	Benzene	1.77	U
107-06-2	1,2-Dichloroethane	3.66	U
71-36-3	1-Butanol	1.84	U
108-10-1	Methyl isobutyl ketone	9.82	U
108-88-3	Toluene	8.02	U
108-90-7	Chlorobenzene	4.10	U
100-41-4	Ethylbenzene	3.57	U
108-38-3/106-42-3	m- and p-Xylene	1.92	U
95-47-6	o-Xylene	2.10	U
108-67-8	1,3,5-Trimethylbenzene	1.96	U
95-63-6	1,2,4-Trimethylbenzene	2.13	U

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

InstName : Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\140122c\
Data File : 68396.D
Acq On : 22 Jan 2014 2:05 pm (#1); 22-Jan-14, 14:04:47 (#2)
Operator : NW
Sample :
Misc : POC THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jan 22 14:13:36 2014
Quant Method : C:\msdchem\1\METHODS\VOCGAS.M
Quant Title : Flammable Gas Analysis
QLast Update : Mon Aug 26 13:12:56 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
3) Fluorobenzene	3.555	96	2836914	205.75 ppmv	0.04
15) Chlorobenzene-d5	5.861	117	2303255	177.50 ppmv	0.00
Target Compounds					Qvalue
1) Hydrogen	1.621	GC1	.1077m	143.23 ppmv	
4) Methanol	0.883	31	8448	37.27 ppmv	100

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

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0135
Examination Date:	12/12/2013
Waste Container ID:	68408
Video/Audio Recorded Media Number:	LA-RTR2-13-0135 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 14
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA225
Waste Matrix Code:	S5400
Waste Stream I.D.:	LA-MHD01.001
Waste Container Weights:	Gross Wt.: 93.5 kg Tare Wt.: 33.4 kg Net Wt.: 60.1 kg
Rigid Liner and Liner Vent Description:	Liner: [X] No [ ] Yes Lid: [X] No [ ] Yes Type: [ ] 30-mil [ ] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [ ] Yes [X] N/A Punctured: [X] No [ ] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [ ] No [X] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 2 layers
Volume Utilization Percentage:	50 %

CCP Radiography Data Sheet

Waste Container ID: 68408

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):	25.0
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	6.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	29.1
Soils (S):	
Total WMP Weight:	60.1

CCP Radiography Data Sheet

Waste Container ID: 68408

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	12/12/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	68408	Count Sequence Number:	24004
Operator:	D3PW2DK1\operator		
Assay Start:	12/17/2013 11:13:26 AM		
Description 1:	1LANDA1881		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Debris S5000		
Container Type:	55 gallon drum		
Weight:	Net: 60.1 kg	Net:	60.1 kg
Container:	Volume: 208.0 l	Full:	50.0 %
Density:	0.580 kg /l		

System Configuration

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

Errors quoted at 1.000 sigma

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number:	24004	Batch Number:	1LANDA1881
Assay Instrument:	MCS HENC #1	Location:	LANL TA-54
Analysis Method:	CCP-TP-063 v 15	Software Version:	NDA 2000 V.4.0
Item ID:	68408	Analysis Date:	12/17/2013

Net Weight	60100.0 g		
Pu mass	2.01E+001	+-	7.62E+000 g
TRU Alpha Activity	4.16E+000	+-	1.89E+000 Ci
TRU Activity Concentration	6.92E+004	+-	3.14E+004 nCi/g
Pu-239 Equivalent Activity	4.21E+000	+-	1.89E+000 Ci
Pu-239 FGE	1.89E+001	+-	7.60E+000 g
Decay heat	1.35E-001	+-	6.24E-002 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	5.11E-007
U233	<LLD	<LLD	0.00E+000	3.40E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	9.27E-007
NP237	5.09E-002	3.59E-005	5.96E-006	1.67E-006
PU238	2.39E-003	4.08E-002	1.75E-002	6.38E-004
U238	<LLD	<LLD	0.00E+000	1.17E-005
PU239	1.88E+001	1.17E+000	4.71E-001	1.82E-002
PU240	1.28E+000	2.91E-001	1.25E-001	4.54E-003
AM241	7.76E-001	2.66E+000	1.82E+000	1.09E-001
PU241	2.53E-002	2.60E+000	1.11E+000	4.06E-002
PU242	5.44E-003	2.15E-005	9.21E-006	0.00E+000
AM243	2.02E-004	4.04E-005	6.91E-006	4.62E-006

Errors quoted at 1.000 sigma

Operator: _____ Date: 12/19/13

ITR: _____ Date: 12·19·13

Automated Independent Technical Review

Count Sequence Number: 24004 Batch Number: 1LANDA1881
Counter ID: MCS HENC #1
Container ID: 68408
Waste Matrix Code: Debris S5000 Count Type:
Sequence Type: Assay Date: 12/17/2013

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; Gamma data specified as input.	Results taken from quantitative gamma data.
Results taken from Quantitative Gamma data.	
Results comparison test passed.	
Section 4 - MGA Analysis	MGA analysis failed. AK isotopics applied. The AK information utilized was provided by Steve Schafer, AKE, and consists of data from CCP-AK-LANL-006, AK Source Document M237. MT-52,53,54
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: 12-19-13

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **68408**

BDR Number: **LA13FG12133**

Sampling Date: **12/20/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	3.39	U
74-82-8	Methane	6.56	U
67-56-1	Methanol	2.17	
60-29-7	Ethyl Ether	0.12	U
75-35-4	1,1-Dichloroethylene	0.20	U
67-64-1	Acetone	0.42	U
75-34-3	1,1-Dichloroethane	0.72	U
156-59-2	cis-1,2-Dichloroethene	0.09	U
78-93-3	Methyl ethyl ketone	0.90	U
110-82-7	Cyclohexane	0.59	U
71-43-2	Benzene	0.17	U
107-06-2	1,2-Dichloroethane	0.56	U
71-36-3	1-Butanol	0.38	U
108-10-1	Methyl isobutyl ketone	0.66	U
108-88-3	Toluene	0.93	U
108-90-7	Chlorobenzene	0.67	U
100-41-4	Ethylbenzene	0.59	U
108-38-3/106-42-3	m- and p-Xylene	0.38	U
95-47-6	o-Xylene	0.36	U
108-67-8	1,3,5-Trimethylbenzene	0.65	U
95-63-6	1,2,4-Trimethylbenzene	0.78	U

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

Quantitation Report (QT Reviewed)

InstName : FGA Unit 12

Data Path : C:\msdchem\1\DATA\131220c\
Data File : 68408.D
Acq On : 20 Dec 2013 1:39 pm (#1); 20 Dec 2013 1:38 pm (#2)
Operator : SA
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Dec 20 13:47:33 2013
Quant Method : C:\msdchem\1\METHODS\VOCGAS.M
Quant Title : Flammable Gas Analysis for Transportation Only
QLast Update : Tue Dec 03 09:52:38 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
3) Fluorobenzene	4.057	96	7394058	207.75 ppmv	0.00
15) Chlorobenzene-d5	6.636	117	6010879	178.75 ppmv	0.00
Target Compounds					Qvalue
4) Methanol	0.831	31	847	2.17 ppmv	100

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

38
~~40~~ EL1-1514

S842526

S842526

Container 747168

File Options Reports Help

S842526

747168	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

S842526

- S842526
  - LA00000068509
    - LASB50018
  - LA00000069060
    - LASB50100
  - LA00000069142 -EMPTY
  - LA00000069067
    - LASB50015

ATTACHMENT 1
Page 1 of 4

Working Copy
Date: 12/15/13 HS

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: S842526

6.2[4] Date Processed: 12-15-13

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

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

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

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

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

4.3[4][B] Platform Scale: Equipment No.: 019065
Cal. Due Date: 10-19-14

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

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

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

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

Performed By: Frederick Rebolete / [signature] / 122556 / 12-15-13
Waste Handling Tech (print) Signature Z # Date

ATTACHMENT 1
Page 2 of 4

4.1[6][B] Parent Waste Container No.: 5842526

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

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

6.2[5][B]/ 6.2[6] Total Parent Drum Weight (lb) 379.0 lb

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

6.2[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.: S842526

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	69060	69067		
10.1[4]	Daughter Drum Filter No.	JL-896	JL-857	N/A	
10.1[4]	Daughter Drum Bag Filter No.	L-10137	L-10369		
10.1[4]	Daughter Drum Purchase Order No.	501892	501892		
10.1[13][C]	WCG Fire Watch Stationed		☐ YES	☐ NO	☑ N/A
10.1[14][C][d]3/11.1[3]	WCG Fire Watch Secured		☐ YES	☐ NO	☑ N/A
10.2[4]	POC bag-on bag: Manufacturer	BOP			
	Model No.	6 CHS 15-25NC			
	Serial No.	L-10286			
	Date of Manufacture	5-13			
10.2[5]	POC ID No	68509			
10.2[7][B]/10.2[6]	POC Item Description	Nitrate salt + kitty litter		N/A	
10.2[13]	POC Assembly closed per Manufacturer's instructions. (Initial and Z#)	JM 228826			
10.2[14]	POC Assembly Gross Weight (lb)	369.8			
10.2[15]	POC Rad. Survey Results (mrem/hr)	1.5 R			
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	lead shielding		
10.3[9][A]	PCB-contaminated Waste Description	N/A	N/A		
10.3[9][B]	PCB Item ID No.			N/A	
10.3[10]	Remaining Waste Description	See comments	See comments		
10.3[13]/10.4[10]/ 10.5[4]/10.6[10]	Daughter Drum % Full (%)	70 %	60 %		
10.5[3]/10.6[2]	Description Waste Added During Processing	kitty litter	kitty litter stab out bags		

ATTACHMENT 1
Page 4 of 4

4.1[6][B] Parent Waste Container No.: S 842526

Comments: Plastic, Room trash, Nitrate Salts, lead shielding, Kitty litter

11.1[1] Performed By: Frederick [illegible] / [signature] 1278826 / 12-15-13
Waste Handling Tech (print) Signature Z # Date

11.1[8] Reviewed By: Clayton Mullins / [signature] 1240092 / 1/23/14 1522
SOS or designee (print) Signature Z # Date/Time

Working Copy
Date: 12/15/13 HD

ATTACHMENT 2
Page 1 of 1

WCRRF OVERPACK DRUM ASSEMBLY PREPARATION DATA SHEET

5.[3] Overpack drum information:
Purchase Order No.: _____
Lot No.: _____
Manufacture Date: _____

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

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

N/A

Overpack filtered vent information:
Manufacturer: _____
Model No.: _____
Serial No.: _____
Manufacture Date: _____

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

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

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

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

Comments: Drum not prepd at WCRRF

8.1[1] Performed By: Federico Acebedo / [signature] 1228826 / 12-15-13
Waste Handling Technician (print) Signature Z # Date

8.1[6] Reviewed By: Clayton Mullins / CA 1240096 1/23/14
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 5
Page 1 of 1

Working Copy
Date: 12/15/13 HS

WCRRF OVERPACK DRUM CLOSURE DATA SHEET

7.[17] Overpack Drum Unique Identifier No.: 69142

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

M&TE No.: 038369
Cal. Expiration Date: 12-18-13
Range in ft-lb: 16-80
Tolerance: +/- 3% cw +/- 6% ccw

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

Performed By: Frederick Archuleta / [signature] 1228826 / 12-15-13
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): 236.8 lb

Comments: N/C

8.1[1] Performed By: Frederick Archuleta / [signature] 1228826 / 12-15-13
Waste Handling Technician (print) Signature Z # Date

8.1[7] Reviewed By: Clayton Mellen / [signature] 1240092 / 1/23/14
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 1
Page 1 of 2

Working Copy
Date: 12/13/13 HS

WCRRF DRUM PREPARATION DATA SHEET

5.[34][E] Drum ID No.: 69060

5.[3] Drum information:
Purchase Order No.: 501892
Lot No.: 0244449
Manufacture Date: 2013

5.[17] Drum Liner Bag/Filter Assembly:
Manufacturer: BOP
Model No.: 6CPVC15 2SPVC
Serial No.: L-10137
Manufacture Date: 5/13

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	8-05-14
Range:	40-200 in-lb	16-80 ft-lb
Tolerance (+/-):	±4% CW ±6% CCW	±3% CW ±6% CCW

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

Performed By: BRIAN GALLEGOS / [signature] / 1287129 / 12-13-13
Operator (print) Signature Z # Date

5.[23] Filtered vent information:
Manufacturer: NUCFIL
Model No.: G19DS
Serial No.: JL-896
Manufacture Date: 10/11

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

5.[29][B] 2 in. bung plug torque value: 32 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.: 69060

Comments: N/C

5.[35] Performed By: BRIAN GALLEGOS / Brian Gallegos / 1267129 / 12-13-13
Operator (print) / Signature / Z # / Date

7.1[4] Reviewed By: Clayton Mullins / CM / 1240921 / 1/23/14
Supervisor or designee (print) / Signature / Z # / Date

ATTACHMENT 2
Page 1 of 2

WCRRF DRUM CLOSURE DATA SHEET

6.[3] Drum ID No.: 69060

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

M&TE No.: 038369
Cal. Expiration Date: 12-18-13
Range: 16-80 ft-lb
Tolerance (+/-): +/-3% cw + +/-6% ccw

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

Performed By: Melinda Stewart / Melinda Stewart 1277268 / 12-15-13
Operator (print) Signature Z # Date

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

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

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

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

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

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

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

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

ATTACHMENT 2
Page 2 of 2

6.[3] Drum ID No.: 69060

6.[26] Scale File ID number: 09065

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

6.[28] Drum gross weight: 210 0 lbs

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

Comments: N/C

6.[32] Performed By: Frederick Ochlek / [signature] 1228826 / 12-15-13
Operator (print) Signature Z # Date

7.1[4] Reviewed By: Clayton Mullins / [signature] 1240061 / 1/23/14
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 1
Page 1 of 2

Working Copy
Date: 12/13/13 HS

WCRRF DRUM PREPARATION DATA SHEET

5.[34][E] Drum ID No.: 69067

5.[3] Drum information:
Purchase Order No.: 501892
Lot No.: JL 12-18-13 ~~024449~~ 0244449
Manufacture Date: 2013

5.[17] Drum Liner Bag/Filter Assembly:
Manufacturer: BOP
Model No.: JL 12-18-13 ~~3cpvc-1.5-25pvc~~ 6cpvc-1.5-25pv
Serial No.: L-10369
Manufacture Date: 6-13

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

	Filtered Vent	2 in. Bung
M&TE No.:	100216	036245
Cal. Expiration Date:	12-18-13	08-5-14
Range:	40-200 in-lb	16-80 ft-lb
Tolerance (+/-):	+-4%cw +-6%ccw	+-3%cw +-6%ccw

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

Performed By: Justin Lopez (Operator (print)) [signature] (Signature) 266[illegible] (Z #) 12-13-13 (Date)

5.[23] Filtered vent information:
Manufacturer: Nucfil
Model No.: 019DS
Serial No.: JL-857
Manufacture Date: 10-11

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

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

5.[30] Scale File ID number: 019065

ATTACHMENT 1
Page 2 of 2

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

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

5.[34][E] Drum ID No.: ~~69076~~ 69067 12 15-13

Comments: N/A

5.[35] Performed By: Frederick [illegible] / [signature] 1228524 / 12-15-13
Operator (print) Signature Z # Date

7.1[4] Reviewed By: Clayton Mullins / [signature] 240092 / 1/23/14
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 2
Page 1 of 2

WCRRF DRUM CLOSURE DATA SHEET

6.[3] Drum ID No.: 69067 ~~69076~~ 12-15-13

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

M&TE No.: 0383169
Cal. Expiration Date: 12-18-13
Range: 16 - 80 ft-lb
Tolerance (+/-): +/- 3% cw +/- 6% ccw

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

Performed By: Frederick [illegible] / [illegible] 1223826 / 12-15-13
Operator (print) Signature Z # Date

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

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

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

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

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

Performed By: Frederick [illegible] / [illegible] 1223826 / 12-15-13
Operator (print) Signature Z # Date

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

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

ATTACHMENT 2
Page 2 of 2

6.[3] Drum ID No.: ~~69076~~ 69067 12-15-13

6.[26] Scale File ID number: 019065

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

6.[28] Drum gross weight: 246.2 lbs

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

Comments: N/C

6.[32] Performed By: Federico Hallista / [signature] / 122884 / 12-15-13
Operator (print) Signature Z # Date

7.1[4] Reviewed By: Clayton Mullins / CA / 240091 / 1/23/14
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 3
Page 1 of 1

Working Copy
Date: 12/15/13 HS

WCRRF PARENT 55-GAL DRUM PREPARATION DATA SHEET

6.3[21] Prepared Parent 55-Gal Drum Number: S842526

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): 379.0

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

Comments: N/C

8.1[1] Performed By: Federico Bebelata / [signature] 1278826 / 12-15-13
Waste Handling Technician (print) Signature Z # Date

8.1[7] Reviewed By: Clayton McNiles / [signature] 1240096 / 1/23/14
Supervisor or designee (print) Signature Z # Date

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

8.1[8][D] Approved by: Gilbert Ng / [signature] 1N9235 / 1/21/14 0:00
SOS/SOM or designee (print) Signature Z # Date Time

1930 SP72

LTP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Planning and Technical Solutions

Container ID: S842526 Container Type: 85 GAL DRUM Gross Weight (lbs): 399.987
Total PE-Ci Activity: 1.68E+01 Equivalent Combustible PE-Ci: 6.30E+00
Total Fissile Gram Equivalents: 1.82E+02 Total Surface Dose Rate (mrem/hr): 28
EPA Code(s): D007; D008; D009
Waste Description: Nitrate salts

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

Drum venting and gas sampling completed on 2/26/13 and Attachment 3 of DOP-1030 is attached. RTR pre-screen indicates impenetrable object most likely due to lead liner.

Potential Safety Risks: Nitrate salt drums often contain free liquids and are packaged in individual plastic bags. Net weight is ~238 lbs. and generator data shows 13 items of nitrate salts with weights ranging from ~~[illegible]~~ 34 lbs.

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

IHS Representative

Potential IHS Safety Risks: May contain D007, D008, and D009 materials May contain free liquids.

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

LTP Engineering

Waste container remediation compliant with applicable facility safety basis requirements: ☒ Yes ☐ No
Engineering Comments: NA
Performed By: Valerie Rhodes | Valerie Rhodes | 112609 | 9/30/13
LTP Engineering (Print) | Signature | Z# | Date

TRU Remediation Operations

Potential Safety Risks: Use Proper PPE and Kitty Litter Ratio

Performed By: Gilbert Martinez | [illegible] | 1149735 | 11/13/13
TRU Operations (Print) | Signature | Z# | Date

Operations Manager or designee

Processing Determination: ☒ Accept ☐ Reject
OM or designee Comments: Do not push or press on waste with hands, use heavy duty gloves during processing.

Approved By: David L. Blain | [illegible] | 1218569 | 11/14/13
OM or designee (Print) | Signature | Z# | Date

~~Jose Sanez~~ | [illegible] | 11/19/13 | 221452 | 11/19/13
Jose Perez | [illegible] | 221452 | 11/21/13

Noncertified TRU Waste Drum Item Information

DrumID: 015233

Item No	ItemID	Process Status	Net Wt (kg)	Matrix	Meas Code	SNM (g)	MT	Auth (Pg/Ln)		Comments
1	IXFS-975-FA		7.950	NITRATE SALTS		28.82	52	6/14	G465	
2	IXFS976-FA		5.910	NITRATE SALTS		4.23	52	6/14	G465	
3	I9780C54A		15.620	NITRATE SALTS		6.28	53	6/14	G465	
4	IXFS977-FA		6.820	NITRATE SALTS		0.	52	6/14	G465	
5	IXFS980-FA		10.910	NITRATE SALTS		48.48	52	6/14	G465	
6	IXFS-979-F1		2.950	NITRATE SALTS		0.	52	6/14	G465	
7	OXFTL56		5.220	NITRATE SALTS		26.01	52	6/14	G465	
8	I9810X55A		11.820	NITRATE SALTS		36.41	52	6/14	G465	
9	IXFS-983FA		7.500	NITRATE SALTS		22.16	52	6/14	G465	
10	IXFS-984-FA		7.730	NITRATE SALTS		15.42	52	6/14	G465	
11	IXFS-987-FA		8.180	NITRATE SALTS		4.24	52	6/14	G465	
12	IXFS989FA		12.720	NITRATE SALTS		0.76	42	14/12	G465	
13	IXFS991FA		5.000	NITRATE SALTS		1.52	52	6/14	G465	

Noncertified Waste Drum Material Summary

Gross Wt (kg): 181.4

Material Type	SNM (grams)	Items Net Wt (kg)
42	0.76	12.72
52	187.29	79.99
53	6.28	15.62
Totals	194.33	108.33

LET

ATTACHMENT 3
Page 1 of 3

TA-54 AREA G DRUM VENTING DATA SHEET

[2] Waste Container Unique Identifier: S842526

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

[5] (S) Personnel have exited the 30-ft standoff distance. (SAC 5.6.4.3)

55-gal drum: ☑ SAT ☐ UNSAT ☐ N/A

85-gal drum: ☐ SAT ☐ UNSAT ☑ N/A

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

[9] Head Space Gas sample results

	85-gal (☑ N/A)	55-gal (☐ N/A)
Hydrogen	____ %	0.374052 %
Methane	____ ppm	0.000 ppm
VOC	____ ppm	50.74 ppm
Filter Vent Unique Identifier No.	____	AN-363
Filter Vent Installed		
Stub Stem (e.g., NucFil-007S)	☐ (☑ N/A)	☐ (☑ N/A)
Short Stem (e.g., NucFil-7DS)	☐ (☑ N/A)	☐ (☑ N/A)
Long Stem (e.g., NucFil-08DS)	☐ (☑ N/A)	☑ (☐ N/A)

UET

ATTACHMENT 3
Page 2 of 3

7 [2] Waste Container Unique Identifier: S842526

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

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

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

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

- 85-gal Waste Container ____ ☑ N/A
- 55-gal Waste Container ____ ☑ N/A

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

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

ATTACHMENT 3
Page 3 of 3

7 [2] Waste Container Unique Identifier: S842526

7 [11][B][f] Number of WIPP-approved filtered vents installed:
- 85-gal Waste Container _____ ☐ N/A
- 55-gal Waste Container _____ ☐ N/A

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

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

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

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

7 [13][A] (S) 55-gal waste containers to be transferred to WCRRF satisfy the following criteria (WCRRF SAC 5.10.2.3.4.a): ☑ SAT ☐ UNSAT ~~☑ N/A~~ 130013
- Hydrogen concentration less than or equal to 2.4% (24,000 ppm)
- VOC less than or equal to 5,250 ppm

Comments: N/A

7 [11][M] Performed By: Chris Vigil 163082 2-26-13
7 [23] EEP-DOP Supervisor Designee (Print) Signature Date

7 [13] Electrical space heaters ON and thermostat set: ☑ SAT ☐ UNSAT

7 [14] Reviewed By: Chris Vigil 163082 2-26-13
EEDF Supervisor Designee (Print) Signature Date

DVS Gas Determination Results Report

Date: 2/26/2013

Waste Container Number: S842526

Batch Number: DVS2130226

Filter Type Installed: 08DS

Number of Filters Installed:

Flammable Volatile Organic Compounds (VOCs)

Compound	Concentration (ppmV)	Upper Calibration Range (ppmV)	Exceeds Calibration (Y/N)	Calculated Value (if exceeds calibration)
Methanol	30.47	1591.00	N	N/A
Diethyl Ether	0	503.00	N	N/A
1,1 Dichloroethene	0	402.80	N	N/A
Acetone	16.52	1502.00	N	N/A
1,1-Dichloroethane	0	400.80	N	N/A
Cis 1,2-Dichloroethene	0	400.20	N	N/A
Methyl Ethyl Ketone	0	1503.00	N	N/A
Cyclohexane	0	497.30	N	N/A
Benzene	1.34	1492.00	N	N/A
1,2-Dichloroethane	2.41	400.80	N	N/A
N-Butyl Alcohol	0	200.20	N	N/A
Methyl Isobutyl Ketone	0	501.90	N	N/A
Toluene	0	1491.00	N	N/A
Chlorobenzene	0	186.60	N	N/A
Ethylbenzene	0	100.00	N	N/A
m,p-Xylene	0	100.09	N	N/A
o-Xylene	0	100.30	N	N/A
1,3,5-Trimethylbenzene	0	50.64	N	N/A
1,2,4-Trimethylbenzene	0	50.17	N	N/A

Flammable Tentative Identified Compounds (TIC)

Compound	Concentration (ppmV)	CAS Number
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

Total Flammable VOCs	50.74	I.V.R. Intial and Date	JAB 2/26/13

Compound	Concentration		Upper Calibration Range		Exceeds Calibration (Y/N)
Hydrogen	0.374052	%	6.45	%	N
Methane	0.000	ppm	15990.00	ppm	N

Comments:

AN-363

Doug Fiste — DVS Operator Print Name

Signature

02-26-13 — Date

12-15-13

0550 ASSUMING WCRR OPS CENTER POSITION H SMITH
0550 STARTING OUT SIDE ROUNDS
0606 OUTSIDE ROUND COMPLETED
0610 STARTING PRE-JOB BRIEFING
0614 STARTING INSIDE ROUNDS
0628 ITEM #63 INSIDE ROUNDS OOS, PDD IN PLACE. PERMISSION TO PROCEED PER CSE DOCUMENTATION
0640 ~~0t~~ 145 12/15/13 INSIDE ROUNDS COMPLETED
0656 INSIDE AND OUTSIDE ROUNDS REVIEWED BY SDS
0736 BAGGING ON 68738
0747 BAG ON COMPLETED
0751 OPERATORS NOTIFIED OPS CENTER CAMS ELEVATED AFTER BAG ON, RCT'S CHECKING AND WILL NOTIFY
0753 OPERATORS NOTIFIED OPS. CENTER, RCT STATES CAM A LITTLE ELEVATED, BACK TO NORMAL RANGE AND RELENSE ROOM FOR PROCESSING. CONTINUING TO PROCESS
0858 BAGGING OFF - BAGGING ON 1 DAUGHTER
0913 BAG ON COMPLETED
0958 BEGIN DENESTING 4 DRUMS
1014 OPERATORS CALLED OUT WHILE DENESTING S842526 FOUND HOLES IN LID. THEY FILLED HOLES WITH SILOCONE AND TAPED, ALSO TOOK PICTURES AND CONTINUED DENESTING.
1105 RCT'S NOTIFIED OPS. CENTER CAMS ALARM ~~[illegible]~~ 12/15/13 HS LOW FLOW ALARM, WILL NEED TO CHANGE FILTERS AND RESET AFTER DENESTING
1136 BAG ON, BAG OFF, DENESTING COMPLETED, BAGGED ON S842525
1146 LATE ENTRY: MODE CHANGE TO OPERATIONS IN WCRR YARD AND TA50-69 AT 0703 HS
1330 BAGGING OFF 1 DAUGHTER, 1 POC, BAGGING ON DAUGHTER
HS 1354 BAG ON-BAG OFF COMPLETED, CONTINUING TO PROCESS
1415 PERMISSION GRANTED TO BEGIN MOVEMENT INTO TA 50-69
1429 MOVEMENT INTO TA50-69 COMPLETED
1440 STARTING OUTSIDE ROUNDS
1451 BAGGING OFF BAGGING ON 67835
12/15/13 1453 CONTINUED IN NEW LOG BOOK H SMITH

12-15-13 CONTINUED FROM PREVIOUS LOGBOOK H SMITH
1459 COMPLETED OUTSIDE ROUNDS
1522 BAG OFF - BAG ON COMPLETED
1603 PERMISSION GRANTED TO MOVE WASTE FROM TA50-69 TO TA50-194
1604 OPERATORS NOTIFIED OPS CENTER BOX SMOULDERIN AND TURNING ORANGE CLOUD. NOTIFYING I.H.
1608 ITEM # 63 INSIDE ROUNDS OOS. POD IN PLACE, PERMISSION TO PROCEED PER CSE DOCUMENTATION
1613 INSIDE ROUNDS COMPLETED
1628 MOVEMENT TO TA50-75 FROM TA50-69 IS COMPLETED 9 CONTAINERS MOVED FROM TA50-69.
1635 OPERATORS NOTIFIED OPS CENTER OF REACTION DUE TO
ABNORMAL EVENT FAST CHEMICAL CHANGE WHEN NUETRALIZER WA ADDED IN THE BOX. OPERATORS ADDED MORE KITTY LITTER WHICH SLOWED THE PROCESS. IH IS OBSERVING AND HAS GIVEN PERMISSION TO CONTINUE PROCESSING.
1638 LATE ENTRY: OPERATORS NOTIFIED OPS CENTER OF HS 12-15-1 SMOULDERING IN BOX DISCHARGING ORANGE CLOUD. NOTIFIED SOM & SOS AND IH. AT 1632. HS
1654 BAGGING OFF - BAGGING ON 1 DAUGHTER
1702 I-H INFORMED OPS. CENTER OF NO MORE REACTION TO LIQUID, AND WILL CONTINUE TO PROCESS.
1712 BAG ON, BAG OFF COMPLETE OF DAUGHTER
1713 INSIDE AND OUTSIDE ROUNDS REVIEW BY SOS
1731 BAGGING OFF 2ND DAUGHTER AND INSTALLING PORT COVER
1802 BAG OFF COMPLETE
1805 WCG RECEPTACLE HAS BEEN TURNED ON
1811 MODE CHANGE DECREASE TO WARM - WARM STANDBY
12-15-13 1830 END OF DAY, WCRR OPS CENTER SECURED H SMITH

NO FURTHER ENTRIES ON THIS PAGE H SMITH

12/15/13 WCRR SOM

0600 Assumed the WCRR SOM position.

0635 Completed pre job brief conducted by SOS. Safety topic from IH was to keep focused on last day of shift. House Keeping of WCG to be performed @ end of shift w/ thorough glove inspections. Challenged operators to improve efficiencies of operations - one idea was to have enough glove expanders to prep all gloves prior to donning respirators - currently have 2 inside 50-69. Due to changing to SP72 processing, outside PIC is accumulating materials required i.e. Kitty litter, neutralizer, etc.

0654 Inside / Outside rounds reviewed w/ TSR Tracking sheet updated / status board updated.

0703 Completed Mode Change: WCRR Yard / Blds 50-69 from Warm / Warm to Operations / Operations.

0747 Completed bag on of drum # 68738.

0751 Operators notified OCO of slightly elevated CAMs, RP-1 invest.

0753 RP-1 reported that CAMs are reading normal - continuing to process.

0913 Completed bag off of 1 daughter - continuing to process.

0958 Operators beginning to denest 4 drums (→ 12/15/13 SP 72's)

1014 While denesting drum # 5842524 operators encountered a hole in the lid of inner drum. They filled the holes w/ silicon and taped over, Pictures were taken and continued to denest

1105 RP-1 reported to ops center they have a low flow alarm on CAMs CAMs still functional and filters will be changed after denesting completed.

1136 Denesting is completed. All bag offs completed for drum # 68738 (2 daughters total) Completed bag on of drum # 5842524.

1215 RP-1 lead reported that all CAM filters were changed out despite only 1 was alarming — others were indicating getting close to low flow set points and Monday is scheduled change out day.

1354 Completed bag off of 1 daughter and 1 POC - continuing to process

1400 SOS update from 412 operations - had an operator become sick so will complete SWB ~~bag~~ 12/15/13 denest in progress. Another operator is being provided from Dome 375 operations to assist

continued on next page →

12/15/13 WCRR SOM continued.

1423 Relieved by L. Jalbert as SOM.

1423 ASSUMED SOM DUTIES.

1604 During neutralization of 300 parent liquids (pH of 4 → pH of 7), orange/brown vapors appeared. Pause called, workers stepped back and IH investigated. IH was onbox at time. Minor exothermic reaction. No damage to bags, gloves or tooling. Not unusual for most neutralization concern Nitric acid.

~~1623~~ Move out commences (a containers)

12/15/13 1635 Ops resumed - IH considered it a "fast" reaction

1652 ~~1756~~ Bag off 1st daughter, bag on second daughter commences

1702 IH concludes observation of neutralization activities.

1712 bag on, bag off of daughters complete

1738 bag off commences for second daughter, parent, install port covers

1811 Mode change: Operations/operations to warm/warm for site/facility

1812 LATE ENTRY T1755: BAG OFFS COMPLETE

1830 SECURE SOM SHIFT.

No further entries this page

55

12-15-13

0700 Assuming WCRRF SOS position at Charlie

0615 pre job being conducted briefed to being safe while digesting, plate changes and efficiency

0635 Pre job concluded.

0656 Rounds acquired OK

0730 Bagging on U8735

0747 Bag on completed

0858 Bagging on 1 daughter, bagging off 1 daughter

0913 Bag on complete

0948 Starting to digest 4 drums

1136 Bag on, Bag off completed bagged on SS842526 and completed digesting

1157 late entry - mode change to operations inside TASF and WCRRF yard at 703 Charlie

1330 Starting bag off of 1 daughter and 1 POC will be bagging on another daughter

1354 Bag on, Bag off complete

1415 Starting movement into SC 69.

1439 movement into SC 69 is complete.

1440 Starting at 12-15-13 outside rounds.

1455 Bagging off, bagging on U7835

1459 completed outside rounds

1522 Bag on, bag off complete

1603 Starting movement into transportainers

1604 notified by CPO center of conditioning liquid and turning into thick smoke inside plane OK 1H has been notified

1613 (inside rounds) complete

1649 movement out of SC 69 complete

1635 1H notified that reaction in WCG was caused from a past chemical change when neutralizer was added. OK to continue processing.

1654 Bagging on 1 daughter, bagging off 1 daughter

1712 Bag on, bag off complete

1723 Rounds acquired

1755 starting bag off and unloading POC cells

1803 Bag on, Bag off complete

1805 WCG reciprocate has been turned on

1811 mode change performed to warm standby in SC 69 and WCRRF yard

1832 End of day SOS position secure site safe

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-RTR2-13-0138
Examination Date:	12/19/2013
Waste Container ID:	68509
Video/Audio Recorded Media Number:	LA-RTR2-13-0138 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.: 167.5 kg Tare Wt.: 145.1 kg Net Wt.: 22.4 kg
Rigid Liner and Liner Vent Description:	Liner: [ ] No [X] Yes Lid: [ ] No [X] Yes Type: [ ] 30-mil [X] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [X] Yes [ ] N/A Punctured: [ ] No [X] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [X] No [ ] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 1 layer
Volume Utilization Percentage:	75 %

CCP Radiography Data Sheet

Waste Container ID: 68509

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):	22.4
Soils (S):	
Total WMP Weight:	22.4

CCP Radiography Data Sheet

Waste Container ID: 68509

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	12/19/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	68509	Count Sequence Number:	24053
Operator:	D3PW2DK1\operator		
Assay Start:	1/3/2014 11:04:15 AM		
Description 1:	1LANDA1886		
Description 2:	POC 167.5		
Location:	LANL TA-54		
Comment:	AK-6, MT-42		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 22.4 kg	Net:	22.4 kg
Container:	Volume: 208.0 l	Full:	95.0 %
Density:	0.707 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:	24053	Batch Number:	1LANDA1886
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:	68509	Analysis Date:	1/3/2014

Net Weight	22400.0 g		
Pu mass	1.51E+001	+-	9.68E+000 g
TRU Alpha Activity	5.41E+000	+-	3.03E+000 Ci
TRU Activity Concentration	2.41E+005	+-	1.35E+005 nCi/g
Pu-239 Equivalent Activity	5.44E+000	+-	3.03E+000 Ci
Pu-239 FGE	1.42E+001	+-	9.66E+000 g
Decay heat	1.77E-001	+-	1.00E-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	6.41E-007
U233	<LLD	<LLD	0.00E+000	5.47E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	1.78E-006
NP237	7.91E-002	5.58E-005	1.04E-005	2.64E-006
PU238	1.38E-003	2.36E-002	1.65E-002	6.83E-004
U238	<LLD	<LLD	0.00E+000	1.25E-005
PU239	1.41E+001	8.75E-001	5.99E-001	2.53E-002
PU240	9.18E-001	2.08E-001	1.46E-001	6.04E-003
AM241	1.25E+000	4.30E+000	2.96E+000	1.25E-001
PU241	1.81E-002	1.86E+000	1.30E+000	5.39E-002
PU242	5.59E-002	2.21E-004	1.55E-004	0.00E+000
CM243	6.19E-006	3.03E-004	5.81E-005	1.32E-005

Errors quoted at 1.000 sigma

Operator: _____ Date: 1-7-14

ITR: _____ Date: 1.9.14

Automated Independent Technical Review

Count Sequence Number: 24053
Batch Number: 1LANDA1886
Counter ID: MCS HENC #1
Container ID: 68509
Waste Matrix Code: Homo Sol. S3000
Count Type:
Sequence Type:
Assay Date: 1/3/2014

Comments	Disposition
Section 1 - Add-A-Source Analysis No Add-a-Source warnings.	Ok
Section 2 - Passive Neutron Analysis Analysis Status: No errors.	Ok
Ones Rate Analysis complete with warnings. - Error calculating the Ones Rate Pu-240 Effective MDA.	Not data affecting.
Section 3 - Data Combiner Analysis Override enabled; Gamma data specified as input. Results taken from Quantitative Gamma data. Results comparison test passed.	Results taken from quantitative gamma data.
Section 4 - MGA Analysis Results are marked as invalid.	MGA analysis failed. AK isotopics applied. The AK information utilized was provided by Steve Schafer, AKE, and consists of data from CCP-AK-LANL-006, AK Source Document M237. MT-52,53,42
Section 5 - Gamma Analysis Analysis Status: No errors.	Ok
Miscellaneous	No additional nuclides contributing to 95% of the radiological hazard identified.

Expert Review by: Sherri Chandler Date: 1-6-14

Waste Container ID: **68509**

BDR Number: **LA14FG2008**

Sampling Date: **1/22/2014**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	862.86	
74-82-8	Methane	142.14	U
67-56-1	Methanol	35.23	U
60-29-7	Ethyl Ether	0.96	U
75-35-4	1,1-Dichloroethylene	6.38	U
67-64-1	Acetone	18.08	U
75-34-3	1,1-Dichloroethane	4.08	U
156-59-2	cis-1,2-Dichloroethene	0.76	U
78-93-3	Methyl ethyl ketone	11.73	U
110-82-7	Cyclohexane	5.10	U
71-43-2	Benzene	1.77	U
107-06-2	1,2-Dichloroethane	3.66	U
71-36-3	1-Butanol	1.84	U
108-10-1	Methyl isobutyl ketone	9.82	U
108-88-3	Toluene	8.02	U
108-90-7	Chlorobenzene	4.10	U
100-41-4	Ethylbenzene	3.57	U
108-38-3/106-42-3	m- and p-Xylene	1.92	U
95-47-6	o-Xylene	2.10	U
108-67-8	1,3,5-Trimethylbenzene	1.96	U
95-63-6	1,2,4-Trimethylbenzene	2.13	U

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

InstName : Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\140122c\
Data File : 68509.D
Acq On : 22 Jan 2014 1:09 pm (#1); 22-Jan-14, 13:08:45 (#2)
Operator : NW
Sample :
Misc : POC THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jan 22 13:17:14 2014
Quant Method : C:\msdchem\1\METHODS\VOCGAS.M
Quant Title : Flammable Gas Analysis
QLast Update : Mon Aug 26 13:12:56 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
3) Fluorobenzene	3.578	96	2905883	205.75 ppmv	0.06
15) Chlorobenzene-d5	5.881	117	2343146	177.50 ppmv	0.02
Target Compounds					Qvalue
1) Hydrogen	1.614	GC1	6488m	862.86 ppmv	

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

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0138
Examination Date:	12/19/2013
Waste Container ID:	69060
Video/Audio Recorded Media Number:	LA-RTR2-13-0138 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 14
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3110
Waste Stream I.D.:	LA-MIN02-V.001
Waste Container Weights:	Gross Wt.: 95.0 kg Tare Wt.: 33.4 kg Net Wt.: 61.6 kg
Rigid Liner and Liner Vent Description:	Liner: [X] No [ ] Yes Lid: [X] No [ ] Yes Type: [ ] 30-mil [ ] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [ ] Yes [X] N/A Punctured: [X] No [ ] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [ ] No [X] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 2 layers
Volume Utilization Percentage:	50 %

CCP Radiography Data Sheet

Waste Container ID: 69060

Section 3: Container Inventory and Comments (Detailed descriptions)

IM: Scrap metal

AM:

OM:

OI:

C:

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):	0.2
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	5.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	56.4
Soils (S):	
Total WMP Weight:	61.6

CCP Radiography Data Sheet

Waste Container ID: 69060

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	12/19/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	69060	Count Sequence Number:	24087
Operator:	D3PW2DK1\operator		
Assay Start:	1/10/2014 4:03:00 PM		
Description 1:	1LANDA1888		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6, MT-42		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 61.6 kg	Net:	61.6 kg
Container:	Volume: 208.0 l	Full:	50.0 %
Density:	0.590 kg /l		

System Configuration

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

Errors quoted at 1.000 sigma

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number:	24087	Batch Number:	1LANDA1888
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:	69060	Analysis Date:	1/10/2014

Net Weight	61600.0 g		
Pu mass	7.33E+001	+- 2.05E+001	g
TRU Alpha Activity	1.15E+001	+- 4.38E+000	Ci
TRU Activity Concentration	1.86E+005	+- 7.12E+004	nCi/g
Pu-239 Equivalent Activity	1.17E+001	+- 4.39E+000	Ci
Pu-239 FGE	6.88E+001	+- 2.04E+001	g
Decay heat	3.71E-001	+- 1.45E-001	W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	1.14E-006
U233	<LLD	<LLD	0.00E+000	1.02E-002
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	3.07E-006
NP237	1.66E-001	1.17E-004	1.96E-005	4.94E-006
PU238	6.69E-003	1.14E-001	3.78E-002	1.29E-003
U238	<LLD	<LLD	0.00E+000	2.13E-005
PU239	6.85E+001	4.25E+000	1.27E+000	4.77E-002
PU240	4.46E+000	1.01E+000	3.34E-001	1.14E-002
AM241	1.78E+000	6.11E+000	4.18E+000	2.18E-001
PU241	8.76E-002	9.02E+000	2.98E+000	1.01E-001
PU242	2.72E-001	1.07E-003	3.54E-004	0.00E+000
AM243	2.66E-003	5.32E-004	9.04E-005	1.44E-005

Errors quoted at 1.000 sigma

Operator: _____ Date: 1/14/14

ITR: _____ Date: 1.14.14

Automated Independent Technical Review

Count Sequence Number: 24087 Batch Number: 1LANDA1888
Counter ID: MCS HENC #1
Container ID: 69060
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 1/10/2014

Comments	Disposition
Section 1 - Add-A-Source Analysis No Add-a-Source warnings.	Ok
Section 2 - Passive Neutron Analysis Analysis Status: No errors. Ones Rate Analysis complete with warnings. - Error calculating the Ones Rate Pu-240 Effective MDA.	Ok Not data affecting.
Section 3 - Data Combiner Analysis Override enabled; Gamma data specified as input. Analysis Status: Override enabled; data marked not available but were used. Results taken from Quantitative Gamma data. Results comparison test passed.	Results taken from quantitative gamma data.
Section 4 - MGA Analysis Results are marked as invalid.	MGA analysis failed. AK isotopics applied. The AK information utilized was provided by Steve Schafer, AKE, and consists of data from CCP-AK-LANL-006, AK Source Document M237. MT-52,53,42
Section 5 - Gamma Analysis Analysis Status: No errors. MCA Deadtime greater than the upper limit of 50.0%. Spectrum Validity Check engine has suggested data review.	Ok MCA deadtime = 54.29% No spectral distortion observed. Spectrum valid.

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

Expert Review by: Sheri Chamberlin Date: 1-13-14

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **69060**

BDR Number: **LA14FG12009**

Sampling Date: **1/21/2014**

5842526

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	3.39	U
74-82-8	Methane	6.56	U
67-56-1	Methanol	1.24	U
60-29-7	Ethyl Ether	0.12	U
75-35-4	1,1-Dichloroethylene	0.20	U
67-64-1	Acetone	0.42	U
75-34-3	1,1-Dichloroethane	0.72	U
156-59-2	cis-1,2-Dichloroethene	0.09	U
78-93-3	Methyl ethyl ketone	0.90	U
110-82-7	Cyclohexane	0.59	U
71-43-2	Benzene	0.17	U
107-06-2	1,2-Dichloroethane	0.56	U
71-36-3	1-Butanol	0.38	U
108-10-1	Methyl isobutyl ketone	0.66	U
108-88-3	Toluene	0.93	U
108-90-7	Chlorobenzene	0.67	U
100-41-4	Ethylbenzene	0.59	U
108-38-3/106-42-3	m- and p-Xylene	0.38	U
95-47-6	o-Xylene	0.36	U
108-67-8	1,3,5-Trimethylbenzene	0.65	U
95-63-6	1,2,4-Trimethylbenzene	0.78	U

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

Quantitation Report (QT Reviewed)

InstName : FGA Unit 12

Data Path : C:\msdchem\1\DATA\140121C\
Data File : 69060.D
Acq On : 21 Jan 2014 1:14 pm
Operator : RJ
Sample :
Misc : 55 Gallon drum through filter. (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jan 21 13:23:56 2014
Quant Method : C:\msdchem\1\METHODS\VOCGAS.M
Quant Title : Flammable Gas Analysis for Transportation Only
QLast Update : Tue Dec 03 09:52:38 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
3) Fluorobenzene	4.060	96	8570080	207.75 ppmv	0.00
15) Chlorobenzene-d5	6.636	117	6711298	178.75 ppmv	0.00

Target Compounds	Qvalue

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

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0138
Examination Date:	12/19/2013
Waste Container ID:	69067
Video/Audio Recorded Media Number:	LA-RTR2-13-0138 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.: 111.5 kg Tare Wt.: 33.4 kg Net Wt.: 78.1 kg
Rigid Liner and Liner Vent Description:	Liner: [X] No [ ] Yes Lid: [X] No [ ] Yes Type: [ ] 30-mil [ ] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [ ] Yes [X] N/A Punctured: [X] No [ ] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [ ] No [X] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 2 layers
Volume Utilization Percentage:	50 %

CCP Radiography Data Sheet

Waste Container ID: 69067

Section 3: Container Inventory and Comments (Detailed descriptions)

IM: Scrap metal

AM:

OM: Scrap lead

OI:

C:

R:

XPM: Plastic bag

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP): Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	0.1
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	10.0
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	2.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	66.0
Soils (S):	
Total WMP Weight:	78.1

CCP Radiography Data Sheet

Waste Container ID: 69067

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	12/19/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	69067	Count Sequence Number:	16830
Operator:	DCLTD231\Operator		
Assay Start:	1/17/2014 11:12:35 AM		
Description 1:	2LANDA1252		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6, MT-42		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gal Drum		
Weight:	Net: 78.1 kg	Net:	78.1 kg
Container:	Volume: 208.0 l	Full:	50.0 %
Density:	0.750 kg /l		

System Configuration

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

Errors quoted at 1.000 sigma

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number: 16830
Assay Instrument: HENC #2
Analysis Method: CCP-TP-063 v 15
Item ID: 69067

Batch Number: 2LANDA1252
Location: LANL TA-54
Software Version: NDA 2000 V.4.0
Analysis Date: 1/17/2014

Net Weight	78100.0 g		
Pu mass	1.15E+002	+-	3.59E+001 g
TRU Alpha Activity	1.66E+001	+-	2.78E+000 Ci
TRU Activity Concentration	2.13E+005	+-	3.56E+004 nCi/g
Pu-239 Equivalent Activity	1.69E+001	+-	2.79E+000 Ci
Pu-239 FGE	1.08E+002	+-	3.58E+001 g
Decay heat	5.35E-001	+-	8.86E-002 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
CO60	3.91E-010	4.42E-007	9.38E-008	9.36E-008
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	1.17E-006
U233	<LLD	<LLD	0.00E+000	1.54E-002
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	5.02E-006
NP237	2.06E-001	1.45E-004	2.79E-005	3.61E-006
PU238	1.05E-002	1.79E-001	6.49E-002	1.65E-003
U238	<LLD	<LLD	0.00E+000	2.48E-005
PU239	1.07E+002	6.66E+000	2.22E+000	6.11E-002
PU240	6.99E+000	1.59E+000	5.74E-001	1.46E-002
AM241	2.39E+000	8.19E+000	1.58E+000	1.55E-001
PU241	1.37E-001	1.41E+001	5.12E+000	1.30E-001
PU242	4.26E-001	1.68E-003	6.09E-004	0.00E+000
AM243	3.36E-003	6.71E-004	1.30E-004	2.21E-005

Errors quoted at 1.000 sigma

Operator: DRC Date: 1.21.14

ITR: [signature] Date: 1.22.14

Automated Independent Technical Review

Count Sequence Number: 16830 Batch Number: 2LANDA1252
Counter ID: HENC #2
Container ID: 69067
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 1/17/2014

Comments	Disposition
Section 1 - Add-A-Source Analysis Add-a-Source WARNINGS: Add-a-Source correction factor is less than one.	Ok
Section 2 - Passive Neutron Analysis Analysis Status: No errors. Ones Rate Analysis complete with warnings. - Error calculating the Ones Rate Pu-240 Effective MDA.	Ok Not data affecting.
Section 3 - Data Combiner Analysis Override enabled; Gamma data specified as input. Analysis Status: Override enabled; data marked not available but were used. Results taken from Quantitative Gamma data. Results comparison test passed.	Results taken from quantitative gamma data.
Section 4 - MGA Analysis Results are marked as invalid.	MGA analysis failed. AK isotopics applied. The AK information utilized was provided by Steve Schafer, AKE, and consists of data from CCP-AK-LANL-006, AK Source Document M237. MT-52,53,42
Section 5 - Gamma Analysis Analysis Status: No errors. MCA Deadtime greater than the upper limit of 50.0%.	Ok MCA deadtime = 50.61%. No spectral distortion observed.

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

Expert Review by: Sheri Chambers Date: 1-21-14

Waste Container ID: **69067**

BDR Number: **LA14FG12009**

Sampling Date: **1/21/2014**

S842526

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	74.32	
74-82-8	Methane	6.56	U
67-56-1	Methanol	1.24	U
60-29-7	Ethyl Ether	0.12	U
75-35-4	1,1-Dichloroethylene	0.20	U
67-64-1	Acetone	0.42	U
75-34-3	1,1-Dichloroethane	0.72	U
156-59-2	cis-1,2-Dichloroethene	0.09	U
78-93-3	Methyl ethyl ketone	0.90	U
110-82-7	Cyclohexane	0.59	U
71-43-2	Benzene	0.17	U
107-06-2	1,2-Dichloroethane	0.56	U
71-36-3	1-Butanol	0.38	U
108-10-1	Methyl isobutyl ketone	0.66	U
108-88-3	Toluene	0.93	U
108-90-7	Chlorobenzene	0.67	U
100-41-4	Ethylbenzene	0.59	U
108-38-3/106-42-3	m- and p-Xylene	0.38	U
95-47-6	o-Xylene	0.36	U
108-67-8	1,3,5-Trimethylbenzene	0.65	U
95-63-6	1,2,4-Trimethylbenzene	0.78	U

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

Quantitation Report (QT Reviewed)

InstName : FGA Unit 12

Data Path : C:\msdchem\1\DATA\140121C\
Data File : 69067.D
Acq On : 21 Jan 2014 1:51 pm
Operator : RJ
Sample :
Misc : 55 Gallon drum through filter. (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jan 21 14:00:09 2014
Quant Method : C:\msdchem\1\METHODS\VOCGAS.M
Quant Title : Flammable Gas Analysis for Transportation Only
QLast Update : Tue Dec 03 09:52:38 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
3) Fluorobenzene	4.060	96	8610529	207.75	ppmv	0.00
15) Chlorobenzene-d5	6.636	117	6759246	178.75	ppmv	0.00
Target Compounds						Qvalue
1) Hydrogen	1.910	GC1	21200	74.32	ppmv	100

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

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S842528

S842528

Container Profile 768754

File Options Reports Help

S842528

768754	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

S842528

S842528
- 94153 - empty
- 94152
- 94151

Task History

Transfer Details

Transfer Amount	Transfer Unit	Item	Measured Weight	Measured Weight Unit
49.99947775	%			

Working Copy
Date: 8-8-13 JZ

ATTACHMENT 1
Page 1 of 4

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: S842528

6.2[4] Date Processed: 8-8-13

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:
(> 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: Brandon Chavez / Brandon Chavez 1204742 / 8-8-13
Waste Handling Tech (print) Signature Z # Date

ATTACHMENT 1
Page 2 of 4

4.1[6][B] Parent Waste Container No.: S842528

5.[18] Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable: 265.2 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) 265.2 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
	N/A	/	/ /

ATTACHMENT 1
Page 3 of 4

4.1[6][B] Parent Waste Container No.: S842528

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	94151	94152		
10.1[4]	Daughter Drum Filter No.	KL-458	KL-426	N/A	
10.1[4]	Daughter Drum Bag Filter No.	L-6895	L-6679		
10.1[4]	Daughter Drum Purchase Order No.	501103	501103		
10.1[13][C]	WCG Fire Watch Stationed		☐ YES	☐ NO	☑ N/A
10.1[14][C][d]3/11.1[3]	WCG Fire Watch Secured		☐ YES	☐ NO	☑ N/A
10.2[4]	POC bag-on bag: Manufacturer				
	Model No.				
	Serial No.				
	Date of Manufacture	N/A		N/A	
10.2[5]	POC ID No				
10.2[7][B]/10.2[6]	POC Item Description		N/A		
10.2[13]	POC Assembly closed per Manufacturer's instructions. (Initial and Z#)				
10.2[14]	POC Assembly Gross Weight (lb)				
10.2[15]	POC Rad. Survey Results (mrem/hr)				
10.3[3][A]	Approx. Containerized Liquid Vol./Units				
10.3[5][A]	Free Liquid Volume/Units	2gal	N/A		
10.3[7][A]	Opaque/Non-penetrable Item Description:	Lead	Lead		
10.3[9][A]	PCB-contaminated Waste Description	N/A	N/A	N/A	
10.3[9][B]	PCB Item ID No.				
10.3[10]	Remaining Waste Description	see comments	see comments	N/A	
10.3[13]/10.4[10]/ 10.5[4]/10.6[10]	Daughter Drum % Full (%)	100%	50%		
10.5[3]/10.6[2]	Description Waste Added During Processing	plastic	plastic		

ATTACHMENT 1
Page 4 of 4

4.1[6][B] Parent Waste Container No.: S842528

Comments: Salts, plastic, kitty litter, lead

11.1[1] Performed By: Brandon Chavez / Brandon Chavez 1204742 / 8-8-13
Waste Handling Tech (print) Signature Z # Date

11.1[7] Reviewed By: G Mh / [illegible] M9235, 8/14/13 1012
SOS or designee (print) Signature Z # Date/Time

Working Copy
Date: 8.8.13 JZ

ATTACHMENT 2
Page 1 of 1

WCRRF OVERPACK DRUM ASSEMBLY PREPARATION DATA SHEET

5.[3] Overpack drum information:

Purchase Order No.: 413659
Lot No.: 208850
Manufacture Date: 13

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

	Filtered Vent	2-in. Bung
M&TE No.:	100216	038368
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.: O-13
Serial No.: DX-265
Manufacture Date: 4-10

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

5. [11] Performed By: Brandon Chavez / [signature] B04742 / 8-8-13
Waste Handling Technician (print) Signature Z # Date

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

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

Comments: N/C

8.1[1] Performed By: Brandon Chavez / [signature] B04742 / 8-8-13
Waste Handling Technician (print) Signature Z # Date

8.1[6] Reviewed By: G Mtz / [signature] 149235 / 8/12/13
Supervisor or designee (print) Signature Z # Date

Working Copy
Date: 8-8-13 BC

ATTACHMENT 5
Page 1 of 1

WCRRF OVERPACK DRUM CLOSURE DATA SHEET

7.[18] Overpack Drum Unique Identifier No.: 94153

7.[24] Overpack drum closure ring torque wrench information:
M&TE No.: 038373
Cal. Expiration Date: 9-11-13
Range in ft-lb: 10-80
Tolerance: ±3% CW ±6% CCW

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

Performed By: Brandon Chavez / Brandon Chavez 1047421
Waste Handling Technician (print) Signature Z # Date

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

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

7.[35][B] Platform scale serial number: 019065
Platform scale calibration expiration date: 10-14-14

7.[35][D] 85-gal overpack drum gross weight (lb): 176.6 lb

Comments: N/C

8.1[1] Performed By: Brandon Chavez / Brandon Chavez 1047421 8-8-13
Waste Handling Technician (print) Signature Z # Date

8.1[7] Reviewed By: [illegible] / [illegible] 1149235 8/12/13
Supervisor or designee (print) Signature Z # Date

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

Drum ID#: 94151

1. Drum/Lid Assembly

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

RECORD drum information:

Purchase Request #: 501103
Lot #: 0234766
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
- [ ] 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 #: 6CPVC/1.5SPV
Serial #: ~~L-8247~~ 8-8-13 L-6895
Date of Manufacture: 3/13

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

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

4. Install Lid/Drum Filter

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

RECORD drum filter information:

Manufacturer: NUCFIL
Model #: 019DS
Serial #: KC 458
Date of Manufacture: 11/11

RECORD torque wrench information:

Filter torque wrench:		Jam Nut / Bung torque wrench:	
M&TE ID #:	100216	M&TE ID #:	038369
Cal Expiration Date:	12-18-13	Cal Expiration Date:	12-18-13
Range (ft-lbs or in-lbs):	40-200	Range (ft-lbs or in-lbs):	10-80
Tolerance:	±4% cw ±6% ccw	Tolerance:	±3% cw ±6% ccw

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

[x] Yes [ ] No

Print Name: IAN MARQUEZ Signature: [signature] Z#: 276205

5. Weigh Drum Assembly

RECORD weight information

Tare wtight (lbs) 762
File ID #: 019065

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

6. Label Drum Assembly

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

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

Operator Print: IAN MARQUEZ Operator Sign: [signature] Z#: 276205 Date: 8-5-13

Verifier Print: Brandon Chavez Verifier Sign: [signature] Z#: 204742 Date: 8-8-13

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

DRUM ID#: 94151

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: 8-1-13

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

--- Tolerance ± 3%CW ± 6%ACW

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): 192.4

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: Brendon Chacon Date: 8-8-13

Verifier Print/Sign: JOE QUINTANA Date: 8/8/13

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

Drum ID#: 94152

1. Drum/Lid Assembly

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

RECORD drum information:

Purchase Request #: 501103
Lot #: 0234766
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 1.5-25PVC
Serial #: ~~L-8944 8-8-13~~ L-66679
Date of Manufacture: 3/13

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

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

4. Install Lid/Drum Filter

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

RECORD drum filter information:

Manufacturer: Nucfil
Model #: 0405
Serial #: KL476
Date of Manufacture: 11/11

RECORD torque wrench information:

Filter torque wrench:		Jam Nut / Bung torque wrench:	
M&TE ID #:	180116	M&TE ID #:	038369
Cal Expiration Date:	12-18-13	Cal Expiration Date:	12-18-13
Range (ft-lbs or in-lbs):	40 - 203	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: Ian Martinez Signature: [signature] Z#: 276708

5. Weigh Drum Assembly

RECORD weight information

Tare witght (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: Ian Martinez Operator Sign: [signature] Z#: 276708 Date: 8-1-13

Verifier Print: Brandon Chavez Verifier Sign: [signature] Z#: 204742 Date: 8-8-13

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

DRUM ID#: 94152

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: 8-11-13

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

Tolerance ± 3%CW ± 6%CCW

2. DRUM LABELING

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

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

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

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

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

RCRA Label:

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

OR

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

NOTE: Check only one of the above two boxes.

3. WEIGH DRUM ASSEMBLY

Record weight information:

Gross Weight(lbs.): 235.6

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 8-8-13

Verifier Print/Sign: JOE QUINTANA Date: 8/8/13

Working Copy
Date: 8/8/13 BC

ATTACHMENT 3
Page 1 of 1

WCRRF PARENT 55-GAL DRUM PREPARATION DATA SHEET

6.3[21] Prepared Parent 55-Gal Drum Number: BC 8-8-13 ~~S842528~~ S842528

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): 265.2

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

Comments: N/C

8.1[1] Performed By: Brandon Chavez / Brandon Chavez B047401 8-8-13
Waste Handling Technician (print) Signature Z # Date

8.1[7] Reviewed By: G Mt / G M 149235 8/14/13
Supervisor or designee (print) Signature Z # Date

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

8.1[8][D] Approved by: G Mt / G M 149235 8/14/13 1110
SOS/SOM or designee (print) Signature Z # Date Time

NONE
NO MSTR
72

WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Production Control

Container ID: S842528 Container Type: 85-GAL Gross Weight (lbs): 260
Inner Seal #: 015286 Filter Prefix: LAVC Filter Serial #: 02593
AK Waste Stream: LA-MHD01.001 Certified RTR BDR: No BDR
TWSR Comments: LEACHED SOLIDS SALTS MST 12
Total PE-Ci Activity: 1.69E+01 Equivalent Combustible PE-Ci: 6.33E+00 AM-241 PE-Ci: 1.37E+00
Total Fissile Gram Equivalents: 186.3 Total Surface Dose Rate (mrem/hr): 3
EPA Code(s): None
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: LA125M Production Control Comments: Ensure EPA Codes D007, D008, and D009 are on the label. A minimum of 1.2 volumes of kitty litter must be mixed with 1.0 volume of nitrate salts.

Performed By: R. W. Jones (Production Control (Print)) Signature: R. W. Jones Z Number: 117434 Date: 1.10.12
SUSAN S RAMSEY Signature: Susan S Ramsey Z Number: 100681 Date: 10/31/12

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: Salts/nitrate salts
Net Wt: 200lb. No generator data available for review. No RTR BDR available for review. Oracle database indicates drum contents are salts or nitrate salts. Salt waste streams can be either cemented and placed in cups prior to placement into drums or uncemented/unconsolidated into plastic bags (such as nitrate salts) prior to placement into drums. Nitrate salts may contain free-liquids. May require RWP for >1000 and <10000 mrem/hr @ 30 cm

Performed By: Valerie Rhodes (WDP Engineering (Print)) Signature: Valerie Rhodes Z Number: 112609 Date: 5/3/12

TRU Remediation Operations

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

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

Performed By: Gilbert Martin (TRU Remediation Operations (Print)) Signature: G Martin Z Number: 149275 Date: 3.18.13
ROBIN SHAW 272995 3/19/13
IHS Review Johnny Arnold CSP, may contain Pb, Hg, Cr
11/5/12

~~ER 13~~
72
NR
6.10.

ATTACHMENT 1

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

5.[1] Sample Date: 1/19/12

Container No. (5.[1])	54446	5851424	5834706	56105	5822638	5842528
Filtered Vent Type (5.[1])	13	13	13	13	13	13
WIPP-Approved Filtered Vent (5.[2])	☑ SAT ☐ UNSAT	☑ SAT ☐ UNSAT	☑ SAT ☐ UNSAT	☑ SAT ☐ UNSAT	☑ SAT ☐ UNSAT	☑ SAT ☐ UNSAT
Total CCP VOC value (< 7,000 ppm) (5.[4])	Ø ppm	Ø ppm	Ø ppm	Ø ppm	Ø ppm	Ø ppm
Hydrogen Reading (< 64,000 ppm) (5.[5])	Ø ppm	234.52 ppm	Ø ppm	Ø ppm	Ø ppm	106.08 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: Gabe Romero (CCP (Print)) 236973 (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)) Alicia Herrera (Signature) 188450 (Z#) 1/23/12 (Date)

InstName : Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\120119c\
Data File : S842528.D
Acq On : 19 Jan 2012 1:14 pm (#1); 19-Jan-12, 13:13:50 (#2)
Operator : SA
Sample :
Misc : 85 GAL LFL SAMPLED FROM UNDER DRUM LID 13 FIL (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jan 19 13:32:38 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	3.683	96	4599976	209.00	ppmv	0.05
15) Chlorobenzene-d5	5.996	117	3754660	185.50	ppmv	0.05
Target Compounds						Qvalue
1) Hydrogen	1.618	GC1	835m	106.08	ppmv	

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

vocgas.m Thu Jan 19 13:32:45 2012

8-8-13

0606 Assuming WCRRF Operations center - Orlando

0609 Assuming WCRRF operations center in training Randy Roybal

0615 Prejob being conducted by SOS.

0707 Starting movement from transportainer to transport vehicle.

0715 permission granted to drop vehicle acces gates.

0759 Starting to denest 2 drums

0800 Starting work package 00455566-01 in TA 50-84 (Heating unit)

0812 vehicle acces gate have been Restored and shipment is complete.

0830 Badge Reader is Down. Have contacted Badge Reader support

0845 Denesting complete Bagging on S881607

0853 Bag on Complete.

0910 Elevated Cam operators still in Resporators

0915 Notified by RCT that cam's will have to go through one more count cycle before releasing operators to come out of Resperators and deposting.

0928 Cams are back in normal Range operators are ~~back~~ RR 08/08/13 out of Respirators. Room has been deposted.

0930 Starting movement from transport vehicle to transportainer.

0935 permission granted to drop vehicle acces gates.

0955 Notified by operator of possible loss of integrity of a bung.

0957 Notified RCT's of possible loss of integrity of bung. SOS and OM have been notified. Entering EP WCRF-RM-AOP-0203.

1000 RCT's and IH preparing plane RR 08/08/13 for ~~reentry~~ RR 08/08/13 ~~fentry~~ reentry

1005 RCT's Briefing operator's to RWP 2011-0014.

1037 RCT's, IH, and operator are entering WCRRF YARD to perform Smears and VOC's.

1049 Notified by IH that NO VOC's were detected. on compromised Drum S802959.

1053 Notified by RCT's Smears are being counted on drum S802959

1054 Late Entry at 1038 operator will be placeing a plastic sleeve over Drum S802959.

1109 Notified By RCT that smears are NDA.

1114 Exiting EP-WCRF-RM-AOP-0203 SOS has been notified WCRRF is Resuming normal operations.

1137 Bagging off 1 Daughter Bagging on 1 Daughter continueing to process

Continued on Next page Randy Roybal

08/08/13 Continued from previous page Randy Roybal
1154 Bag off Complete. Bag on complete.
1240 Entered EP-WCRR-RM-AOP-0207 Due to Lightning and Th
Starting 30 min waiting period.
1250 Restarting 30 min wait due to lightning
1321 Exiting Ep WCRR-Rm-AOP-0207 OK to resume
outside operations.
1450 Baging ~~OA~~ RR08/08/13 OFF Bagging on 5842528
1520 movement into Transportainer complete and vehicle access
gates have been Restored.
1521 Bag off Complete.
1524 Starting inside Rounds.
1540 Starting outside Rounds.
1541 Item #63 is OOS POD in place ok to proceed.
1543 Item #3 is unSAT FSR in place ok to proceed.
1558 outside Rounds Complete.
1632 Starting movement out of 50-69 to transportainer.
1654 Bagging off 1 daughter and continuring to process
1656 movement to transportainer Complete
1708 Bag off Complete.
1746 Bagging off last Drum of the day.
1804 Bag off complete.
1824 Performed Shift turnover with CO gerald Espinoza -Orlando

No further entries this page -Orlando

8-8-13

1154 Inside operations completed the bag on and off -

1239 Operations Center entered ADP-0207 for Severe Weather - Outdoor Operations are suspended and the transfer vehicle requires unloading.

1321 Operations exited ADP-0207 for Severe Weather, lightning has ceased

1357 Due to rain delays P+T suggested the second transfer out be rescheduled till Monday. Per discussion with Operations and RP-1, there will be enough space available in the transportainers till Monday.

1410 Outside Operations initiate movement from the transfer vehicle to the transportainer. SOM observed the same 3 operators working the WCG are the same noted in the AM working the WCG. One operator exited the WCG to conduct respirator fit. (i.e there were 4 operators on WCG in am now there are 3) same operators.

1450 Bagging off a daughter, and Bagging on 5842528

1520 Movement into transportainers were completed by operators

1521 Operators inside completed the bag off of a daughter and bagged on another and continued processing.

1654 Inside Operations complet bagging off a daughter and bagging on another

1656 Movement out of 50/69 to the transportainer (7) drums were completed.

1804 Operation completed bag off and did not have time to de-nest. Two parent drums remain in the 50/69 Facility ready to bag off. The drum lift fport was placed

1816 Conducted shift turnover with Night shift SOM and reviewed checklist.

1821 Secured the day shift SOM position [signature]

8-13-13

No further Entries this page
[signature]

8-8-07 WCRR SOS LOG BOOK

0600 Assuming SOS Position [illegible]

0615 Conducted shift brief discussed shares in box use of proper PPE In and out of box. Also briefed to donation needed and be very Carefull while pulling bag up on drum.

0640 Concluded shift brief

0707 starting shipment out of 50-69

0759 stating denesting process

0800 starting work on Heater #1 50-84

0812 shipment completed.

0845 Denesting Complete

0910 RCT's notified of Elevated Cam's.

0918 RCT's notified that Cams will need to cycle. Prior to doffing Respirators

0928 Cams are back to normal.

0930 starting movement From transport vehicle to transportainers

0953 notified by operator's of possible loose bung.

0957 notified OM, SOM Entering EP-WCRR-RM-AOP-0203

1000 RCTs And IH Preparing For reentry

1005 RCTs briefing operators to RWP.

1037 RCTs, IH and operator entering yard to perform smears and VOC's.

1049 Notified by IH that no VOC's were detected.

1053 Smears are being Counted on drum.

1109 Notified By RCT that smears are NDA GM 8-8-13

1114 Exiting EP-WCRR-RM-AOP-0203 ~~Resum~~ Resuming normal operations in yard

1137 Bagging off 1 daughter Bagging on Another.

1154 Bag on/off complete.

1240 entering 30-30 Floor lighting.

1250 restarting 30-30

1321 Exiting EP-WCRR-RM-AOP-0207 OK to resume Outside operation

1450 Bagging off bagging on 584258.

1520 Movement into transportainer Complete from G.

1521 Bag off Complete

1524 Starting Rounds.

1632 Starting Movement out of 50-69 To transportainers.

Continue on next Page

6/8/15 Continuing from next Page
1654 Bagging off of Daughter Continuing to process
1708 Bag off complete
1746 Bagging off last drum of day
1804 Bag off Complete
1817 Shift Turnover with Clayton Mullins

no

Further

entries

on

this

Page

CCP Radiography Data Sheet

S842528

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0100
Examination Date:	8/14/2013
Waste Container ID:	94151
Video/Audio Recorded Media Number:	LA-RTR2-13-0100 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 13
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3110
Waste Stream I.D.:	LA-MIN02-V.001
Waste Container Weights:	Gross Wt.: 87.0 kg Tare Wt.: 33.4 kg Net Wt.: 53.6 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:	60 %

CCP Radiography Data Sheet

Waste Container ID: 94151

Section 3: Container Inventory and Comments (Detailed descriptions)

IM:

AM:

OM: Scrap lead

OI:

C:

R:

XPM: Plastic bags, liner lid

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP): Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	8.0
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	3.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	42.6
Soils (S):	
Total WMP Weight:	53.6

CCP Radiography Data Sheet

Waste Container ID: 94151

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

RTR Operator:

Eric Lyles		8/14/2013
Print Name	Signature	Date

5842528

NDA 2000 Assay Report

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

Item ID:	94151	Count Sequence Number:	23448
Operator:	D3PW2DK1\operator		
Assay Start:	8/14/2013 3:55:52 PM		
Description 1:	1LANDA1828		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6, Not Precision		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 53.6 kg	Net:	53.6 kg
Container:	Volume: 208.0 l	Full:	60.0 %
Density:	0.430 kg /l		

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

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

Errors quoted at 1.000 sigma

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number: 23448
Assay Instrument: MCS HENC #1
Analysis Method: CCP-TP-063 v 14
Item ID: 94151

Batch Number: 1LANDA1828
Location: LANL TA-54
Software Version: NDA 2000 V.4.0
Analysis Date: 8/14/2013

Net Weight	53600.0 g		
Pu mass	1.48E+002	+-	2.28E+001 g
TRU Alpha Activity	1.41E+001	+-	2.17E+000 Ci
TRU Activity Concentration	2.63E+005	+-	4.05E+004 nCi/g
Pu-239 Equivalent Activity	1.44E+001	+-	2.17E+000 Ci
Pu-239 FGE	1.40E+002	+-	2.14E+001 g
Decay heat	4.46E-001	+-	7.03E-002 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	1.43E-001	1.01E-004	1.41E-005	3.81E-006
PU238	1.36E-002	2.32E-001	3.57E-002	3.36E-005
PU239	1.39E+002	8.64E+000	1.33E+000	1.25E-003
PU240	8.91E+000	2.02E+000	3.11E-001	2.92E-004
AM241	9.28E-001	3.18E+000	1.69E+000	8.84E-002
PU241	1.72E-001	1.77E+001	2.72E+000	2.56E-003
PU242	2.97E-002	1.17E-004	1.80E-005	0.00E+000
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	5.42E-007
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	2.22E-006
U238	<LLD	<LLD	0.00E+000	1.41E-005
AM243	1.03E-003	2.06E-004	2.90E-005	1.05E-005

Errors quoted at 1.000 sigma

Operator: Marla Eg Date: 8-15-13

ITR: Jim Barton Date: 8/19/13

Automated Independent Technical Review

Count Sequence Number: 23448 Batch Number: 1LANDA1828
Counter ID: MCS HENC #1
Container ID: 94151
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 8/14/2013

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

Expert Review by: Sheri Chambers Date: 8-15-13

Waste Container ID: **94151**

BDR Number: **LA13FG12084**

Sampling Date: **8/26/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	163.86	
74-82-8	Methane	9.63	U
67-56-1	Methanol	35.07	
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\130826c\
Data File : 94151.D
Acq On : 26 Aug 2013 9:53 am (#1); 26 Aug 2013 9:52 am (#2)
Operator : EL
Sample :
Misc : 55 Gallon Drum Through Filter (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Aug 26 10:03:12 2013
Quant Method : C:\msdchem\1\METHODS\VOCGAS.M
Quant Title : Flammable Gas Analysis for Transportation Only
QLast Update : Wed May 22 12:06:27 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
3) Fluorobenzene	4.067	96	8465494	207.75	ppmv	0.00
15) Chlorobenzene-d5	6.639	117	6339017	178.75	ppmv	0.00
Target Compounds						Qvalue
1) Hydrogen	1.910	GC1	46742m	163.86	ppmv	
4) Methanol	0.824	31	15689m	35.07	ppmv	

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

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CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0100
Examination Date:	8/14/2013
Waste Container ID:	94152
Video/Audio Recorded Media Number:	LA-RTR2-13-0100 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 13
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3110
Waste Stream I.D.:	LA-MIN02-V.001
Waste Container Weights:	Gross Wt.: 107.0 kg Tare Wt.: 33.4 kg Net Wt.: 73.6 kg
Rigid Liner and Liner Vent Description:	Liner: [X] No [ ] Yes Lid: [X] No [ ] Yes Type: [ ] 30-mil [ ] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [ ] Yes [X] N/A Punctured: [X] No [ ] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [ ] No [X] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 2 layers
Volume Utilization Percentage:	60 %

CCP Radiography Data Sheet

Waste Container ID: 94152

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):	0.5
Rubber (R):	
Plastics (waste materials) (XPM):	2.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	61.1
Soils (S):	
Total WMP Weight:	73.6

CCP Radiography Data Sheet

Waste Container ID: 94152

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

RTR Operator:

Eric Lyles		8/14/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	94152	Count Sequence Number:	16384
Operator:	DCLTD231\Operator		
Assay Start:	8/14/2013 4:06:24 PM		
Description 1:	2LANDA1211		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gal Drum		
Weight:	Net: 73.6 kg	Net:	73.6 kg
Container:	Volume: 208.0 l	Full:	60.0 %
Density:	0.590 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:	16384	Batch Number:	2LANDA1211
Assay Instrument:	HENC #2	Location:	LANL TA-54
Analysis Method:	CCP-TP-063 v 14	Software Version:	NDA 2000 V.4.0
Item ID:	94152	Analysis Date:	8/14/2013

Net Weight	73600.0 g		
Pu mass	5.48E+001	+- 1.00E+001	g
TRU Alpha Activity	6.20E+000	+- 1.33E+000	Ci
TRU Activity Concentration	8.42E+004	+- 1.81E+004	nCi/g
Pu-239 Equivalent Activity	6.32E+000	+- 1.34E+000	Ci
Pu-239 FGE	5.17E+001	+- 9.99E+000	g
Decay heat	1.98E-001	+- 4.37E-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	4.43E-007
U233	<LLD	<LLD	0.00E+000	5.75E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	1.73E-006
NP237	6.69E-002	4.72E-005	7.87E-006	1.35E-006
PU238	5.02E-003	8.58E-002	2.06E-002	6.25E-004
U238	<LLD	<LLD	0.00E+000	1.21E-005
PU239	5.15E+001	3.19E+000	6.20E-001	2.32E-002
PU240	3.29E+000	7.47E-001	1.79E-001	5.44E-003
AM241	6.34E-001	2.18E+000	1.17E+000	4.24E-002
PU241	6.36E-002	6.55E+000	1.57E+000	4.77E-002
PU242	1.10E-002	4.34E-005	1.04E-005	0.00E+000
AM243	8.22E-004	1.64E-004	2.77E-005	8.21E-006

Errors quoted at 1.000 sigma

Operator: _____ Date: 8-15-13

ITR: _____ Date: 8/19/13

Automated Independent Technical Review

Count Sequence Number: 16384 Batch Number: 2LANDA1211
Counter ID: HENC #2
Container ID: 94152
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 8/14/2013

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; Gamma data specified as input. Results taken from Quantitative Gamma data. Results comparison test passed.	Results taken from quantitative gamma data.
Section 4 - MGA Analysis Results are marked as invalid.	Isotopic analysis failed. AK isotopics applied. The AK information utilized was provided by Steve Schafer, AKE, and consists of data from CCP-AK-LANL-006, AK Source Document M237. MT-52.
Section 5 - Gamma Analysis Analysis Status: No errors.	OK
Miscellaneous	No additional nuclides contributing to 95% of the radiological hazard identified.

Expert Review by: [signature] Date: 8/15/13

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **94152**

BDR Number: **LA13FG2126**

Sampling Date: **12/10/2013**

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\131210c\
Data File : 94152.D
Acq On : 10 Dec 2013 1:10 pm (#1); 10-Dec-13, 13:09:54 (#2)
Operator : NW
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Dec 10 13:24:45 2013
Quant Method : C:\msdchem\1\METHODS\VOCGAS.M
Quant Title : Flammable Gas Analysis
QLast Update : Mon Aug 26 13:12:56 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
3) Fluorobenzene	3.581	96	3700039	205.75	ppmv	0.06
15) Chlorobenzene-d5	5.881	117	2967981	177.50	ppmv	0.02

Target Compounds	Qvalue

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

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S843528

S843528

Container 747419

File Options Reports Help

S843528

747419	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

S843528

- S843528
  - LA00000068504
  - LA00000068500
  - LA00000068486 – EMPTY

Working Copy
Date: 10-2-13

ATTACHMENT 1
Page 1 of 4

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: S843528

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

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

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

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

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

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

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

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: [illegible] / [signature] 122[illegible] / 10-2-13
Waste Handling Tech (print) Signature Z # Date

ATTACHMENT 1
Page 2 of 4

4.1[6][B] Parent Waste Container No.: S843528

5.[18] Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable: 475.6 lb

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

6.2[5][B]/ 6.2[6] Total Parent Drum Weight (lb) 558 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.: S843528

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	68504	68500		
10.1[4]	Daughter Drum Filter No.	LM 281	LM-375	N/A	
10.1[4]	Daughter Drum Bag Filter No.	L-10304	L-10303		
10.1[4]	Daughter Drum Purchase Order No.	501578	501578		
10.1[13][C]	WCG Fire Watch Stationed		☐ YES	☐ NO	☑ N/A
10.1[14][C][d]3/11.1[3]	WCG Fire Watch Secured		☐ YES	☐ NO	☑ N/A
10.2[4]	POC bag-on bag: Manufacturer				
	Model No.				
	Serial No.				
	Date of Manufacture				
10.2[5]	POC ID No				
10.2[7][B]/10.2[6]	POC Item Description				
10.2[13]	POC Assembly closed per Manufacturer's instructions. (Initial and Z#)				
10.2[14]	POC Assembly Gross Weight (lb)				
10.2[15]	POC Rad. Survey Results (mrem/hr)				
10.3[3][A]	Approx. Containerized Liquid Vol./Units	N/A	N/A		
10.3[5][A]	Free Liquid Volume/Units	5 galons	N/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.	N/A	N/A	N/A	
10.3[10]	Remaining Waste Description	See Comments	See Comments		
10.3[13]/10.4[10]/ 10.5[4]/10.6[10]	Daughter Drum % Full (%)	90%	90%		
10.5[3]/10.6[2]	Description Waste Added During Processing	Kitty litter Plastic stuff in bags	Kitty litter		

ATTACHMENT 1
Page 4 of 4

4.1[6][B] Parent Waste Container No.: S843528

Comments: Nitrate Salts, Plastic, 5 gallons pH 14 liquid Nitrate Poly liner lid, kitty litter lead shielding

11.1[1] Performed By: GERALD ESPINOZA 12377201 10-2-13
Waste Handling Tech (print) Signature Z # Date

11.1[8] Reviewed By: Clayton Mullins 1240092 10/3/13 0205
SOS or designee (print) Signature Z # Date/Time

Working Copy
Date: 9-26-13

ATTACHMENT 2
Page 1 of 1

WCRRF OVERPACK DRUM ASSEMBLY PREPARATION DATA SHEET

5.[3] Overpack drum information:

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

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

	Filtered Vent	2-in. Bung
M&TE No.:	100216	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.: SL-916
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 Archuleta [signature] 1228824 9-26-13
Waste Handling Technician (print) Signature Z # Date

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

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

Comments: N/C

8.1[1] Performed By: Frederico Archuleta [signature] 1228824 9-26-13
Waste Handling Technician (print) Signature Z # Date

8.1[6] Reviewed By: Clayton Mathis [signature] 1240092 10/3/13
Supervisor or designee (print) Signature Z # Date

Working Copy
Date: 10-2-13a

ATTACHMENT 5
Page 1 of 1

WCRRF OVERPACK DRUM CLOSURE DATA SHEET

7.[17] Overpack Drum Unique Identifier No.: 68486

7.[23] Overpack drum closure ring torque wrench information:
M&TE No.: 037418
Cal. Expiration Date: 3-6-14
Range in ft-lb: 10-80
Tolerance: +/-5% cw & 6% ccw

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

Performed By: Jacinto Rebolloso / [signature] 123889 10-2-13
Waste Handling Technician (print) Signature Z # Date

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

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

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

7.[34][D] 85-gal overpack drum gross weight (lb): 167.6 lb

Comments: n/a

8.1[1] Performed By: Gerald Espinoza / [signature] 123109 10-2-13
Waste Handling Technician (print) Signature Z # Date

8.1[7] Reviewed By: Clayton Mullins / [signature] 240091 10/3/13
Supervisor or designee (print) Signature Z # Date

Working Copy
Date: 10-1-13 ω

ATTACHMENT 1
Page 1 of 2

WCRRF DRUM PREPARATION DATA SHEET

5.[34][E] Drum ID No.: 68500

5.[3] Drum information:
Purchase Order No.: 501578
Lot No.: 0290999
Manufacture Date: 2013

5.[17] Drum Liner Bag/Filter Assembly:
Manufacturer: BOP
Model No.: 6CPVC 1.5-3SPVC
Serial No.: L-10303
Manufacture Date: 5/13

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

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

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

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

5.[23] Filtered vent information:
Manufacturer: NUCFIL
Model No.: 019DS
Serial No.: LM-375
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.: 68500

Comments: N/A

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

7.1[4] Reviewed By: Clayton Mullins [signature] 124009 10/3/13
Supervisor or designee (print) Signature Z # Date

Working Copy
Date: 10-1-13w

ATTACHMENT 2
Page 1 of 2

WCRRF DRUM CLOSURE DATA SHEET

6.[3] Drum ID No.: 68500

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

M&TE No.: 037418
Cal. Expiration Date: 3-6-14
Range in ft-lb: 10-80
Tolerance: +-3% CW + +-6% CCW

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

Performed By: GERALD ESPINOZA (Operator (print)) [signature] (Signature) 1237129 (Z #) 10-2-13 (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: GERALD ESPINOZA (Operator (print)) [signature] (Signature) 1237129 (Z #) 10-2-13 (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.: 68500

6.[26] Scale File ID number: 019065

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

6.[28] Drum gross weight: 3716 lbs

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

Comments: N/C

6.[32] Performed By: GERALD ESPINOZA / [signature] / 1237720 / 10-2-13
Operator (print) Signature Z # Date

7.1[4] Reviewed By: Clayton Mullins / CA / 1240091 / 10/3/13
Supervisor or designee (print) Signature Z # Date

Working Copy
Date: 10-1-13w

ATTACHMENT 1
Page 1 of 2

WCRRF DRUM PREPARATION DATA SHEET

5.[34][E] Drum ID No.: 68504

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

5.[17] Drum Liner Bag/Filter Assembly:
Manufacturer: BOP
Model No.: 6CPVC 1.5-25PVC
Serial No.: L-10304
Manufacture Date: 5/13

5.[19] Filtered vent and 2 in. bung torque wrench information:

	Filtered Vent	2 in. Bung
M&TE No.:	100216	038369
Cal. Expiration Date:	12-18-13	12-18-13
Range in ft-lb:	40-200	10-80
Tolerance:	±4%cw ±6%ccw	±3%cw ± 6%ccw

5.[20] Torque wrench listed above is within the acceptable ranges as displayed on the calibration certificate. ☑ YES ☐ NO

Performed By: MICHAEL MONTOYA / [signature] 1913524 10/01/13
Operator (print) Signature Z # Date

5.[23] Filtered vent information:
Manufacturer: NUCFIL
Model No.: 019 DS
Serial No.: LM-281
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.: 68504

Comments: n/a

5.[35] Performed By: [illegible] Montoya [illegible] 191354 10/01/13
Operator (print) Signature Z # Date

7.1[4] Reviewed By: Clayton Mullins [illegible] 240096 10/3/13
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 2
Page 1 of 2

Working Copy
Date: 10-2-13

WCRRF DRUM CLOSURE DATA SHEET

6.[3] Drum ID No.: 68504

6.[9] Drum closure ring torque wrench information:

M&TE No.: 037418
Cal. Expiration Date: 3-6-14
Range in ft-lb: 10-80
Tolerance: +/- 3% cw +/- 6% ccw

6.[10] Torque wrench listed above is within the acceptable ranges as displayed on the calibration certificate. ☑ YES ☐ NO

Performed By: [illegible] / [signature] / [illegible] / 10-2-13
Operator (print) Signature Z # Date

6.[12] Drum closure ring torque value: 60 ft-lb

6.[15] Threaded lug of the drum closure ring is not touching the jam nut and the locking ring lugs are not touching. ☐ SAT ☐ UNSAT

6.[17][A] Filtered vent and 2 in. bung torque wrench information: ☑ N/A

	Filtered Vent	2 in. Bung
M&TE No.:		
Cal. Expiration Date:	N/A	N/A
Range in ft-lb:		
Tolerance:		

6.[17][B] Torque wrench listed above is within the acceptable ranges as displayed on the calibration certificate. ☐ YES ☐ NO ☑ N/A

Performed By: N/A / / /
Operator (print) Signature Z # Date

6.[17][C] 2 in. bung plug torque value: _____ 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.: 68504

6.[26] Scale File ID number: 019065

6.[27] Scale is within the calibration frequency. ☑ SAT ☐ UNSAT

6.[28] Drum gross weight: 362.4 lbs

6.[29] Drum gross weight recorded on drum lid in approximately 1/2 in. lettering: ☑ SAT ☐ UNSAT

Comments: N/C

6.[32] Performed By: Frederick Aebischer | [signature] | 1225526 | 10-2-13
Operator (print) | Signature | Z # | Date

7.1[4] Reviewed By: Clayton Mullins | [signature] | 1240090 | 10/3/13
Supervisor or designee (print) | Signature | Z # | Date

1931
SP72

WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Production Control

Container ID: S843528 Container Type: 55-GAL Gross Weight (lbs): 492
Inner Seal #: 019671 Filter Prefix: LAVC Filter Serial #: 02690
Waste Stream: LA-MHD01.001 Certified RTR BDR: No BDR
TWSR Comments: LEACHED SOLIDS MST 12
Total PE-Ci Activity: 8.52E+00 Equivalent Combustible PE-Ci: 3.20E+00 AM-241 PE-Ci: 6.92E-01
Total Fissile Gram Equivalents: 94.1 Total Surface Dose Rate (mrem/hr): 1
EPA Code(s): D007; D008; D009
NCR RTR/NDA Comment: None
RTR Pre-Screen Date: 1/9/2012 Comment: Lead liner, >1% liquid, impenetrable item
Certified RTR Comment: None
Prohibited Items: ☐ Sealed > 4 Liters ☑ Liquid ☐ Pressurized Container ☑ Impenetrable Item ☐ Other
Security Determination: ☑ Green ☐ Yellow
Remediation Determination: ☐ VE ☑ PID ☐ Split ☑ Repack
Estimated 30-cm Dose Rate (mrem/hr): ☐ <100 ☐ >100 and <1,000 ☑ >1,000 and <10,000 ☐ >10,000
TRUCON Code: Production Control Comments: Ensure EPA Codes D007, D008, and D009 are on the label. A minimum of 1.2 volumes of kitty litter/zeolite must be mixed with 1.0 volume of nitrate salts.

Performed By: Susan Ramsey (Production Control (Print)) / Signature / 100681 (Z Number) / 12/20/12 (Date)

WDP Engineering

Chemicals Present (e.g., pyrophorics, acids, bases, shock sensitive, organic liquids, peroxides, crown ethers): ☐ Yes ☑ No ☐ Unknown
Processing Determination: ☑ Accept ☐ Reject
WDP Engineering Comments: Nitrate Salts
Net Wt. 432#. Generator info shows 10 drums of nitrate salts; weights range from 16-58#. No RTR BDR. Nitrate salts are typically packaged in plastic bags; undocumented liquids, filter debris may be present. RTR PS shows prohibited liquids, impenetrable item(s), + lead liner. No chemicals identified. Applicable waste codes are for chromium, lead, + mercury. Nitrate salts require repack w/ admixture.

Performed By: Valerie Rhodes (WDP Engineering (Print)) / Valerie Rhodes (Signature) / 112160 (Z Number) / 1/23/13 (Date)

TRU Remediation Operations

☑ Waste Container Information Evaluated ☐ Less Than 170 lbs ☐ RTR Video Available
Other Specific Safety Concerns: Do not push or press on waste with hands. Use heavy duty gloves during processing.
Processing Determination: ☑ Accept ☐ Reject
TRU Remediation Operations Comments: USE Proper PPE - Mix Kitty

Performed By: G Mt (TRU Remediation Operations (Print)) / Signature / 149235 (Z Number) / 6/19/13 (Date)
Jose Jerez
221452 6/22/13
HS Review - [illegible] CSP, may contain Pb, Hg + Cr
1-29-13

Noncertified TRU Waste Drum Item Information

DrumID: 019671

Item No	ItemID	Process Status	Net Wt (kg)	Matrix	Meas Code	SNM (g)	MT	Auth (Pg/Ln)		Comments
1	OX11266NW1		26.250	NITRATE SALTS		28.5	52	6/14	G468	
2	LR-69NW1		13.860	NITRATE SALTS		4.6	52	6/14	G468	
3	LR-72NE1		9.890	NITRATE SALTS		9.01	52	6/14	G468	
4	RR-73NW1		10.340	NITRATE SALTS		21.07	52	6/14	G468	
5	LR-70NW2		20.680	NITRATE SALTS		4.26	52	6/14	G468	
6	RR-74VRNE1		11.930	NITRATE SALTS		9.48	52	6/14	G468	
7	LR-75VRNW1		20.680	NITRATE SALTS		7.73	52	6/14	G468	
8	OX113-68NE1		22.390	NITRATE SALTS		9.72	52	6/14	G468	
9	LR-70NW1		19.090	NITRATE SALTS		4.69	52	6/14	G468	
10	LR-70NE1		7.270	NITRATE SALTS		6.16	52	6/14	G468	

Noncertified Waste Drum Material Summary

Gross Wt (kg): 223.2

Material Type	SNM (grams)	Items Net Wt (kg)
52	105.22	162.38
Totals	105.22	162.38

19 7 0 7 1 5

ATTACHMENT 1
Page 1 of 1

TA-54 AREA G WASTE CONTAINER HYDROGEN/VOC SAMPLE ANALYSIS DATA SHEET

5.[1] Sample Date: 5/16/13

Container No. (5.[1])	5843588					
Container type sampled (e.g., 55-gal, 85-gal, 110-gal, or SWB) (5.[1])	55-gal					
Filtered Vent Type (5.[1])	072					
Filtered Vent Unobstructed (5.[1])	☑ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT
WIPP-Approved Filtered Vent (5.[2])	☑ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT
Total CCP VOC value (< 7,000 ppm) (5.[4])	0 ppm	ppm	ppm	ppm	ppm	ppm
Hydrogen Reading (< 64,000 ppm) (5.[5])	196.33 ppm	ppm	ppm	ppm	ppm	ppm
Methane Reading (< 16,000 ppm) (5.[5])	0 ppm	ppm	ppm	ppm	ppm	ppm

N/A

5.[7] Certified CCP Technician:

Performed By: Sara Aragon (CCP (Print)), 237975 (Z#)

Reviewed By: Nathan Wales (CCP (Print)), 238866 (Z#)

Comments:

6.1[2][A] WCRRF waste container satisfies the following criteria: ☑ SAT ☐ UNSAT ☐ N/A

- Hydrogen – less than or equal to 3.2% (32,000 ppm)
- VOC – less than or equal to 7,000 ppm

6.1[3] Performed By: SUSAN RAMSEY (Waste Handling Operator (print)), [signature] (Signature), 100681 (Z#), 5/20/13 (Date)

InstName : Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\130516c\
Data File : S843528.D
Acq On : 16 May 2013 1:26 pm (#1); 16-May-13, 13:26:01 (#2)
Operator : SA
Sample :
Misc : 55 GAL LFL THROUGH UNOBSTRUCTED-072 (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 16 13:43:50 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	3.513	96	4668261	201.25 ppmv	0.06
15) Chlorobenzene d5	5.858	117	3886085	177.00 ppmv	-0.04
Target Compounds					Qvalue
1) Hydrogen	1.601	GC1	13940m	1961.33 ppmv	

(#) - qualifier out of range (m) = manual integration (+) = signals summed

vocgas.m Thu May 16 13:44:02 2013

10-2-13

0604 Looming WOERF operations center - Clolanda.
0613 Pre job being performed by SOS
0634 Pre job has been concluded.
0650 Operators entering 50-69.
0800 Bagging off 1 daughter, Bagging on 1 daughter, continuing to process
0825 Bag on, Bag off is complete. Cams CV10-2-13 are elevated, Cam C2 at 0.6 DAC hrs. All other cams are nominal. LAS surveys are NDA
0839 Cam in nominal range operators continuing to process
0940 Bagging off, Bagging on 9910170
1015 Bag on, Bag off complete
1156 Bagging off 1 daughter, Bagging on 1 daughter.
1219 Bag on of 1 daughter complete.
1410 Operators notifying operations center the copper piping is coming loose over the glovebox. SOS and SOM have been notified.
1422 SOS and SOM have determined that copper piping is OK and stable, FSR will be submitted.
1437 FSR#112542 submitted for copper piping repair.
1503 Bagging off 1 daughter 1 POC, Bagging on 9843528
1520 Starting movement into ~~out of~~ 10-0-76 of 50-69.
1540 movement into 50-69 is complete.
1550 Bag on, Bag off complete
1606 Starting inside rounds.
1615 Starting movement out of 50-69.
1630 Item #63 is OOS, POD in place okay to proceed per CSE
1634 Inside rounds complete.
1706 Starting outside rounds.
1717 Bagging off 1 daughter, Bagging on another
1723 Item 79 is unsat FSL in place, OK to proceed.
1734 Bag on, Bag off complete continuing to proceed
1735 Rounds signed off by SOS.
2-3-13 802 Being relieved by OCO Terri Coleman - Clolanda
HG

no further entries this page

10-2-13

1802 Assuming WCRR operations center. Coleman

1819 Pre-job being conducted by SOS

1833 Pre-job concluded.

1859 Operators entering 5069 to resume operations.

2151 Operators beginning to denest 3 drums.

@ 2300 Denesting completed. Operators state they were only able to denest 2 drums, 1 drum was too degraded to denest. Bagged off 1 daughter, bagged on 5824967. Operators also found a 4in slit in the top bag when bagged off. Operators taped over it. The drum not denested was 5832148.

~~10-2-13~~ 10-3-13 2354 Operators out for lunch.

10-3-13 0135 ~~1335~~ Operators back from lunch.

10-3-13 0200 Relieved by OCO Clayton Mullins. Coleman

RM

JJ

No further entries this page

10-2-13 Day shift

0605 Reviewed the shift turnover checklist and assumed the SOM position John Gaudagnoli

0613 Reviewed and approved the day shift watch bill. Procedure driven work released

0630 Completed attending the pre-job brief conducted by the SOS (Gilbert) The safety topic was to stay focused and ensure no distractions. RP-1 discussed Lessons Learned, with Hi dose drums, rotation of personnel, use of lead blankets, and utilize time and distance. An operator noted the cutter was getting sticky, as a result, day shift will replace the cutter. Currently there are 4 spots open in the transportainer. Per shift turnover, we will need supplies for the glove box and gloves will require checking.

0710 Completed am phone call with area G SOM statusing POD activities.

0713 Completed extending shift order WCRR-SH-13-005 R0 - Provide precautionary Instructions to Prevent Bag Tears, through 10-9-13.

0801 Inside Operations initiated bag off of 1 daughter and bag on, and continue processing parent 5845338.

0825 Bag on and Bag off Complete, CAM ~~[illegible]~~ C2 was elevated and noted at 0.6 DAC - all other CAMs are normal - LAS surveys are NDA -

0889 CAM-C2 noted in normal range operations will continue to process.

0940 Bagging off - Bagging On 5910170

1015 Bag on and Bag off Complete and 2 daughters generated from 5845338

1145 Inside operations report bag on of a daughter and bag off completed and continue to process.

1225 Completed the daily Facility update with OM, PM an ES/PM and SOM.

1235 PST arrives to obtain RWP brief in preparation of tomorrows transfer.

1317 Reviewed and approved WO# 00458847-01 50-84(A) LAE (SHUTDOWN) Rx Cond.

1410 Inside operators report that the copper piping holding the air head is loose. The piping was taped to secure (safe configuration) FSR-112562 submitted.

1503 Inside Operators initiate Bag on of 1 daughter and Bag off of another and initiate bagging on 5843528

1520 Outside Operators initiate movement in of 3 Parents into 50/69 facility.

1550 Bag on / Bag off noted completed.

1600 Completed ensuring consumable/SS supplies inventory was conducted and supplies ordered. Obtained 1" slings to support denesting. Certifications provided to the OCD and SOM. Som ensured secured in Level B storage.

(Continued on Next Page)

10-2-13 DAYSHIFT (Continued)

1605 Obtained confirmation from CSE (R. Griffis) that it was OK to utilize the RTV - noting flammability rating of 1, with MSDS, and can be bagged on (drum) if RTV is not dried - E mail sent to SDS, SOM, etc.

1629 Movement out of 50/69 and into the transportainers of 4 drums was completed. Currently there are 3 remaining open positions in 50-75 transportainer.

1717 Inside Operations report bagging on 1 daughter and bagging on another and continue to process.

1734 Bag off and Bag on - noted completed and continue processing.

1805 Completed conducting the shift turnover check list with the on-coming SOM.

1810 Relieved by the oncoming SOM - R. AXTELL - John Guadagnoli

No further Entries this page
10-2-13

10/2/13 Night Shift

1810 Reviewed Shift turnover checklist and assumed WCRR SOM position. RC

1817 Approved and posted nightshift operations watchbill. Attending pre job brief conducted by SOS. JH discussed use of gloves inside 50-69 for general use - displaying a new type that has been evaluated and approved. Shared the safety start message of PII safeguarding

2151 Operators reported starting denesting operations on the 3 drums that were moved in on day shift so that when drum in process is completed a bag on can occur directly.

2300 Denesting ops completed - operators reported 1 drum was degraded to the point they were not comfortable de-nesting (#5832148) - Completed bag offs for parent # 5843528 (2 daughters total) and bagged on drum # 5824967.

2354 Operators breaking for lunch

0135 Resuming operations.

0420 Completed bagoff of 1 daughter - continuing to process.

0545 SOS provided update to processing - drum on WCG was packed full w/ initial release of liquids - will not have completed prior to turnover. Cleanup of WCG taking place.

0613 Relieved by J. Guadagnoli as SOM. RC

No further entries this page

10.2.18 WCRK SOS LOG BOOK

0600 Assuming SOS Position

0615 Conducted Shift Brief discussed Current Condition with off going crew.

0636 Concluded shift brief.

0650 Operators entering 50-69

0800 Bagging off 1 daughter, Bagging on Another.

0825 Bagging on Bagging off complete. Cam Elevated Cam C2 At 0.6 DAC hrs. LAS are NDA.

0834 Cam back to normal Continuing to process

0940 Bagging off bagging on S910170

1015 Bag on/off complete.

1156 Bagging off one daughter bagging on Another

1219 Bag on/off Complete

1410 Operators notified of Copper piping going to Air Samplers was resting on Glove Box. Sam was notified

1422 Sam and myself made determination on Piping It was taped up FSR Put In To Remip.

1437 FSR #12512 Submitted to replace Copper Piping

1503 bagging off 1 daughter 1 POC bagging on S843524

1520 Starting movement Into 50-69

1540 Moves Complete

1550 Bag on/off complete

1606 Starting Rounds.

1615 Starting move out of 50-69

1717 Bagging off 1 daughter bagging on Another

1734 Bag on/off complete

1735 Reviewed Inside And outside Rounds

1800 Operators Exited 50-69

1815 Relieved by Clayton Mullins

No further entries on this page

10/2/13 WCRR SOS Log Book

1816 Assuming SOS position. CA

1817 Starting Pre-Job with turnover from day shift and status inside 50-69 and WCG. IH went over new safety gloves that could be used inplace of leather gloves.

1833 Pre-Job complete.

2151 Bagging off, bagging on 5824967 after denesting the remaining 3 parents inside 50-69.

2300 Bag off/on complete as well as denesting complete. Unable to denest 5832148 due to degradation also drum bagged had a 4inch slit in the bag when bagged off, patched with tape.

HQ

0604 Signed off on the rounds.

0607 Stations 7R and 3L need to be changed. Stations 1R, 3R, 4R, and 7L all need to be watched.

0610 Relieved by Gilbert Martinez. CA 10/2/13

No Further Entries on this Page

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0117
Examination Date:	10/22/2013
Waste Container ID:	68500
Video/Audio Recorded Media Number:	LA-RTR2-13-0117 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 14
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3110
Waste Stream I.D.:	LA-MIN02-V.001
Waste Container Weights:	Gross Wt.: 168.5 kg Tare Wt.: 33.4 kg Net Wt.: 135.1 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: 68500

Section 3: Container Inventory and Comments (Detailed descriptions)

IM:

AM:

OM: Scrap lead

OI:

C:

R:

XPM: Plastic bag

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP): Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	8.0
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	2.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	125.1
Soils (S):	
Total WMP Weight:	135.1

CCP Radiography Data Sheet

Waste Container ID: 68500

Section 5: RTR Summary (Questions answered "Yes" will be explained in the Comment block, except for Question 1)	
Is there observable liquid?	☐ Yes ☒ No
Is there any observable liquid in internal containers, more than 60 milliliters or 3 percent by volume, whichever is greater?	☐ Yes ☒ No
Is the total volume of observable liquid in the outermost container GREATER than 1% of the container?	☐ Yes ☒ No
Is there observable liquid in payload containers with an EPA Hazardous Waste Number of U134?	☐ Yes ☒ No
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐ Yes ☒ No
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐ Yes ☒ No
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does NOT match TRUCON Code[s])?	☐ Yes ☒ No
Is there an indication of wastes containing explosives or compressed gases?	☐ Yes ☒ No
Is there an indication of PCBs liquids?	☐ Yes ☒ No
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐ Yes ☒ No
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐ Yes ☒ No
CH or RH TRAMPAC	
Are there heat-sealed bags (unvented) GREATER than 4 liters and LESS than 390 square inches in the waste, or heat sealed bags not authorized in the RH TRUCON Code?	☐ Yes ☒ No
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐ Yes ☒ No
Are there sealed containers GREATER than 4 liters?	☐ Yes ☒ No
Are there indications of inadequate protection for heavy and/or sharp objects?	☐ Yes ☒ No

Comments: N/A

RTR Operator:

Eric Lyles		10/22/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	68500	Count Sequence Number:	16616
Operator:	DCLTD231\Operator		
Assay Start:	10/23/2013 2:03:50 PM		
Description 1:	2LANDA1233		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gal Drum		
Weight:	Net: 135.0 kg	Net:	135.0 kg
Container:	Volume: 208.0 l	Full:	70.0 %
Density:	0.930 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:	16616	Batch Number:	2LANDA1233
Assay Instrument:	HENC #2	Location:	LANL TA-54
Analysis Method:	CCP-TP-063 v 15	Software Version:	NDA 2000 V.4.0
Item ID:	68500	Analysis Date:	10/23/2013

Net Weight	135000.0 g		
Pu mass	9.58E+001	+- 3.07E+001	g
TRU Alpha Activity	2.23E+001	+- 4.35E+000	Ci
TRU Activity Concentration	1.65E+005	+- 3.22E+004	nCi/g
Pu-239 Equivalent Activity	2.25E+001	+- 4.35E+000	Ci
Pu-239 FGE	9.51E+001	+- 3.07E+001	g
Decay heat	7.25E-001	+- 1.43E-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	1.69E-006
U233	<LLD	<LLD	0.00E+000	1.80E-002
U234	1.04E-001	6.46E-004	1.72E-004	0.00E+000
U235	7.40E+000	1.60E-005	4.26E-006	7.94E-006
NP237	3.32E-001	2.34E-004	5.12E-005	4.17E-006
PU238	8.75E-003	1.50E-001	5.52E-002	1.91E-003
U238	<LLD	<LLD	0.00E+000	8.14E-005
PU239	8.99E+001	5.57E+000	1.90E+000	7.12E-002
PU240	5.75E+000	1.30E+000	4.81E-001	1.67E-002
AM241	4.44E+000	1.52E+001	3.88E+000	3.18E-001
PU241	1.10E-001	1.13E+001	4.18E+000	1.45E-001
PU242	1.92E-002	7.57E-005	2.79E-005	0.00E+000
AM243	4.85E-003	9.69E-004	2.13E-004	2.54E-005

Errors quoted at 1.000 sigma

Operator: _____ Date: 10/24/13

ITR: _____ Date: 10·24·13

Automated Independent Technical Review

Count Sequence Number: 16616 Batch Number: 2LANDA1233
Counter ID: HENC #2
Container ID: 68500
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 10/23/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis Add-a-Source WARNINGS: Add-a-Source correction factor is less than n-sigma * the correction factor error.	Ok
Section 2 - Passive Neutron Analysis Analysis Status: No errors.	Ok
NCC Pu mass was above calibration range. FGE is greater than the upper limit of 200.00 The Standard NCC Pu effective mass exceeds the Upper Calibration Limit. No roots found within the limits while determining the Standard NCC Pu Mass, Chose largest positive root.	Multiplication in drum. Neutron results rejected. Gamma results applied.
Ones Rate Analysis complete with warnings. - Error calculating the Ones Rate Pu-240 Effective MDA.	Not data affecting.
Section 3 - Data Combiner Analysis Override enabled; Gamma data specified as input. Results taken from Quantitative Gamma data. Results comparison test passed.	Results taken from quantitative gamma data.

Comments	Disposition
Section 4 - MGA Analysis Results are marked as invalid.	MGA analysis failed. AK isotopics applied. The AK information utilized was provided by Steve Schafer, AKE, and consists of data from CCP-AK-LANL-006, AK Source Document M237. MT-52.
Section 5 - Gamma Analysis Analysis Status: No errors.	Ok
Miscellaneous	No additional nuclides contributing to 95% of the radiological hazard identified.

Expert Review by: Sherri Chamberlin Date: 10-24-13

Attachment 4 – Flammable Gas Analysis Form

SCO 1049 Add 4 - Win XP SP3/Win 7 SP1
Excel 2003/2007/2010

Waste Container ID: **68500**

BDR Number: **LA13FG2111**

Sampling Date: **11/1/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	372.78	
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\131101c\
Data File : 68500.D
Acq On : 1 Nov 2013 10:11 am (#1); 01-Nov-13, 10:11:12 (#2)
Operator : SA
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Nov 01 10:21:13 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	5128853	205.75 ppmv	0.03
15) Chlorobenzene-d5	5.858	117	3880874	177.50 ppmv	0.00
Target Compounds					Qvalue
1) Hydrogen	1.610	GC1	2803m	372.78 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-RTR2-13-0117
Examination Date:	10/22/2013
Waste Container ID:	68504
Video/Audio Recorded Media Number:	LA-RTR2-13-0117 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 14
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3110
Waste Stream I.D.:	LA-MIN02-V.001
Waste Container Weights:	Gross Wt.: 164.5 kg Tare Wt.: 33.4 kg Net Wt.: 131.1 kg
Rigid Liner and Liner Vent Description:	Liner: [X] No [ ] Yes Lid: [X] No [ ] Yes Type: [ ] 30-mil [ ] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [ ] Yes [X] N/A Punctured: [X] No [ ] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [ ] No [X] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 1 layer
Volume Utilization Percentage:	85 %

CCP Radiography Data Sheet

Waste Container ID: 68504

Section 3: Container Inventory and Comments (Detailed descriptions)

IM:

AM:

OM: Scrap lead

OI:

C:

R:

XPM: Plastic bag, liner lid

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP): Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	10.0
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	3.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	118.1
Soils (S):	
Total WMP Weight:	131.1

CCP Radiography Data Sheet

Waste Container ID: 68504

Section 5: RTR Summary (Questions answered "Yes" will be explained in the Comment block, except for Question 1)	
Is there observable liquid?	☐ Yes ☒ No
Is there any observable liquid in internal containers, more than 60 milliliters or 3 percent by volume, whichever is greater?	☐ Yes ☒ No
Is the total volume of observable liquid in the outermost container GREATER than 1% of the container?	☐ Yes ☒ No
Is there observable liquid in payload containers with an EPA Hazardous Waste Number of U134?	☐ Yes ☒ No
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐ Yes ☒ No
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐ Yes ☒ No
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does NOT match TRUCON Code[s])?	☐ Yes ☒ No
Is there an indication of wastes containing explosives or compressed gases?	☐ Yes ☒ No
Is there an indication of PCBs liquids?	☐ Yes ☒ No
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA Hazardous Waste Numbers of D001, D002, or D003)?	☐ Yes ☒ No
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐ Yes ☒ No
CH or RH TRAMPAC	
Are there heat-sealed bags (unvented) GREATER than 4 liters and LESS than 390 square inches in the waste, or heat sealed bags not authorized in the RH TRUCON Code?	☐ Yes ☒ No
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐ Yes ☒ No
Are there sealed containers GREATER than 4 liters?	☐ Yes ☒ No
Are there indications of inadequate protection for heavy and/or sharp objects?	☐ Yes ☒ No

Comments: N/A

RTR Operator:

Eric Lyles		10/22/2013
Print Name	Signature	Date

5843528

NDA 2000 Assay Report

Item Information

Item ID:	68504	Count Sequence Number:	16618
Operator:	DCLTD231\Operator		
Assay Start:	10/23/2013 3:46:16 PM		
Description 1:	2LANDA1233		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gal Drum		
Weight:	Net: 131.0 kg	Net:	131.0 kg
Container:	Volume: 208.0 l	Full:	85.0 %
Density:	0.740 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:	16618	Batch Number:	2LANDA1233
Assay Instrument:	HENC #2	Location:	LANL TA-54
Analysis Method:	CCP-TP-063 v 15	Software Version:	NDA 2000 V.4.0
Item ID:	68504	Analysis Date:	10/23/2013

Net Weight	131000.0 g		
Pu mass	2.13E+001	+- 4.50E+000	g
TRU Alpha Activity	4.20E+000	+- 1.46E+000	Ci
TRU Activity Concentration	3.21E+004	+- 1.12E+004	nCi/g
Pu-239 Equivalent Activity	4.25E+000	+- 1.46E+000	Ci
Pu-239 FGE	2.01E+001	+- 4.22E+000	g
Decay heat	1.37E-001	+- 4.86E-002	W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	4.06E-002	2.86E-005	5.47E-006	1.20E-006
PU238	1.94E-003	3.33E-002	7.03E-003	3.53E-005
PU239	2.00E+001	1.24E+000	2.62E-001	1.31E-003
PU240	1.28E+000	2.90E-001	6.13E-002	3.08E-004
AM241	7.70E-001	2.64E+000	1.44E+000	3.51E-002
PU241	2.45E-002	2.52E+000	5.33E-001	2.68E-003
PU242	4.26E-003	1.68E-005	3.56E-006	0.00E+000
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	4.89E-007
U233	<LLD	<LLD	0.00E+000	5.08E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	2.48E-006
U238	<LLD	<LLD	0.00E+000	2.42E-005
AM243	6.85E-004	1.37E-004	2.64E-005	6.77E-006

Errors quoted at 1.000 sigma

Operator: _____ Date: 10/24/13

ITR: _____ Date: 10.24.13

Automated Independent Technical Review

Count Sequence Number: 16618 Batch Number: 2LANDA1233
Counter ID: HENC #2
Container ID: 68504
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 10/23/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis No Add-a-Source warnings.	Ok
Section 2 - Passive Neutron Analysis Analysis Status: No errors. Ones Rate Analysis complete with warnings. - Error calculating the Ones Rate Pu-240 Effective MDA.	Ok Not data affecting.
Section 3 - Data Combiner Analysis Override enabled; Passive Neutron Pu and Gamma U data specified as input. Pu results taken from Passive Neutron data, U from Quantitative Gamma data. Results comparison test passed.	Passive Neutron Pu and Gamma U data specified as input.
Section 4 - MGA Analysis Results are marked as invalid.	MGA analysis failed. AK isotopics applied. The AK information utilized was provided by Steve Schafer, AKE, and consists of data from CCP-AK-LANL-006, AK Source Document M237. MT-52.
Section 5 - Gamma Analysis Analysis Status: No errors.	Ok
Miscellaneous	No additional nuclides contributing to 95% of the radiological hazard identified.

Expert Review by: Sheri Chandler Date: 10-24-13

Attachment 4 – Flammable Gas Analysis Form

SCO 1049 Add 4 - Win XP SP3/Win 7 SP1
Excel 2003/2007/2010

Waste Container ID: **68504**

BDR Number: **LA13FG12108**

Sampling Date: **10/25/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	8.15	U
74-82-8	Methane	9.63	U
67-56-1	Methanol	30.57	U
60-29-7	Ethyl Ether	1.77	U
75-35-4	1,1-Dichloroethylene	5.36	U
67-64-1	Acetone	14.34	
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 : 68504.D
Acq On : 25 Oct 2013 1:03 pm
Operator : SA
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Oct 25 13:12:07 2013
Quant Method : C:\msdchem\1\METHODS\VOCGAS.M
Quant Title : Flammable Gas Analysis for Transportation Only
QLast Update : Wed May 22 12:06:27 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
3) Fluorobenzene	4.063	96	7730623	207.75 ppmv	0.00
15) Chlorobenzene-d5	6.639	117	5690671	178.75 ppmv	0.00
Target Compounds					Qvalue
7) Acetone	1.363	58	29496	14.34 ppmv	95

(#) = qualifier out of range (m) = manual integration (+) = signals summed

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S843593

S843593

Container P 747369

File Options Reports Help

S843593

747369	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

S843593

S843593

- LA00000068664 – EMPTY
- LA00000068551
- LA00000068547

ATTACHMENT 1
Page 1 of 4

working Copy
Date: 11/12/13 HS

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: S843593

6.2[4] Date Processed: 11-12-13

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: 10-14-14

4.3[5][B] ($) Three 1-Liter containers carbon spheroids or MET-L-X in WCG: (SAC 5.10.1.7.1) ☑ YES ☐ NO ☐ N/A

4.3[6] ($) Stationary Fire Watch has been established: ☑ N/A
(> 300 PE-Ci Equivalent Combustible)
(SAC 5.10.1.7.2) _____ (Initial and Date)

4.3[7 [A] Parent Waste Container degraded, loss of integrity, or weighs greater than 468 lb but less than or equal to 624 lb:
☑ YES ☐ NO ☐ N/A

4.3[8][D] WCG glove and bag-in/bag-out bag inspection: ☑ SAT ☐ UNSAT ☐ N/A

Performed By: James Smith / [signature] 1116642 11-12-13
Waste Handling Tech (print) Signature Z # Date

ATTACHMENT 1
Page 2 of 4

4.1[6][B] Parent Waste Container No.: S843593

5.[18] Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable: 441.6 lb

6.2[5][A] Parent Drum Lead Blanket Weight (lb): 83.0 lb

6.2[5][B]/ 6.2[6] Total Parent Drum Weight (lb) 524.6 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.: S843593

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	68551	68547		
10.1[4]	Daughter Drum Filter No.	LM-311	LM-366	N	
10.1[4]	Daughter Drum Bag Filter No.	L-10374	L-10373		A
10.1[4]	Daughter Drum Purchase Order No.	501578	501578		
10.1[13][C]	WCG Fire Watch Stationed		☐ YES	☐ NO	☑ N/A
10.1[14][C][d]3/11.1[3]	WCG Fire Watch Secured		☐ YES	☐ NO	☑ N/A
10.2[4]	POC bag-on bag: Manufacturer				
	Model No.				
	Serial No.				
	Date of Manufacture				
10.2[5]	POC ID No				
10.2[7][B]/10.2[6]	POC Item Description		N		
10.2[13]	POC Assembly closed per Manufacturer's instructions. (Initial and Z#)		A		
10.2[14]	POC Assembly Gross Weight (lb)				
10.2[15]	POC Rad. Survey Results (mrem/hr)				
10.3[3][A]	Approx. Containerized Liquid Vol./Units				
10.3[5][A]	Free Liquid Volume/Units	6 Gallons	½ gallon		
10.3[7][A]	Opaque/Non-penetrable Item Description:	lead shielding	lead shielding		
10.3[9][A]	PCB-contaminated Waste Description	N			
10.3[9][B]	PCB Item ID No.		A	N	
10.3[10]	Remaining Waste Description	See Comments	See Comments		
10.3[13]/10.4[10]/ 10.5[4]/10.6[10]	Daughter Drum % Full (%)	100%	80%	A	
10.5[3]/10.6[2]	Description Waste Added During Processing	Kitty litter + Hex Arm Plastic	Kitty litter Stickouts		

ATTACHMENT 1
Page 4 of 4

4.1[6][B] Parent Waste Container No.: S 843593

Comments: Kitty litter, Plastic, Room Trash, Nitrate Salts Absorbed liquid and lead Sheilding, Hex Armor

11.1[1] Performed By: Edward Martinez, [signature] 1239911, 11-12-13
Waste Handling Tech (print) Signature Z # Date

11.1[8] Reviewed By: Clayton Mullins, [signature] 1240192, 11/13/13 0503
SQS or designee (print) Signature Z # Date/Time

Working Copy
Date: 11-13-13 JE

ATTACHMENT 2
Page 1 of 1

WCRRF OVERPACK DRUM ASSEMBLY PREPARATION DATA SHEET

5.[3] Overpack drum information:

Purchase Order No.: 501563
Lot No.: 0238367
Manufacture Date: 2013

5.[8] Overpack filtered vent and 2-in. bung torque wrench information:

	Filtered Vent	2-in. Bung
M&TE No.:	N/A	N/A
Cal. Expiration Date:	N/A	N/A
Tolerance:	N/A	N/A

Overpack filtered vent information:

Manufacturer: NUCPIL
Model No.: 019DS
Serial No.: LM-388
Manufacture Date: 12/12

5.[9] Torque wrench listed above is within the acceptable ranges as displayed on the calibration certificate. ☐ N/A Yes ☐ N/A No

5. [11] Performed By: N/A
Waste Handling Technician (print) Signature Z # Date

5.[15] Filtered Vent torque value [120 in-lb (96 to 144 in-lb)]: N/A in-lb

5. [18] 2-in. bung plug torque value: N/A ft-lb

Comments: Overpack drum was not prepad at TA-50.

8.1[1] Performed By: Edward Martinez
Waste Handling Technician (print) Signature Z # 1238911 Date 11-13-13

8.1[6] Reviewed By: Clayton Mullins
Supervisor or designee (print) Signature Z # 1240092 Date 11/13/13

ATTACHMENT 5
Page 1 of 1

Working Copy
Date: 11/12/13 HS

WCRRF OVERPACK DRUM CLOSURE DATA SHEET

7.[17] Overpack Drum Unique Identifier No.: 681664

7.[23] Overpack drum closure ring torque wrench information:
M&TE No.: 036245
Cal. Expiration Date: 08/05/2014
Range in ft-lb: 16-80
Tolerance: +/-3% cw and +/-6% ccw

7.[24] Torque wrench listed above is within the acceptable ranges as displayed on the calibration certificate. ☑ Yes ☐ No

Performed By: Edward Martinez, [signature] 1239911 11-12-13
Waste Handling Technician (print) Signature Z # Date

7.[26] Overpack drum closure ring torque value: 60 ft-lb

7.[29] Threaded lug of the drum closure ring is not touching the jam nut and the locking ring lugs are not touching. ☑ SAT ☐ UNSAT

7.[34][B] Platform scale serial number: 019065
Platform scale calibration expiration date: 10-14-14

7.[34][D] 85-gal overpack drum gross weight (lb): 167.2 lb

Comments: N/C

8.1[1] Performed By: Edward Martinez, [signature] 1239911 11-12-13
Waste Handling Technician (print) Signature Z # Date

8.1[7] Reviewed By: Clayton Mullins, [signature] 1240092 11/12/13
Supervisor or designee (print) Signature Z # Date

UET Copy
Working Copy
Date: 10-21-13

ATTACHMENT 1
Page 1 of 2

WCRRF DRUM PREPARATION DATA SHEET

5.[34][E] Drum ID No.: 68547

5.[3] Drum information:
Purchase Order No.: 501578
Lot No.: 0240999
Manufacture Date: 2013

5.[17] Drum Liner Bag/Filter Assembly:
Manufacturer: BOP
Model No.: 6CPVC 1.5-23PVC
Serial No.: L-10373
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: MICHAEL MARTINA [signature] 191952/10-21-13
Operator (print) Signature Z# Date

5.[23] Filtered vent information:
Manufacturer: NUCFIL
Model No.: 019DS
Serial No.: LM-366
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.: 68547

Comments: N/C

5.[35] Performed By: MICHAEL MONTOYA / [signature] 191352 / 10-21-13
Operator (print) Signature Z # Date

7.1[4] Reviewed By: Clayton Mullin / [signature] 240092 / 11/13/13
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 2
Page 1 of 2

WCRRF DRUM CLOSURE DATA SHEET

6.[3] Drum ID No.: 68547

6.[9] Drum closure ring torque wrench information:

M&TE No.: 036245
Cal. Expiration Date: 08/05/2014
Range in ft-lb: 16-80
Tolerance: +/-3% CW and +/-6% CCW

6.[10] Torque wrench listed above is within the acceptable ranges as displayed on the calibration certificate. ☑ YES ☐ NO

Performed By: Edward Martinez / [signature] / 239411 / 11-12-13
Operator (print) Signature Z # Date

6.[12] Drum closure ring torque value: 60 ft-lb

6.[15] Threaded lug of the drum closure ring is not touching the jam nut and the locking ring lugs are not touching. ☑ SAT ☐ UNSAT

6.[17][A] Filtered vent and 2 in. bung torque wrench information: ☑ N/A

	Filtered Vent	2 in. Bung
M&TE No.:	N/A	N/A
Cal. Expiration Date:		
Range in ft-lb:		
Tolerance:		

6.[17][B] Torque wrench listed above is within the acceptable ranges as displayed on the calibration certificate. ☐ YES ☐ NO ☑ N/A

Performed By: N/A
Operator (print) Signature Z # Date

6.[17][C] 2 in. bung plug torque value: N/A in-lb ☑ N/A

6.[17][D] Filtered vent torque value [120 in-lb (96 to 144 in-lb)]: N/A in-lb ☑ N/A

ATTACHMENT 2
Page 2 of 2

6.[3] Drum ID No.: ~~11-019065~~ 11-12-13 68547

6.[26] Scale File ID number: 019065

6.[27] Scale is within the calibration frequency. ☑ SAT ☐ UNSAT

6.[28] Drum gross weight: 319.6 lbs

6.[29] Drum gross weight recorded on drum lid in approximately 1/2 in. lettering: ☑ SAT ☐ UNSAT

Comments: N/C

6.[32] Performed By: Edward Martinez (Operator (print)) (Signature) 1239911 (Z #) 11-12-13 (Date)

7.1[4] Reviewed By: Clayton Mullins (Supervisor or designee (print)) (Signature) 1240092 (Z #) 11/13/13 (Date)

Working Copy
Date: 10-21-13

ATTACHMENT 1
Page 1 of 2

WCRRF DRUM PREPARATION DATA SHEET

5.[34][E] Drum ID No.: 68551

5.[3] Drum information:
Purchase Order No.: 501578
Lot No.: 240999
Manufacture Date: 2013

5.[17] Drum Liner Bag/Filter Assembly:
Manufacturer: DOP
Model No.: 6CPVC1.5250VC
Serial No.: L-10374
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] 1204742 / 10-21-13
Operator (print) Signature Z # Date

5.[23] Filtered vent information:
Manufacturer: NUCFIL
Model No.: 019DS
Serial No.: LM-311
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.: 68551

Comments: N/C

5.[35] Performed By: Brandon Chavez / [signature] 204742 / 10-21-13
Operator (print) Signature Z # Date

7.1[4] Reviewed By: Clayton Mullins / [signature] 240092 / 11/13/13
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 2
Page 1 of 2

WCRRF DRUM CLOSURE DATA SHEET

6.[3] Drum ID No.: 68551

6.[9] Drum closure ring torque wrench information:

M&TE No.: 036245
Cal. Expiration Date: 08/05/2014
Range in ft-lb: 16 - 80
Tolerance: +/- 3% cw and +/- 6% ccw

6.[10] Torque wrench listed above is within the acceptable ranges as displayed on the calibration certificate. ☑ YES ☐ NO

Performed By: Edward Martinez [signature] 1239111 11-12-13
Operator (print) Signature Z # Date

6.[12] Drum closure ring torque value: 66 ft-lb

6.[15] Threaded lug of the drum closure ring is not touching the jam nut and the locking ring lugs are not touching. ☑ SAT ☐ UNSAT

6.[17][A] Filtered vent and 2 in. bung torque wrench information: ☑ N/A

	Filtered Vent	2 in. Bung
M&TE No.:		
Cal. Expiration Date:	N	N
Range in ft-lb:	A	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: N/A
Operator (print) Signature Z # Date

6.[17][C] 2 in. bung plug torque value: N/A in-lb ☑ N/A

6.[17][D] Filtered vent torque value [120 in-lb (96 to 144 in-lb)]: N/A in-lb ☑ N/A

ATTACHMENT 2
Page 2 of 2

6.[3] Drum ID No.: 68551

6.[26] Scale File ID number: 019065

6.[27] Scale is within the calibration frequency. ☑ SAT ☐ UNSAT

6.[28] Drum gross weight: 362.8 lbs

6.[29] Drum gross weight recorded on drum lid in approximately 1/2 in. lettering: ☑ SAT ☐ UNSAT

Comments: N/C

6.[32] Performed By: Eduard Martinez (Operator (print)) [signature] (Signature) 1254911 (Z #) 11-12-13 (Date)

7.1[4] Reviewed By: Clayton Mullins (Supervisor or designee (print)) [signature] (Signature) 1248094 (Z #) 11/12/13 (Date)

ATTACHMENT 3
Page 1 of 1

Working Copy
Date: 11/12/13 HS

WCRRF PARENT 55-GAL DRUM PREPARATION DATA SHEET

6.3[21] Prepared Parent 55-Gal Drum Number: S843593

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): 441.6

6.3[19] ($) Prepared parent 55-gal drum weighs < 624 lb: (SR 4.5.1) ☑ SAT ☐ UNSAT

Comments: N/C

8.1[1] Performed By: James Sewell / [signature] 116662 / 11-12-13
Waste Handling Technician (print) Signature Z # Date

8.1[7] Reviewed By: Clayton Mullins / [signature] 240098 11/13/13
Supervisor or designee (print) Signature Z # Date

8.1[8][B] Acceptance criteria satisfied: ☑ YES ☐ NO

8.1[8][D] Approved by: Randy Axtell / [signature] 109185 11/13/13 / 0502
SOS/SOM or designee (print) Signature Z # Date Time

Inspected SP70

LTP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Planning and Technical Solutions 85 11-4-13

Container ID: S843593 Container Type: STEEL DRUM (55 GAL) Gross Weight (lbs): 450.0405
Total PE-Ci Activity: 3.06E+00 Equivalent Combustible PE-Ci: 1.15E+00
Total Fissile Gram Equivalents: 3.38E+01 Total Surface Dose Rate (mrem/hr): 2
EPA Code(s): D007; D008; D009
Waste Description: Nitrate salts

Remediation/Characterization Activities: Ensure EPA Codes D007, D008, and D009 are indicated on the Haz Waste Label. A minimum of 1.2 volumes of kitty litter/zeolite must be mixed with 1.0 volume of nitrate salts.

RTR pre-screen indicates ~2.5 gallons of liquid.

Potential Safety Risks: Nitrate salt drums often contain free liquids and are packaged in individual plastic bags. Net weight is ~320 lbs. and generator data shows 12 items of nitrate salts with weights ranging from ~18 - 39 lbs.

Performed By: Susan Ramsey (LTP-PTS (Print)) | Signature | 100681 (Z#) | 8/8/13 (Date)

IHS Representative

Potential IHS Safety Risks: May contain D007, D008 & D009 materials. Used nitrate salts to counteract liquids.

Performed By: Johnny Smallwood (IHS Representative (Print)) | Signature | 241659 (Z#) | 8-21-13 (Date)

LTP Engineering

Waste container remediation compliant with applicable facility safety basis requirements: ☒ Yes ☐ No

Engineering Comments: NA

Performed By: Valerie Rhodes (LTP Engineering (Print)) | Signature | 112609 (Z#) | 9/30/13 (Date)

TRU Remediation Operations

Potential Safety Risks: Do not push or press waste with hands. Use proper ratio of kitty litter to waste in accordance with procedure.

Performed By: Derrel L. Blair (TRU Operations (Print)) | Signature | 1218069 (Z#) | 10/29/13 (Date)

Operations Manager or designee

Processing Determination: ☒ Accept ☐ Reject

OM or designee Comments: Use Hexarmour gloves when processing waste in the glovebox. Use proper gloves during bag on and bag off.

Approved By: Jose Perez (OM or designee (Print)) | Signature | 221452 (Z#) | 10-29-13 (Date)

Noncertified TRU Waste Drum Item Information

DrumID: 019678

Item No	ItemID	Process Status	Net Wt (kg)	Matrix	Meas Code	SNM (g)	MT	Auth (Pg/Ln)		Comments
1	LR-26NW1		17.730	NITRATE SALTS		3.41	52	6/14	G468	
2	LR-76NE1		14.550	NITRATE SALTS		1.73	52	6/14	G468	
3	LR-76NW2		9.550	NITRATE SALTS		1.45	52	6/14	G468	
4	LR-77NW1		8.460	NITRATE SALTS		2.1	52	6/14	G468	
5	OX11478NE1		10.450	NITRATE SALTS		1.44	52	6/14	G468	
6	OX11578NE1		16.930	NITRATE SALTS		5.87	52	6/14	G468	
7	LR-70NE1		9.550	NITRATE SALTS		1.49	52	6/14	G468	
8	OX11509A		15.450	NITRATE SALTS		12.27	52	6/14	G468	
9	LR77NW2		8.180	NITRATE SALTS		1.41	52	6/14	G468	
10	LR77NE2		9.090	NITRATE SALTS		1.81	52	6/14	G468	
11	LR76NE2		11.700	NITRATE SALTS		1.27	52	6/14	G468	
12	LR76NW3		13.860	NITRATE SALTS		1.7	52	6/14	G468	

Noncertified Waste Drum Material Summary

Gross Wt (kg): 204.1

Material Type	SNM (grams)	Items Net Wt (kg)
52	35.95	145.50
Totals	35.95	145.50

1947 0 4 7 3

ATTACHMENT 1
Page 1 of 1

TA-54 AREA G WASTE CONTAINER HYDROGEN/VOC SAMPLE ANALYSIS DATA SHEET

5.[1] Sample Date: 5/21/13

Container No. (5.[1])	S843593					
Container type sampled (e.g., 55-gal, 85-gal, 110-gal, or SWB) (5.[1])	55 Gal					
Filtered Vent Type (5.[1])	70					
Filtered Vent Unobstructed (5.[1])	☑ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT
WIPP-Approved Filtered Vent (5.[2])	☑ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT N/A	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT
Total CCP VOC value (< 7,000 ppm) (5.[4])	0 ppm	ppm	ppm	ppm	ppm	ppm
Hydrogen Reading (< 64,000 ppm) (5.[5])	1483.52 ppm	ppm	ppm	ppm	ppm	ppm
Methane Reading (< 16,000 ppm) (5.[5])	0 ppm	ppm	ppm	ppm	ppm	ppm

5.[7] Certified CCP Technician:

Performed By: Sara Aragon (CCP (Print)) / 237975 (Z #)

Reviewed By: Nathan Wales (CCP (Print)) / 238844 (Z #)

Comments:

6.1[2][A] WCRRF waste container satisfies the following criteria: ☑ SAT ☐ UNSAT ☐ N/A

- Hydrogen – less than or equal to 3.2% (32,000 ppm)
- VOC – less than or equal to 7,000 ppm

6.1[3] Performed By: Susan Ramsey (Waste Handling Operator (print)) / Susan G. Ramsey (Signature) / 140681 (Z #) / 5/22/13 (Date)

InstName : Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\130521c\
Data File : S843593.D
Acq On : 21 May 2013 2:45 pm (#1); 21-May-13, 14:45:15 (#2)
Operator : SA
Sample :
Misc : 55 GAL LFL DRUM THROUGH UNOBSTRUCTED 72 (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 21 14:53:43 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	3.594	96	4217501	201.25 ppmv	0.03
15) Chlorobenzene-d5	5.920	117	3691671	177.00 ppmv	0.07
Target Compounds					Qvalue
1) Hydrogen	1.599	GC1	10544m	1483.52 ppmv	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

vocgas.m Tue May 21 14:53:55 2013

11-12-13

0600 ASSUMING OPERATOR'S CENTER -H. SMITH
0615 BEGINNING PRE-JOB BRIEFING AND CREW TURNOVER
0642 PRE-JOB BRIEFING CONCLUDED
0701 OPERATORS ENTER BUILDING TO BEGIN PROCESSING
0812 PERMISSION GRANTED TO LOWER ACCESS GATES TO BEGIN SHIPMENT ~~OF~~ 11/12/13 HS OUT OF TA50 194/75 TO AREA G.
0813 BAGGING OFF 2 POC'S 1 DAUGHTER AND BAGGING ON ~~S8300613~~ HS 11/12/13 S803613
0920 BAG OFF COMPLETE
0921 MODE CHANGE TA50-69 AND YARD DECREASE TO WARM
0922 SHIPMENT OUT OF WCRR TA50-194/75 IS COMPLETE, VEHICLE ACCESS GATES SECURED.
0923 MAINTENANCE ENTERS BUILDING TO WORK ON PCM'S
1058 MODE CHANGE INCREASE TO OPERATIONS IN WCRRF SITE.
1120 MAINTENANCE EXIT BUILDING. WORK COMPLETED
1300 PERMISSION GRANTED TO BEGIN MOVEMENT OUT OF TA50 69 TO TA 50-194/75
1318 OPERATORS OUT FOR LUNCH
1339 TRANSPORTAINER DOOR ARE CLOSED & LATCHED. MOVEMENT OUT OF TA50-69 IS COMPLETE
1431 PERMISSION GRANTED TO BEGIN MOVEMENT INTO TA50-69 FROM TA50-194/75
1500 MOVEMENT INTO TA50-69 IS COMPLETED
1510 BAGGING OFF S803613 BAGGING ON S843593
1520 STARTING OUTSIDE ROUNDS
1545 BAG ON - BAG OFF COMPLETED
1545 OUTSIDE ROUNDS COMPLETED
1602 STARTING INSIDE ROUNDS
1637 ITEM #63 ODS. PDD IN PLACE OKAY TO PROCEED PER CSE DOCUMENTATION
1645 INSIDE ROUNDS COMPLETED
1701 INSIDE ROUNDS AND OUTSIDE ROUNDS REVIEWED BY SDS
1800 OPERATORS OUT FOR THE DAY
11-12-13 1802 BEING RELIEVED BY OCO GERALD ESPANOZA-H SMITH
HS

NO FURTHER ENTRIES ON THIS PAGE. H SMITH

11-12-13

1802 Assuming OCO position - Gerald Espin
1815 SHIFT BRIEF AND TURNOVER BEING CONDUCTED.
1840 Pre job Concluded.
1905 OPERATORS needed BACK TO BEGIN PROCESSING.
2100 BAGGING OFF FIRST DAUGHTER BAGGING ON A SECOND DAUGHER.
2113 NOTIFIED BY INSIDE PIC OF ELEVATED CAMS.
2127 BAG OFF COMPLETE, CAMS HAVE WENT BACK TO NORMAL.
2234 STARTING TO DENEST 2 DRUMS.
2257 DENESTING COMPLETE, BAGGING OFF and BAGGING ON S833846.
2331 BAG ON BAG OFF COMPLETE
0213 STARTING OUTSIDE ROUNDS.
0245 BEING RELIEVED BY OCO TERRI COLEMAN. G. Espin
0245 Assuming WCRR operations center. Coleman
0258 Outside rounds complete.
0310 Bagging off 1 daughter, 1 POC, bagging on another daughter.
0337 Bag off/on complete.
0428 Beginning inside rounds.
0430 Being relieved by OCO Gerald Espinoza. Coleman
0430 ASSUMING WCRR OPERATIONS CENTER. G. Espin
0442 ITEM #63 OOS, OK TO PROCEED PER CSE DOCUMENTATION.
0445 INSIDE ROUNDS COMPLETED.
0506 ROUNDS REVIEWED BY SOS.
11/13/13 0605 BEING RELIEVED BY OCO HOWARD SMITH G. Espin

NO FURTHER ENTRIES THIS PAGE

11-12-13 DAYSHIFT.

0603 Reviewed the shift turnover checklist and assumed the WCRR dayshift SOM position John Guadagnoli

0643 Completed attending the pre-job brief conducted by (Clarissa). There is one transfer scheduled out (20 drums). The PCM-2 is non-functional. RP-Techs will be notified and scheduled for repair. The safety topic was walking up and down stairs - ensure hand is on rail. An RCT mentioned he encountered a road accident (fatality) when driving back from Texas. Also during de-nesting yesterday, RCT provided more info, the ring was noted below the top chime within the 85 drum. The SOM discussed the shift orders in affect.

0710 Completed the daily phone call to AREAG statusing POD activities.

0805 P&T arrives to inspect drums to be transfered out, and RP-1 will notify techs to repair the PCM-2 when operators initiate bag outs.

0813 Inside operations report initiating bag offs and bagging on Parent 5830613

0920 Inside operators report the bag off and bag on was completed. WCG safe configuration

0921 Mode change: 50/69 and YARD transition from Operations/Operations to WARM/WARM which allows RP-Tech's to enter 50/69 and conduct work on the PCM-2.

0922 The transfer out 20 drums from WCRRF to AREAG - Truck loaded and exited WCRRF.

1015 Completed reviewing AOP validation check sheets with the procedure writer.

1058 RP-Techs complete repair of the PCM-2
Mode change: 50/69 and yard Transition from WARM/WARM to Operations/Operations

1110 Extended shift orders - WCRR-SH-13-003 R_2 and WCRR-SH-13-005 R_0 through 11-18-13

1231 Completed noon status call - with SOM, SOS, OM, and Production Control.

1339 Operators completed the tranfer out of 50/69 to the transportainer.

1431 Operators initiate movement into 50/69 from the transportainers - 4 drums total.

1510 Inside operators report bagging of 1 daughter and 1 POC and bagging on PARENT 5843593

1545 Bag off and bag on were completed

1745 Obtained update from the SOS, the parent drum is 1/4 full and the daughter drum will require a bag off, the lid is being placed on the parent to secure the parent and leave the WCG in a safe configuration during shift change. No waste in WCG.

1800 Initiated shift turnover checklist with oncoming SOM.

1810 Relieved by R. AXTELL as SOM John Guadagnoli

No further Entries this Page

11/12/13 Night Shift

1810 Reviewed shift turnover checklist, reviewed approved and posted night shift operations watchbill and assumed WCRR SOM position. R

1840 Pre job brief is concluded. 1H safety topic was forklift ops and importance of spotter. Briefed the active shift orders in effect for manual drum movements and preventing bag tears. Discussed w/ operators safety concern of driving home after 12 hour shift when tired. Prompted them to bring up safety concerns w/ ES management and WSST.

2113 RP-1 reported elevated CAMs during bag off of daughter drum - one CAM @ 0.5 DAC another @ 0.7 DAC.

2127 CAMs returned to normal. Bag off is completed of ~~and~~ LAG 11/12/13 1 daughter and continuing processing.

2257 Operators completed denesting 2 drums

2331 Completed bag offs for parent drum # 5843593 - 2 daughters total. Bagged on drum # 5833846. Totals for todays production report was already sent out and will not include 5843593.

11/13/13 0337 Completed bag off of 1 daughter and 1 POC - continuing to process.

0511 Reviewed inside and outside round sheets.

0545 Reviewed compliance tracking schedule and updated status board.

0547 Late entry @ 0400 Inventory control brought up issue of WCATS system regarding prepping of drums in Arctic. Some are not getting completed in WCATS prior to moving from Arctic to 50-69, causing problems w/ labeling when used as daughter drums. LAG

11/13/13 0609 Relieved by J. Guadagnoli as WCRR SOM. R

No further entries this page LAG

13 PROJECT NAME _____ NOTEBOOK NO. _____

11-12-13

0415 Assuming WCRRF SOS position

0417 Beginning pre job, discussed shift makeup, driving safety, briefings on procedures RCT's still trying to get personnel to work on PCM.

0442 Pre job briefing concluded.

0702 Operators entering 50-69 to continue processing.

0811 Starting movement to transport vehicle for shipment to treat.

0813 Bagging off 2 POC's, 1 daughter, Bagging on ~~S8304115~~ S8303613 (CW)

0920 Bag on, Bag off is complete.

0921 Mode change to warm for maintenance to perform work on PCM

0923 movement out of ~~50-69~~ 03-11-12-13 WCRRF is complete

1058 mode change performed TA50 69 and WCRRF yard now in operations, PCM work was completed.

1102 Operators entering 50-69 to continue processing.

1300 Starting movement out of 50-69 10 drums.

1324 Completed movement out of 50-69

1325 Operators waiting for lunch.

1420 Operators entering 50-69 to continue processing.

1431 Starting movement into 50-69.

1500 Completed movement into 50-69

1510 Bagging off S8303613, ~~03~~ 11-12-13 (CW) 1 daughter and 1 POC, Bagging on S8433593

1545 Bag on, Bag off completed, completed outside rounds

1600 late entry started outside rounds. 1520 (CW)

1602 Starting inside rounds.

1648 Completed inside rounds.

1701 Rounds signed off.

1800 Operators waiting 50-69 drum S8433593 is 25% full

1810 Released by SOS Clayton Mullins & Crelande

12-13 MG

to further entries this page

SIGNATURE _____ DATE _____ 20 _____

READ AND UNDERSTOOD _____ DATE _____ 20 _____

PROJECT NAME WCRRF SOS Log Book NOTEBOOK NO.

11/12/13		
	1811	Assuming SOS position. CA
	1815	Starting Pre-Job, with turnover from day shift. Also discussed always having a spotter when operating a fork lift as well as being in constant contact with the spotter.
	2100	Bagging off 1st daughter, bagging on a 2nd.
	2113	Notified by operators inside of slightly elevated CAM's.
	2127	Bag off/on complete, CAM's back to normal.
	2234	Starting to denest 2 drums.
	2257	Denesting complete, bagging off 2nd daughter and bagging on 5833846.
RG	2331	Bag off/on complete.
	0310	Bagging off 1st daughter and 1 POC, bagging on a 2nd daughter.
	0337	Bag off/on complete.
	0506	Signed off on the rounds.
11/13/13	~~0600~~ CM 11-17-13	0600 Securing SOS position. CA

No Further Entries on this Page

SIGNATURE _____ DATE _____ 20

READ AND UNDERSTOOD _____ DATE _____ 20

CCP Radiography Data Sheet

CCP-TP-053 Attachment 2

5843593

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0129
Examination Date:	11/15/2013
Waste Container ID:	68547
Video/Audio Recorded Media Number:	LA-RTR2-13-0129 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.: 145.0 kg Tare Wt.: 33.4 kg Net Wt.: 111.6 kg
Rigid Liner and Liner Vent Description:	Liner: [X] No [ ] Yes Lid: [X] No [ ] Yes Type: [ ] 30-mil [ ] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [ ] Yes [X] N/A Punctured: [X] No [ ] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [ ] No [X] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 2 layers
Volume Utilization Percentage:	60 %

CCP Radiography Data Sheet

Waste Container ID: 68547

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):	14.0
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	6.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	91.6
Soils (S):	
Total WMP Weight:	111.6

CCP Radiography Data Sheet

Waste Container ID: 68547

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		11/15/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	68547	Count Sequence Number:	23877
Operator:	D3PW2DK1\operator		
Assay Start:	11/20/2013 2:08:08 PM		
Description 1:	1LANDA1868		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 112.0 kg	Net:	112.0 kg
Container:	Volume: 208.0 l	Full:	60.0 %
Density:	0.900 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:	23877	Batch Number:	1LANDA1868
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:	68547	Analysis Date:	11/20/2013

Net Weight	112000.0 g		
Pu mass	2.15E+001	+- 1.04E+001	g
TRU Alpha Activity	9.00E+000	+- 5.22E+000	Ci
TRU Activity Concentration	8.04E+004	+- 4.66E+004	nCi/g
Pu-239 Equivalent Activity	9.05E+000	+- 5.22E+000	Ci
Pu-239 FGE	2.03E+001	+- 1.03E+001	g
Decay heat	2.96E-001	+- 1.73E-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	9.78E-007
U233	<LLD	<LLD	0.00E+000	6.90E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	2.42E-006
NP237	1.34E-001	9.46E-005	2.03E-005	3.39E-006
PU238	1.96E-003	3.36E-002	1.77E-002	9.81E-004
U238	<LLD	<LLD	0.00E+000	3.02E-005
PU239	2.02E+001	1.25E+000	6.40E-001	3.65E-002
PU240	1.29E+000	2.93E-001	1.56E-001	8.55E-003
AM241	2.16E+000	7.43E+000	5.18E+000	1.32E-001
PU241	2.46E-002	2.54E+000	1.35E+000	7.41E-002
PU242	4.31E-003	1.70E-005	9.03E-006	0.00E+000
AM243	6.96E-004	1.39E-004	3.03E-005	9.51E-006

Errors quoted at 1.000 sigma

Operator: [signature] Date: 11-22-13

ITR: [signature] Date: 11.25.13

Automated Independent Technical Review

Count Sequence Number: 23877 Batch Number: 1LANDA1868
Counter ID: MCS HENC #1
Container ID: 68547
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 11/20/2013

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.
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: 11-21-13

Attachment 4 – Flammable Gas Analysis Form

SCO 1049 Add 4 - Win XP SP3/Win 7 SP1
Excel 2003/2007/2010

Waste Container ID: **68547**

BDR Number: **LA13FG2120**

Sampling Date: **11/25/2013**

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\131125c\
Data File : 68547.D
Acq On : 25 Nov 2013 1:06 pm (#1); 25-Nov-13, 13:06:00 (#2)
Operator : EL
Sample :
Misc : 55 Gallon Drum Through Filter (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Nov 25 13:15:13 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	3.597	96	4283826	205.75 ppmv	0.08
15) Chlorobenzene-d5	5.894	117	3402533	177.50 ppmv	0.03

Target Compounds	Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

CCP Radiography Data Sheet

CCP-TP-053 Attachment 2

5843593

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0129
Examination Date:	11/15/2013
Waste Container ID:	68551
Video/Audio Recorded Media Number:	LA-RTR2-13-0129 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 14
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3110
Waste Stream I.D.:	LA-MIN02-V.001
Waste Container Weights:	Gross Wt.: 164.5 kg Tare Wt.: 33.4 kg Net Wt.: 131.1 kg
Rigid Liner and Liner Vent Description:	Liner: [X] No [ ] Yes Lid: [X] No [ ] Yes Type: [ ] 30-mil [ ] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [ ] Yes [X] N/A Punctured: [X] No [ ] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [ ] No [X] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 1 layer
Volume Utilization Percentage:	95 %

CCP Radiography Data Sheet

Waste Container ID: 68551

Section 3: Container Inventory and Comments (Detailed descriptions)

IM:

AM:

OM:

OI:

C:

R: Rubber gloves

XPM: 90 mil liner lid

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP): Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	10.0
Plastics (waste materials) (XPM):	1.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	120.1
Soils (S):	
Total WMP Weight:	131.1

CCP Radiography Data Sheet

Waste Container ID: 68551

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		11/15/2013
Print Name	Signature	Date

```
|-----------------------------------------------------------------------|
|                          NDA 2000 Assay Report                        |
|-----------------------------------------------------------------------|

************************    Item Information    ************************

Item ID:            68551              Count Sequence Number:  23876
Operator:           D3PW2DK1\operator
Assay Start:        11/20/2013  1:19:29 PM
Description 1:      1LANDA1868
Description 2:      N/A
Location:           LANL TA-54
Comment:            AK-6
Matrix Type:        Homo Sol. S3000
Container Type:     55 gallon drum
Weight:             Net:       131.0   kg        Net:   131.0 kg
Container:          Volume:    208.0   l        Full:    95.0 %
Density:                         0.660 kg /l


************************   System Configuration   ************************

Counter:                        MCS HENC #1
Count Type:                     Item Count
Collimator/Geometry Setting:    All Banks On (GE -  0

Errors quoted at  1.000 sigma
```

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number:	23876	Batch Number:	1LANDA1868
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:	68551	Analysis Date:	11/20/2013

Net Weight	131000.0 g		
Pu mass	1.87E+001	+- 3.50E+000	g
TRU Alpha Activity	5.56E+000	+- 7.88E-001	Ci
TRU Activity Concentration	4.25E+004	+- 6.02E+003	nCi/g
Pu-239 Equivalent Activity	5.60E+000	+- 7.88E-001	Ci
Pu-239 FGE	1.90E+001	+- 3.51E+000	g
Decay heat	1.82E-001	+- 2.61E-002	W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
SR90	1.57E-008	2.16E-006	8.80E-007	0.00E+000
CS137	2.49E-008	2.16E-006	8.80E-007	6.56E-007
U233	<LLD	<LLD	0.00E+000	5.51E-003
U234	2.89E-002	1.80E-004	4.51E-005	0.00E+000
U235	2.06E+000	4.46E-006	1.12E-006	2.32E-006
NP237	7.61E-002	5.37E-005	9.59E-006	1.54E-006
PU238	1.71E-003	2.92E-002	6.91E-003	7.62E-004
U238	<LLD	<LLD	0.00E+000	2.41E-005
PU239	1.76E+001	1.09E+000	2.17E-001	2.84E-002
PU240	1.12E+000	2.55E-001	6.22E-002	6.64E-003
AM241	1.22E+000	4.19E+000	7.55E-001	5.62E-002
PU241	2.14E-002	2.21E+000	5.39E-001	5.75E-002
PU242	3.75E-003	1.48E-005	3.61E-006	0.00E+000
AM243	5.82E-004	1.16E-004	2.12E-005	6.80E-006

Errors quoted at 1.000 sigma

Operator: [signature] Date: 11-22-13

ITR: Maria [signature] Date: 11.25.13

Automated Independent Technical Review

Count Sequence Number: 23876
Batch Number: 1LANDA1868
Counter ID: MCS HENC #1
Container ID: 68551
Waste Matrix Code: Homo Sol. S3000
Count Type:
Sequence Type:
Assay Date: 11/20/2013

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.
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: 11-21-13

Attachment 4 – Flammable Gas Analysis Form

SCO 1049 Add 4 - Win XP SP3/Win 7 SP1
Excel 2003/2007/2010

Waste Container ID: **68551**

BDR Number: **LA13FG2120**

Sampling Date: **11/25/2013**

S843593

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	130.47	
74-82-8	Methane	142.14	U
67-56-1	Methanol	35.23	U
60-29-7	Ethyl Ether	0.96	U
75-35-4	1,1-Dichloroethylene	6.38	U
67-64-1	Acetone	18.08	U
75-34-3	1,1-Dichloroethane	4.08	U
156-59-2	cis-1,2-Dichloroethene	0.76	U
78-93-3	Methyl ethyl ketone	11.73	U
110-82-7	Cyclohexane	5.10	U
71-43-2	Benzene	1.77	U
107-06-2	1,2-Dichloroethane	3.66	U
71-36-3	1-Butanol	1.84	U
108-10-1	Methyl isobutyl ketone	9.82	U
108-88-3	Toluene	8.02	U
108-90-7	Chlorobenzene	4.10	U
100-41-4	Ethylbenzene	3.57	U
108-38-3/106-42-3	m- and p-Xylene	1.92	U
95-47-6	o-Xylene	2.10	U
108-67-8	1,3,5-Trimethylbenzene	1.96	U
95-63-6	1,2,4-Trimethylbenzene	2.13	U

CAS Number	IDENTIFIED TIC COMPOUND	Est. Amount ppmv
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

InstName : Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\131125c\
Data File : 68551.D
Acq On : 25 Nov 2013 12:55 pm (#1); 25-Nov-13, 12:55:09 (#2)
Operator : EL
Sample :
Misc : 55 Gallon Drum Through Filter (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Nov 25 13:04:09 2013
Quant Method : C:\msdchem\1\METHODS\VOCGAS.M
Quant Title : Flammable Gas Analysis
QLast Update : Mon Aug 26 13:12:56 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
3) Fluorobenzene	3.539	96	4100585	205.75	ppmv	0.02
15) Chlorobenzene-d5	5.848	117	3233150	177.50	ppmv	-0.01
Target Compounds						Qvalue
1) Hydrogen	1.617	GC1	981m	130.47	ppmv	

(#) = qualifier out of range (m) = manual integration (+) = signals summed