58

RECEIVED

ENTERED

AUG 27 2014

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: AUG 27 2014
Symbol: ENV-DO-14-0227
LAUR: 14-26432
Locates Action No.: N/A

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 6

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* included as 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 sixth 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.

36588

Enclosure 1 includes the pertinent documentation for thirteen (13) of the original 267 parent waste containers and all associated daughter and granddaughter waste containers. The enclosed documentation for each parent waste container is separated by a tab and documentation for the daughter containers are highlighted within each tab by colored pages. These parent containers and their daughter and granddaughter containers were listed in the *Nitrate Salt Drums with Associated Waste Stream and Location Data for 267 Original Parent and 707 Current/Remediated Daughter Containers* table (as revised and submitted to the NMED on July 17, 2014).

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

Sincerely,

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

Sincerely,

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

AMD:GET:MPH:LVH/lm

Enclosures: (1) Remediation and Repacking Documentation for Nitrate Salt-Bearing Waste Containers – Package 6

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

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

Remediation and Repackaging Documentation for Nitrate Salt-Bearing Waste Containers – Package 6
ENV-DO-14-0227
LA-UR-14-26432

August 2014

Los Alamos
NATIONAL LABORATORY
EST. 1943

ENCLOSURE 1

Remediation and Repacking Documentation for Nitrate Salt-Bearing Waste Containers – Package 6

ENV-DO-14-0227

LAUR-14-26432

Date: AUG 2 7 2014

ParentID	Intermediate Daughters	PKG_ID	Overpacked Into
S823153		94039	
S823153		94040	
S823166	68722	69041	SB50104
S823166	68722	69068	SB50012
S823187	90899	92245	
S823187	90899	92246	
S823187	90900	92669	SB02203
S823194	90888	92229	
S823194	90890	92360	SB02092
S823221		68379	
S823221		68382	
S823229	68962	69402	SB50057
S823229	68962	69445	
S824181	88957	93515	
S824181	88957	93516	
S824184		68620	SB50002
S824184		68624	
S824184		68628	SB50082
S824187		93581	
S824187		93582	
S824188		93568	SB02080
S824188		93571	
S824188		93572	
S824188		93573	
S824188		93574	
S824208		68422	
S824208		68423	
S824208		68424	
S824208		68425	SB50036
S824208		68558	
S824208		68560	
S824468		94074	
S824468		94075	
S824468		94076	
S824508		93609	
S824508		93610	
S824508		93611	

S823153

S823153

Container Profile 762365

File Options Reports Help

S823153

762365	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

S823153

- S823153
  - 94039
  - 94042 – EMPTY
  - 94040

Task History

Transfer Details

Transfer Amount	Transfer Unit	Item	Measured Weight	Measured Weig...
49.99947775	%			

Working Copy
Date: 7-22-13

ATTACHMENT 1
Page 1 of 4

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: S 823153

6.2[4] Date Processed: 7-22-13

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

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

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

4.1[7] Activity Hazard Classification based on Anticipated Extremity Radiation Dose Rate:
JA 7-22-13 ☑ 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: [illegible] / [signature] 122526 / 7-22-13
Waste Handling Tech (print) Signature Z # Date

ATTACHMENT 1
Page 2 of 4

4.1[6][B] Parent Waste Container No.: 9823153

5.[18] Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable: 433.8 lb

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

6.2[5][B]/ 6.2[6] Total Parent Drum Weight (lb) 433.8 lb

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

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

N/A / / /

EWMO-FOD (print) Signature Z # Date

ATTACHMENT 1
Page 3 of 4

4.1[6][B] Parent Waste Container No.: S 823153

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	94039	94040		
10.1[4]	Daughter Drum Filter No.	KL-645	KL-479	N	
10.1[4]	Daughter Drum Bag Filter No.	L-8154	L-8149		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	N			
10.2[7][B]/10.2[6]	POC Item Description		A		
10.2[13]	POC Assembly closed per Manufacturer's instructions. (Initial and Z#)				
10.2[14]	POC Assembly Gross Weight (lb)				
10.2[15]	POC Rad. Survey Results (mrem/hr)			N	
10.3[3][A]	Approx. Containerized Liquid Vol./Units	N/A	N/A		
10.3[5][A]	Free Liquid Volume/Units	5 GALLONS	1 QUART		
10.3[7][A]	Opaque/Non-penetrable Item Description:	N/A ~~LEAD~~ 1-22-13	Lead		A
10.3[9][A]	PCB-contaminated Waste Description	N/A	N/A		
10.3[9][B]	PCB Item ID No.	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 (%)	80%	100%		
10.5[3]/10.6[2]	Description Waste Added During Processing	Stub out bags Kitty Litter	Stubout Bags Kitty Litter		

ATTACHMENT 1
Page 4 of 4

4.1[6][B] Parent Waste Container No.: S. 823153

Comments: Rags trash, plastic, liquid, lead, Kitty litter

11.1[1] Performed By: [illegible] | ADAM Segovia | 276702 | 7-22-13
Waste Handling Tech (print) Signature Z # Date

11.1[7] Reviewed By: Clayton Mullins | [illegible] | 248092 | 7/23/13 0544
SOS or designee (print) Signature Z # Date/Time

Working Copy
Date: 6-28-13

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.:	1002116	0383609
Cal. Expiration Date:	12.18.13	12-18-13
Tolerance:	40-200	10-80

Overpack filtered vent information:

Manufacturer: NUCFIL
Model No.: 013
Serial No.: JL-19168
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] / 1257120 / 6-28-13
Waste Handling Technician (print) Signature Z # Date

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

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

Comments: N/C

8.1[1] Performed By: Gerald Espinoza / [signature] / 1257120 / 6-28-13
Waste Handling Technician (print) Signature Z # Date

8.1[6] Reviewed By: Clayton Mullins / [signature] / 2400921 / 7/23/13
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 5
Page 1 of 1

Working Copy
Date: 7-22-13 cw

WCRRF OVERPACK DRUM CLOSURE DATA SHEET

7.[18] Overpack Drum Unique Identifier No.: 94042

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: Adam Segovia [signature] 276702 7-22-13
Waste Handling Technician (print) Signature Z # Date

7.[27] Overpack drum closure ring torque value: 60 ft-lb

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

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

7.[35][D] 85-gal overpack drum gross weight (lb): 180.4 lb

Comments: N/C

8.1[1] Performed By: Adam Segovia [signature] 276702 7-22-13
Waste Handling Technician (print) Signature Z # Date

8.1[7] Reviewed By: Clayton Mullins [signature] 240096 7/23/13
Supervisor or designee (print) Signature Z # Date

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

Drum ID#: 94039

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 #: 0134766
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 #: 60Pvc-1.5-25PVC
Serial #: L-3154
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
- [ ] 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: NuCFI
Model #: 019DS
Serial #: EC-645
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% CL ±6% CW	Tolerance:	±3% CL ±6% CW

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

[x] Yes [ ] No

Print Name: Justin Lopez Signature: [signature] Z#: 266436

5. Weigh Drum Assembly

RECORD weight information

Tare wight (lbs) 75.6
File ID #: 019065

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

6. Label Drum Assembly

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

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

Operator Print: Justin Lopez Operator Sign: [signature] Z#: 266436 Date: 7-10-13

Verifier Print: Adam Sogovia Verifier Sign: [signature] Z#: 276702 Date: 7-22-13

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

DRUM ID#: 98039

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 #: 038372

Cal expiration date: 9-11-13

Range/ Value (ft-lbs): 30-80

— 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): 270.6

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: 7-22-13

Verifier Print/Sign: Steven Mordage Date: 7-22-13

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

Drum ID#: 94040

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:

Manufacturer: BOP
Model #: 6CPVC-1.5 2SPVC
Serial #: L-8199
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 #: KL-479
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 ±6CCW

Torque wrenches listed above are within the acceptable ranges as displayed on the calibration certificate.
[x] Yes [ ] No
Print Name: MICHAEL MONTOYA Signature: [signature] ZI#: 191352

5. Weigh Drum Assembly

RECORD weight information
Tare wtight (lbs) 76.0
File ID #: 019DL6

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

6. Label Drum Assembly

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

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

Operator Print: MICHAEL MONTOYA Operator Sign: [signature] ZI#: 191352 Date: 7-16-13

Verifier Print: Adam Segovia Verifier Sign: [signature] ZI#: 216702 Date: 7-22-13

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

DRUM ID#: 94040

1. LID INSTALLATION

NOTE: Install lid per manufacturer's instructions

✓ Mount lid with filter directly over drum seam.

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

✓ Engage bolt and nut and torque per manufactures instructions.

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

✓ Tighten jam nut.

Record torque wrench information:

MT&E #: 038373

Cal expiration date: 9-11-13

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

Tolerance +/- 3% cw +/- 6% ccw

2. DRUM LABELING

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

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

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

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

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

RCRA Label:

✓ 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): 435.0

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 7-22-13

Verifier Print/Sign: Kevin Bolusek Date: 7-22-13

WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

57

Production Control

Container ID: S823153 Container Type: 55-GAL Gross Weight (lbs): 440
Inner Seal #: 009917 Filter Prefix: LAVC Filter Serial #: 03309
AK Waste Stream: LA-CIN01.001 Certified RTR BDR: LA-HERTR-12-0085
TWSR Comments: LEACHED SOLIDS
Total PE-Ci Activity: 7.50E+00 Equivalent Combustible PE-Ci: 2.81E+00 AM-241 PE-Ci: 6.09E-01
Total Fissile Gram Equivalents: 82.8 Total Surface Dose Rate (mrem/hr): 100
EPA Code(s): D007 D008 D009 VR 12/11/12
NCR RTR/NDA Comment: LANL: remediate-Approximately 15 Gallons of prohibited liquid contained within a 90 mil rigid liner and several internal plastic bags.
RTR Pre-Screen Date: 12/11/2006 Comment: Impenetrable Obj.
Certified RTR Comment: Approximately 15 Gallons of liquid in a 90 mil rigid liner and several plastic bags
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: None Production Control Comments: Apply Kitty Litter/Zeolite mixture

Performed By: Julie Gallegos / Julie Gallegos / 176905 / 10/18/12
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
~~Valerie Rhodes~~ VR 11/27/12 Net Wt: 380# Generator info shows 2 items of nitrate salts, with weights of 3# + 250# RTR BDR shows plastic bags + homogeneous solids. If also prohibited liquids, Nitrate salts require repack w/ admixture. No chemicals identified; nitrate salts carry waste codes for chromium lead + mercury

Performed By: Valerie Rhodes / Valerie Rhodes / 112609 / 12/12/12
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 hexarmour 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: Clarissa Velarde / Clelarde / 1234079 / 6/27/13
TRU Remediation Operations (Print) Signature Z Number Date
Jose Jerez / Jose Jerez / 221452 / 6/27/13

IHS REVIEW: NS 206362 12/17/12

Discardable Waste Log Sheet

DrumID: 009917

Item#	DrumID	Net (kg)	Matrix	M Code	NM	MT	Auth	Remarks
1	DXFS 548 FA	113.42	NITRATE SALTS		82.19	52	5/11	
2	DXFS 549 FA	14.32	NITRATE SALTS		6.01	52	5/11	
		127.74 kg						

Attachment 2 – CCP Radiography Data Sheet

Section 1: General Information	
☑ RTR Examination ☐ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-HERTR-12-0085
Examination Date:	08/18/12
Waste Container ID:	S823153
Video/Audio Recorded Media Number:	LA-HERTR-12-0085 A
Procedure and Revision No.:	CCP-TP-053 Rev. 11
NCR(s) associated with the container? (e.g., Prohibited Items)	☐ NO ☑ YES NCR No.: NCR-LANL-1558-12 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: 194.0 kg. Tare Wt: 58.1 kg. Net Wt: 135.9 kg.
Rigid Liner and Liner Vent Description: (e.g., "90 mil liner – NO Lid" or "NO Liner")	90mil Liner - Mechanical Vent, Lead Lined Drum
Number of Layers of Confinement:	Appears to be 1 layer
Volume Utilization Percentage:	55 %

Attachment 2 – CCP Radiography Data Sheet (Continued)

Waste Container ID: S823153

Section 3: Container Inventory and Comments (Detailed descriptions)
Plastic bags
Homogeneous solids

Section 4: Packaging Material and Waste Material Parameters		
Packaging Material:		Estimated Weight (kg)
Steel (ST):		27.7
Plastics (PP):	90mil Liner and Lid	7.4
Others:	Lead Liner	23.0
Total Packaging Weight:		58.1
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):		5.0
Organic Matrix (OR):		
Inorganic Matrix (IN):		130.9
Soils (S):		
Total WMP Weight:		135.9

Attachment 2 – CCP Radiography Data Sheet (Continued)

Waste Container ID: S923153

Section 5: RTR Summary (Questions answered "YES" will be explained in the Comments block, except for Question 7.)	Yes	No
Is there observable liquid?	☑	☐
Is there any observable liquid in internal containers, more than 60 milliliters or 3 percent by volume, whichever is greater?	☐	☑
Is the total volume of observable liquid in the outermost container GREATER than 1% of the container?	☑	☐
Is there observable liquid in payload containers with an EPA Hazardous Waste Number of U134?	☐	☑
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☑
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☑
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does NOT match TRUCON Code[s])?	☐	☑
Is there an indication of wastes containing explosives or compressed gases?	☐	☑
Is there an indication of PCBs liquids?	☐	☑
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA hazardous waste numbers of D001, D002, or D003)?	☐	☑
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☐	☑
CH or RH TRUPACT		
Are there heat-sealed bags (unvented) GREATER than 4 liters and LESS than 390 square inches in the waste, or heat sealed bags not authorized in the RH TRUCON Code?	☐	☑
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☑
Are there sealed containers GREATER than 4 liters?	☐	☑
Are there indications of inadequate protection for heavy and/or sharp objects?	☐	☑

Comments: NCR-LANL-1558-12

RTR Operator:

Michael Simmons	[signature]	08/18/12
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])	S823153					
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	N/A 130 ppm	ppm	ppm	ppm
Hydrogen Reading (< 64,000 ppm) (5.[5])	223.66 ppm	ppm	ppm	ppm	ppm	ppm
Methane Reading (< 16,000 ppm) (5.[5])	0 ppm	ppm	ppm	ppm	ppm	ppm

5.[7] Certified CCP Technician:

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

Reviewed By: Nathan Waler (CCP (Print)) 1333546 (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 : S823153.D
Acq On : 29 Jan 2013 1:07 pm (#1); 29 Jan 2013 1:05 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 13:11:11 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	1.930	GC1	63170m	223.66	ppmv	

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

H2-CH4.M Tue Jan 29 13:11:17 2013 UNIT12

7-22-13
0600 Assuming WCRRF operations center - Okelarde
0602 Starting outside rounds.
0607 Item #3 unsat, FSR in place okay to proceed.
0611 Starting inside rounds.
0615 Pre job briefing being conducted by SOS.
0630 Pre job has been concluded
0633 Item #63 is OOS, POD in place, okay to proceed.
0638 Inside rounds complete
0700 Rounds have been signed off by SOS.
0715 Mode change performed TA50-69 and WCRRF yard now in operations
0725 Starting movement into 50-69.
0740 movement into 50-69 is complete
0830 Bagging on S8164469.
0842 Bag on is complete.
1012 Bagging off 1 daughter and 1 POC and continuing to process
1035 Bag on, Bag off complete
1126 Bagging off, Bagging on S8164464
1155 Bag on, Bag off complete
1300 Operators notified operations center that they are having problems getting the ring bolt off and are requesting the SOS.
1335 Assuming WCRRF operatins center in training Randy Roybal
1336 Operators were able to remove bolt from drum lid and will countinue with operations.
1441 Operators ~~Bagging~~ RR. 07/22/13 Bagging off one daughter and ~~Countin~~ RR. 07/22/13 Continuing to process.
1458 Bag off complete ~~Countinu~~ RR 07/22/13 continuing to process
1501 Starting out side rounds.
1503 Item #3 unsat FSR in place ok to proceed.
1517 Completed out side rounds. RR 7-22-13
1556 Starting movement of 4 Drums into 50-69
1610 Movement Complete into 50-69.
1626 Starting inside Rounds.
1635 Item #63 is OOS Pod in place ok to continue
1700 Starting movement out of 50-69
Continue on next page Randy Roybal

07/22/13 continued from previous page. Randy Roybal
1705 Completed inside Rounds.
1709 movement out of 50-69 complete.
1713 Rounds ~~Signed~~ 07/22/13 RR Signed off by SOS.
1722 Bagging off, Bagging on S823153
1800 Bag on Bag off complete.
1807 Performed shift turn over with OCO Gerald Espinoza - Randy Roybal, Clarissa Velarde

RR

No Further entries this page.

RR 07/22/13

7-22-13
1807 Assuming WCRRF Operations Center.
1815 Prejob being conducted by SOS.
1840 Prejob has been concluded.
1900 Operators headed into 50-69 to begin processing.
1938 Notified by Operator inside 50-69 that Station 3 right hand glove has a hole but not all the way through. No Contamination detected. Going to change as preventative maintenance.
1950 Notified by operators inside stations 1,2,3,4,7,8 have Creces between thumb and forefinger. RCTS have requested that all gloves are watched by operators. Station 3 has port covers in place. Until it can be changed.
2140 Bagging off 1 daughter bagging on 1 daughter.
2220 Bag off/on Complete.
2230 Operators called and notified of a large spider in 50-69, IH identified it as a poisonous sun spider. FSR being submitted to Spray 50-69 for insects.
2340 Bagging off 1 daughter and empty, Closing with port cover.
0008 Bag off Completed.
0015 Operators out for lunch.
0115 Operators headed back into 50-69.
0223 Starting movement from 50-69 to transportainers.
0248 Starting of denesting of 5 drums. bagging on drum # S846087.
0250 movement out of WCRRF Complete.
0420 Bag on Complete. Denesting Complete.
0428 Started outside rounds.
0435 Item # 3 UNSAT, FSR in place, ok to proceed.
0450 Completed outside rounds.
0505 Starting inside rounds.
0523 Item # 63 OOS, PoD in place, ok to proceed.

Continue on next page.

7.23.13 Continued from previous page. YE
0527 Completed inside rounds.
0537 Both rounds reviewed by SOS.
0605 Performing shift turnover with OCO
7.23.13 Clarissa Velarde.

No Further entries this page

PROJECT NAME 7-22-13 NOTEBOOK NO.

0600 Assumed the WCRR SOM position [signature]
0640 Completed attending the pre-job brief conducted by the SOS (Gilbert). Updates were provided to the operators and RCTs regarding the facility status and the inner rollup door requires manual movement. The WCG filter will be evaluated for changing on FRIDAY. Round/DP will be reviewed. The safety topic included rotation of personnel when the inner rollup door is opened. ~~SH 013 R2 0~~ WCRR-SH-13-003 R2 MANUAL DRUM Movement was discussed. Roles and responsibilities were assigned.
0700 Performed call in to TA 54 SOM POD.
0715 Mode Change - Yard - transitioned from WARM to Operations and 50-69 Facility transitioned from COLD to Operations.
Upon review of the Rounds, the WCG D/P is noted at -0.89 - Satisfactory -
0740 Operations completed the movement into 50-69 - facility - 4 drums total.
0842 Operations complete the 1st bag on of drum S 816469
0900 Discussed with P+T transfers on Tuesday and FRIDAY transfers Out. P+T will make available 2 trucks as needed.
1012 Operations initiat bagging off ID and IP.
1035 Bagging off is noted completed
1026 Operations initiate bagging on S 816664
1220 Completed the daily update phone call with the AM, PM, and Area G - SOM.
1410 Operator reported stripping the parent drum bolt w.
1545 Completed discussion and review of TRU drums to be received at WCRR facility tomorrow and SOS/RPI Supervisor identified 10 drums to be received. Five drums were dropped based upon dose/multiple PDC generation and - de-inventory to be conducted at the end of the week.
1625 Obtained gamma characterization results, noting that the drums within the transportainer, which were assayed indicate they are LLW - results were forwarded to Production Inventory for adjustments. Follow up will be required.
1721 Operations completed bag offs generating 3 daughters and bagging on Parent S823153
1759 EP-DIV-AP-2008D, R0 - EWMO Lockout/Tagout Administrative Controls Procedure is effective today. Changes were made in the LO/TO Logbook.
1800 Operations repeat Bag on completed.
1805 Completed EWMO Shift Turnover Checklist with oncoming Nightshift SOM. and turned over SOM duties
1811 Secured the SOM position [signature]

No further Entries this page [signature]

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

1811 Reviewed Shift Turnover Checklist and assumed WCRR SOM position.

1812 Night Shift Watchbill was prepared, reviewed, approved and posted.

1815 Attended pre shift brief conducted by SOS. Safety topics were ladder safety by IH and SOM discussed fitness for duty. Crew is operating at near minimum staffing - SOS will see if Day Shift can provide any additional operators. Covered manual operation of inner roll up door, plan is to denest all 5 drums @ one time due to forklift requirements w/ inner door operation. Discussed safe configuration / renesting if required. Shift Order WCRR-SH-13-003 R.2 Manual Drum Movements in effect and being extended to 7/29/13 1830.

1938 Operators notified OCO that Station #3 (R) hand glove has a small hole (surface layer) w/ no contamination detected.

1951 Further information regarding WCG gloves is that stations 1, 2, 3, 4, 7 and 8 both hands are showing slight creases between thumb and fore finger (this is where hole developed on #3(R)). Port cover is being installed on #3(R) and will monitor closely all other stations throughout operations.

7140 Operators are bagging off 1 daughter.

2230 ES IH identified a poisonous Sun Spider that operators had collected inside 50-69. OCO submitting FSR for animal control / insect fumigation services.

7/23/13 0008 Completed bag off of last daughter for preat # 5823153. Oper will install horizontal port cover, break for lunch and begin denesting operations after lunch.

0015 Operators breaking for lunch.

0115 Resuming operations.

0250 Movement of drums out of 50-69 to transportation complete.

0420 Completed denesting of 5 drums and bag on of 5846087 to the WCG.

0602 Secured the Night Shift SOM position and turned over SOM to J. Guadagnoli.

No further entries this page

SIGNATURE _____ DATE 7/23 20 13

READ AND UNDERSTOOD _____ DATE _____ 20 __

7/22/13 WERF SOS LOG BOOK

0600 Assuming SOS Position [illegible]

0615 Conducted shift brief Discussed Drum lift has been completed Also To take It slow the operators have not processed For A week to take breaks as needed Also discussed Filter changes to be conducted on Friday. Also Roll up Door Will be raised And lowered Manually

0638 Concluded shift brief

0700 Reviewed Inside and outside Rounds.

[illegible] 7-22-13 0715 Mode change Complete WERF In operations.

0725 Starting Move Into facility

0746 Move In Complete

0830 Bagging on 5816469

0842 Bag on Complete

1012 Bags off / daughter And POC And Continuing to Process

1035 Bag on/off complete

1126 Bagging off, bagging on 5816664

1155 Bag on/off Complete

1300 Operators notified operation's center having Problem removing bolt entering facility to check out

1335 Operator have removed bolt And will continue

1441 Bagging off / daughter And continue Operating

1458 Bag off Complete

1501 Started Inside Rounds

1556 Starting Move In of 4 drums

1610 Movement Complete

1626 Started Inside Rounds

1700 Moving out of 50-69

1705 Moving out complete

1713 Signoized off Inside And outside Rounds.

1722 Bagging off. Bagging on 5823153

1800 Completed Bag off bag on

1805 Turning over SOS Position To clayton Mullins [illegible]

no Further entries on this Page

7/22/13 WCRR SOS Log Book

1806 Assuming SOS position. CA

1818 Starting Pre-Job, discussed inner roll-up door manual raise/lower, de-nesting and ~~Minimus~~ em 7-22-13 being short staffed.

1840 Completed Pre-Job.

1938 Notified by operators inside, that station 3 right hand has a hole, but not breached.

1950 Station 3 has a port cover on it, will be able to process. Also lef hand station 3 and all of stations 1, 2, 4, 7 and 8 all need to be watched.

2140 Bagging off 1 daughter, bagging on a second.

2220 Bag off/on complete.

2230 FSR being submitted to spray 50-69 for insects, due to a large spider in room 102. IH identified it as a sun spider, which is poisonous. As soon as system is up FSR will be submitted.

2340 Bagging off 1 daughter and the empty, placing port cover on parent port.

0008 Bag off complete.

0223 Starting movement out of 50-69

0248 Starting to de-nest 5 drums then bagging on 5846087.

0250 Movement out of 50-69 complete.

0420 De-nesting and bag on complete.

0537 Signed off on the rounds.

0604 Station 4 right hand needs to be changed.

0610 Turning over SOS position to Gilbert Martinez. CA

No Further Entries on this Page

7/23/13 WCKK SOS LOG Book

0600 Assuming SOS Position [illegible]

0615 Conducted Shift brief went over checking Glove well May Require Change out. Also Issues with Belly Bands.

[illegible] 7-23-13 0645 Shift brief Conducted.

0753 Mode Change Complete WCKK Yard And 50-69 In warm need to change out Glove on station 1, 2, 3, 7 and 8 belly bands

0820 Started Glove changes

1027 Glove Changes complete

1030 Mode change complete WCKK In operations.

1036 Started shipment In to 50-69 From G.

1039 Operators continuing to process 5846087

1147 Shipment In from G Complete

1220 Bagging off, 2 daughters And continuing to process 5513539

1259 Bags off/on complete

1444 Bagging off 1 daughter And Continuing to process.

1499 Bags off complete

1538 Starting Inside Rounds

1625 Entering 30-30 Vole

1651 Bagging off Bagging on 5811734

1655 Exiting 30-30

1720 Reviewed Inside and outside Rounds

1729 Bag off complete

MY 1870 Turning over SOS Position to Clayton Mullins [illegible]

W further entries on the page

7/23/13 WCRR SOS Log Book

1821 Assuming SOS position.

1822 Starting Pre-Job, discussed watching out for spiders and other insects inside 50-69 and in the yard. As well as keeping notice of yourself and co-workers, especially being short staffed.

1845 Pre-Job complete.

2045 Bagging off 1 daughter, bagging on a second daughter.

2100 Bag off/on complete.

2103 Notified by IC that our Inventory is not matching up between what we are showing our inventory to be and what the system says our inventory to be. SOM notified as well. With OCO as second set of eye, going to perform physical inventory of 50-69, 50-194 and 50-75

2251 Physical inventory completed, not all drums were in system, drums will be be added to system to ensure inventory was correct.

2302 Bagging off 2nd daughter, bagging on 5822727.

2336 Bag off/on complete.

2355 New Inventory numbers updated and placed on status board.

0317 Bagging off 1 daughter and 2 POCs, bagging on a second daughter.

0349 Bag off/on complete.

0519 Signed of on the rounds.

0605 Turning over SOS position to Gilbert Martinez.

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-RTR2-13-0094
Examination Date:	7/24/2013
Waste Container ID:	94039
Video/Audio Recorded Media Number:	LA-RTR2-13-0094 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.: 123.0 kg Tare Wt.: 33.4 kg Net Wt.: 89.6 kg
Rigid Liner and Liner Vent Description:	Liner: [X] No [ ] Yes Lid: [X] No [ ] Yes Type: [ ] 30-mil [ ] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [ ] Yes [X] N/A Punctured: [X] No [ ] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [ ] No [X] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 2 layers
Volume Utilization Percentage:	75 %

CCP Radiography Data Sheet

Waste Container ID: 94039

Section 3: Container Inventory and Comments (Detailed descriptions)

IM: Scrap metal

AM:

OM:

OI:

C:

R:

XPM: 90 mil liner lid, plastic bags

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP): Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	1.5
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	8.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	80.1
Soils (S):	
Total WMP Weight:	89.6

CCP Radiography Data Sheet

Waste Container ID: 94039

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:

Michael Simmons		7/24/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	94039	Count Sequence Number:	23316
Operator:	D3PW2DK1\operator		
Assay Start:	7/29/2013 9:08:37 AM		
Description 1:	1LANDA1817		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 89.6 kg	Net:	89.6 kg
Container:	Volume: 208.0 l	Full:	75.0 %
Density:	0.570 kg /l		

System Configuration

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

Errors quoted at 1.000 sigma

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number:	23316	Batch Number:	1LANDA1817
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:	94039	Analysis Date:	7/29/2013

Net Weight	89600.0 g		
Pu mass	1.21E+001	+-	2.44E+000 g
TRU Alpha Activity	4.68E+000	+-	2.03E+000 Ci
TRU Activity Concentration	5.23E+004	+-	2.27E+004 nCi/g
Pu-239 Equivalent Activity	4.71E+000	+-	2.03E+000 Ci
Pu-239 FGE	1.14E+001	+-	2.29E+000 g
Decay heat	1.54E-001	+-	6.79E-002 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	5.53E-002	3.95E-005	6.51E-006	2.28E-006
PU238	1.11E-003	1.92E-002	3.87E-003	3.40E-005
PU239	1.14E+001	7.14E-001	1.44E-001	1.27E-003
PU240	7.26E-001	1.67E-001	3.37E-002	2.96E-004
AM241	1.09E+000	3.78E+000	2.03E+000	5.24E-002
PU241	1.41E-002	1.46E+000	2.95E-001	2.59E-003
PU242	2.42E-003	9.62E-006	1.94E-006	0.00E+000
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	6.13E-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	1.34E-006
U238	<LLD	<LLD	0.00E+000	1.11E-005

Errors quoted at 1.000 sigma

Operator: _____ Date: 7-31-13

ITR: _____ Date: 8-1-13

Automated Independent Technical Review

Count Sequence Number: 23316 Batch Number: 1LANDA1817
Counter ID: MCS HENC #1
Container ID: 94039
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 7/29/2013

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 Chamberlin Date: 7-30-13

Waste Container ID: **94039**

BDR Number: **LA13FG12068**

Sampling Date: **7/30/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	202.68	
74-82-8	Methane	9.63	U
67-56-1	Methanol	N/A	U
60-29-7	Ethyl Ether	N/A	U
75-35-4	1,1-Dichloroethylene	N/A	U
67-64-1	Acetone	N/A	U
75-34-3	1,1-Dichloroethane	N/A	U
156-59-2	cis-1,2-Dichloroethene	N/A	U
78-93-3	Methyl ethyl ketone	N/A	U
110-82-7	Cyclohexane	N/A	U
71-43-2	Benzene	N/A	U
107-06-2	1,2-Dichloroethane	N/A	U
71-36-3	1-Butanol	N/A	U
108-10-1	Methyl isobutyl ketone	N/A	U
108-88-3	Toluene	N/A	U
108-90-7	Chlorobenzene	N/A	U
100-41-4	Ethylbenzene	N/A	U
108-38-3/106-42-3	m- and p-Xylene	N/A	U
95-47-6	o-Xylene	N/A	U
108-67-8	1,3,5-Trimethylbenzene	N/A	U
95-63-6	1,2,4-Trimethylbenzene	N/A	U

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

Quantitation Report (QT Reviewed)

InstName : FGA Unit 12

Data Path : C:\msdchem\1\DATA\130730c\
Data File : 94039.D
Acq On : 30 Jul 2013 1:58 pm (#1); 30 Jul 2013 1:57 pm (#2)
Operator : SA
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER, NucFil-019DS (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Aug 01 14:56:47 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	57816m	202.68	ppmv	

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

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-HERTR-13-0087
Examination Date:	7/24/2013
Waste Container ID:	94040
Video/Audio Recorded Media Number:	LA-HERTR-13-0087 C&D
Procedure and Revision No.:	CCP-TP-053 Rev. 13
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3150
Waste Stream I.D.:	LA-CIN01.001
Waste Container Weights:	Gross Wt.: 197.5 kg Tare Wt.: 33.4 kg Net Wt.: 164.1 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: 94040

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):	33.0
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	6.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	125.1
Soils (S):	
Total WMP Weight:	164.1

CCP Radiography Data Sheet

Waste Container ID: 94040

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		7/24/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	94040	Count Sequence Number:	16264
Operator:	DCLTD231\Operator		
Assay Start:	7/29/2013 9:54:53 AM		
Description 1:	2LANDA1201		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gal Drum		
Weight:	Net: 164.0 kg	Net:	164.0 kg
Container:	Volume: 208.0 l	Full:	85.0 %
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:	16264	Batch Number:	2LANDA1201
Assay Instrument:	HENC #2	Location:	LANL TA-54
Analysis Method:	CCP-TP-063 v 14	Software Version:	NDA 2000 V.4.0
Item ID:	94040	Analysis Date:	7/29/2013

Net Weight	164000.0 g		
Pu mass	7.06E+001	+- 2.28E+001	g
TRU Alpha Activity	2.00E+001	+- 1.04E+001	Ci
TRU Activity Concentration	1.22E+005	+- 6.36E+004	nCi/g
Pu-239 Equivalent Activity	2.02E+001	+- 1.04E+001	Ci
Pu-239 FGE	6.66E+001	+- 2.28E+001	g
Decay heat	6.57E-001	+- 3.48E-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	1.51E-006
U233	<LLD	<LLD	0.00E+000	1.26E-002
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	4.10E-006
NP237	2.54E-001	1.82E-004	3.97E-005	6.95E-006
PU238	6.47E-003	1.12E-001	4.16E-002	1.45E-003
U238	<LLD	<LLD	0.00E+000	3.51E-005
PU239	6.63E+001	4.17E+000	1.43E+000	5.41E-002
PU240	4.24E+000	9.74E-001	3.62E-001	1.27E-002
AM241	4.26E+000	1.48E+001	1.03E+001	1.92E-001
PU241	8.21E-002	8.54E+000	3.17E+000	1.11E-001
PU242	1.41E-002	5.61E-005	2.09E-005	0.00E+000

Errors quoted at 1.000 sigma

Operator: _____ Date: 7.31.13

ITR: _____ Date: 8-1-13

Automated Independent Technical Review

Count Sequence Number: 16264 Batch Number: 2LANDA1201
Counter ID: HENC #2
Container ID: 94040
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 7/29/2013

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; 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-AL-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: 7-30-13

Waste Container ID: **94040**

BDR Number: **LA13FG12068**

Sampling Date: **7/30/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	451.15	
74-82-8	Methane	9.63	U
67-56-1	Methanol	N/A	U
60-29-7	Ethyl Ether	N/A	U
75-35-4	1,1-Dichloroethylene	N/A	U
67-64-1	Acetone	N/A	U
75-34-3	1,1-Dichloroethane	N/A	U
156-59-2	cis-1,2-Dichloroethene	N/A	U
78-93-3	Methyl ethyl ketone	N/A	U
110-82-7	Cyclohexane	N/A	U
71-43-2	Benzene	N/A	U
107-06-2	1,2-Dichloroethane	N/A	U
71-36-3	1-Butanol	N/A	U
108-10-1	Methyl isobutyl ketone	N/A	U
108-88-3	Toluene	N/A	U
108-90-7	Chlorobenzene	N/A	U
100-41-4	Ethylbenzene	N/A	U
108-38-3/106-42-3	m- and p-Xylene	N/A	U
95-47-6	o-Xylene	N/A	U
108-67-8	1,3,5-Trimethylbenzene	N/A	U
95-63-6	1,2,4-Trimethylbenzene	N/A	U

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

Quantitation Report (QT Reviewed)

InstName : FGA Unit 12

Data Path : C:\msdchem\1\DATA\130730c\
Data File : 94040.D
Acq On : 30 Jul 2013 3:05 pm (#1); 30 Jul 2013 3:03 pm (#2)
Operator : SA
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER, NucFil-019DS (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 30 15:09:39 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	128690m	451.15	ppmv	

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

40

S823166

S823166

Container Profile 747492

File Options Reports Help

S823166

747492	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

S823166

- S823166
  - LA00000068722
    - LA00000069041
      - LASB50104
    - LA00000069068
      - LASB50012
    - LA00000068689 - EMPTY
  - W798030 - EMPTY

Task History

Transfer Details

Transfer Amount	Transfer Unit	Item	Measured Weight	Measured Weig...
0.0010	%			

Working Copy
Date: 12-16-13 JL

ATTACHMENT 1
Page 1 of 4

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: 68722

6.2[4] Date Processed: 12-16-13

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: ADAM SEGOVIA [signature] 127670 12-16-13
Waste Handling Tech (print) Signature Z # Date

ATTACHMENT 1
Page 2 of 4

4.1[6][B] Parent Waste Container No.: 68722

5.[18] Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable: 412.4 lb

6.2[5][A] Parent Drum Lead Blanket Weight (lb): 22.0 lb

6.2[5][B]/ 6.2[6] Total Parent Drum Weight (lb) 434.0 lb

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

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

Initials Z# Date

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

N/A

EWMO-FOD (print) Signature Z # Date

ATTACHMENT 1
Page 3 of 4

4.1[6][B] Parent Waste Container No.: 68722

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	69068	69041		
10.1[4]	Daughter Drum Filter No.	JL-891	JL-890	N	A
10.1[4]	Daughter Drum Bag Filter No.	L-10366	L-10150		
10.1[4]	Daughter Drum Purchase Order No.	501892	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	N/A			
	Model No.	N/A			
	Serial No.	N/A			
	Date of Manufacture	N/A	N		
10.2[5]	POC ID No	N/A			
10.2[7][B]/10.2[6]	POC Item Description	N/A	A		
10.2[13]	POC Assembly closed per Manufacturer's instructions. (Initial and Z#)	N/A			
10.2[14]	POC Assembly Gross Weight (lb)	N/A			
10.2[15]	POC Rad. Survey Results (mrem/hr)	N/A			
10.3[3][A]	Approx. Containerized Liquid Vol./Units	N/A		N/A	
10.3[5][A]	Free Liquid Volume/Units	2 gal.	1.5 gal.		
10.3[7][A]	Opaque/Non-penetrable Item Description:	N/A	lead window 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		
10.3[10]	Remaining Waste Description	see comments	see comments		
10.3[13]/10.4[10]/ 10.5[4]/10.6[10]	Daughter Drum % Full (%)	80	100		
10.5[3]/10.6[2]	Description Waste Added During Processing	plastic absorbent hex armor	plastic absorbent hex armor		

ATTACHMENT 1
Page 4 of 4

4.1[6][B] Parent Waste Container No.: 68722

Comments: liquid, lead, plastic, debris

11.1[1] Performed By: J COLEMAN, Jeff Column 225549 12-16-13
Waste Handling Tech (print) Signature Z # Date

11.1[8] Reviewed By: Clayton Miller, CA 124092 1/23/14 1439
SOS or designee (print) Signature Z # Date/Time

Working Copy
Date: 11-19-13 CW

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
Manufacture Date: 2013

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

	Filtered Vent	2-in. Bung
M&TE No.:	100216	036245
Cal. Expiration Date:	12/18/13	08/05/14
Tolerance:	±4% CW ±6% CCW	±3% CW ±6% CCW

Overpack filtered vent information:

Manufacturer: N4CFIL
Model No.: 013
Serial No.: JL 1060
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: Randy Roybal / [signature] / 1187034 / 11/19/13
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: Randy Roybal / [signature] / 1187034 / 11/19/13
Waste Handling Technician (print) Signature Z # Date

8.1[6] Reviewed By: Clayton Mullins / [signature] / 1240094 / 1/23/14
Supervisor or designee (print) Signature Z # Date

UET Working Copy
Date: 12/16/13

ATTACHMENT 5
Page 1 of 1

WCRRF OVERPACK DRUM CLOSURE DATA SHEET

7.[17] Overpack Drum Unique Identifier No.: 68689

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

M&TE No.: 038369
Cal. Expiration Date: 12-18-2013
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: J COLEMAN [signature] 275849 12-16-13
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): 174.0 lb

Comments: N/C

8.1[1] Performed By: J COLEMAN [signature] 275849 12-16-13
Waste Handling Technician (print) Signature Z # Date

8.1[7] Reviewed By: Clayton Miller [signature] [illegible] 1/23/14
Supervisor or designee (print) Signature Z # Date

Working Copy
Date: 12-5-13

ATTACHMENT 1
Page 1 of 2

WCRRF DRUM PREPARATION DATA SHEET

5.[34][E] Drum ID No.: 69041

5.[3] Drum information:
Purchase Order No.: 501578
Lot No.: 0240119
Manufacture Date: 13

5.[17] Drum Liner Bag/Filter Assembly:
Manufacturer: BOP
Model No.: 6CPVC 1.5-2SPVC
Serial No.: L-10150
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	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 / 110[illegible] / 12-05-13
Operator (print) Signature Z # Date

5.[23] Filtered vent information:
Manufacturer: Nucfil
Model No.: 019DS
Serial No.: JL-890
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): 76.0 lbs

5.[34][E] Drum ID No.: 69041

Comments: N/A

5.[35] Performed By: Troy Coleman | Troy Coleman | Z25577 | 12-16-13
Operator (print) | Signature | Z # | Date

7.1[4] Reviewed By: Clayton Mullins | CX | 240097 | 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.: 69041

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

M&TE No.: 035369
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: JEFF COLEMAN (Operator (print)) [signature] (Signature) 7255YA (Z #) 12-16-13 (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:	A in-lb	ft-lb
Tolerance (+/-):	N	

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.: JC 12-16-13 ~~019065~~ 69041

6.[26] Scale File ID number: 019065

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

6.[28] Drum gross weight: 443.6 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: J COLEMAN (Operator (print)), Jeff Coleman (Signature), 2255491 (Z #), 12-16-13 (Date)

7.1[4] Reviewed By: Clayton Mullins (Supervisor or designee (print)), CA (Signature), 240092 (Z #), 1/23/14 (Date)

Working Copy
Date: 12/13/13 HS

ATTACHMENT 1
Page 1 of 2

WCRRF DRUM PREPARATION DATA SHEET

5.[34][E] Drum ID No.: 69068

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 15-25PVC
Serial No.: L10366
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:	12-18-2013	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: Joe Romero (Operator (print)) [signature] (Signature) 1109702l (Z #) 12-13-13 (Date)

5.[23] Filtered vent information:
Manufacturer: Nucfil
Model No.: 019DS
Serial No.: JL-891
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): 78 lbs

5.[34][E] Drum ID No.: 69068

Comments: N/C

5.[35] Performed By: Joe Romero (Operator (print)) [signature] (Signature) 1109702 (Z #) 12-13-13 (Date)

7.1[4] Reviewed By: Clayton Mullins (Supervisor or designee (print)) [signature] (Signature) 1240091 (Z #) 1/23/14 (Date)

ATTACHMENT 2
Page 1 of 2

WCRRF DRUM CLOSURE DATA SHEET

6.[3] Drum ID No.: 69068

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

M&TE No.: 038369
Cal. Expiration Date: 12-18-2013
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: J COLEMAN / Jeff Coleman / 225577 / 12-16-13
Operator (print) / Signature / Z # / Date

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

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

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

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

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

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

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

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

ATTACHMENT 2
Page 2 of 2

6.[3] Drum ID No.: 69068

6.[26] Scale File ID number: 019065

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

6.[28] Drum gross weight: 243.8 lbs

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

Comments: N/A

6.[32] Performed By: J COLEMAN (Operator (print)), [signature] (Signature), Z258491 (Z #), 12-16-13 (Date)

7.1[4] Reviewed By: Clayton Mullins (Supervisor or designee (print)), [signature] (Signature), Z480961 (Z #), 1/23/14 (Date)

SP 72

WDP TRU Waste Container Management Operations

UET

Document No: EP-DIV-AP-0107
Attachment: 1
Revision: 1
Effective Date: 12/22/2009

ATTACHMENT 1

WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Production Control Container no-labeled & given new number. B Knight 11/12/13

Container ID: S823166 (Parent) / 68722 (Daughter) Container Type: 85-GAL Gross Weight (lbs): 421

Inner Seal #: 009907 Filter Prefix: LAVC Filter Serial #: 02960

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

TWSR Comments: LEACHED SOLIDS NITRATE SALTS

Total PE-Ci Activity: 4.69E+00 Equivalent Combustible PE-Ci: 1.78E+00 AM-241 PE-Ci: No data

Total Fissile Gram Equivalents: 51.8 Total Surface Dose Rate (mrem/hr): 1

EPA Code(s): [redacted]

NCR RTR/NDA Comment: None

RTR Pre-Screen Date: 2/20/2007 Comment: Impenetrable Obj, Liner Not Punctured,

Certified RTR Comment: None

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

Security Determination: ☑ Green ☐ Yellow

Remediation Determination: ☑ VE ☐ PID ☐ Split ☑ Repack

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

TRUCON Code: LA125M Production Control Comments: Need to add EPA Codes D007, D008, & D009. 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 Susan S. Ramsey / Signature / 117434 / 9.1.10
Production Control (Print) Signature Z Number Date

WDP Engineering

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

Processing Determination: ☑ Accept ☐ Reject

WDP Engineering Comments: RTR pre-screen indicates impenetrable object and liner not punctured. Waste record indicates leached solids in form of nitrate salts. Log sheet indicates 3 items, heaviest is 152 lbs. Net weight of 3 items is 262 lbs. May require RWP based on elevated rad levels for > 100 mrem/hr @ 30 cm.

Performed By: Michael Garcia / Michael Garcia / 099143 / 9/4/10
WDP Engineering (Print) Signature Z Number Date

TRU Remediation Operations

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

Other Specific Safety Concerns: USE PROPER PPE and KITTY LITTER ABSOR

Processing Determination: ☐ Accept ☑ Reject

TRU Remediation Operations Comments:

Performed By: / / 149275 / 11/13/13 / 176905 / 9.14.10
TRU Remediation Operations (Print) Signature Z Number Date

145 Recover. July, Small Quant, 241659, chemical Rad hazard May contain lead, chromium, 7-13-31 Mercury

Wednesday, August 04, 2010 WCRRF

Darrell L. Blaton 218069 11/14/13 Jose Jerez Longley 221452 11/21/13

Discardable Waste Log Sheet

DrumID: 009907

Item#	ItemID	Net (kg)	Matrix	M Code	NDE	MT	Audit	Remarks
1	IXFS 542 FB	28.41	NITRATE SALTS		20.34	52	5/11	
2	IXFS 544 FA	68.86	NITRATE SALTS		30.83	52	5/11	
3	IXFS 543 F1	22.05	NITRATE SALTS		4.04	52	5/11	
		119.32 kg						

1 5 7 2 9 7 1 0

ATTACHMENT 3
Page 1 of 3

TA-54 AREA G DRUM VENTING DATA SHEET

7.[2] Waste Container Unique Identifier: 9823166

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	____ %	0.107175 %
Methane	____ ppm	0.000 ppm
VOC	____ ppm	18.64 ppm
Filter Vent Unique Identifier No.:	____	AN-3666
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)

LET

Best Available Copy

ATTACHMENT 3
Page 2 of 3

7 [2] Waste Container Unique Identifier: 9823166

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

CET

Best Available Copy

ATTACHMENT 3
Page 3 of 3

7 [2] Waste Container Unique Identifier: S823166

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.								
55-gal	Type								
	Unique Identifier No.								

N/A

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

Comments _____

N/A

7 [11][M] 7 [23] Performed By: Chris Vigil 163082 2-26-13
EP-DOP Supervisor designee (Print) Signature Date

7 [23] Drum-lid space heaters ON and thermostat set: ☐ SAT ☑ UNSAT

7 [24] Reviewed By: Chris Vigil 163082 2-26-13
EP-DOP Supervisor designee (Print) Signature Date

DVS Gas Determination Results Report

Date: 2/26/2013

Waste Container Number: S823166

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	12.39	1591.00	N	N/A
Diethyl Ether	0	503.00	N	N/A
1,1 Dichloroethene	0	402.80	N	N/A
Acetone	2.06	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	4.19	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	18.64	I.V.R. Intial and Date	KP 2-26-13

Compound	Concentration		Upper Calibration Range		Exceeds Calibration (Y/N)
Hydrogen	0.107175	%	6.45	%	N
Methane	0.000	ppm	15990.00	ppm	N

Comments:

AN-366

Doug Eisele
DVS Operator Print Name

Signature

02-26-13
Date

12-16-13

0550 Assuming WCRR operations center - JCleman
0605 Beginning outside rounds.
0620 Beginning inside rounds.
0621 Pre job being conducted by the SOS.
0637 Item #63 is OOS, OKay to proceed per CSE documentation.
0638 Late entry at 0634, outside rounds complete. JC
0639 RCT's discussing HFM's alarming over the weekend and path forward.
0642 Inside rounds complete.
0700 Both rounds reviewed by SOS.
0714 The glovebox receptacle has been de-energized.
0737 Mode changed to operations in WCRRF yard and 5069.
0755 Initiating a drum movement, staging drums for the shipment out to Area G.
0758 Bagging on 68723. PPE check is Sat.
0810 Bag on complete.
0827 Staging complete for drums shipping to Area G. Transportainers secured.
0844 Permission granted to lower the vehicle access gates to load the transfer vehicle for a shipment to Area G.
0900 PPE check is Sat.
0925 Vehicle access gates restored. Transfer vehicle loaded.
1017 Permission granted to lower the vehicle access gates to begin receipt of drums from Area G.
1020 Bagging off 1 daughter, bagging on a PCC. PPE check is Sat.
1035 Bag on complete.
1130 Bagging off 1 daughter and 1 PCC, bagging on 68722
1215 Bag off/on complete.
1228 Operators out for lunch, second crew in to continue processing.
1419 Bagging off 1 daughter, bagging on another daughter.
1430 Receipt of shipment from Area G complete. Transportainers secured. All 9 drums moved into 5069. Vehicle access gates restored.
1440 Bag off/on complete.

Continued on next page. - JCleman

12-16-13 Continued from previous page. JCOlman

1520 Notified by lead RCT that an operator exiting 5069 alarm the PCM? RCTs responded and found 972 dpm alpha at along his left side of his leg. RCTs hand surveyed his skin and was NDA. RCTs will recheck his pants (which the RCTs removed) in about and now CLSD.

1637 Beginning outside rounds.

1654 Outside rounds completed.

1705 Initiating a drum movement from 5069 to a transportainer

1708 Beginning inside rounds.

1724 Drum movement out of 5069 complete.

1725 Initiating a drum movement from transportainer to 5069.

1735 Drum movement into 5069 complete

1741 Bagging off 1 daughter and placing port cover on.

1815 Item # 63-B 005, okay to proceed per CSE documentation. Bag off complete.

1820 Inside rounds complete.

1826 Mode change complete. We are now in Warm standby in 5069 and WCRF yard.

1845 EOD of day. CCO position secured. JCOlman

See further entries on page

12/16/13 WCRR SOM

0600 Reviewed Shift Turnover Checklist and assumed WCRR SOM position.

0645 Prejob brief conducted by SOS was concluded. IH Safety topic was recent injuries w/in EWMO operations - awareness of surroundings, weather factors, etc. Discussed RCRA storage requirements @ WCRR - liquids, HAZ waste vs. Non-Haz, permitted areas. Challenged operators to improve processes / efficiencies. ES Ops Manager discussed weekly goals for WCRR as far as drums remediated and ways to achieve.

0655 DSPET (L Lackas) is dropping 2 drums from incoming shipment 68819 and 68820 - they were not manifested from last Friday

0705 Completed daily morning call in to TA-54 SOM and gave WCRR scheduled work status. No items to emerge.

0710 Operators conducting WCG cleanup and glove inspections - mode change on hold until completed. Inside/Outside rounds reviewed, TSR Tracking sheet and status board updated

0737 Operators reported glove inspections completed - all are SAT. Completed Mode Change: WCRR Yard / Blds 50-69 from Warm/ Warm to Operations/ Operations.

0810 Bag on of drum # 68723 to WCG complete.

0925 Completed loading of transport vehicle for outgoing shipment of 14 drums.

1017 Receipt of incoming shipment taking place - 9 drums total.

1215 Completed all bag offs for parent # 68723 (2 daughters 1 POC total) - bagged on drum # 68722.

1220 Completed daily call in w/ PM, OM, SOMs and J Vigil to status activities.

1228 Operators changing areas for processing work

1330 Notified by Operator J Coleman that he cannot find his issued Keys for WCRR Buildings and transportation. Search had been conducted with no results. Called the SIT and spoke w/ Chris Rogers @ 5-3505 for notification - Informed OM.

350 Notified deployed security contact Bill McGonaghy of lost Keys.

1430 Completed receipt of drums from Area G - all drums were moved into 50-69.

1440 Completed bag off of 1 daughter - continuing to process

continued on next page →

12/16/13 WCRR SOM continued.

1530 Extended Shift Orders WCRR-SH-13-003 R.2 Manual Drum Movements and WCRR-SH-13-005 R.0 Instructions to Prevent Bag Tears for 1 week to expire 12/23/13.

1537 RP-1 reported that an operator 12/16/13 surveying out from 50-69 in PCM had alpha contamination on left pant leg @ 9 72 dpm. Direct survey of leg was NDA. RP-1 directed operator to change modesty pants and then resurveyed thru PCM twice - Sat. RP-1 holding modesty pants for recount - suspect Radon. OM notified.

1555 Discussed lost Key issue w/ C. Rogbo-1 SIT. They will allow search time until 1200 tomorrow to locate Keys at which time it will become a security incident if Keys not found.

1700 OCO directed inside PIC to turn thermostat to 72°F

1724 Completed movement out of 7 drums from 50-69 to transportainer

1735 Completed move in of 2 SP 72s to place on secondary containment w/in TA-50-69 for thawing (have a total of 4 SP-72 drums inside)

1815 Completed all bag offs for parent # 68722 (2 daughters total) - Port cover in place. Difficulties reported for drum were ~2 gals liquid encountered and difficulty placing lid back on empty parent. Operators also removed 7 cracked inner windows and placed in 2nd daughter drum - new ones already prepped and to be installed tomorrow.

1824 Completed Mode Change WCRR Yard/Bldg 50-69 from Operations/Operations to Warm/Warm

1828 Late Entry @ 1820 - RP-1 lead reported that modesty pants held from earlier discussed to LMDA - confirming Radon. RM

1845 Secured SOM position

No further entries this page RM

PROJECT NAME WCRRF SOS Log Book NOTEBOOK NO.

11/16/12

0600 Assuming SOS log book. CA

0615 Starting Pre-Job, discussed watching footing and all areas as well with a potential for injuries. Also discussed proper turnover between SOS's and crews. Also ensuring procedure compliance at all times.

0615 ~~Continue~~ Contact RCT's if alarm HFM, PCM and foot probes, maintenance will be performing work on the HFM inside the processing area. Able to manually control temp inside, not to adjust temp below 68°F and set temp to 72°F at end of shift

0644 Pre-Job complete.

0700 Signed off on the cards.

0737 Glove inspection complete, all gloves looked good. Mode change complete, WCRRF yard and SO-69 are now in Operations.

0755 Bagging on 68723.

0810 Bag on complete.

11-16-12 0845 Turning over SOS position to Jose Jerez. CA

0845 Assuming SOS position for JG

0900 Pre Check SOS JG

0925 Vehicle access gate restored, outgoing shipment complete

1017 Permission to leave vehicle access gate to begin receipt of Parcels from Area 6

1020 Bagging off ~~1st~~ 1st daughter, bagging on a PDC.

1030 Turning over SOS duties to Clayton Mullins. JG

1031 Assuming SOS position. JG

1034 Late entry @ 1020 Bagging off 1st daughter, bagging on a PDC.

1035 Bag off/on complete.

1130 Bagging off a PDC and 2nd daughter, bagging on 68722.

1215 Bag off/on complete.

11-16-12 1216 Turning over SOS position to Jose Jerez. CA

1216 Assuming SOS position. JG

1220 First crew out for lunch, second crew headed in to continue processing.

1419 Bagging off one daughter, bagging on second daughter.

1420 Turning over SOS position to Clayton Mullins. JG

1431 Assuming SOS position. CA JG

1440 Bag off/on complete.

1520 Minor issue, notified by RCT's that an operator alarmed the PCM, RCT's had surveyed him, which was NDA, holding his PPE pants for re-check. Will check old pants at a later time.

Continued on next page. CMullins

SIGNATURE _____ DATE _____ 20

READ AND UNDERSTOOD _____ DATE _____ 20

PROJECT NAME Continued from previous page NOTEBOOK NO.

12/4/13

1705 Starting a movement out of 50-69.
1724 Movement out complete.
1725 Starting a movement into 50-69.
1739 Movement in complete.
1741 Starting bag off of 2nd daughter to complete processing.
1815 Bag off complete.
1827 The PPE pants from the minor issue came back NDA.
1840 Signed off on the rounds.
1845 Securing SOS position. CK

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-RTR2-14-0001
Examination Date:	1/2/2014
Waste Container ID:	69041
Video/Audio Recorded Media Number:	LA-RTR2-14-0001 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.: 201.5 kg Tare Wt.: 33.4 kg Net Wt.: 168.1 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: 69041

Section 3: Container Inventory and Comments (Detailed descriptions)

IM:

AM:

OM: Scrap lead

OI:

C:

R:

XPM:

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP): Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	38.0
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	
Organic Matrix (OR):	
Inorganic Matrix (IN):	130.1
Soils (S):	
Total WMP Weight:	168.1

CCP Radiography Data Sheet

Waste Container ID: 69041

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

Comments: N/A

RTR Operator:

Michael Simmons		1/2/2014
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	69041	Count Sequence Number:	24075
Operator:	D3PW2DK1\operator		
Assay Start:	1/9/2014 3:43:05 PM		
Description 1:	1LANDA1887		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 168.0 kg	Net:	168.0 kg
Container:	Volume: 208.0 l	Full:	85.0 %
Density:	0.950 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: 24075
Assay Instrument: MCS HENC #1
Analysis Method: CCP-TP-063 v 15
Item ID: 69041

Batch Number: 1LANDA1887
Location: LANL TA-54
Software Version: NDA 2000 V.4.0
Analysis Date: 1/9/2014

Net Weight	168000.0 g		
Pu mass	3.49E+001	+-	8.07E+000 g
TRU Alpha Activity	1.20E+001	+-	5.26E+000 Ci
TRU Activity Concentration	7.13E+004	+-	3.13E+004 nCi/g
Pu-239 Equivalent Activity	1.21E+001	+-	5.26E+000 Ci
Pu-239 FGE	3.40E+001	+-	8.05E+000 g
Decay heat	3.93E-001	+-	1.75E-001 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	1.09E-006
U233	<LLD	<LLD	0.00E+000	8.66E-003
U234	2.30E-002	1.43E-004	5.55E-005	0.00E+000
U235	1.64E+000	3.55E-006	1.38E-006	3.49E-006
NP237	1.73E-001	1.22E-004	2.71E-005	4.49E-006
PU238	3.19E-003	5.45E-002	1.51E-002	1.26E-003
U238	<LLD	<LLD	0.00E+000	2.67E-005
PU239	3.28E+001	2.03E+000	4.99E-001	4.71E-002
PU240	2.10E+000	4.76E-001	1.35E-001	1.10E-002
AM241	2.74E+000	9.41E+000	5.24E+000	8.54E-002
PU241	3.98E-002	4.09E+000	1.16E+000	9.49E-002
PU242	6.99E-003	2.76E-005	7.82E-006	0.00E+000

Errors quoted at 1.000 sigma

Operator: [signature] Date: 1·14·14

ITR: [signature] Date: 1/14/14

Automated Independent Technical Review

Count Sequence Number: 24075 Batch Number: 1LANDA1887
Counter ID: MCS HENC #1
Container ID: 69041
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 1/9/2014

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 Clamle 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: **69041**

BDR Number: **LA14FG12008**

Sampling Date: **1/16/2014**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	3.39	U
74-82-8	Methane	6.56	U
67-56-1	Methanol	1.24	U
60-29-7	Ethyl Ether	0.12	U
75-35-4	1,1-Dichloroethylene	0.20	U
67-64-1	Acetone	0.42	U
75-34-3	1,1-Dichloroethane	0.72	U
156-59-2	cis-1,2-Dichloroethene	0.09	U
78-93-3	Methyl ethyl ketone	0.90	U
110-82-7	Cyclohexane	0.59	U
71-43-2	Benzene	0.17	U
107-06-2	1,2-Dichloroethane	0.56	U
71-36-3	1-Butanol	0.38	U
108-10-1	Methyl isobutyl ketone	0.66	U
108-88-3	Toluene	0.93	U
108-90-7	Chlorobenzene	0.67	U
100-41-4	Ethylbenzene	0.59	U
108-38-3/106-42-3	m- and p-Xylene	0.38	U
95-47-6	o-Xylene	0.36	U
108-67-8	1,3,5-Trimethylbenzene	0.65	U
95-63-6	1,2,4-Trimethylbenzene	0.78	U

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

Quantitation Report (QT Reviewed)

InstName : FGA Unit 12

Data Path : C:\msdchem\1\DATA\140116c\
Data File : 69041.D
Acq On : 16 Jan 2014 1:57 pm
Operator : SA
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jan 16 14:07:33 2014
Quant Method : C:\msdchem\1\METHODS\VOCGAS.M
Quant Title : Flammable Gas Analysis for Transportation Only
QLast Update : Tue Dec 03 09:52:38 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
3) Fluorobenzene	4.063	96	8425511	207.75	ppmv	0.00
15) Chlorobenzene-d5	6.639	117	6577636	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-RTR2-13-0140
Examination Date:	12/23/2013
Waste Container ID:	69068
Video/Audio Recorded Media Number:	LA-RTR2-13-0140 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.: 111.0 kg Tare Wt.: 33.4 kg Net Wt.: 77.6 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: 69068

Section 3: Container Inventory and Comments	(Detailed descriptions)
IM:	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):	2.5
Plastics (waste materials) (XPM):	7.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	68.0
Soils (S):	
Total WMP Weight:	77.6

CCP Radiography Data Sheet

Waste Container ID: 69068

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	12/23/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	69068	Count Sequence Number:	24056
Operator:	D3PW2DK1\operator		
Assay Start:	1/3/2014 1:13:18 PM		
Description 1:	1LANDA1886		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 77.6 kg	Net:	77.6 kg
Container:	Volume: 208.0 l	Full:	75.0 %
Density:	0.500 kg /l		

System Configuration

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

Errors quoted at 1.000 sigma

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number:	24056	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:	69068	Analysis Date:	1/3/2014

Net Weight	77600.0 g			
Pu mass	1.25E+001	+-	2.14E+000	g
TRU Alpha Activity	2.27E+000	+-	7.34E-001	Ci
TRU Activity Concentration	2.92E+004	+-	9.46E+003	nCi/g
Pu-239 Equivalent Activity	2.30E+000	+-	7.34E-001	Ci
Pu-239 FGE	1.18E+001	+-	2.13E+000	g
Decay heat	7.35E-002	+-	2.43E-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	3.60E-007
U233	<LLD	<LLD	0.00E+000	3.15E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	8.92E-007
NP237	3.48E-002	2.46E-005	3.77E-006	1.59E-006
PU238	1.14E-003	1.95E-002	4.33E-003	7.23E-004
U238	<LLD	<LLD	0.00E+000	8.46E-006
PU239	1.17E+001	7.27E-001	1.32E-001	2.70E-002
PU240	7.50E-001	1.70E-001	3.91E-002	6.31E-003
AM241	3.94E-001	1.35E+000	7.21E-001	3.57E-002
PU241	1.42E-002	1.47E+000	3.37E-001	5.44E-002
PU242	2.50E-003	9.88E-006	2.27E-006	0.00E+000

Errors quoted at 1.000 sigma

Operator: _____ Date: 1-7-14

ITR: _____ Date: 1-9-14

Automated Independent Technical Review

Count Sequence Number: 24056
Batch Number: 1LANDA1886
Counter ID: MCS HENC #1
Container ID: 69068
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. 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 Chambers Date: 1-6-14

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **69068**

BDR Number: **LA14FG2003**

Sampling Date: **1/10/2014**

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\140110c\
Data File : 69068.D
Acq On : 10 Jan 2014 2:00 pm (#1); 10-Jan-14, 13:59:23 (#2)
Operator : SA
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jan 10 14:08:04 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	3.571	96	3293735	205.75 ppmv	0.05
15) Chlorobenzene-d5	5.874	117	2640422	177.50 ppmv	0.01

Target Compounds	Qvalue

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

S823187

S823187

Container Profile 756189

File Options Reports Help

S823187

756189	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

S823187

- S823187
  - 90901 – EMPTY
  - 90900
    - 92670-EMPTY
    - 92669
      - LASB02203
  - 90899
    - 92247 – EMPTY
    - 92246
    - 92245

Task History

Transfer Details

Transfer Amount	Transfer Unit	Item	Measured Weight	Measured Weig...
49.99947775	%			

UET

Working Copy
Date: 10-25-12

ATTACHMENT 1
Page 1 of 4

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: 90899

6.2[4] Date Processed: 10-25-12

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

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

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

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

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

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

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

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

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

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

Performed By: Eddie Rios / Eddie Rios 187822 10-25-12
Waste Handling Tech (print) Signature Z# Date

ATTACHMENT 1
Page 2 of 4

4.1[6][B] Parent Waste Container No.: 908.97

5.[18] Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable: 423.9 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) 423.9 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
	NA		

ATTACHMENT 1
Page 3 of 4

4.1[6][B] Parent Waste Container No.: 10889

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	92245	92246		
10.1[4]	Daughter Drum Filter No.	AM-776	AM785	N/A	
10.1[4]	Daughter Drum Bag Filter No.	L-3767	L-4245		
10.1[4]	Daughter Drum Purchase Order No.	416265	416184		
10.1[13][C]	WCG Fire Watch Stationed		☐ YES	☐ NO	☑ N/A
10.1[14][C][d]3/11.1[3]	WCG Fire Watch Secured		☐ YES	☐ NO	☑ N/A
10.2[4]	POC bag-on bag: Manufacturer				
	Model No.				
	Serial No.				
	Date of Manufacture				
10.2[5]	POC ID No				
10.2[7][B]/10.2[6]	POC Item Description				
10.2[13]	POC Assembly closed per Manufacturer's instructions. (Initial and Z#)	N/A	N/A		
10.2[14]	POC Assembly Gross Weight (lb)				
10.2[15]	POC Rad. Survey Results (mrem/hr)				
10.3[3][A]	Approx. Containerized Liquid Vol./Units	no			
10.3[5][A]	Free Liquid Volume/Units	10oz	1Gallon		
10.3[7][A]	Opaque/Non-penetrable Item Description:	None	none	N/A	
10.3[9][A]	PCB-contaminated Waste Description	none	None		
10.3[9][B]	PCB Item ID No.	none	none		
10.3[10]	Remaining Waste Description	See comments	See comments		
10.3[13]/10.4[10]/10.5[4]/10.6[8]	Daughter Drum % Full (%)	90%	100%		
10.5[3]/10.6[2]	Description Waste Added During Processing	See comments	See comments		

ATTACHMENT 1
Page 4 of 4

4.1[6][B] Parent Waste Container No.: 10899

Comments: Plastic absorbent (Kitty litter) add to nitrate salts to absorb liquid. Also split into (2) daughter drums. more absorbed liquid in 2nd daughter drum

11.1[1] Performed By: Edde Rios [signature] 187822 10-25-12
Waste Handling Tech (print) Signature Z# Date

11.1[7] Reviewed By: Jose Jerez [signature] 1221452 10 26-12 0821
SOS or designee (print) Signature Z# Date/Time

0

ATTACHMENT 2
Page 1 of 1

WCRRF OVERPACK DRUM ASSEMBLY PREPARATION DATA SHEET

5.[3] Overpack drum information:

Purchase Order No.: 413954
Lot No.: 211426
Manufacture Date: 10

5.[8] Overpack filtered vent information:

Manufacturer: NUCFIL
Model No.: 013
Serial No.: EJ-371
Manufacture Date: 5-09

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

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

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

Performed By: Steven Mondragon / Steven Mondragon 10-23-12
Waste Handling Technician (print) Signature Z# Date

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

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

Comments: N/C

8.1[1] Performed By: Steven Mondragon / Steven Mondragon 10-23-12
Waste Handling Technician (print) Signature Z# Date

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

8.1[7] Reviewed By: Eddie Rios / Eddie Rios 10-24-12 10-25-12
Supervisor or designee (print) Signature Z# Date
Jose Perez 221452 10-26-12

Working Copy
Date: 10-25-12

ATTACHMENT 5
Page 1 of 1

WCRRF OVERPACK DRUM CLOSURE DATA SHEET

7.[19] Overpack Drum Unique Identifier No.: 72247

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

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

Performed By: Eddie Rios [signature] 188822 10-25-12
Waste Handling Technician (print) Signature Z# Date

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

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

7.[36][B] Platform scale serial number: 019015
Platform scale calibration expiration date: 7-31-13

7.[36][D] 85-gal overpack drum gross weight (lb): 165.6 lb

Comments: N/A

8.1[1] Performed By: Eddie Rios [signature] 188822 10-25-12
Waste Handling Technician (print) Signature Z# Date

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

8.1[7] Reviewed By: Eddie Rios [signature] 10-26-12 188822 10-25-12
Supervisor or designee (print) Signature Z# Date
Jose Perez [signature] 221452 10-26-12

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

Drum ID#: 92245

1. Drum/Lid Assembly

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

RECORD drum information:

Purchase Request #: 416265
Lot #: 0229225
Date of Manufacture: 12

2. Drum Liner Bag/Filter Assembly:

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

RECORD bag filter information:

Manufacturer: BOP
Model #: 65PVC1-5-2 SPVC
Serial #: 1-3767
Date of Manufacture: 6/12

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

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

4. Install Lid/Drum Filter

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

RECORD drum filter information:

Manufacturer: NUCFIL
Model #: 91425
Serial #: 8x-116
Date of Manufacture: 11/12

RECORD torque wrench information:

Filter torque wrench:		Jam Nut / Bung torque wrench:	
M&TE ID #:	072614	M&TE ID #:	021151
Cal Expiration Date:	10-9-16	Cal Expiration Date:	6-11-13
Range (ft-lbs or in-lbs):	40-200	Range (ft-lbs or in-lbs):	16-80
Tolerance:	±-4% ±-6%	Tolerance:	±-3% ±-6%

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

[x] Yes [ ] No

Print Name: Eddie Rios Signature: [signature] ZI: 187822

5. Weigh Drum Assembly

RECORD weight information

Tare wight (lbs) 75.6 lbs
File ID #: 019065

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

6. Label Drum Assembly

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

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

Operator Print: Eddie Rios Operator Sign: [signature] ZI: 187822 Date: 10-18-12

Verifier Print: Clayton Mullins Verifier Sign: [signature] ZI: 240092 Date: 10/25/12

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

DRUM ID#: 92845

1. LID INSTALLATION

NOTE: Install lid per manufacturer's instructions

✓ Mount lid with filter directly over drum seam.

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

✓ Engage bolt and nut and torque per manufacturer instructions.

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

✓ Tighten jam nut.

Record torque wrench information:

MT&E #: 040329

Cal expiration date: 3-15-13

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

Tolerance ±3%cm / ±6%cm

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#: 00065

✓ 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: Edwin Rios / Edwin Rios Date: 10-25-12

Verifier Print/Sign: Clayton Mullins / Clayton Mullins Date: 10/25/12

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

Drum ID#: 92246

1. Drum/Lid Assembly

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

RECORD drum information:
- Purchase Request #: 416184
- Lot #: 6229221
- Date of Manufacture: 12

2. Drum Liner Bag/Filter Assembly:

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

RECORD bag filter information:
- Manufacturer: BOP
- Model #: 6CPV-1.5-23PVC
- Serial #: 24243
- Date of Manufacture: 6-12

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

- [ ] Inspect cardboard liner/plastic liner (circle type of liner used)
  - NOTE: Reject any damaged liners
- [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

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

RECORD drum filter information:
- Manufacturer: NUCFIL
- Model #: 01905
- Serial #: AM-785
- Date of Manufacture: 1-12

RECORD torque wrench information:

Filter torque wrench:		Jam Nut / Bung torque wrench:	
M&TE ID #:	040694	M&TE ID #:	02151
Cal Expiration Date:	9-26-13	Cal Expiration Date:	6-11-13
Range (ft-lbs or in-lbs):	40-200	Range (ft-lbs or in-lbs):	16-80
Tolerance:	±4% cur ±6% cur	Tolerance:	±3% cur ±6% cur

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

5. Weigh Drum Assembly

RECORD weight information
- Tare wight (lbs) 75.6
- File ID #: 019065

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

6. Label Drum Assembly

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

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

Operator Print: Brandon Chavez Operator Sign: [signature] ID: 204742 Date: 10-23-12
Verifier Print: Eddie Rios Verifier Sign: [signature] ID: 187822 Date: 10-25-12

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

DRUM ID#: 92246

1. LID INSTALLATION

NOTE: Install lid per manufacturer's instructions

✓ Mount lid with filter directly over drum seam.

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

✓ Engage bolt and nut and torque per manufactures instructions.

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

✓ Tighten jam nut.

Record torque wrench information:

MT&E # : 040329

Cal expiration date: 3-15-13

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

Tolerance +-3% cw / +-6% ccw

2. DRUM LABELING

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

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

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

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

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

RCRA Label:

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

OR

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

NOTE: Check only one of the above two boxes.

3. WEIGH DRUM ASSEMBLY

Record weight information:

Gross Weight(lbs.): 348.4

Scale ID#: 019065

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

4. FINALIZE DOCUMENTATION

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

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

✓ Complete TWSR.

Operator Print/Sign: [illegible] Date: 10-25-12

Verifier Print/Sign: Clyde Miller [illegible] Date: 10/25/12

WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

1 of 0

Production Control

Container ID: 90899 Container Type: 55-GAL Gross Weight (lbs): 419
Liner Seal #: None Filter Prefix: None Filter Serial #: CL-1370
Waste Stream: LA-MHD01.001 Certified RTR BDR: No BDR
TWSR Comments: PARENT #S823187
Total PE-Ci Activity: 1.83E+00 Equivalent Combustible PE-Ci: 6.87E-01 AM-241 PE-Ci: 1.49E-01
Total Fissile Gram Equivalents: 20.2 Total Surface Dose Rate (mrem/hr): 17
EPA Code(s): D008 D007 D009 NR - 10/4/12
NCR RTR/NDA Comment: None
RTR Pre-Screen Date: 6/27/2012 Comment: Liquid >1%, S3000
Certified RTR Comment: None

Prohibited Items: ☐ Sealed > 4 Liters ☑ Liquid ☐ Pressurized Container ☐ Impenetrable Item ☐ Other
Security Determination: ☑ Green ☐ Yellow
Remediation Determination: ☐ VE ☐ PID ☐ Split ☑ Repack
Estimated 30-cm Dose Rate (mrem/hr): ☐ <100 ☒ >100 and <1,000 ☐ >1,000 and <10,000 ☐ >10,000
TRUCON Code: TBD Production Control Comments: Need to add EPA Codes D007 & D009.
Nitrate salts mixed with Waste Loc 770 from previous repack campaign. A minimum of 1.2 volumes of kitty litter/zeolite must be mixed with 1.0 volume of nitrate salts!
Performed By: Susan Ramsey / Susan S. Ramsey / 100681 / 9/4/12
Production Control (Print) Signature Z Number Date

WDP Engineering

Chemicals Present (e.g., pyrophorics, acids, bases, shock sensitive, organic liquids, peroxides, crown ethers): ☐ Yes ☒ No ☐ Unknown
Processing Determination: ☒ Accept ☐ Reject
WDP Engineering Comments: Nitrate Salts/debris
Net Wt: 350 lb
Parent drum (SEDS attached) was part of WCRR nitrate salt repack campaign. This resulting daughter 55-gal drum may contain nitrate salts or a combination of nitrate salts and debris. RTR PS identifies liquids (requiring adjustment to the admixture/nitrate salt ratio). Nitrate salts carry waste codes for chromium, lead, and mercury. No chemicals present. May require RWP for > 100 & < 1000 mrem/hr

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

TRU Remediation Operations

☑ Waste Container Information Evaluated ☐ Less Than 170 lbs ☐ RTR Video Available
Other Specific Safety Concerns: Do not push or press on waste. Use Kevlar gloves.
Processing Determination: ☑ Accept ☐ Reject
TRU Remediation Operations Comments: Use proper ratio of kitty litter to waste in accordance with the procedure.
Performed By: Jose Jerez / Jose Jerez / 221452 / 10-11-12
TRU Remediation Operations (Print) Signature Z Number Date
LR Z# 249750 10/15/12

IHS Review: BB 206362 10.11.12

Discardable Waste Log Sheet

DrumID: 009998

Record	DrumID	Net (kg)	Matrix	M Code	RM	MT	Audit	Remarks
1	DXFS 528 F1	33.41	NITRATE SALTS		9.34	52	5/11	
2	DXFS 529 F1	7.73	NITRATE SALTS		0	52	5/11	
3	DXFS 530 F1	3.18	NITRATE SALTS		0	52	5/11	
4	DXFS 531 FD	4.09	NITRATE SALTS		6.27	52	5/11	
5	DXFS 534 F1	15.45	NITRATE SALTS		6.48	52	5/11	
6	DXFS 537 F1	16.14	NITRATE SALTS		5.84	52	5/11	
7	DXFS 533 F1	16.36	NITRATE SALTS		4.19	52	5/11	
8	DXFS 539 F1	11.14	NITRATE SALTS		3.33	52	5/11	
9	DXFS 540 F1		NITRATE SALTS		1.95	52	5/11	008/09 NET WT. COMBINED
10	DXFS 542 FA	17.27	NITRATE SALTS		5.37	52	5/11	
		124.77 kg						

ATTACHMENT 1
Page 1 of 1

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

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

Container No. (5.[1])	90899					
Container type sampled (e.g., 55-gal, 85-gal, 110-gal, or SWB) (5.[1])	55-gal					
Filtered Vent Type (5.[1])	190S					
Filtered Vent Unobstructed (5.[1])	☑ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT
WIPP-Approved Filtered Vent (5.[2])	☑ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT
Total CCP VOC value (< 7,000 ppm) (5.[4])	~~0~~ 20.50 ppm	ppm	ppm	ppm	ppm	ppm
Hydrogen Reading (< 64,000 ppm) (5.[5])	20157 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: None

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

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

6.1[3] Performed By: SUSAN RAMSEY (Waste Handling Operator (print)), [signature] (Signature), 100681 (Z #), 10/10/12 (Date)

InstName : Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\121005c\
Data File : 90899.D
Acq On : 5 Oct 2012 1:51 pm (#1); 05-Oct-12, 13:50:31 (#2)
Operator : NW
Sample :
Misc : 55 gallon LFL drum through 019DS,unobstructed (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Oct 05 13:58:50 2012
Quant Method : C:\msdchem\1\METHODS\vocgas.m
Quant Title : Flammable Gas Analysis
QLast Update : Wed Sep 05 10:53:25 2012
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
3) Fluorobenzene	3.535	96	6108998	201.25 ppmv	0.00
15) Chlorobenzene-d5	5.868	117	5409105	177.00 ppmv	0.00
Target Compounds					Qvalue
1) Hydrogen	1.614	GC1	1425	201.57 ppmv	100
12) Benzene	3.222	78	249415	12.33 ppmv	95
17) Toluene	4.831	92	138149	8.17 ppmv	99

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

PROJECT NAME _____ NOTEBOOK NO _____

10-25-12

0000 Assuming WCRRF operations center - Orlando
0001 Started inside and outside rounds.
0005 Check sampling complete
0038 Inside and outside rounds complete.
0700 Inside and outside rounds completed by SOS.
0717 Mode change performed TASC 69 and WCRRF yard now in operations.
0744 bag on 90899
0751 ~~0850~~ bag on is complete.
0813 Starting movement to transport vehicle
0839 Permission granted to leave vehicle gates.
0910 movement to transport vehicle is complete, vehicle access gates have been restored.
0915 starting movement out of 5C-69
0923 movement out of 5C 69 complete.
0937 bagging off 90899 and daughters bagging on 91013.
0956 bag on is complete.
1150 bagging off 91013 and daughters bagging on 90936.
1217 bag on complete
1335 Permission granted to leave vehicle access gates to unload drums from transport vehicle
1354 Bag off is complete.
1400 Starting inside rounds.
1415 Starting to unload transport vehicle
1450 off loading of transport vehicle is complete. Vehicle access gates have been restored.
1451 Starting movement out of 5C 69. Completed inside rounds.
1459 Starting outside rounds.
1500 movements are complete.
1502 Outside rounds complete.
1506 late entry at 1510 mode change performed TASC 69 is in cold and WCRRF yard in warm mode CR.
1550 CSE going into TASC 69 to perform w31 to perform CR. CSE will be going in the roof thru the puggaree roof hatch SOM has given him permission
1604 while CSE was performing check on roof, alarm bracket cleared for high pressure alarm.
1615 operator has completed ventilation check. alarm has been acknowledged. CSE has completed his checks of bldg.
1630 end of day WCRRF operations center secure - Orlando

HG

no further entries this page

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

PROJECT NAME 10/25/12 NOTEBOOK NO

0600 Assumed WCRR SOM position.

0615 Attended pre job brief conducted by SOS. Discussed using introductory port, how to access dose records, preparations for cold weather.

0717 Completed mode change: WCRR Yard / Bldg 50-69 from Warm / Warm to Operations / Operations.

0845 CSE for Bldg 50-69 Integrity after discussing w/ IH will check roof integrity by accessing thru Bldg 69 mezzanine hatch.

0940 Released W.O. # 4381577-01 50-54 (A) CAE-001 Shutdown

1000 Emerged ISI 6.3.1 w/ scheduling to perform this afternoon.

1030 Attended team meeting conducted by OM. Discussed plan to take both Bldg 50-69 and WCRR yard to Cold on 11/15/12 to 11-20-12 for maintenance

1510 Completed Mode change: WCRR Yard / Bldg 50-69 from Operations / Operations to Warm / Cold.

1550 CSE is on site to complete ISI 6.3.1 Building Integrity Inspection. Allowing access thru mezzanine hatch for limited time. RP-1 completed survey @ hatch and identified no contamination.

1604 As expected received Bldg High pressure alarm on Allen Bradley due to hatch being opened.

1615 Operator ~~AKA~~ 10/25/12 acknowledged alarm after CSE completed inspection and closed hatch. Building pressure back to normal as reported by operator.

1630 Secured SOM position

LD
11-5-12

No further entries this page

SIGNATURE DATE 10/25 20 12
READ AND UNDERSTOOD DATE 20

10-25-12 WCRR 505 Log Book

0600 Assuming 505 position for the day. [illegible]

0605 Starting Pre-Job brief. Discussed not being complacent follow procedures and stay focused. 1 shipment out and 1 shipment in. Processing waste, possibly taking SWB's in to load salvage 55 gallon drums. Housekeeping at the end of the day. Need to be in Cold by the end of the day for maintenance tomorrow. Talked about Cold weather, will need to start putting the eye wash indoors. Talk to the CSE to ensure all boilers are operating normal so that temperature stays above operating limits of 60°.

0800 Signed off on inside and outside rounds

0717 Mode Change. 50-69 and Yard are now in Operations.

0744 Bagging on first drum

1454 Inside rounds signed off

1500 Mode Change Complete. WCRR Stand by in the yard Cold Stand by in 50-69

1540 Signed off on outside rounds

1550 CSE going into 50-69 to finish building integrity surveillance last time he was here he didn't complete the roof

1604 Notified of alarm inside of 50-69. Possibly because of roof hatch being opened

1605 Operator 39 notifying that alarm is for high pressure alarm. Ventilation readings are all normal. CSE has completed his inspection

10-25-12 1625 Securing 505 position for the day [illegible]

JB MCA

See Follow Entries on this Page

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0105
Examination Date:	9/4/2013
Waste Container ID:	92245
Video/Audio Recorded Media Number:	LA-RTR2-13-0105 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 13
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3110
Waste Stream I.D.:	LA-MIN02-V.001
Waste Container Weights:	Gross Wt.: 150.5 kg Tare Wt.: 33.4 kg Net Wt.: 117.1 kg
Rigid Liner and Liner Vent Description:	Liner: [X] No [ ] Yes Lid: [X] No [ ] Yes Type: [ ] 30-mil [ ] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [ ] Yes [X] N/A Punctured: [X] No [ ] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [ ] No [X] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 2 layers
Volume Utilization Percentage:	80 %

CCP Radiography Data Sheet

Waste Container ID: 92245

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

Section 4: Packaging Material and Waste Material Parameters	
Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP):Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	3.0
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	5.0
Plastics (waste materials) (XPM):	8.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	101.1
Soils (S):	
Total WMP Weight:	117.1

CCP Radiography Data Sheet

Waste Container ID: 92245

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

RTR Operator:

Benito Maestas		9/4/2013
Print Name	Signature	Date

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

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

Item ID:            92245              Count Sequence Number:  23545
Operator:           D3PW2DK1\operator
Assay Start:        9/6/2013    8:53:14 AM
Description 1:      1LANDA1837
Description 2:      N/A
Location:           LANL TA-54
Comment:            AK-6
Matrix Type:        Homo Sol. S3000
Container Type:     55 gallon drum
Weight:             Net:       117.0   kg        Net:   117.0 kg
Container:          Volume:    208.0   l        Full:    80.0 %
Density:                         0.700 kg /l


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

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

Errors quoted at  1.000 sigma
```

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number: 23545
Assay Instrument: MCS HENC #1
Analysis Method: CCP-TP-063 v 15
Item ID: 92245

Batch Number: 1LANDA1837
Location: LANL TA-54
Software Version: NDA 2000 V.4.0
Analysis Date: 9/6/2013

Net Weight	117000.0 g		
Pu mass	3.77E+001	+-	6.68E+000 g
TRU Alpha Activity	6.77E+000	+-	2.21E+000 Ci
TRU Activity Concentration	5.78E+004	+-	1.89E+004 nCi/g
Pu-239 Equivalent Activity	6.85E+000	+-	2.21E+000 Ci
Pu-239 FGE	3.55E+001	+-	6.27E+000 g
Decay heat	2.19E-001	+-	7.33E-002 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	7.52E-002	5.30E-005	9.84E-006	2.56E-006
PU238	3.45E-003	5.90E-002	1.05E-002	3.28E-005
PU239	3.54E+001	2.19E+000	3.89E-001	1.22E-003
PU240	2.26E+000	5.13E-001	9.10E-002	2.85E-004
AM241	1.17E+000	4.00E+000	2.17E+000	5.05E-002
PU241	4.36E-002	4.49E+000	7.96E-001	2.50E-003
PU242	7.55E-003	2.98E-005	5.29E-006	0.00E+000
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	6.96E-007
U233	<LLD	<LLD	0.00E+000	5.18E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	1.46E-006
U238	<LLD	<LLD	0.00E+000	1.64E-005
AM243	1.05E-004	2.11E-005	4.28E-006	6.10E-006

Errors quoted at 1.000 sigma

Operator: [illegible] Date: 9.9.13

ITR: Jim Barton Date: 9/10/13

Automated Independent Technical Review

Count Sequence Number: 23545 Batch Number: 1LANDA1837
Counter ID: MCS HENC #1
Container ID: 92245
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 9/6/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis No Add-a-Source warnings.	Ok
Section 2 - Passive Neutron Analysis Analysis Status: No errors.	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 Chandler Date: 9-9-13

Waste Container ID: **92245**

BDR Number: **LA13FG12093**

Sampling Date: **9/13/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	196.85	
74-82-8	Methane	9.63	U
67-56-1	Methanol	81.32	
60-29-7	Ethyl Ether	1.77	U
75-35-4	1,1-Dichloroethylene	5.36	U
67-64-1	Acetone	67.02	
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	4.50	
107-06-2	1,2-Dichloroethane	0.92	U
71-36-3	1-Butanol	0.54	U
108-10-1	Methyl isobutyl ketone	3.11	U
108-88-3	Toluene	4.61	
108-90-7	Chlorobenzene	0.87	U
100-41-4	Ethylbenzene	1.15	U
108-38-3/106-42-3	m- and p-Xylene	0.59	U
95-47-6	o-Xylene	0.63	U
108-67-8	1,3,5-Trimethylbenzene	0.72	U
95-63-6	1,2,4-Trimethylbenzene	0.78	U

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

Quantitation Report (QT Reviewed)

InstName : FGA Unit 12

Data Path : C:\msdchem\1\DATA\130913c\
Data File : 92245.D
Acq On : 13 Sep 2013 2:28 pm
Operator : SA
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 13 14:37:05 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	8077758	207.75	ppmv	0.00
15) Chlorobenzene-d5	6.636	117	6093060	178.75	ppmv	0.00
Target Compounds						Qvalue
1) Hydrogen	1.897	GC1	56151m	196.85	ppmv	
4) Methanol	0.827	31	34708m	81.32	ppmv	
7) Acetone	1.357	58	144048	67.02	ppmv	97
12) Benzene	3.717	78	149243	4.50	ppmv	97
17) Toluene	5.577	92	113442	4.61	ppmv	95

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

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-HERTR-12-0131
Examination Date:	1/2/2013
Waste Container ID:	92246
Video/Audio Recorded Media Number:	LA-HERTR-12-0131 ~~A&B~~ 1/8/13 MS C&D 1/8/13 MS
Procedure and Revision No.:	CCP-TP-053 Rev. 12
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA212
Waste Matrix Code:	S3110
Waste Stream I.D.:	LA-MIN02-V.001
Waste Container Weights:	Gross Wt.: 158.0 kg Tare Wt.: 33.4 kg Net Wt.: 124.6 kg
Rigid Liner and Liner Vent Description:	Liner: [X] No [ ] Yes Lid: [X] No [ ] Yes Type: [ ] 30-mil [ ] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [ ] Yes [X] N/A Punctured: [X] No [ ] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [ ] No [X] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 1 layer
Volume Utilization Percentage:	90 %

CCP Radiography Data Sheet

Waste Container ID: 92246

Section 3: Container Inventory and Comments (Detailed descriptions)

IM: Scrap metal

AM:

OM: Scrap lead

OI: Absorbent

C:

R:

XPM: Plastic liner lid, 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 Liner (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):	20.0
Other Inorganic Materials (OI)	4.0
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	8.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	92.1
Soils (S):	
Total WMP Weight:	124.6

CCP Radiography Data Sheet

Waste Container ID: 92246

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

RTR Operator:

Michael Simmons		1/2/2013
Print Name	Signature	Date

1/8/13

NDA 2000 Assay Report

Item Information

Item ID:	92246	Count Sequence Number:	15081
Operator:	DCLTD231\Operator		
Assay Start:	2/19/2013 1:33:06 PM		
Description 1:	2LANDA1101		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gal Drum		
Weight:	Net: 125.0 kg	Net:	125.0 kg
Container:	Volume: 208.0 l	Full:	90.0 %
Density:	0.670 kg /l		

System Configuration

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

Errors quoted at 1.000 sigma

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number:	15081	Batch Number:	2LANDA1101
Assay Instrument:	HENC #2	Location:	LANL TA-54
Analysis Method:	CCP-TP-063 v 14	Software Version:	NDA 2000 V.4.0
Item ID:	92246	Analysis Date:	2/19/2013

Net Weight	125000.0 g		
Pu mass	2.25E+001	+-	5.18E+000 g
TRU Alpha Activity	5.48E+000	+-	2.08E+000 Ci
TRU Activity Concentration	4.39E+004	+-	1.67E+004 nCi/g
Pu-239 Equivalent Activity	5.53E+000	+-	2.08E+000 Ci
Pu-239 FGE	2.12E+001	+-	4.86E+000 g
Decay heat	1.79E-001	+-	6.95E-002 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	6.26E-002	4.47E-005	8.05E-006	1.20E-006
PU238	2.07E-003	3.58E-002	8.23E-003	3.74E-005
PU239	2.11E+001	1.33E+000	3.06E-001	1.39E-003
PU240	1.35E+000	3.10E-001	7.14E-002	3.25E-004
AM241	1.10E+000	3.81E+000	2.06E+000	4.10E-002
PU241	2.67E-002	2.78E+000	6.39E-001	2.91E-003
PU242	4.51E-003	1.79E-005	4.11E-006	0.00E+000
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	3.88E-007
U233	<LLD	<LLD	0.00E+000	4.75E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	1.53E-006
U238	<LLD	<LLD	0.00E+000	1.38E-005
AM243	1.61E-004	3.26E-005	6.12E-006	6.39E-006

Errors quoted at 1.000 sigma

Operator: _____ Date: 2/21/13

ITR: Ann Barton Date: 2/25/13

Automated Independent Technical Review

Count Sequence Number: 15081 Batch Number: 2LANDA1101
Counter ID: HENC #2
Container ID: 92246
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 2/19/2013

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 Chamberlin Date: 2-20-13

Attachment 4 – Flammable Gas Analysis Form 5823187

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

Waste Container ID: **92246**

BDR Number: **LA13FG8015**

Sampling Date: **3/1/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	149.81	
74-82-8	Methane	213.40	U
67-56-1	Methanol	27.87	U
60-29-7	Ethyl Ether	1.25	U
75-35-4	1,1-Dichloroethylene	5.71	U
67-64-1	Acetone	16.90	U
75-34-3	1,1-Dichloroethane	4.24	U
156-59-2	cis-1,2-Dichloroethene	0.55	U
78-93-3	Methyl ethyl ketone	9.86	U
110-82-7	Cyclohexane	5.84	U
71-43-2	Benzene	0.87	
107-06-2	1,2-Dichloroethane	1.51	U
71-36-3	1-Butanol	1.36	U
108-10-1	Methyl isobutyl ketone	9.34	U
108-88-3	Toluene	3.09	U
108-90-7	Chlorobenzene	1.69	U
100-41-4	Ethylbenzene	2.62	U
108-38-3/106-42-3	m- and p-Xylene	1.48	U
95-47-6	o-Xylene	1.76	U
108-67-8	1,3,5-Trimethylbenzene	3.14	U
95-63-6	1,2,4-Trimethylbenzene	3.92	U

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\130301c\
Data File : 92246.D
Acq On : 1 Mar 2013 12:53 pm (#1); 1 Mar 2013 12:52 pm (#2)
Operator : NW
Sample :
InstName : Unit 8
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 01 13:00:49 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	2549924	206.00 ppm	0.00
15) Chlorobenzene-d5	5.936	117	2296019	179.50 ppm	0.00
Target Compounds					Qvalue
1) Hydrogen	5.311	GC1	37015m	149.81 ppm	
12) Benzene	2.880	78	5614	0.87 ppm	97

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

33

ATTACHMENT 1
Page 1 of 4

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: 90900

6.2[4] Date Processed 1-22-13

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

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

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

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

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

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

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

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

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

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

Performed By: Brian Gallegos [signature] 267129 1-22-13
Waste Handling Tech (print) Signature Z # Date

ATTACHMENT 1
Page 2 of 4

4.1[6][B] Parent Waste Container No.: 90900

5.[18] Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable: 378.0 lb

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

6.2[5][B] Total Parent Drum Weight (lb) 378.0 lb
6.2[6]

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

6.2[28] Approval to leave a parent drum attached to the WC Glovebox overnight: N/A

EWMO LOD (print) Signature Date

ATTACHMENT 1
Page 3 of 4

4.1[6][B] Parent Waste Container No.: 90900

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	92669	N		
10.1[4]	Daughter Drum Filter No.	JL-1143			
10.1[4]	Daughter Drum Bag Filter No.	WO-1863		A	
10.1[4]	Daughter Drum Purchase Order No.	50011			
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 date)				
10.2[14]	POC Assembly Gross Weight (lb)			A	
10.2[15]	POC Rad Survey Results (mrem/hr)				
10.3[5][A]	Approx. Containerized Liquid Vol./Units				
10.3[5][A]	Free Liquid Volume/Units		N		
10.3[7][A]	Opaque/Non-penetrable Item Description:				
10.3[9][A]	PCB Decontaminated Waste Description				
10.3[9][B]	PCB Item ID No.				
10.3[10]	Remaining Waste Description	SEE COMMENTS			
10.3[13]/10.4[10]/10.5[4]/10.6[8]	Daughter Drum % Full (%)	90%			
10.5[3]/10.6[2]	Description Waste Added During Processing	BAG OUT STUBS			

ATTACHMENT 1
Page 4 of 4

4.1[6][B] Parent Waste Container No.: 90900

Comments: POC LIDS, ROOM TRASH, HEX ARMOUR GLOVES, SALTS, PLASTIC, NEAUTRALIZER, KITTY LITTER

11.1[1] Performed By: BRIAN GALLEGOS [signature] 267129 1-22-13
Waste Handling Tech (print) Signature Z# Date

11.1[7] Reviewed By: G Mb [signature] 149235 1-24-13 1000
SOS or designee (print) Signature Z# Date Time

UET

Date: 1-17-13

ATTACHMENT 2
Page 1 of 1

WCRRF OVERPACK DRUM ASSEMBLY PREPARATION DATA SHEET

5.[3] Overpack drum information:

Purchase Order No.: 413724
Lot No.: 210114
Manufacture Date: 10

5.[8] Overpack filtered vent information:

Manufacturer: Avcel
Model No: 013
Serial No.: 26-59
Manufacture Date: 9-11

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

	Filtered Vent	2 in. Bung
M&TE No.:	046694	038369
Cal. Expiration Date:	9-26-13	12-18-13
Tolerance:	10.3 ~~±4%~~ ±6%rdg ±4%fsd	±3%rdg ±6%rdg

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

Performed By: Michael Bonner [signature] 1-17-13
Waste Handling Technician (print) Signature Z # Date

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

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

Comments: N/C

8.1[1] Performed By: Michael Bonner [signature] 1-17-13
Waste Handling Technician (print) Signature Z # Date

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

8.1[7] Reviewed By: C. Martin [signature] 1-24-13
Supervisor or designee (print) Signature Z # Date

Working Copy
Date: 1-22-13

ATTACHMENT 5
Page 1 of 1

WCRRF OVERPACK DRUM CLOSURE DATA SHEET

7.[19] Overpack Drum Unique Identifier No.: 92670

7.[25] Overpack drum closure ring torque wrench information:
M&TE No.: 03836
Cal. Expiration Date: 3-16-13
Range in ft-lb: 10-8
Tolerance ±3% over 60 ft-lb

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

Performed By: Brian Gallegos B. Gallegos 267129 1-22-13
Waste Handling Technician (print) Signature Z # Date

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

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

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

7.[36][D] Original overpack drum gross weight (lb): N/A

Comments: N/A

8.1[1] Performed By: Brian Gallegos B. Gallegos 267129 1-22-13
Waste Handling Technician (print) Signature Z # Date

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

8.1[7] Reviewed By: G. Mc A. M. 44335 1-24-13
Supervisor or designee (print) Signature Z # Date

Best Available Copy

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

Drum ID#: 92669

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 #: 5010:1
- Lot #: 2333 70
- Date of Manufacture: 12

2. Drum Liner Bag/Filter Assembly:

- [x] Place yellow vinyl tape, with linear markings 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 #: [illegible]
- Serial #: [illegible]
- Date of Manufacture: 12

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

- [x] Inspect cardboard liner/plastic liner (circle type of liner used)
  - NOTE: Reject any damaged liners
- [x] Place cardboard/plastic liner into drum liner bag/filter assembly
- [x] Line up filter with drum seam
- [x] Place liner/bag/filter assembly into drum
- [x] Put excess liner bag into cardboard liner/drum 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: [illegible]
- Model #: [illegible]
- Serial #: [illegible]
- Date of Manufacture: 10-[illegible]

RECORD torque wrench information

Filter torque wrench:		Jam Nut / Bung torque wrench:	
METE ID #:	[illegible]	METE ID #:	038569
Cal Expiration Date:	7-26-13	Cal Expiration Date:	12-18-13
Range (ft-lbs or in-lbs):	[illegible]	Range (ft-lbs or in-lbs):	[illegible]
Tolerance:	[illegible]	Tolerance:	[illegible]

Torque wrenches listed above are within the acceptable ranges as displayed on the calibration certificate.
- [x] Yes
- [ ] No

Print Name: Adam Sawyer Signature: [illegible] ID#: 276702

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

AJR 182722 1-17-13

6. Label Drum Assembly

- [x] Place 1 barcode drum ID label to the left of the drum seam, 45° from drum bottom
- [x] Place 1 barcode drum ID label in the center of the drum lid

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

Operator Print: Michael Rosas Operator Sign: [illegible] ID: 182722 Date: 1-17-13

Verifier Print: Brian Gallegos Verifier Sign: [illegible] ID: 267129 Date: 1-22-13

Best Available Copy

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

DRUM ID#: 92669

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 #: 038387

Cal expiration date: 3-16-12

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

— Tolerance ± 3% CW 16% 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): 203.0

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: 1-22-13

Verifier Print/Sign: [illegible] Date: 1-22-13

WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Production Control

Container ID: 90900 Container Type: POC Gross Weight (lbs): 371

Liner Seal #: None Filter Prefix: None Filter Serial #: EL-310; EL-401

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

TWSR Comments: PARENT #S823187 WTS2138TD-836 6.87E-01

Total PB-Ci Activity: ~~1.03E+00~~ Equivalent Combustible PE-Ci: ~~1.07E-01~~ AM-241 PB-Ci: 1.49E-01

Total Fissile Gram Equivalents: [illegible] Total Surface Dose Rate (mrem/hr): ~~<2~~

EPA Code(s): D008 D007 [illegible] VE 10/2/12

NCR RTR/NDA Comment: None

RTR Pre-Screen Date: None Comment: None

Certified RTR Comment: None

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

Security Determination: | Green | Yellow

Remediation Determination: VE | PID | Split | Repack

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

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

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

Performed By: Susan Ramsey (Production Control (Print)) Signature: [illegible] Z Number: 100681 Date: 9/10/12

WDP Engineering

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

Processing Determination: Accept | Reject

WDP Engineering Comments: Nitrate Salts – POC

Net Wt: 61 lb Parent drum (SEDS attached) was part of WCRR nitrate salt repack campaign using Waste Lock 770®. This resulting daughter POC is being repacked to adjust the admixture/nitrate salt ratio. Nitrate salts carry waste codes for chromium, lead, and mercury. No chemicals present. May require RWP for ≥100 + < 1000 mrem/hr

Performed By: Valerie Rhodes (WDP Engineering (Print)) Signature: [illegible] Z Number: 112609 Date: 10/2/12

TRU Remediation Operations

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

Other Specific Safety Concerns: Ensure Hexamesh gloves are used during the processing of waste items in the glove box. Do not push or press on waste

Processing Determination: Accept | Reject

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

Performed By: Jose Perez (TRU Remediation Operations (Print)) Signature: [illegible] Z Number: 221452 Date: 10-9-12

LH Z# 249750 10/9/12

HS Reviewed [illegible] OSP, contains lead, chromium + Hg

10-3-12

Best Available Copy

Discardable Waste Log Sheet

DrumID: 009998

Item#	ItemID	Net (kg)	Matrix	M Code	RH	MR	Audit	Remarks
1	DXFS 528 P1	13.41	NITRATE SALTS		9.34	52	5/11	
2	DXFS 529 P1	7.73	NITRATE SALTS		0	52	5/11	
3	DXFS 530 P1	3.18	NITRATE SALTS		8	52	5/11	
4	DXFS 531 PD	4.09	NITRATE SALTS		6.27	52	5/11	
5	DXFS 534 P1	15.45	NITRATE SALTS		6.48	52	5/11	
6	DXFS 537 P1	16.16	NITRATE SALTS		5.84	52	5/11	
7	DXFS 538 P1	16.36	NITRATE SALTS		6.19	52	5/11	
8	DXFS 539 P1	11.14	NITRATE SALTS		3.53	52	5/11	
9	DXFS 540 P1		NITRATE SALTS		1.95	52	5/11	98.09 NET WT. COMBINED
10	DXFS 542 PA	12.27	NITRATE SALTS		9.97	52	5/11	

124.79 kg

ATTACHMENT 1
Page 1 of 1

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

5.[1] Sample Date: 9/28/12

Container No. (5.[1])	9C90C					
Container type sampled (e.g., 55-gal 85-gal, 110-gal, or SWB) (5.[1])	PLC					
Filtered Vent Type (5.[1])	1-JD's					
Filtered Vent Unobstructed (5.[1])	☑ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☑ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT
WIPP-Approved Filtered Vent (5.[2])	☑ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT
Total CCP VOC value (< 7,000 ppm) (5.[4])	0 ppm	ppm	ppm	ppm	ppm	ppm
Hydrogen Reading (< 64,000 ppm) (5.[5])	0 ppm	ppm	ppm	ppm	ppm	ppm
Methane Reading (< 16,000 ppm) (5.[5])	0 ppm	ppm	ppm	ppm	ppm	ppm

5.[7] Certified CCP Technician:

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

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

Comments: None

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

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

6.1[3] Performed By: SUSAN S. RAMSEY (Waste Handling Operator (print)) Susan S. Ramsey (Signature) 100681 (Z #) 10/2/12 (Date)

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\120928C\
Data File : 90900.D
Acq On : 28 Sep 2012 12:03 pm (#1); 28 Sep 2012 12:02 pm (#2)
Operator : SA
Sample :
InstName : Unit 8
Misc : LFL POC THROUGH FILTER-19DS FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Oct 02 15:07:06 2012
Quant Method : C:\msdchem\1\METHODS\Vocgas.m
Quant Title : Flammable Gas Analysis for Transportation
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
3) Fluorobenzene	3.259	96	2505183	206.00 ppm	0.00
15) Chlorobenzene-d5	5.936	117	2207863	179.50 ppm	0.00

Target Compounds	Qvalue

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

Vocgas.m Tue Oct 02 15:07:39 2012

1-22-13 WCRR SOS LOG BOOK

0600 Assuming SOS Position [illegible]
0610 Conducted shift Brief Safety topic seat belts.
0645 Concluded shift Brief
0716 Reviewed Inside and outside Rounds. Operators entering Facility need to change out Gloves in Station 1 before Going to operations mode
0739 Notified by Inside RCT's They are having problems with breakthrough waiting for smears prior to Glove Changes.
0815 ok to proceed Per RCT's breakthrough ok
0858 started Glove Change
0928 completed Glove Change
0930 Mode Change Complete WCRRF In operations
0932 Dewatering 2 drum and bagging on 5793683
1025 PPE Check
1052 bagging off and bagging on 90896
1120 PPE Check
1207 bagging off and bagging on 90893 PPE Check
1234 PPE Check
1430 notified by Inside personal a drum with liquid in bag had a PH of 3 making In a acid bagged In neutralizer and remidiated the Issue
1532 bagging off and bagging on 90900 PPE Check
1650 Inside and outside Rounds Complete.
1745 ~~1755~~ bagged off last drum of day.
1758 Mode Change Complete WCRRF In warm
1-22-13 1830 end of shift Securing SOS Position [illegible]
RIA

No further entries on this Page

2213
0600 Assuming WCRRF operations center - crelande.
0615 Pre job briefing being conducted by SPS.
0632 Starting inside rounds and outside rounds
0644 Pre job concluded.
0659 Item 61 OOS, POD in place, OK to proceed with rounds.
0702 Inside rounds complete ~~0702~~ 9-22-13
0715 Inside and outside rounds signed off by OOS.
0730 Notified by Operators that station 1 Right and left hand gloves will need to be changed out per RCT's.
0739 RCT's having some problems with benthold wading for smears to be counted prior to starting glove changes.
0858 Starting glove changes on station 1.
0928 Completed glove changes on station 1
0930 mode change performed 50-69 and WCRRF yard in operations.
0932 Starting to denist and will be bagging on 97936B3
0951 Permission granted to lower vehicle access gates for loading of transport vehicle.
0959 Denisting and bag on is complete.
1025 PPE Check is sat.
1052 bagging off 97936B3 and POC, bagging on 90896
1057 Vehicle access gates have been restored, movement to transport vehicle is complete.
1120 bag on, bag off complete, PPE check is complete.
1207 bagging off 90896, bagging on 90893, PPE Check is sat.
1234 bag on, bag off complete, PPE Check is sat
1446 Starting movement to 50-69
1450 notified by operators enter liquid in drum with pH of 3 Notifying SPS. Operators will be introducing neutralizer on next bag off. PPE Check is sat
1532 bagging off 90893, bagging on 90900 ppe check is sat
1600 Starting inside rounds
1610 Starting outside rounds
1629 Item 61 is OOS POD in place, OK to continue
continued on next page - crelande

1-22-13 Continued from previous page - Crelando
1629 Completed inside rounds. PPE Check is sat.
1702 Starting movement out of 50-69.
1719 movement complete out of 50-69.
1722 bagging off 90900
1746 bag off complete.
1758 mode change performed TA50-669 and WCRRF yard now
1/22/13 ~~1830~~ 1830 in warm standby.
JJ 1830 end of day WCRRF operations center secure - Crelando
MA

No further entries this page

0600 Assumed WCRR SOM position
0615 Attended pre job brief conducted by SOS. Safety topic covered use of seat belts, both on the job and off.
0630 Talked to OSPRT regarding todays shipments. They may be able to support 2 outgoing shipments and leave tomorrow for incoming.
0705 Notified by SOS that gloves on Station 1 will require to be changed out prior to going operational
0715 Rounds completed and reviewed as well as RCRA inspections.
0805 Left message w/ Southwest Office Supply regarding Kenyx copier - need repairs on current copier and/or have new one on order delivered.
0820 Notified by DUS PIC that he is no longer authorized as Area G operator core quals - needs to be reauthorized by OM prior to DUS being able to operate.
0928 Glovebox glove change out complete
0930 Completed Mode Change: WCRR Yard / Bldg 50-69 from Warm / Warm to Operations / Operations.
0932 Bagging on first drum.
1050 Reviewed WO # 454194-01 to repair heater in 50-194
1200 Called into weekly solution package meeting and LFL status. This weeks shipments are on schedule. Area G will LFL 40 drums between today and tomorrow which will fill in next weeks shipments (all SP-57 drums).
1400 Notified by OM that tomorrows AM shipment will not be able to ship until after mandatory ADEP meeting.
1430 Notified by OM that FOD is approving AM shipments tomorrow both to and from Area G
1440 Notified by OCO that current drum on WCG (SP-72 POC) had ≈ 1 liter of liquid @ pH of 3. Operators will bag on neutralizer w/ next bag on.
1500 Attended meeting w/ CCP, PM, OM, SSW and production control for SP-57 drums which were NCR'd due to multiple confinement levels not allowing H_2 levels to decrease normally.
1758 Completed Mode Change: WCRR Yard / Bldg 50-69 from Operations / Operations to Warm / Warm.
1830 Secured SOM position.

1/22/13

No further entries this date

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:	92669
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.: 113.5 kg Tare Wt.: 33.4 kg Net Wt.: 80.1 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: 92669

Section 3: Container Inventory and Comments (Detailed descriptions)

IM: Hardware, metal lid

AM:

OM: Scrap lead

OI:

C: Fiberboard packing material, fiberboard insert sleeve, 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):	25.0
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	3.0
Other Inorganic Materials (OI)	
Cellulosics (C):	10.0
Rubber (R):	
Plastics (waste materials) (XPM):	6.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	36.1
Soils (S):	
Total WMP Weight:	80.1

CCP Radiography Data Sheet

Waste Container ID: 92669

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		1/9/2014
Print Name	Signature	Date

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

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

Item ID:	92669	Count Sequence Number:	24094
Operator:	D3PW2DK1\operator		
Assay Start:	1/13/2014 12:16:43 PM		
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: 80.1 kg	Net:	80.1 kg
Container:	Volume: 208.0 l	Full:	85.0 %
Density:	0.450 kg /l		

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

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

Errors quoted at 1.000 sigma

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number:	24094	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:	92669	Analysis Date:	1/13/2014

Net Weight	80100.0 g		
Pu mass	9.16E+000	+-	1.73E+000 g
TRU Alpha Activity	1.99E+000	+-	2.20E-001 Ci
TRU Activity Concentration	2.49E+004	+-	2.75E+003 nCi/g
Pu-239 Equivalent Activity	2.01E+000	+-	2.20E-001 Ci
Pu-239 FGE	8.64E+000	+-	1.62E+000 g
Decay heat	6.49E-002	+-	7.22E-003 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	3.93E-002	2.77E-005	3.99E-006	1.25E-006
PU238	8.36E-004	1.43E-002	2.70E-003	3.25E-005
PU239	8.60E+000	5.33E-001	1.01E-001	1.21E-003
PU240	5.50E-001	1.25E-001	2.35E-002	2.84E-004
AM241	3.85E-001	1.32E+000	1.95E-001	2.67E-002
PU241	1.04E-002	1.07E+000	2.02E-001	2.44E-003
PU242	1.83E-003	7.25E-006	1.37E-006	0.00E+000
SR90	6.18E-009	8.53E-007	3.06E-007	0.00E+000
CS137	9.81E-009	8.53E-007	3.06E-007	1.66E-007
U233	<LLD	<LLD	0.00E+000	2.47E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	7.29E-007
U238	<LLD	<LLD	0.00E+000	7.92E-006
AM243	6.92E-005	1.38E-005	2.24E-006	3.12E-006
CM243	1.20E-007	5.88E-006	2.33E-006	5.25E-006

Errors quoted at 1.000 sigma

Operator: _____ Date: 1.15.14

ITR: _____ Date: 1.15.14

Automated Independent Technical Review

Count Sequence Number: 24094 Batch Number: 1LANDA1889
Counter ID: MCS HENC #1
Container ID: 92669
Waste Matrix Code: Debris S5000 Count Type:
Sequence Type: Assay Date: 1/13/2014

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

Expert Review by: Sheri Chamberlin Date: 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: **92669**

BDR Number: **LA14FG12008**

Sampling Date: **1/16/2014**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	3.39	U
74-82-8	Methane	6.56	U
67-56-1	Methanol	1.24	U
60-29-7	Ethyl Ether	0.12	U
75-35-4	1,1-Dichloroethylene	0.20	U
67-64-1	Acetone	0.42	U
75-34-3	1,1-Dichloroethane	0.72	U
156-59-2	cis-1,2-Dichloroethene	0.09	U
78-93-3	Methyl ethyl ketone	0.90	U
110-82-7	Cyclohexane	0.59	U
71-43-2	Benzene	0.17	U
107-06-2	1,2-Dichloroethane	0.56	U
71-36-3	1-Butanol	0.38	U
108-10-1	Methyl isobutyl ketone	0.66	U
108-88-3	Toluene	0.93	U
108-90-7	Chlorobenzene	0.67	U
100-41-4	Ethylbenzene	0.59	U
108-38-3/106-42-3	m- and p-Xylene	0.38	U
95-47-6	o-Xylene	0.36	U
108-67-8	1,3,5-Trimethylbenzene	0.65	U
95-63-6	1,2,4-Trimethylbenzene	0.78	U

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

Quantitation Report (QT Reviewed)

InstName : FGA Unit 12

Data Path : C:\msdchem\1\DATA\140116c\
Data File : 92669.D
Acq On : 16 Jan 2014 2:22 pm (#1); 16 Jan 2014 2:21 pm (#2)
Operator : SA
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jan 16 14:33:21 2014
Quant Method : C:\msdchem\1\METHODS\VOCGAS.M
Quant Title : Flammable Gas Analysis for Transportation Only
QLast Update : Tue Dec 03 09:52:38 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
3) Fluorobenzene	4.063	96	8155981	207.75	ppmv	0.00
15) Chlorobenzene-d5	6.636	117	6463474	178.75	ppmv	0.00

Target Compounds	Qvalue

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

S823194

S823194

Container Profile 749266

File Options Reports Help

S823194

749266	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

S823194

- S823194
  - 90891 – EMPTY
  - 90890
    - 92361 – EMPTY
    - 92360
      - LASB02092
  - 90888
    - 92230 – EMPTY
    - 92229

Task History

Transfer Details

Transfer Amount	Transfer Unit	Item	Measured Weight	Measured Weig...
99.9989555	%			

Working Copy
Date: 10/23/12

ATTACHMENT 1
Page 1 of 4

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: 90888

6.2[4] Date Processed: 10/23/12

4.1[6][B] Processing Activity (EP-DIV-AP-0107):
☑ > 190 mrem/hr ☐ PID ☐ Split ☑ Repack
JQ 10/23/12

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

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

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

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

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

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

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

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

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

Performed By: JOE QUINTANA [signature] 239987 / 10/23/12
Waste Handling Tech (print) / Signature Z # Date

ATTACHMENT 1
Page 2 of 4

4.1[6][B]	Parent Waste Container No.:	90888
5.[18]	Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable:	310.2 lb
6.2[5][A]	Parent Drum Lead Blanket Weight (lb):	120.0 lb
6.2[5][B]/ 6.2[6]	Total Parent Drum Weight (lb)	430.2 lb
6.2[7]	($) Total Parent Drum Weight < 624 lb (SR 4.5.1):	☑ SAT ☐ UNSAT
6.2[28]	Approval to leave a parent drum attached to the WCG overnight:	

EWMO-FOD (print)	Signature	Z #	Date
	NA	/	/

ATTACHMENT 1
Page 3 of 4

4.1[6][B] Parent Waste Container No.: 90888

Daughter Drums 50 10/23/12					
10.1[4]/10.2[4]	Daughter Drum No. 92219	~~91239~~			
10.1[4]	Daughter Drum Filter No. AM 837	~~619-05 30~~		N/A	
10.1[4]	Daughter Drum Bag Filter No.	L 3725			
10.1[4]	Daughter Drum Purchase Order No.	416765			
10.1[13][C]	WCG Fire Watch Stationed		☐ YES	☐ NO	☑ N/A
10.1[14][C][d]3/11.1[3]	WCG Fire Watch Secured		☐ YES	☐ NO	☑ N/A
10.2[4]	POC bag-on bag: Manufacturer				
	Model No.				
	Serial No.				
	Date of Manufacture				
10.2[5]	POC ID No.				
10.2[7][B]/10.2[6]	POC Item Description		N/A		
10.2[13]	POC Assembly closed per Manufacturer's instructions. (Initial and Z#)				
10.2[14]	POC Assembly Gross Weight (lb)				
10.2[15]	POC Rad. Survey Results (mrem/hr)				
10.3[3][A]	Approx. Containerized Liquid Vol./Units				
10.3[5][A]	Free Liquid Volume/Units				
10.3[7][A]	Opaque/Non-penetrable Item Description:				
10.3[9][A]	PCB-contaminated Waste Description				
10.3[9][B]	PCB Item ID No.				
10.3[10]	Remaining Waste Description	See Comments		N/A	
10.3[13]/10.4[10]/10.5[4]/10.6[8]	Daughter Drum % Full (%)	100%			
10.5[3]/10.6[2]	Description Waste Added During Processing	Kitty Litter			

ATTACHMENT 1
Page 4 of 4

4.1[6][B] Parent Waste Container No.: 90888

Comments: PLASTIC, SALTS, LEAD, KITTY LITTER,

11.1[1] Performed By: JOE QUINTANA [signature] 239987, 10/23/12
Waste Handling Tech (print) / Signature Z # Date

11.1[7] Reviewed By: Jose Jerez / [signature] 122452, 10/24/12 1046
SOS or designee (print) / Signature Z # Date/Time

ATTACHMENT 2
Page 1 of 1

WCRRF OVERPACK DRUM ASSEMBLY PREPARATION DATA SHEET

5.[3] Overpack drum information:
- Purchase Order No.: 413954
- Lot No.: 2114216
- Manufacture Date: 10

5.[8] Overpack filtered vent information:
- Manufacturer: NUCFIL
- Model No.: 013
- Serial No.: HL-803
- Manufacture Date: 8/11

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

	Filtered Vent	2 in. Bung
M&TE No.:	040694	021151
Cal. Expiration Date:	9.26.13	6.11.13
Tolerance:	±4% cw ±6% ccw	±3% cw ±6% ccw

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

Performed By: Michael Romero — Waste Handling Technician (print) — Signature — Z# 188723 — Date 10.16.12

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

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

Comments: N/C

8.1[1] Performed By: Michael Romero — Waste Handling Technician (print) — Signature — Z# 188723 — Date 10.16.12

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

8.1[7] Reviewed By: Jose Jerez — Supervisor or designee (print) — Signature — Z# 122402 — Date 10-24-12

ATTACHMENT 5
Page 1 of 1

Working Copy

Date: 10-23-12 **WCRRF OVERPACK DRUM CLOSURE DATA SHEET**

7.[19] Overpack Drum Unique Identifier No.: 92230

7.[25] Overpack drum closure ring torque wrench information:
M&TE No.: [illegible]
Cal. Expiration Date: [illegible]
Range in ft-lb: [illegible]
Tolerance: [illegible]

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

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

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

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

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

7.[36][D] 85-gal overpack drum gross weight (lb): 161.8 lb

Comments: n/a

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

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

8.1[7] Reviewed By: Jose Jerez / [signature] / 22142 / 10-24-12
Supervisor or designee (print) Signature Z# Date

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

Drum ID#: 92229

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 #: 41187165
Lot #: 0229225
Date of Manufacture: 12

2. Drum Liner Bag/Filter Assembly:

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

RECORD bag filter information:
Manufacturer: BOP
Model #: LICDV 1.5-2 SPVC
Serial #: L-3225
Date of Manufacture: 6-12

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

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

4. Install Lid/Drum Filter

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

RECORD drum filter information:
Manufacturer: NUCPIC
Model #: 69DS
Serial #: AM 337
Date of Manufacture: 1-12

RECORD torque wrench information:

Filter torque wrench:		Jam Nut / Bung torque wrench:	
M&TE ID #:	070614	M&TE ID #:	021151
Cal Expiration Date:	10-19-12	Cal Expiration Date:	10-11-13
Range (ft-lbs or in-lbs):	40-200	Range (ft-lbs or in-lbs):	10-80
Tolerance:	±3% CW ±6% CCW	Tolerance:	±3% CW ±6% CCW

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

5. Weigh Drum Assembly

RECORD weight information
Tare wright (lbs) 74.4
File ID #: 0464

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

6. Label Drum Assembly

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

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

Operator Print: Michael Romero Operator Sign: Michael Romero Z#: 182723 Date: 10-11-12
Verifier Print: [illegible] Verifier Sign: [illegible] Z#: [illegible] Date: [illegible]

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

DRUM ID#: 92229

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 # : [illegible]

Cal expiration date: [illegible]

Range/ Value (ft-lbs): [illegible]

Tolerance: [illegible]

2. DRUM LABELING

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

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

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

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

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

RCRA Label:

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

OR

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

NOTE: Check only one of the above two boxes.

3. WEIGH DRUM ASSEMBLY

Record weight information:

Gross Weight(lbs): 396.0

Scale ID#: [illegible]

✓ 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: [illegible]

Verifier Print/Sign: Brandon Chavez Date: 10-23-12

WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

72

Production Control

Container ID: 90888 Container Type: 55-GAL Gross Weight (lbs): 306
Liner Seal #: None Filter Prefix: None Filter Serial #: CL-1413
Waste Stream: LA-MHD01.001 Certified RTR BDR: No BDR
TWSR Comments: PARENT #S823194
Total PE-Ci Activity: 1.98E+00 Equivalent Combustible PE-Ci: 7.44E-01 AM-241 PE-Ci: 2.40E-01
Total Fissile Gram Equivalents: 19.0 Total Surface Dose Rate (mrem/hr): 12
EPA Code(s): D008 D007 D009 VR 10/9/12
NCR RTR/NDA Comment: None
RTR Pre-Screen Date: 6/27/2012 Comment: Impenetrable, Liquid >1%, S5000
Certified RTR Comment: None
Prohibited Items: ☐ Sealed > 4 Liters ☑ Liquid ☐ Pressurized Container ☑ Impenetrable Item ☐ Other
Security Determination: ☑ Green ☐ Yellow
Remediation Determination: ☐ VE ☐ PID ☐ Split ☑ Repack
Estimated 30-cm Dose Rate (mrem/hr): ☐ <100 ☒ >100 and <1,000 ☐ >1,000 and <10,000 ☐ >10,000
TRUCON Code: TBD Production Control Comments: Need to add EPA Codes D007 & D009.
Nitrate salts mixed with Waste (or 770 lb) from previous repack campaign. A minimum of 1.2 volume of kitty litter/zeolite must be mixed with 1.0 volume of nitrate salts.
Performed By: Susan Ramsey / Susan Ramsey / 100681 / 9/4/12
Production Control (Print) Signature Z Number Date

WDP Engineering

Chemicals Present (e.g., pyrophorics, acids, bases, shock sensitive, organic liquids, peroxides, crown ethers): ☐ Yes ☒ No ☐ Unknown
Processing Determination: ☒ Accept ☐ Reject
WDP Engineering Comments: Nitrate Salts/debris
Parent drum (SEDS attached) was part of WCRR nitrate salt repack campaign. This resulting daughter 55-gal drum may contain nitrate salts or a combination of nitrate salts and debris. RTR PS identifies impenetrable item(s) (likely homogeneous nitrate salts or debris such as lead) and liquids (requiring adjustment to the admixture/nitrate salt ratio). Nitrate salts carry waste codes for [redacted] and mercury. No chemicals present. May require RWP for >100 t
Net Wt: 237 lb
Net Wt: 237 lb
Performed By: Valerie Rhodes / Valerie Rhodes / 112609 / 10/10/12
WDP Engineering (Print) Signature Z Number Date
Valerie Rhodes

TRU Remediation Operations

☑ Waste Container Information Evaluated ☐ Less Than 170 lbs ☐ RTR Video Available
Other Specific Safety Concerns: Use Heavymow gloves when processing waste. Do not push or press on waste.
Processing Determination: ☑ Accept ☐ Reject
TRU Remediation Operations Comments: Use proper ratio of kitty litter to waste in accordance with the procedure
Performed By: Jose Tovar / Jose Tovar / 122[illegible] / 10-11-12
TRU Remediation Operations (Print) Signature Z Number Date

OK Z# 249750 10/15/12

HS Review: AB 206362 10.11.12

Discardable Waste Log Sheet

Drum ID: 00914

Item	Sample	Net Wgt	Matrix	M Code	NMI	MF	Analst	Signature
1	DFS 544 FB	25.48	NITRATE SALTS		22.63	52	5/11	
2	DFS 545 FI	37.73	NITRATE SALTS		2.88	42	13/31	
3	DFS 547 FI	24.26	NITRATE SALTS		10.57	52	5/11	
4	DFS 546 FI	26.77	NITRATE SALTS		7.01	52	5/11	
		112.44 kg						

Best Available Copy

ATTACHMENT 1
Page 1 of 1

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

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

Container No. (5.[1])	908 55					
Container type sampled (e.g., 55-gal, 85-gal, 110-gal, or SWB) (5.[1])	55-gal					
Filtered Vent Type (5.[1])	19DS					
Filtered Vent Unobstructed (5.[1])	☑ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT
WIPP-Approved Filtered Vent (5.[2])	☑ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT
Total CCP VOC value (< 7,000 ppm) (5.[4])	7.32 ppm	ppm	ppm	ppm	ppm	ppm
Hydrogen Reading (< 64,000 ppm) (5.[5])	0 ppm	ppm	ppm	ppm	ppm	ppm
Methane Reading (< 16,000 ppm) (5.[5])	0 ppm	ppm	ppm	ppm	ppm	ppm

N/A

5.[7] Certified CCP Technician:

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

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

Comments: None

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

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

6.1[3] Performed By: SUSAN RAMSEY (Waste Handling Operator (print)), [signature] (Signature), 100681 (Z #), 10/10/12 (Date)

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\121005c\
Data File : 90888.D
Acq On : 5 Oct 2012 3:33 pm (#1); 5 Oct 2012 3:32 pm (#2)
Operator : SA
Sample :
InstName : Unit 8
Misc : 55 GAL LFL DRUM THROUGH 19DS-UNOBSTRUCTED (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Oct 05 15:40:34 2012
Quant Method : C:\msdchem\1\METHODS\Vocgas.m
Quant Title : Flammable Gas Analysis for Transportation
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
3) Fluorobenzene	3.259	96	2324565	206.00	ppm	0.00
15) Chlorobenzene-d5	5.936	117	2128907	179.50	ppm	0.00
Target Compounds						Qvalue
12) Benzene	2.877	78	23323	3.96	ppm	95
17) Toluene	4.782	92	16514	3.36	ppm	97

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

Vocgas.m Fri Oct 05 15:40:51 2012

10-23-12 PROJECT NAME _____ NOTEBOOK NO _____

0600 Assuming WCRRF operations center-Cleland
0605 starting outside and inside rounds.
0615 Pre-job being conducted by SOS.
0624 Inside rounds complete.
0630 Outside rounds complete.
0650 Inside and outside rounds signed off by SOS
0742 CSE completed 151.03 TA50-69 building structure integrity.
0800 Mode change performed TA50-69 and WCRRF gland now in operations
0802 bagging on 90888
0806 bag on to complete.
0814 notified by lead RCT they will no be able to support lunch coverage due to training.
0903 Bagging off 90888 and bagging on 90993
0910 Bagging off complete.
1001 bagging off 90993 and bagging on 90939
1013 starting movement into 50-69
1022 bag on and bag off is complete.
1115 bagging off 90939 and bagging on 90965
1134 bag on bag off complete.
1149 Operators exiting TA50-69 for lunch no RCT coverage.
1250 Operators entering TA50-69 to continue processing.
1405 Starting inside rounds.
1410 starting outside rounds.
1426 bagging off 90965 and bagging on 90895.
1435 Outside rounds completed.
1438 Completed inside rounds.
1451 bag on, bag off complete.
1546 bagging off 90895
1606 bag off to complete
1630 Mode change performed TA50-69 and WCRRF gland now in warm mode.
1631 End of day WCRRF operators center secure - Cleland

No further entries this page.

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

0600 Assumed the WCRR SOM position. [signature]
0615 Pre-job briefing conducted by SOS. Miscellaneous supplies needed such as kitty litter. 0900 the building integrity ISI will be conducted first thing this morning.
0630 Notified by OCO that there is a hole in the men's restroom causing mice to come into the building. Pest Control was called out to come and pick up another rodent. SOM notified Jack Vigil who will get with MSS on a path forward.
0800 Mode change complete WCRYARD/50-69 from WARM/WARM to OPERATIONS/OPERATIONS.
0830 Notified by RP-1 Supervisor that they will not be able to support operations through lunch due to being short staffed due to training.
1129 SOM and SSTI worked on ensuring an LWD is available for DVS Hepa WOS testing. OM was notified and is helping in getting proper approvals for NFT to use existing LAWS LWD to allow changing of parts.
1300 Met with Jack Vigil to go over maintenance for the up coming months. Offered weekends in November. Jack Vigil will work with MSS on maintenance. @ 10-23-12
1535 Notified by inventory control that he is having problems with printing labels through oracle database. A request to white shelf has been sent. SOM requested inventory control to try using the operation center computer.
1547 Signed off on WCRRF Quarterly Combustible Loading Surveillance 4.4.1. Requested Operation center to update status board and TSR/TSI compliance tracking data base. The total combustible quantity equalled to 0.56 lb/ft² which meets our 0.60 lb/ft² requirement.
1430 Mode change complete WCRYARD/50-69 from OPERATIONS/OPERATIONS to WARM/WARM.
1645 Securing the SOM watch. [signature]

11-6-12

No further entries this page

SIGNATURE [signature] DATE 10-23 20 12
READ AND UNDERSTOOD DATE 20

10-23-12 UXRR 505 Log Book

0600 Assuming 505 position for the day - [illegible]
0615 Starting Pre-Job brief. Engineering performing Building integrity inspection. Should take about 30 minutes. No shipments in or out today. Processing daughter drums from SPR.
0630 Concluded Pre-Job brief.
0650 Inside and outside rounds signed off
~~0742~~ Engineer completed building integrity ~~[illegible]~~ 10-22-12 inspection
0754 Waiting for SSW to be onsite to go into Ops Mode.
0800 Mode Change Completed. In Operations Mode.
0815 Lead RCT notifying Operations that they will not be able to support us working through lunch due to mandatory training they need to attend and also short handed on RCT's due to wounds.
0830 Late Entry. At 0800 first drum was bagged on
1145 First Crew breaking for lunch. Second Crew on standby waiting for RCT's so that they can go in to process drum #4 that was bagged on prior to breaking for lunch.
1245 Second Crew going in to start processing Parent drum #4 for the day.
1430 Signed off on outside rounds
1512 Signed off on inside rounds
1630 Mode Change WARM in the yard and SG-69.
10-23-12 1634 Securing 505 position for the day. [illegible]
HA

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-RTR2-13-0106
Examination Date:	9/5/2013
Waste Container ID:	92229
Video/Audio Recorded Media Number:	LA-RTR2-13-0106 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 13
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3110
Waste Stream I.D.:	LA-MIN02-V.001
Waste Container Weights:	Gross Wt.: 179.0 kg Tare Wt.: 33.4 kg Net Wt.: 145.6 kg
Rigid Liner and Liner Vent Description:	Liner: [X] No [ ] Yes Lid: [X] No [ ] Yes Type: [ ] 30-mil [ ] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [ ] Yes [X] N/A Punctured: [X] No [ ] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [ ] No [X] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 2 layers
Volume Utilization Percentage:	90 %

CCP Radiography Data Sheet

Waste Container ID: 92229

Section 3: Container Inventory and Comments (Detailed descriptions)

IM: Utility knives

AM:

OM: Scrap lead

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):	0.1
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	8.0
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	6.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	131.5
Soils (S):	
Total WMP Weight:	145.6

CCP Radiography Data Sheet

Waste Container ID: 92229

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	9/5/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	92229	Count Sequence Number:	23548
Operator:	D3PW2DK1\operator		
Assay Start:	9/6/2013 11:03:56 AM		
Description 1:	1LANDA1837		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6, MT-42 MIX		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 146.0 kg	Net:	146.0 kg
Container:	Volume: 208.0 l	Full:	90.0 %
Density:	0.780 kg /l		

System Configuration

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

Errors quoted at 1.000 sigma

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number:	23548	Batch Number:	1LANDA1837
Assay Instrument:	MCS HENC #1	Location:	LANL TA-54
Analysis Method:	CCP-TP-063 v 15	Software Version:	NDA 2000 V.4.0
Item ID:	92229	Analysis Date:	9/6/2013

Net Weight	146000.0 g		
Pu mass	6.67E+001	+-	1.71E+001 g
TRU Alpha Activity	1.10E+001	+-	3.38E+000 Ci
TRU Activity Concentration	7.53E+004	+-	2.32E+004 nCi/g
Pu-239 Equivalent Activity	1.12E+001	+-	3.38E+000 Ci
Pu-239 FGE	6.12E+001	+-	1.53E+001 g
Decay heat	3.56E-001	+-	1.12E-001 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	1.14E-001	8.02E-005	1.59E-005	3.54E-006
PU238	2.69E-002	4.59E-001	1.18E-001	6.53E-005
PU239	5.97E+001	3.70E+000	9.50E-001	5.26E-004
PU240	4.02E+000	9.12E-001	2.34E-001	1.30E-004
AM241	1.72E+000	5.91E+000	3.23E+000	7.19E-002
PU241	1.08E-001	1.11E+001	2.86E+000	1.58E-003
PU242	2.89E+000	1.14E-002	2.93E-003	0.00E+000
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	8.67E-007
U233	<LLD	<LLD	0.00E+000	6.99E-003
U234	2.56E-002	1.59E-004	4.70E-005	0.00E+000
U235	1.82E+000	3.94E-006	1.16E-006	2.55E-006
U238	<LLD	<LLD	0.00E+000	3.89E-005

Errors quoted at 1.000 sigma

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

ITR: Jim Barton Date: 9/10/13

Automated Independent Technical Review

Count Sequence Number: 23548 Batch Number: 1LANDA1837
Counter ID: MCS HENC #1
Container ID: 92229
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 9/6/2013

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

Expert Review by: Sheri Chamberlin Date: 9-9-13

Waste Container ID: **92229**

BDR Number: **LA13FG12093**

Sampling Date: **9/13/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	236.86	
74-82-8	Methane	9.63	U
67-56-1	Methanol	83.00	
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	3.07	
107-06-2	1,2-Dichloroethane	0.92	U
71-36-3	1-Butanol	0.54	U
108-10-1	Methyl isobutyl ketone	3.11	U
108-88-3	Toluene	6.34	
108-90-7	Chlorobenzene	0.87	U
100-41-4	Ethylbenzene	1.15	U
108-38-3/106-42-3	m- and p-Xylene	0.59	U
95-47-6	o-Xylene	0.63	U
108-67-8	1,3,5-Trimethylbenzene	0.72	U
95-63-6	1,2,4-Trimethylbenzene	0.78	U

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

Quantitation Report (QT Reviewed)

InstName : FGA Unit 12

Data Path : C:\msdchem\1\DATA\130913c\
Data File : 92229.D
Acq On : 13 Sep 2013 1:41 pm
Operator : SA
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 13 13:50:15 2013
Quant Method : C:\msdchem\1\METHODS\VOCGAS.M
Quant Title : Flammable Gas Analysis for Transportation Only
QLast Update : Wed May 22 12:06:27 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
3) Fluorobenzene	4.060	96	8264493	207.75	ppmv	0.00
15) Chlorobenzene-d5	6.636	117	6123798	178.75	ppmv	0.00
Target Compounds						Qvalue
1) Hydrogen	1.900	GC1	67565m	236.86	ppmv	
4) Methanol	0.824	31	36246m	83.00	ppmv	
12) Benzene	3.717	78	104243	3.07	ppmv	97
17) Toluene	5.577	92	156772	6.34	ppmv	96

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

Working Copy
Date: 11-13-18

ATTACHMENT 1
Page 1 of 4

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: 90890

6.2[4] Date Processed: 11/13/12

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

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

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

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

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

4.3[4][B] Platform Scale: Equipment No.: 0190165
Cal. Due Date: 7.31.17

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: Teresita Espinoza [signature] [illegible] 11/13/12
Waste Handling Tech (print) Signature Z # Date

ATTACHMENT 1
Page 2 of 4

4.1[6][B] Parent Waste Container No.: 9L8'0

5.[18] Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable: 4108 lb

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

6.2[5][B]/ 6.2[6] Total Parent Drum Weight (lb) 4108 lb

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

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

N/A / / /

EWMO-FOD (print) Signature Z # Date

ATTACHMENT 1
Page 3 of 4

4.1[6][B] Parent Waste Container No.: 90890

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	923160			
10.1[4]	Daughter Drum Filter No.	JL 13060		N	
10.1[4]	Daughter Drum Bag Filter No.	L 4323		A	
10.1[4]	Daughter Drum Purchase Order No.	416205			
10.1[13][C]	WCG Fire Watch Stationed		☐ YES	☐ NO	☑ N/A
10.1[14][C][d]3/11.1[3]	WCG Fire Watch Secured		☐ YES	☐ NO	☑ N/A
10.2[4]	POC bag-on bag: Manufacturer				
	Model No.				
	Serial No.				
	Date of Manufacture				
10.2[5]	POC ID No				
10.2[7][B]/10.2[6]	POC Item Description				
10.2[13]	POC Assembly closed per Manufacturer's instructions. (Initial and Z#)		N	A	
10.2[14]	POC Assembly Gross Weight (lb)				
10.2[15]	POC Rad. Survey Results (mrem/hr)				
10.3[3][A]	Approx. Containerized Liquid Vol./Units				
10.3[5][A]	Free Liquid Volume/Units				
10.3[7][A]	Opaque/Non-penetrable Item Description:				
10.3[9][A]	PCB-contaminated Waste Description				
10.3[9][B]	PCB Item ID No.				
10.3[10]	Remaining Waste Description	See Comments			
10.3[13]/10.4[10]/10.5[4]/10.6[8]	Daughter Drum % Full (%)	100%		N	A
10.5[3]/10.6[2]	Description Waste Added During Processing	plastic			

ATTACHMENT 1
Page 4 of 4

4.1[6][B] Parent Waste Container No.: 90890

Comments: Salts, Plastic, Cheese cloth, ICE.

11.1[1] Performed By: Gerald Espinoza 123720 11/13/12
Waste Handling Tech (print) Signature Z # Date

11.1[7] Reviewed By: Gilbert Martinez 149235 11.19.12 1430
SOS or designee (print) Signature Z # Date/Time

Working Copy
Date: 11/8/2012

ATTACHMENT 2
Page 1 of 1

WCRRF OVERPACK DRUM ASSEMBLY PREPARATION DATA SHEET

5.[3] Overpack drum information:

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

5.[8] Overpack filtered vent information:

Manufacturer: NUCFIL
Model No.: 013
Serial No.: IL-276
Manufacture Date: 9-11

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

	Filtered Vent	2 in. Bung
M&TE No.:	040699	021151
Cal. Expiration Date:	9-26-13	6-11-13
Tolerance:	±4% cw ±6% ccw	±3% cw ±6% ccw

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

Performed By: Brandon Chavez / [signature] [illegible] 11-8-12
Waste Handling Technician (print) Signature Z# Date

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

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

Comments: NO

8.1[1] Performed By: Brandon Chavez [signature] [illegible] 11-8-12
Waste Handling Technician (print) Signature Z# Date

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

8.1[7] Reviewed By: Gilbert Martinez [signature] M. J 149255 11.19.12
Supervisor or designee (print) Signature Z# Date

Working Copy
Date: 11-13-12

ATTACHMENT 5
Page 1 of 1

WCRRF OVERPACK DRUM CLOSURE DATA SHEET

7.[19] Overpack Drum Unique Identifier No.: 923601

7.[25] Overpack drum closure ring torque wrench information:
M&TE No.: 020329
Cal. Expiration Date: 3-15-13
Range in ft-lb: 160-80
Tolerance: ±3% (160) ±6% (80)

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

Performed By: Gerald Espinoza / [signature] 11/13/12
Waste Handling Technician (print) Signature Z# Date

7.[28] Overpack drum closure ring torque value: 160 ft-lb

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

7.[36][B] Platform scale serial number: 019065
Platform scale calibration expiration date: 7-31-13 LE 11-13-12

7.[36][D] 85-gal overpack drum gross weight (lb): ~~260~~ 326.4 lb

Comments: N/C

8.1[1] Performed By: Gerald Espinoza / [signature] 11/13/12
Waste Handling Technician (print) Signature Z# Date

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

8.1[7] Reviewed By: Gilbert Martinez / [signature] 14935 11-19-12
Supervisor or designee (print) Signature Z# Date

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

Drum ID#: 92360

1. Drum/Lid Assembly

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

RECORD drum information:

Purchase Request #: 416265
Lot #: 0289225
Date of Manufacture: 12

2. Drum Liner Bag/Filter Assembly:

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

RECORD bag filter information:

Manufacturer: BOP
Model #: 6CPDC 1.5-2.5 pvc
Serial #: 24328
Date of Manufacture: 7/12

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

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

4. Install Lid/Drum Filter

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

RECORD drum filter information:

Manufacturer: NacFil
Model #: 019DS
Serial #: 02-N06
Date of Manufacture: 10/11

RECORD torque wrench information:

Filter torque wrench:
M&TE ID #: 0406094
Cal Expiration Date: 9-26-13
Range (ft-lbs or in-lbs): 40-200
Tolerance: +/- 4% cw
+/- 6% ccw

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

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

[x] Yes [ ] No

Print Name: Brandon Chavez Signature: [signature] Z#: 204742

5. Weigh Drum Assembly

RECORD weight information

Tare wight (lbs) 760 4
File ID #: 090605

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

6. Label Drum Assembly

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

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

Operator Print: Brandon Chavez Operator Sign: [signature] Z#: 204742 Date: 11-8-12

Verifier Print: Gerald Espinoza Verifier Sign: [signature] Z#: 237720 Date: 11/13/12

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

DRUM ID#: 923600

1. LID INSTALLATION

NOTE: Install lid per manufacturer's instructions

✓Mount lid with filter directly over drum seam.

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

✓Engage bolt and nut and torque per manufactures instructions.

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

✓Tighten jam nut.

Record torque wrench information:

MT&E #: 040329

Cal expiration date: 3-15-13

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

— Tolerance ±3% CW ±6% CCW

2. DRUM LABELING

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

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

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

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

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

RCRA Label:

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

OR

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

NOTE: Check only one of the above two boxes.

3. WEIGH DRUM ASSEMBLY

Record weight information:

Gross Weight(lbs): 500.2

Scale ID#: 0190105

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

4. FINALIZE DOCUMENTATION

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

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

✓Complete TWSR.

Operator Print/Sign: Gerald Espinoza Date 11/13/12

Verifier Print/Sign: Ri Hasing Date: 11-13-12

WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Production Control

Container ID: 90890 Container Type: POC Gross Weight (lbs): 406
Container Seal #: None Filter Prefix: None Filter Serial #: EL-318; EL-406
RTR Waste Stream: LA-MHD01.001 Certified RTR BDR: No BDR
TWSR Comments: PARENT #S823194 WTS-12STD-864
Total PE-Ci Activity: 1.98E+00 Equivalent Combustible PE-Ci: 7.44E-01 AM-241 PE-Ci: 2.40E-01
Total Fissile Gram Equivalents: 19.0 Total Surface Dose Rate (mrem/hr): 1
EPA Code(s): D008 D007 D009 VE 10/2/12
NCR RTR/NDA Comment: None
RTR Pre-Screen Date: None Comment: None
Certified RTR Comment: None
Prohibited Items: ☒ Sealed > 4 Liters ☒ Liquid ☒ Pressurized Container ☒ Impenetrable Item ☒ Other
Security Determination: ☑ Green ☐ Yellow
Remediation Determination: ☐ VE ☐ PID ☐ Split ☑ Repack
Estimated 30-cm Dose Rate (mrem/hr): ☐ <100 ☑ >100 and <1,000 ☐ >1,000 and <10,000 ☐ >10,000
TRUCON Code: TBD Production Control Comments: Need to add EPA Codes D007 & D009
Nitrate salts mixed with Waste Lock 770® from previous repack campaign. A minimum of 1:2 volumes of kitty litter/zeolite must be mixed with 1:0 volume of nitrate salts.
Performed By: Susan Ramsey / Production Control (Print) Signature: Susan B. Ramsey Z Number: 100681 Date: 9/10/12

WDP Engineering

Chemicals Present (e.g., pyrophorics, acids, bases, shock sensitive, organic liquids, peroxides, crown ethers): ☐ Yes ☒ No ☐ Unknown
Processing Determination: ☑ Accept ☐ Reject
WDP Engineering Comments: **Nitrate Salts – POC**

Net Wt: 96 lb Parent drum (SEDS attached) was part of WCRR nitrate salt repack campaign using Waste Lock 770®. This resulting daughter POC is being repacked to adjust the admixture/nitrate salt ratio. Nitrate salts carry waste codes for chromium, lead, and mercury. No chemicals present. May require RWP for > 100 + < 1000 mrem/hr

Performed By: Valerie Rhodes / WDP Engineering (Print) Signature: Valerie Rhodes Z Number: 184291 Date: 10/2/12

TRU Remediation Operations

☑ Waste Container Information Evaluated ☐ Less Than 170 lbs ☐ RTR Video Available
Other Specific Safety Concerns: Use Kevlar gloves when handling waste in the glove box. Do not push or press on waste.
Processing Determination: ☑ Accept ☐ Reject
TRU Remediation Operations Comments: Use proper amount of kitty litter to waste in accordance with the procedure
Performed By: Jose Perez / TRU Remediation Operations (Print) Signature: Jose Perez Z Number: 221452 Date: 10-4-12

LL Z# 249750 10/9/12

HS Review: AS 206362 10.3.12

Discardable Waste Log Sheet

DrumID: 00914

Record	BeadID	Net (kg)	Matrix	M Code	NM	MT	Anth	Remarks
1	IXFS 544 FB	25.64	NITRATE SALTS		22.63	52	5/11	
2	IXFS 545 F1	17.73	NITRATE SALTS		2.02	42	13/11	
3	IXFS 547 F1	14.26	NITRATE SALTS		10.57	52	5/11	
4	IXFS 546 F1	24.27	NITRATE SALTS		7.01	52	5/11	
		112.44 kg						

Best Available Copy

ATTACHMENT 1
Page 1 of 1

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

5.[1] Sample Date: 9/28/12

Container No. (5.[1])	90890					
Container type sampled (e.g., 55-gal, 85-gal, 110-gal, or SWB) (5.[1])	POC					
Filtered Vent Type (5.[1])	19DS					
Filtered Vent Unobstructed (5.[1])	☑ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☑ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT
WIPP-Approved Filtered Vent (5.[2])	☑ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT
Total CCP VOC value (< 7,000 ppm) (5.[4])	0 ppm	ppm	ppm	ppm	ppm	ppm
Hydrogen Reading (< 64,000 ppm) (5.[5])	0 ppm	ppm	ppm	ppm	ppm	ppm
Methane Reading (< 16,000 ppm) (5.[5])	0 ppm	ppm	ppm	ppm	ppm	ppm

5.[7] Certified CCP Technician:

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

Reviewed By: NATHAN WALES (CCP (Print)) 238566 (Z #)

Comments: None

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

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

6.1[3] Performed By: SUSAN S. RAMSEY (Waste Handling Operator (print)) [signature] (Signature) 100681 (I #) 10/2/12 (Date)

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\120928C\
Data File : 90890.D
Acq On : 28 Sep 2012 2:18 pm (#1); 28 Sep 2012 2:17 pm (#2)
Operator : SA
Sample :
InstName : Unit 8
Misc : LFL POC THROUGH FILTER-19DS FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 28 14:25:47 2012
Quant Method : C:\msdchem\1\METHODS\Vocgas.m
Quant Title : Flammable Gas Analysis for Transportation
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
3) Fluorobenzene	3.259	96	2436034	206.00 ppm	0.00
15) Chlorobenzene-d5	5.936	117	2178400	179.50 ppm	0.00

Target Compounds	Qvalue

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

Vocgas.m Fri Sep 28 14:26:00 2012

PROJECT NAME _____ NOTEBOOK NO. _____

11-13-12

0600 Assuming WCRRF operations center checklists
0615 Pre job being conducted by SOS
0620 Started inside rounds completed outside rounds.
0655 Inside rounds complete
0718 Inside and outside rounds signed off by SOS
0729 mode change performed TASD-69 and WCRRF yard now in opera
0739 fork lift inspections complete
0805 Permission granted to start movement into SD-69
0847 bagging on 90884
0900 Completed movement into SD-69, bag on complete.
0913 Permission granted to lower vehicle access gate for lo
of transport vehicle.
0934 bagging off 90884, bagging on 90941
0958 bag on, bag off complete
1024 Vehicle access gates have been restored. loading of t
vehicle is complete.
1037 bagging off 90941, bagging on 90890
1052 starting movement into SD-69.
1101 movement into SD-69 is complete.
1105 bag on, bag off complete.
1152 bagging off 90890, bagging on. 90897
1212 bag off, bag on complete.
1319 bagging off 90897 and bagging on 90972
1346 bag off, bag on complete
1431 bagging off 90972, bagging on 90974
1454 bag on, bag off complete.
1455 starting inside rounds.
1326 Completed inside rounds
1328 starting movement out of SD-69.
1552 bagging off 90974.
1556 Completed movement out of SD-69.
1600 Starting outside rounds
1615 Completed outside rounds.
1616 bag off is complete.
1618 Rounds have been signed off by SOS.
1620 mode change performed TASD-69 and WCRRF yard now in wa
standby.
1640 end of day WCRRF operations center secure, checklists

No further entries this page

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

PROJECT NAME 11/13/12 NOTEBOOK NO.

0600 Assumed WCRR SOM position

0615 Attended prejob brief conducted by SOS. Discussed winter weather early closure / late opening plans for safety topic, use of handrails, weekend work including contamination event.

0702 CSE completed signoff of work packages from weekend maintenance.

0739 Completed Mode Change: WCRR Yard / Bldg 50-69 from Warm / Cold to Operations / Operations.

1100 Briefed to RWP for entering radiation areas.

1200 Conducted call in for solution package processing @ WCRR and team call in regarding production @ WCRR and DUS.

1400 Attended meeting for DUS Filter change out w/ RPI and DDP Management. Discussed possibility of utilizing Bldg 412 instead of setting up temporary enclosure in one of the domes. PM will give guidance.

1510 (Late Entry 1310) Performed walkdown of containers in TRU storage transportainers w/ Tech 39.

1620 Completed Mode Change: WCRR Yard / Bldg 50-69 from Operations / Operations to Warm / Warm.

1745 Secured SOM position.

No Further Entries this Date

SIGNATURE DATE 11/13 20 12

READ AND UNDERSTOOD DATE 20

11-13-12 WCRR SOS Log Book

0600 Assuming SOS position for the day

0615 Pre-Job brief started. Discussed Changes to Snow and inclement weather procedure Delayed starts and early dismissal. 1 Shipment out eight drums remaining to process prior to removing inventory from the yard and 50-69 to put in Cold.

0640 Pre-Job concluded

0655 Signed off on outside rounds.

0718 Signed off on inside rounds

0739 Mode Change to Operations in Yard and Building 50-69.

1618 ~~Mode Change Complete WCRRF In~~ Reviewed Inside And outside Rounds

1620 Mode Change Complete WCRRF In warm standby.

11-13-12 1630 end of shift Securing SOS Position

No further entries on this page

CCP Radiography Data Sheet

5823194

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0007
Examination Date:	1/17/2013
Waste Container ID:	92360
Video/Audio Recorded Media Number:	LA-RTR2-13-0007 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 12
NCR(s) associated with the container? (e.g., Prohibited Items)	[ ] No [X] Yes NCR No.: NCR-LANL-0028-13 NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA225
Waste Matrix Code:	S5400
Waste Stream I.D.:	LA-MHD01.001
Waste Container Weights:	Gross Wt.: 136.0 kg Tare Wt.: 33.4 kg Net Wt.: 102.6 kg
Rigid Liner and Liner Vent Description:	Liner: [X] No [ ] Yes Lid: [X] No [ ] Yes Type: [ ] 30-mil [ ] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [ ] Yes [X] N/A Punctured: [X] No [ ] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [ ] No [X] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 1 layer
Volume Utilization Percentage:	90 %

CCP Radiography Data Sheet

Waste Container ID: 92360

Section 3: Container Inventory and Comments (Detailed descriptions)

IM: Scrap metal, metal hardware, metal lid

AM:

OM: Scrap lead

OI:

C: Fiberboard material, fiberboard insert sleeve

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):	11.0
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	3.0
Other Inorganic Materials (OI)	
Cellulosics (C):	10.0
Rubber (R):	
Plastics (waste materials) (XPM):	5.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	73.6
Soils (S):	
Total WMP Weight:	102.6

CCP Radiography Data Sheet

Waste Container ID: 92360

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

Comments: NCR-LANL-0028-13

RTR Operator:

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

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

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

Item ID:            92360              Count Sequence Number:  23533
Operator:           D3PW2DK1\operator
Assay Start:        9/5/2013    9:40:49 AM
Description 1:      1LANDA1836
Description 2:      N/A
Location:           LANL TA-54
Comment:            AK-6, MT-42 Mix
Matrix Type:        Homo Sol. S3000
Container Type:     55 gallon drum
Weight:             Net:       103.0   kg        Net:   103.0 kg
Container:          Volume:    208.0   l        Full:    90.0 %
Density:                         0.550 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: 23533
Assay Instrument: MCS HENC #1
Analysis Method: CCP-TP-063 v 15
Item ID: 92360

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

Net Weight	103000.0 g		
Pu mass	1.62E+001	+- 2.90E+000	g
TRU Alpha Activity	5.95E+000	+- 2.53E+000	Ci
TRU Activity Concentration	5.78E+004	+- 2.46E+004	nCi/g
Pu-239 Equivalent Activity	6.00E+000	+- 2.53E+000	Ci
Pu-239 FGE	1.46E+001	+- 2.60E+000	g
Decay heat	1.96E-001	+- 8.40E-002	W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	9.59E-002	6.76E-005	1.09E-005	2.62E-006
PU238	6.69E-003	1.14E-001	2.05E-002	6.59E-005
PU239	1.45E+001	9.01E-001	1.61E-001	5.18E-004
PU240	9.78E-001	2.22E-001	3.97E-002	1.28E-004
AM241	1.37E+000	4.71E+000	2.52E+000	5.25E-002
PU241	2.63E-002	2.71E+000	4.85E-001	1.56E-003
PU242	7.08E-001	2.80E-003	5.00E-004	0.00E+000
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	7.18E-007
U233	<LLD	<LLD	0.00E+000	5.06E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	1.92E-006
U238	<LLD	<LLD	0.00E+000	2.73E-005

Errors quoted at 1.000 sigma

Operator: _____ Date: 9-9-13

ITR: _____ Date: 9/9/13

Automated Independent Technical Review

Count Sequence Number: 23533 Batch Number: 1LANDA1836
Counter ID: MCS HENC #1
Container ID: 92360
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 9/5/2013

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

Expert Review by: Sheri Chamberlin Date: 9-9-13

Waste Container ID: **92360**

BDR Number: **LA13FG2098**

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

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	131.13	
74-82-8	Methane	142.14	U
67-56-1	Methanol	71.32	
60-29-7	Ethyl Ether	0.96	U
75-35-4	1,1-Dichloroethylene	6.38	U
67-64-1	Acetone	18.66	
75-34-3	1,1-Dichloroethane	4.08	U
156-59-2	cis-1,2-Dichloroethene	0.76	U
78-93-3	Methyl ethyl ketone	11.73	U
110-82-7	Cyclohexane	5.10	U
71-43-2	Benzene	1.77	U
107-06-2	1,2-Dichloroethane	3.66	U
71-36-3	1-Butanol	1.84	U
108-10-1	Methyl isobutyl ketone	9.82	U
108-88-3	Toluene	8.02	U
108-90-7	Chlorobenzene	4.10	U
100-41-4	Ethylbenzene	3.57	U
108-38-3/106-42-3	m- and p-Xylene	1.92	U
95-47-6	o-Xylene	2.10	U
108-67-8	1,3,5-Trimethylbenzene	1.96	U
95-63-6	1,2,4-Trimethylbenzene	2.13	U

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

InstName : Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\130909c\
Data File : 92360.D
Acq On : 9 Sep 2013 12:51 pm (#1); 09-Sep-13, 12:51:08 (#2)
Operator : RJ
Sample :
Misc : 55 Gallon drum through filter. (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 09 13:00:15 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	4839442	205.75 ppmv	0.03
15) Chlorobenzene-d5	5.858	117	3765247	177.50 ppmv	0.00
Target Compounds					Qvalue
1) Hydrogen	1.616	GC1	986m	131.13 ppmv	
4) Methanol	0.877	31	27579	71.32 ppmv	100
7) Acetone	1.412	58	26788	18.66 ppmv	81

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

S823221

S823221

Container Profile 761200

File Options Reports Help

S823221

761200	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

S823221

- S823221
  - LA00000068382
  - LA00000068379
  - LA00000068401 – EMPTY

Task History

Transfer Details

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

UBT
Working Copy
Date: 9/16/13 HK

ATTACHMENT 1
Page 1 of 4

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: S823221

6.2[4] Date Processed: 9-16-13

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.: 0190065
Cal. Due Date: 10-14-14

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

4.3[6] ($) Stationary Fire Watch has been established: (> 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~~ BG 9-17-13 ☐ 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 / 9-16-13
Waste Handling Tech (print) Signature Z # Date

ATTACHMENT 1
Page 2 of 4

4.1[6][B] Parent Waste Container No.: S823221

5.[18] Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable: 483.8 lb

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

6.2[5][B]/ 6.2[6] Total Parent Drum Weight (lb) 603.8 lb

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

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

Initials Z# Date

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

N/A

EWMO-FOD (print) Signature Z # Date

ATTACHMENT 1
Page 3 of 4

4.1[6][B] Parent Waste Container No.: S823221

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	68382	68379		
10.1[4]	Daughter Drum Filter No.	KL-456	AV-660	N	
10.1[4]	Daughter Drum Bag Filter No.	L-6697	L-6889		
10.1[4]	Daughter Drum Purchase Order No.	501578	501578	A	
10.1[13][C]	WCG Fire Watch Stationed		☐ YES	☐ NO	☑ N/A
10.1[14][C][d]3/11.1[3]	WCG Fire Watch Secured		☐ YES	☐ NO	☑ N/A
10.2[4]	POC bag-on bag: Manufacturer				
	Model No.				
	Serial No.				
	Date of Manufacture				
10.2[5]	POC ID No				
10.2[7][B]/10.2[6]	POC Item Description		N		
10.2[13]	POC Assembly closed per Manufacturer's instructions. (Initial and Z#)		A		
10.2[14]	POC Assembly Gross Weight (lb)				
10.2[15]	POC Rad. Survey Results (mrem/hr)				
10.3[3][A]	Approx. Containerized Liquid Vol./Units				
10.3[5][A]	Free Liquid Volume/Units	3 GALLONS	N/A	N	
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 (%)	75%	100%	N	
10.5[3]/10.6[2]	Description Waste Added During Processing	BAG OUT STUBS	Kitty litter stub outs	A	

ATTACHMENT 1
Page 4 of 4

4.1[6][B] Parent Waste Container No.: 5823221

Comments: Room TRASH, PLASTIC, NITRATE SALTS, KITTY LITTER, lead

11.1[1] Performed By: Eduardo Martinez [signature] 1239911 9/16/13
Waste Handling Tech (print) Signature Z # Date

11.1[8] Reviewed By: Gilbert Martinez [signature] [signature] 1149835 9/16/13 1134
SOS or designee (print) Signature Z # Date/Time

Working Copy
Date: 9/6/13

ATTACHMENT 2
Page 1 of 1

WCRRF OVERPACK DRUM ASSEMBLY PREPARATION DATA SHEET

5.[3] Overpack drum information:

Purchase Order No.: 501012
Lot No.: 0233945
Manufacture Date: 2012

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

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

Overpack filtered vent information:

Manufacturer: NUCFIL
Model No.: 019DS
Serial No.: EK-1107
Manufacture Date: 5/10

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

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

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

5. [18] 2-in. bung plug torque value: N/A ft-lb

Comments: Was not prepped at TA-50

8.1[1] Performed By: Edward Martinez
Waste Handling Technician (print) Signature Z # Date 1239911 9-16-13

8.1[6] Reviewed By: Clayton Mullins
Supervisor or designee (print) Signature Z # Date 2400071 9/17/13

Date: 9/16/13 AS

ATTACHMENT 5
Page 1 of 1

WCRRF OVERPACK DRUM CLOSURE DATA SHEET

7.[17] Overpack Drum Unique Identifier No.: 68401

7.[23] Overpack drum closure ring torque wrench information:
M&TE No.: 039370
Cal. Expiration Date: 08/02/2014
Range in ft-lb: 10-80
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 / 9/16/13
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): 180.6 lb

Comments: N/C

8.1[1] Performed By: Edward Martinez [signature] 1239911 / 9/16/13
Waste Handling Technician (print) Signature Z # Date

8.1[7] Reviewed By: Clayton Mullins / [signature] 1240092 / 9/17/13
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 1
Page 1 of 2

Working Copy
Date: 9-10-13 a

WCRRF DRUM PREPARATION DATA SHEET

5.[34][E] Drum ID No.: 68379

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-6889
Manufacture Date: 01/13

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

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

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

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

5.[23] Filtered vent information:
Manufacturer: NUCFil
Model No.: 01905
Serial No.: AN-660
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.: 68379

Comments: N/C

5.[35] Performed By: IAN MARQUICE | Signature | Z# 9-11-13 Date
Operator (print)

7.1[4] Reviewed By: Clayton Mullins | Signature | Z# 9/17/13 Date
Supervisor or designee (print)

Working Copy
Date: 9/16/13 EM

ATTACHMENT 2
Page 1 of 2

WCRRF DRUM CLOSURE DATA SHEET

6.[3] Drum ID No.: 68379

6.[9] Drum closure ring torque wrench information:
M&TE No.: 038370
Cal. Expiration Date: 08/02/2014
Range in ft-lb: 10-80
Tolerance: +/- 3% CW and +/- 6% CCW

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

Performed By: Edward Martinez (Operator (print)) [signature] (Signature) 1239911 (Z #) 9-16-13 (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:	N	N
Range in ft-lb:		
Tolerance:	A	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: Edward Martinez (Operator (print)) [signature] (Signature) 1239911 (Z #) 9/16/13 (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.: 68379

6.[26] Scale File ID number: 019065

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

6.[28] Drum gross weight: 479.8 lbs

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

Comments: N/C

6.[32] Performed By: Edward Martinez [signature] 1237111 9-16-13
Operator (print) Signature Z # Date

7.1[4] Reviewed By: Clayton Mullins [signature] 1240092 9/17/13
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 1
Page 1 of 2

Working Copy
Date: 9-10-13 a

WCRRF DRUM PREPARATION DATA SHEET

5.[34][E] Drum ID No.: 68382

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

5.[17] Drum Liner Bag/Filter Assembly:
Manufacturer: BOP
Model No.: 6L PUCL.5-2 SPUC
Serial No.: L-6697
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: [illegible] [illegible] Z26705, 9-11-13
Operator (print) Signature Z # Date

5.[23] Filtered vent information:
Manufacturer: NUCFIL
Model No.: 019DS
Serial No.: KL-456
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.: 68382

Comments: N/C

5.[35] Performed By: IAN MARQUEZ [signature] [illegible] / [illegible]
Operator (print) Signature Z # Date

7.1[4] Reviewed By: Clayton Mullins [signature] 240092 9/17/13
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 2
Page 1 of 2

Working Copy
Date: 9-16-13

WCRRF DRUM CLOSURE DATA SHEET

6.[3] Drum ID No.: 68382

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

M&TE No.: 038369
Cal. Expiration Date: 12-18-13
Range in ft-lb: 10-80
Tolerance: ±3% cw ±6% ccw

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

Performed By: BRIAN GALLEGOS / [signature] 1267129 9-16-13
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: Edward Martinez [signature] 1239910 9-16-13
Operator (print) Signature Z # Date

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

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

ATTACHMENT 2
Page 2 of 2

6.[3] Drum ID No.: 68382

6.[26] Scale File ID number: 019065

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

6.[28] Drum gross weight: 249.4 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 9-16-13
Operator (print) Signature Z # Date

7.1[4] Reviewed By: Clayton Mullins [signature] 1240886 9/27/13
Supervisor or designee (print) Signature Z # Date

72
NR
6.10.12

WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Production Control

Container ID: S823221 Container Type: 55-GAL Gross Weight (lbs): 496
Inner Seal #: 009926 Filter Prefix: LAVC Filter Serial #: 03347
AK Waste Stream: LA-MHD01.001 Certified RTR BDR: No BDR
TWSR Comments: LEACHED SOLIDS
Total PE-Ci Activity: 6.48E+00 Equivalent Combustible PE-Ci: 2.43E+00 AM-241 PE-Ci: 5.26E-01
Total Fissile Gram Equivalents: 71.5 Total Surface Dose Rate (mrem/hr): 8
EPA Code(s): None
NCR RTR/NDA Comment: None
RTR Pre-Screen Date: 5/2/2007 Comment: Liquids, Impenetrable Obj, Liner Not Punctured, Liquid Location: 20
Certified RTR Comment: None

Prohibited Items: ☒ Sealed > 4 Liters ☑ Liquid ☒ Pressurized Container ☑ Impenetrable Item ☒ Other
Security Determination: ☑ Green ☐ Yellow
Remediation Determination: ☑ VE ☑ PID ☐ Split ☑ Repack
Estimated 30-cm Dose Rate (mrem/hr): ☐ <100 ☐ >100 and <1,000 ☑ >1,000 and <10,000 ☐ >10,000
TRUCON Code: LA125M Production Control Comments: Ensure EPA Codes D007, D008, and D009 are on the label. A minimum of 1.2 volumes of kitty litter/zeolite must be mixed with 1.0 volume of nitrate salts.

Performed By: R. W. Jones — Production Control (Print) — Signature — 117434 Z Number — 12.8.11 Date
SUSAN S. RAMSEY — 108681 — 11/28/12

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: Leached solids - nitrate salts
Net wt: 436 lb. Four items ranging from 65 lb to 104 lb
Drums containing nitrate salts may have 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 — 112189 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 hexamnow. ~~Gloves~~ gloves during processing 1-7-13
Processing Determination: ☑ Accept ☐ Reject
TRU Remediation Operations Comments: Use proper ratio of kitty litter to waste in accordance with the procedure

Performed By: Joe Jerez — TRU Remediation Operations (Print) — Signature — 221452 Z Number — 1-7-13 Date
ROLLIN SHULT — 272595 — 1-14-13

IHS Review [illegible] CSP, No IH Concerns
12/4/12

Discardable Waste Log Sheet

DrumID: 009926

Item#	DrumID	Net (kg)	Matrix	M Code	MM	MT	Auth	Remarks
1	DOFS 552 FB	37.47	NITRATE SALTS		28.29	52	5/11	
2	DOFS 553 F1	29.77	NITRATE SALTS		13.95	52	5/11	
3	DOFS 554 F1	29.55	NITRATE SALTS		6.79	52	5/11	
4	DOFS 555 F1	47.2	NITRATE SALTS		35	52	5/11	
		143.99 kg						

ATTACHMENT 1
Page 1 of 1

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

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

Container No. (5.[1])	S825021	S833981	S841292	S823221	S832250	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) 198450 (Z#), 4/2/12 (Date)

InstName : Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\120329c\
Data File : S823221.D
Acq On : 29 Mar 2012 2:12 pm (#1); 29-Mar-12, 14:11:37 (#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 14:20:30 2012
Quant Method : C:\msdchem\1\METHODS\vocgas.m
Quant Title : Flammable Gas Analysis
QLast Update : Tue Mar 06 12:05:15 2012
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
3) Fluorobenzene	3.632	96	4191905	209.00 ppmv	0.00
15) Chlorobenzene-d5	5.945	117	2795480	185.50 ppmv	0.00
Target Compounds					Qvalue
1) Hydrogen	1.609	GC1	3023m	409.31 ppmv	

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

vocgas.m Thu Mar 29 14:20:35 2012

162

9/16/13 HS 9/16/13

0600 Assuming WCRRF Operations Center - C Kelarde

0600 Assuming Ops Center in Training H Smith

0601 Beginning outside rounds

0615 Pre-Job conducted by SOS

0625 Item #19 outside rounds unsat, permission to proceed. Per CSE documentation

0627 Outside rounds complete

0645 Pre-Job concluded

0714 Inside Rounds Started

0740 Item #63 inside rounds OOS. Permission to proceed per CSE documentation

0743 Inside rounds complete

0803 Inside and Outside Rounds Reviewed by SOS

0815 Safety Pause Briefing started

0830 Safety Pause Briefing concluded

0832 Shipment out starting to Area G

0833 Permission granted to lower vehicle access gate

0942 Vehicle access gate restored, shipment ~~FROM~~ 9/16/13 HS WCRR is complete

1033 Maintenance enter building to repair hand & foot monitor.

1056 Maintenance finish repairs on hand and foot monitor and exit facility

1330 Pre Job briefing been conducted for annual serveillance and inspection of drumlift.

1337 Maintenance technicians enter building TASOR to perform load, brake, lift test on drumlift work package #00450786-01 and operators

1354 Per discussion with the SOM, NMO CSE the ceiling is still ~~LOCKING~~ 9/16/13 HS. intact, and building is still operable. As a result, the OM initiated an Immediate Operability Determination and deemed the 50/69 facility Operable.

1410 Starting annual lift ~~SERVEILLANCE~~ 9/16/13 has serveillance

continued on next page H Smith

9/11/13 CONTINUED FROM PREVIOUS PAGE
1447 DRUM LIFT SURVEILLANCE IS COMPLETE
1448 STARTING ANNUAL DRUMLIFT INSPECTION
STARTING OUTSIDE ROUNDS, COMPLETED DRUMLIFT INSPECTION
1505
1522 ITEM #19 OUTSIDE ROUNDS IS UNSAT, FSR IN PLACE, OKAY TO PROCEED PER CSE DOCUMENTATION
1525 OUTSIDE ROUNDS COMPLETE
1530 MODE CHANGE WCRR YARD AND TA50-69 MOVE TO OPERATIONS
1540 OPERATORS BEGIN MOVEMENT FROM TA50-194/195 TO TA50-69
1550 MOVEMENT TO TA50-69 IS COMPLETE
1600 STARTING INSIDE ROUNDS
1623 ITEM 63 INSIDE ROUNDS OOS, PERMISION TO PROCEED PDD IN PLACE, PER CSE DOCUMENTATION
1632 INSIDE ROUNDS COMPLETE
1658 BAGGING ON 5823221
1712 BAG ON COMPLETE
1735 INSIDE ROUNDS AND OUTSIDE ROUNDS SIGNED OFF BY SOS
1800 RELIEVED BY DCO TERRI COLEMAN, H SMITH, C [illegible]

NO FURTHER ENTRIES ON THIS PAGE

HSmith

9-16-13

1801 Assuming WCRR operations cntr. - JCleman

1819 Beginning Pre-job. Card reader not communicating. Notified on call person for card reader.

1820 Received call back from on-call person. He will call me back at 1840.

1825 Discussing safety stand down issues.

1855 Badge reader back up and running. Pre-job and safety stand down completed.

1930 Operators entering 5019 to resume operations on S823221.

2052 Operators report to SOS, while conducting inspections on the Rotozip they found a chunck missing on the front wheel.

2105 Bagging off 1 daughter, bagging on another daughter.

2120 Bag off/on complete.

2243 Bagging off 1 daughter, bagging on S835283.

2315 Bag off/on complete.

0010 Initiating a drum movement from 5019 to a transportainer.

0020 Drum moverant out of 5019 complete. Operators out for lunch.

0120 Operators back from lunch.

0153 Bagging off 1 daughter and 3 POC's, bagging of sc 9-17-6 on another daughter.

0250 Bag off/on complete

0400 Beginning outside rounds.

0409 Beginning inside rounds.

0417 Item #19 on the rounds is unsat, Okay to proceed. FSR in place.

0426 Item #63 on the rounds is OOS. Per CSE documentation, Okay to proceed.

0427 Inside rounds complete.

0430 Outside rounds complete.

0438 Both rounds reviewed by SOS.

9-17-13 0600 Relieved by OCO Clarissa Velarde. JCleman

~~no further entries this page~~

9-16-13 DAYSHIFT (WCRR SOM)

0558 Reviewed log entries and turnover and assumed the WCRR SOM John Gaudagnol

0638 Completed attending the pre-job brief conducted by the SOS (Gilbert). A status of the facility was provided and updates of current maintenance work. Roles and responsibility were provided to the operators. Safety topic was slip hazards. The characterization team is scheduled today and there may be 1 transfer out to AREA G.

0710 Completed the daily RCD phone call with Area G SOM.

0720 RP-1 Supervisor reported no leaks/water noted in 50/69. All RMI's were noted satisfactory. The boundary around the front of the Big Gloveboxes Enclosure will be removed, as long as there is no drippage noted.

0822 Completed the Safety Pause per request of the FED. Discussed ~~how and~~ 9-16-13 RPO's written when personnel did not follow requirements and the distractions associated with current events

0912 The transfer out was completed 13 drums total.

1003 Characterization Team arrives at WCRR to gamma open drums

1020 The OM obtains notification that support to perform the (SA) wet automatic sprinkler system Insp. and (SA) Fire Alarm System Insp ~~[illegible]~~ are not available and will require rescheduling

1033 IWD RP 2- RK-21 - Res 2 To Troubleshoot and repair the PCM-2 unit. (Repair is required on the probes)

1056 The PCM-2 was repaired.

1148 Obtained word from AREA G that the transfer was received and the Storage Unit Operator signed for the drums. As a result WCRR Production Inventory Updated the status board. Notification was made to the OM, and a waste ticket help was submitted.

1215 Completed the daily phone call - update with OM/SOS/Rm -

1229 Request and approval by SOM to merge 453 78601 Drum Lift Brake, 453 78601 - Drum Lift Mechanical, 453 78601 Drum Lubrication

1251 Obtained phone call from craft supervisor that the inspectors are now available and will be coming up to WCRRF.

1316 The pre-job was initiated by crafts Supervisor, all were in attendance. Rwp- 2012-0029 was briefed by the operator.

1342 Personnel entered 50/69 to initiate work package 453 78601 -

9-16-13 DAYSHIFT (Continued)

1345 The SOM requested Appendix 1 of the Valve Alignment (Monthly) conducted last week to be corrected to show V-02A was OK, and valve V-010 valve box was in need of repair. Also new tags with ZIP ties were attached to the valves - indicating to call 5-2797 WCRR Operations Center if manipulation is required, Utilities submitted a request for repair.

1354 For discussion with the OM, and CSE the ceiling is still intact, and building structure is still operable, as a result, the OM initiated an Immediate Operability Determination and deemed the 50/69 facility Operable.

1525 The monthly drum lift Lubrication w/o # 466098-01 was signed off
The quarterly drum lift Mechanical w/o # 466091-01 was signed off
The annual drum lift, load, Brake power test 4.5A, 4.5B, 4.5C # w/o 450786-01 was signed off and met all requirements.

1530 Mode Change: 50/69 and yard transition from Cold/Return to Operations / Operations.

1538 Operations initiated a movement into the facility 4 drums total - 3-55's and 1-85

1550 The movement into the facility was completed, and the Operations Control Status board was updated.

1656 Upon completion of review of RCRA inspection forms and checking with RP-1, there is no indication of any rainwater within the transportainer on inside 50/69 Facility.

1658 Inside operations initiate bag on of Parent drum 5823221 - SP-72.

1712 Inside operations report bag on completed.

1738 Completed review of Rounds, inside and outside.

1805 Completed shift turnover checklist with oncoming SOM, reviewed facility status and updated with completed work orders.

1810 Secured the WCRR dayshift SOM position John Giardinelli

No further Entries this page

9/16/13 Night Shift

1810 Reviewed Shift Turnover Checklist as assumed WCRR SOM position

1815 Attended pre job brief conducted by SOS, Started w/ Safety pause as directed by FOD to discuss recent RPO's @ Area G and WCRR including possible causes and distractions contributing to events. Discussed current conditions inside 50-69 w/ inventory, maintenance completed today, status of water leaks and IOD performed on Bldg integrity. Covered current Shift Orders in place for manual drum movements and preventing bag tears.

1855 Completed pre job briefing and safety stand-down.

1930 MSS on site to replace light plant located @ transport truck staging area - existing one would not start due to dead battery.

2105 Operators bagging off first daughter - continuing to process.

2315 Completed Parent # 5823221 - bagged off another daughter (2 total) Bagged on 5835283.

9/17/13 0020 Completed move out of 3 drums from 50-69 to transportainers, Operators breaking for lunch.

0120 Resuming operations.

0250 Bagging off 1 daughter and 3 POC's. Continuing processing of 5835283

0355 Operators identified that extension cord used to charge roto-grip in 50-69 is damaged and labeled "do not use". Instructed operator to cut off plug end and place in trash. Utilized extension cord for scissor lift next to 50-54 so that Roto-grip may be used for drum movements.

0555 Operators reported having difficult time w/ completion of parent drum bagged on - lead is sandwiched between steel drum and inner poly liner

9/17/13 0612 Relieved by J. Guadagnoli as SOM.

No further entries this page
MG

9/16/13

LUCKK SOS LOG BOOK

0600 Assuming SOS Position [illegible]

0615 ~~0635~~ Conducted shift brief Discussed Maintenance Activites for Day Also talked about leaks In Roof And For All To keep an Eye out For wet spots. Slips trips And Falls.

0635 Shift Brief Concluded. waiting on Maintenance crews to Arrive.

0803 Reviewed Inside And outside Rounds And waiting on maintenance to Arrive

0815 Saftey Pause do to distractions.

0830 saftey Pause complete ok to Proceed.

0832 Shipment out started

0942 Shipment out to G complete

1037 Maintenance entered to repair Hand And Foot Washers

1056 Maintenance complete on Hand And foot.

1336 Pre Job conducted for Drum Lift

1337 Maintenance Personal Entering 50-69.

1406 starting Annual Drum Lift Surveilance.

1447 Drum Lift complete

1448 Started Annual Drum Lift Inspection

1505 Started Rounds

1530 mode change complete w/ crew In operators.

1546 Mixing Into 50-64 4 Drums.

1550 Move Em Complete.

1658 Bagging on 5823221

1717 Bag on complete

1735 Reviewed Inside And outside Rounds

RLG 1810 Relieved by Clayton Mullins [illegible]

no Further Entries on this Page

9/16/13 WCRR SOS Log Book

1811 Assuming SOS position. CA

1819 Starting Pre-Job, discussed the safety stand down regarding incidents from TA-54 and here at TA-50.

1910 Pre-Job and safety stand down complete.

2052 Notified by operators that there is a small ~~chunck~~ chunk missing on the front wheel of the roto-grip. Still safe to use. 9-16-13

2105 Bagging off 1 daughter, bagging on a second.

2120 Bag off/on complete.

2243 Bagging off 2nd daughter, bagging on 5835283.

2315 Bag off/on complete.

0010 Starting movement out of 50-69.

0020 Move out complete.

0153 Bagging off 1 daughter and 3 POC's, bagging on a 2nd daughter.

0250 Bag off/on complete.

0438 Signed off on the rounds.

RA 0610 Relieved by Gilbert Martinez 9/17/13. 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-HERTR-13-0104
Examination Date:	9/23/2013
Waste Container ID:	68379
Video/Audio Recorded Media Number:	LA-HERTR-13-0104 C&D
Procedure and Revision No.:	CCP-TP-053 Rev. 13
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3110
Waste Stream I.D.:	LA-MIN02-V.001
Waste Container Weights:	Gross Wt.: 218.0 kg Tare Wt.: 33.4 kg Net Wt.: 184.6 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: 68379

Section 3: Container Inventory and Comments (Detailed descriptions)

IM:

AM:

OM: Scrap lead

OI:

C:

R:

XPM: Plastic bags

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP): Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	8.0
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	4.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	172.6
Soils (S):	
Total WMP Weight:	184.6

CCP Radiography Data Sheet

Waste Container ID: 68379

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

RTR Operator:

Eric Lyles		9/23/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	68379	Count Sequence Number:	16557
Operator:	DCLTD231\Operator		
Assay Start:	9/24/2013 1:13:24 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: 185.0 kg	Net:	185.0 kg
Container:	Volume: 208.0 l	Full:	95.0 %
Density:	0.940 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:	16557	Batch Number:	2LANDA1226
Assay Instrument:	HENC #2	Location:	LANL TA-54
Analysis Method:	CCP-TP-063 v 15	Software Version:	NDA 2000 V.4.0
Item ID:	68379	Analysis Date:	9/24/2013

Net Weight	185000.0 g			
Pu mass	1.35E+002	+-	3.76E+001	g
TRU Alpha Activity	1.12E+001	+-	2.28E+000	Ci
TRU Activity Concentration	6.04E+004	+-	1.23E+004	nCi/g
Pu-239 Equivalent Activity	1.15E+001	+-	2.28E+000	Ci
Pu-239 FGE	1.27E+002	+-	3.53E+001	g
Decay heat	3.52E-001	+-	7.11E-002	W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	4.73E-001	3.33E-004	7.35E-005	1.20E-005
PU238	1.23E-002	2.11E-001	5.89E-002	3.57E-005
PU239	1.26E+002	7.83E+000	2.19E+000	1.33E-003
PU240	8.08E+000	1.83E+000	5.12E-001	3.11E-004
AM241	3.78E-001	1.30E+000	3.62E-001	2.19E-004
PU241	1.55E-001	1.60E+001	4.47E+000	2.71E-003
PU242	2.70E-002	1.06E-004	2.98E-005	0.00E+000
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	2.21E-006
U233	<LLD	<LLD	0.00E+000	2.19E-002
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	7.16E-006
U238	<LLD	<LLD	0.00E+000	5.19E-005
AM243	1.76E-004	3.52E-005	1.19E-005	2.69E-005

Errors quoted at 1.000 sigma

Operator: D E Rc Date: 9-25-13

ITR: Brit Tupitt Date: 9-26-13

Automated Independent Technical Review

Count Sequence Number: 16557 Batch Number: 2LANDA1226
Counter ID: HENC #2
Container ID: 68379
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 9/24/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis No Add-a-Source warnings.	Ok
Section 2 - Passive Neutron Analysis Analysis Status: No errors.	Ok
Ones Rate Analysis complete with warnings. - Error calculating the Ones Rate Pu-240 Effective MDA.	Not data affecting.
Curium/Californium Neutron Analysis complete with warnings. - The Pu-240 Eff. Mass Variance is negative, Pu-240 Eff. Mass Uncertainty set to zero so analysis could continue.	Ok
Section 3 - Data Combiner Analysis Override enabled; Passive Neutron Pu and Gamma U data specified as input. 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
MCA Deadtime greater than the upper limit of 50.0%.	MCA deadtime = 61.84%. Spectrum valid.
Miscellaneous	No additional nuclides contributing to 95% of the radiological hazard identified. Am-241 direct reported from gamma results.

Expert Review by: Bart B Marak Date: 6/3/14

C13
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: **68379**

BDR Number: **LA13FG12106**

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

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	122.04	
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	2.40	
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 : 68379.D
Acq On : 22 Oct 2013 1:35 pm (#1); 22 Oct 2013 1:34 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 13:43:56 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	7346657	207.75	ppmv	0.00
15) Chlorobenzene-d5	6.639	117	5148597	178.75	ppmv	0.00
Target Compounds						Qvalue
1) Hydrogen	1.910	GC1	34812m	122.04	ppmv	
12) Benzene	3.720	78	72295	2.40	ppmv	97

(#) = 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-RTR2-13-0112
Examination Date:	9/20/2013
Waste Container ID:	68382
Video/Audio Recorded Media Number:	LA-RTR2-13-0112 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.: 113.0 kg Tare Wt.: 33.4 kg Net Wt.: 79.6 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: 68382

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):	5.0
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	3.5
Organic Matrix (OR):	
Inorganic Matrix (IN):	71.1
Soils (S):	
Total WMP Weight:	79.6

CCP Radiography Data Sheet

Waste Container ID: 68382

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		9/20/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	68382	Count Sequence Number:	23644
Operator:	D3PW2DK1\operator		
Assay Start:	9/24/2013 1:25:58 PM		
Description 1:	1LANDA1847		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 79.6 kg	Net:	79.6 kg
Container:	Volume: 208.0 l	Full:	65.0 %
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

017
CD 6/17/14

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number: 23644
Assay Instrument: MCS HENC #1
Analysis Method: CCP-TP-063 v 15
Item ID: 68382

Batch Number: 1LANDA1847
Location: LANL TA-54
Software Version: NDA 2000 V.4.0
Analysis Date: 9/24/2013

Net Weight	79600.0 g		
Pu mass	1.20E+001	+-	2.80E+000 g
TRU Alpha Activity	8.27E+000	+-	1.73E+000 Ci
TRU Activity Concentration	1.04E+005	+-	2.17E+004 nCi/g
Pu-239 Equivalent Activity	8.30E+000	+-	1.73E+000 Ci
Pu-239 FGE	1.14E+001	+-	2.63E+000 g
Decay heat	2.73E-001	+-	5.74E-002 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	1.10E-001	7.72E-005	1.30E-005	4.04E-006
PU238	1.10E-003	1.88E-002	4.38E-003	3.30E-005
PU239	1.13E+001	7.00E-001	1.63E-001	1.23E-003
PU240	7.22E-001	1.64E-001	3.82E-002	2.87E-004
AM241	2.15E+000	7.39E+000	1.72E+000	1.29E-002
PU241	1.39E-002	1.43E+000	3.33E-001	2.51E-003
PU242	2.41E-003	9.51E-006	2.22E-006	0.00E+000
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	1.07E-006
U233	<LLD	<LLD	0.00E+000	7.77E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	2.28E-006
U238	<LLD	<LLD	0.00E+000	1.65E-005

Errors quoted at 1.000 sigma

Operator: [signature] Date: 6-9-14

ITR: [signature] Date: 6.9.14

018
CJ 6/17/14

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. Marsh Date: 6/9/14

020
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: **68382**

BDR Number: **LA13FG12106**

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

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	665.18	
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	0.80	
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 : 68382.D
Acq On : 22 Oct 2013 3:27 pm (#1); 22 Oct 2013 3:26 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 15:36:34 2013
Quant Method : C:\msdchem\1\METHODS\VOCGAS.M
Quant Title : Flammable Gas Analysis for Transportation Only
QLast Update : Wed May 22 12:06:27 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
3) Fluorobenzene	4.063	96	7287366	207.75	ppmv	0.00
15) Chlorobenzene-d5	6.639	117	5305059	178.75	ppmv	0.00
Target Compounds						Qvalue
1) Hydrogen	1.910	GC1	189742m	665.18	ppmv	
12) Benzene	3.720	78	23893	0.80	ppmv #	87

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

S823229

S823229

Container Profile 746986

File Options Reports Help

S823229

746986	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

S823229

- S823229
  - LA00000068962
    - LA00000069402
      - LASB50057
    - LA00000069445
    - LA00000069528 - EMPTY

Task History

Transfer Details

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

Working Copy
Date: 2-28-14 JQ

ATTACHMENT 1
Page 1 of 4

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: 68962

6.2[4] Date Processed: 2/28/14

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

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

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

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

4.3[5][B] ($) Three 1-Liter containers carbon spheroids or MET-L-X in WCG: (SAC 5.10.1.7.1) JQ 2/28/14 (Initial and Date)

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

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

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

Performed By: JOE QUINTANA, Joe Q 239987, 2/28/14
Waste Handling Tech (print) Signature Z# Date

ATTACHMENT 1
Page 2 of 4

4.1[6][B] Parent Waste Container No.: 68962

5.[18] Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable: JQ 2/28/14 ~~410.0~~ 413.0 lb

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

6.2[5][B]/ 6.2[6] Total Parent Drum Weight (lb) 496.0 ~~501.0~~ lb JQ 2/28/14

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

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

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

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

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

ATTACHMENT 1
Page 3 of 4

4.1[6][B] Parent Waste Container No.: 68962

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	69402	69445		A
10.1[4]	Daughter Drum Filter No.	KM333	KM423		
10.1[4]	Daughter Drum Bag Filter No.	L17395	L10255		
10.1[4]	Daughter Drum Purchase Order No.	501210	501210	N	
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[6]/10.2[7][B]	POC Item Description				
10.2[13]	POC Assembly closed per Manufacturer's instructions. (Initial and Z#)			A	
10.2[14]	POC Assembly Gross Weight (lb)				
10.2[15]	POC Rad. Survey Results (mrem/hr)				
10.3[3][A]	Approx. Containerized Liquid Vol./Units				
10.3[5][A]	Free Liquid Volume/Units		N		
10.3[7][A]	Opaque/Non-penetrable Item Description:				
10.3[9][A]	PCB-contaminated Waste Description				
10.3[9][B]	PCB Item ID No.				
10.3[10]	Remaining Waste Description	See Comments	See Comments		A
10.3[13]/10.4[10]/ 10.5[4]/10.6[10]	Daughter Drum % Full (%)	100	100		
10.5[3]/10.6[2]	Description Waste Added During Processing	Kitty Litter	Kitty Litter	N	

ATTACHMENT 1
Page 4 of 4

4.1[6][B] Parent Waste Container No.: 68962

Comments: 5 GALS FREE LIQUID, NITRATE SALTS, LEACHED SOLIDS, STUB OUTS, PLASTICS, LEAD PLASTIC LID, HOMEMADE LEAD BLANKET THROWN ON TOP OF DAUGHTER

11.1[1] Performed By: JOE QUINTANA, Joe Q 239987, 2/28/14
Waste Handling Tech (print) Signature Z# Date

11.1[8] Reviewed By: Jose Jerez, [signature] 1221452, 2/28/14 1319
SOS or designee (print) Signature Z# Date/Time

ATTACHMENT 1
Page 1 of 1

Working Copy
Date: 2-28-14

WCRRF OVERPACK DRUM ASSEMBLY PREPARATION DATA SHEET

5.[3] Overpack drum information:
Purchase Order No.: 501563
Lot No.: 0238367
Manufacture Date: 2013
SERIAL # 005

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:		
Tolerance:		

Overpack filtered vent information:
Manufacturer: NUCFIL
Model No.: 019 DS
Serial No.: KM 79
Manufacture Date: 11/12

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

5. [11] Performed By: NOT PREPPED IN WCRRF,
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: N/C

8.1[1] Performed By: JOE QUINTANA, Joe Q 2399873 2/28/14
Waste Handling Technician (print) Signature Z # Date

8.1[6] Reviewed By: Jose Perez, Jose Perez 2214521 2/28/14
Supervisor or designee (print) Signature Z # Date

Working Copy
Date: 2-28-14

ATTACHMENT 4
Page 1 of 1

WCRRF OVERPACK DRUM CLOSURE DATA SHEET

7.[17] Overpack Drum Unique Identifier No.: 69528

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

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

Performed By: JOE QUINTANA, Joe Q 239987, 2/28/14
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): 68.4 lb

Comments: N/C

8.1[1] Performed By: JOE QUINTANA, Joe Q 239987, 2/28/14
Waste Handling Technician (print) Signature Z# Date

8.1[7] Reviewed By: Jose Jerez, [signature] 221521, 2/28/14
Supervisor or designee (print) Signature Z# Date

69402

Working Copy
Date: 2-7-14

ATTACHMENT 1
Page 1 of 2

WCRRF DRUM PREPARATION DATA SHEET

5.[34][E] Drum ID No.: 69402

5.[3] Drum information:
Purchase Order No.: 501210
Lot No.: 0237179
Manufacture Date: 2013

5.[17] Drum Liner Bag/Filter Assembly:
Manufacturer: BOP
Model No.: 6CPVC-1.5-2SPVC
Serial No.: L-17395
Manufacture Date: 11/13

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

	Filtered Vent	2 in. Bung
M&TE No.:	101310	036245
Cal. Expiration Date:	11-12-14	8-5-14
Range:	40-200 in-lb	1680 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: Brendan Chavez / HOWARD SMITH — Operator (print); H A SMITH — Signature; [redacted] 2-7-14 / 2/7/14 — Z # Date

5.[23] Filtered vent information:
Manufacturer: NUCFIL
Model No.: 0190S
Serial No.: KM333
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): 74 lbs

5.[34][E] Drum ID No.: 69402

Comments: N/C

5.[35] Performed By: Brandon Chavez / HOWARD SMITH — Operator (print) — Signature — 2047162 / 1226TB1 — Z # — 2-7-14 / 2/7/14 — Date

7.1[4] Reviewed By: Jose Jerez — Supervisor or designee (print) — Signature — 1221421 — Z # — 2/28/14 — Date

ATTACHMENT 2
Page 1 of 2

WCRRF DRUM CLOSURE DATA SHEET

6.[3] Drum ID No.: 69402

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

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

Performed By: JOE QUINTANA (Operator (print)) Joe Q (Signature) 239987 (Z#) 2/28/14 (Date)

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

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

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

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

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

Performed By: NOT PREPARED IN WCRRF
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.: 69402

6.[26] Scale File ID number: 019065

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

6.[28] Drum gross weight: 390.4 lbs

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

Comments: N/L

6.[32] Performed By: JOE QUINTANA (Operator (print)), Joe Z (Signature), 239987 (Z #), 2/28/14 (Date)

7.1[4] Reviewed By: Jose Jerez (Supervisor or designee (print)), [signature] (Signature), 2214521 (Z #), 2/28/14 (Date)

Working Copy
Date: 2/19/14

ATTACHMENT 1
Page 1 of 2

WCRRF DRUM PREPARATION DATA SHEET

5.[34][E] Drum ID No.: 69485

5.[3] Drum information:
Purchase Order No.: 501210
Lot No.: 0237179
Manufacture Date: 2013

5.[17] Drum Liner Bag/Filter Assembly:
Manufacturer: BOP
Model No.: 6CPVC1.5-2.5PVC
Serial No.: L-10255
Manufacture Date: 5-13

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

	Filtered Vent	2 in. Bung
M&TE No.:	101310	036245
Cal. Expiration Date:	11-12-14	8-5-14
Range:	40-200 in-lb	16-80 ft-lb
Tolerance (+/-):	+/-4/2cw +/-6/0ccw	+/-3/0cw +/-6/0 ccw

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

Performed By:

Operator (print)	Signature	Z #	Date
Andrew H. Romero	Andrew Romero	187006	02/19/14
Mark Rivera	Mark Rivera	1092478	2-19-14

5.[23] Filtered vent information:
Manufacturer: NUCFIL
Model No.: 019DS
Serial No.: KM-423
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): 76.2 lbs

5.[34][E] Drum ID No.: 69445

Comments: N/A

5.[35] Performed By: Andrew H. Romero / Mark Rivera — Operator (print); Andrew H. Romero / Mark Rivera — Signature; 180006 / 682475 — Z#; 02/19/14 / 2-19-14 — Date

7.1[4] Reviewed By: Jose Jerez — Supervisor or designee (print); Signature; 221452 — Z#; 2/28/14 — Date

ATTACHMENT 2
Page 1 of 2

WCRRF DRUM CLOSURE DATA SHEET

6.[3] Drum ID No.: 69445

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

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

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

Performed By: JOE QUINTANA, Joe Z, 239987, 2/28/14
Operator (print) Signature Z# Date

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

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

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

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

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

Performed By: NOT PREPARED IN WCRRF, , ,
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.: 69445

6.[26] Scale File ID number: 019065

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

6.[28] Drum gross weight: 364.0 lbs

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

Comments: N/C

6.[32] Performed By: JOE QUINTANA, Joe Q 239987 2/28/14
Operator (print) Signature Z# Date

7.1[4] Reviewed By: Jose Jerez, Jose Jerez 2214521 2/28/14
Supervisor or designee (print) Signature Z# Date

Working Copy
Date: 2/27/14 HS

ATTACHMENT 2
Page 1 of 1

WCRRF PARENT 55-GAL DRUM PREPARATION DATA SHEET

6.3[21] Prepared Parent 55-Gal Drum Number: 68962

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): BG 2-27-14 ~~439.0~~ 413.0

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], 2067129, 2-27-14
Waste Handling Technician (print) Signature Z # Date

8.1[7] Reviewed By: Jose Jerez, [signature], 221452, 3/6/14
Supervisor or designee (print) Signature Z # Date

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

8.1[8][D] Approved by: Clayton Mullins, [signature], 240096, 3/6/14, 0835
SOS/SOM or designee (print) Signature Z # Date Time

SP 72

WDP TRU Waste Container Management Operations

UET

Document No: EP-DIV-AP-0107
Attachment: 1
Revision: 1
Effective Date: 12/22/2009

ATTACHMENT 1

WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

#1/2341 (B2) 2/24/14

Production Control 412 Gal was changed to when placed in compliant 85 for transport to WCRR.

Container ID: S823229 68962 Container Type: 85-GAL Gross Weight (lbs): 267
Inner Seal #: 009946 Filter Prefix: LAVC Filter Serial #: 02715
AK Waste Stream: LA-MHD01.001 Certified RTR BDR: No BDR
TWSR Comments: LEACHED SOLIDS CAUTION-MAY BE PRES. DUE TO CO-2NO GAS GEN.
Total PE-Ci Activity: 1.04E+01 Equivalent Combustible PE-Ci: 3.95E+00 AM-241 PE-Ci: No data
Total Fissile Gram Equivalents: 114.9 Total Surface Dose Rate (mrem/hr): 12
EPA Code(s): None
NCR RTR/NDA Comment: None
RTR Pre-Screen Date: 2/20/2007 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/zeolite must be mixed with 1.0 volume of nitrate salts.

Performed By: R. W. Jones (Production Control (Print)) Signature 117434 (Z Number) 9.1.10 (Date)

WDP Engineering SUSAN RAMSEY 100681 5/21/13

Chemicals Present (e.g., pyrophorics, acids, bases, shock sensitive, organic liquids, peroxides, crown ethers): ☐ Yes ☑ No ☐ Unknown
Processing Determination: ☑ Accept ☐ Reject
WDP Engineering Comments: RTR pre-screen had no comments. Waste record indicates leached solids in form of nitrate salts. Log sheet indicates 8 items, heaviest is 57 lbs. Net weight of 8 items is 267 lbs. Actual gross weight indicates 428 lbs. Prohibited item is listed as "other" with no details. May require RWP for >1,000 mrem/hr @30cm.

Performed By: Michael Garcia (WDP Engineering (Print)) Signature 1099143 (Z Number) 9/4/10 (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 when processing.
Processing Determination: ☑ Accept ☐ Reject
TRU Remediation Operations Comments: Use proper ratio of kitty litter to waste in accordance with the procedure

Performed By: Julie Gallegos (TRU Remediation Operations (Print)) Signature 176905 (Z Number) 9/4/10 (Date)

IHS Review Jerry Arnolhood. 241659, may contain lead Chromium, Mercury. 7-3-13 9.16.10 55-GAL UNVENTED

Wednesday, August 04, 2010 Clayton Mullins CA 240012 WCRRF 2/25/14

Jose Jerez 221452 2/24/14

Discardable Waste Log Sheet

DrumID: 009946

Item#	ItemID	Net (kg)	Matrix	M Code	NM	MT	Audit	Remarks
1	DXFS 556 FD	5.91	NITRATE SALTS		17.49	52	5/11	
2	DXF 557 OX8	16.82	NITRATE SALTS		33.01	52	5/11	
3	DXFS 558 F1	25.91	NITRATE SALTS		21.52	52	5/11	
4	DXF5559 F1	10.45	NITRATE SALTS		6.4	52	5/11	
5	DXFS 560 F1	40	NITRATE SALTS		20.33	52	5/11	
6	DXF 561 EX1	4.09	NITRATE SALTS		16.64	52	5/11	
7	DXF 562 OX9	5.91	NITRATE SALTS		2.44	52	5/11	
8	DXFS 563 F1	11.82	NITRATE SALTS		4.36	52	5/11	
		120.91 kg						

1272 011

ATTACHMENT 3
Page 1 of 3

TA-54 AREA G DRUM VENTING DATA SHEET

7.[2] Waste Container Unique Identifier: S823229

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	____ %	0.176725 %
Methane	____ ppm	0.000 ppm
VOC	____ ppm	61.53 ppm
Filter Vent Unique Identifier No.:	____	AN1-327
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: S823229

7.[10] ($) 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] ($) 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: S823229

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~~ 1/4/14

- 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] 7.[23] Performed By: Chris Vigil [signature] 163082 3-5-13
LTP-DDP Supervisor/designee (Print) Signature ID # Date

10.1[3] Overhead space heaters ON and thermostat set. ☑ SAT ☐ UNSAT

10.1[4] Reviewed by: Chris Vigil [signature] 163082 3-5-13
LTP-DDP Supervisor/designee (print) Signature ID # Date

DVS Gas Determination Results Report

Date: 3/5/2013

Waste Container Number: S823229

Batch Number: DVS2130305

Filter Type Installed: 08DS

Number of Filters Installed:

Flammable Volatile Organic Compounds (VOCs)

Compound	Concentration (ppmV)	Upper Calibration Range (ppmV)	Exceeds Calibration (Y/N)	Calculated Value (if exceeds calibration)
Methanol	42.42	1591.00	N	N/A
Diethyl Ether	0	503.00	N	N/A
1,1 Dichloroethene	0	402.80	N	N/A
Acetone	3	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	15.79	1492.00	N	N/A
1,2-Dichloroethane	0.32	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	61.53	I.V.R. Intial and Date	

Compound	Concentration		Upper Calibration Range		Exceeds Calibration (Y/N)
Hydrogen	0.176725	%	6.45	%	
Methane	0.000	ppm	15990.00	ppm	

Comments:

AN-327

Doug Eisele
DVS Operator Print Name

Signature

03-05-13
Date

2-28-14
0558 Assuming WCRR operations center - Coleman
0613 Beginning outside rounds.
0615 Pre-job being conducted by SOS.
0635 Operator reports item 18 on the rounds (hot water boiler) is alarming. Instructed operator to reset alarm.
0637 Alarm on item 18 reset, continuing rounds. Pre-job concluded
0655 Outside rounds complete.
0658 Beginning inside rounds.
0712 Item #63 is OOS, Okay to proceed per CSE documentation.
0712 Assuming OPS center in training ~~Allen Sayer~~ Coleman
0716 ~~0~~ inside Rounds completed
0723 Both Rounds Reviewed by SOS
0740 WCARF is now in operation
0742 Bagging on Drum 68962
0755 Bagon complete PPE check SAT
0800 ~~Arrive~~ Permission granted to move drums from 50/69 to transportainers
0814 Permission granted to lower the vehicle access gates to load the transfer vehicle for a shipment to Area G. Drum movement out of 50-69 to transportainer complete.
0940 ~~0950~~ Shipment out of WCRRF is complete
0920 Bagging off/one daughter
0935 Bag on/off complete
1025 Permission granted to lower vehicle access gate to allow ACTS to do surveys
1028 Bagging on/off 1 daughter and bagging on drum 68973
1058 Bag on/off complete
1156 Bagging off/on 1 daughter
1216 Bag off/on complete.
1223 Operators switching out for lunch.
1341 Permission granted to move drums into 50/69
1357 Movement into 50/69 complete
1446 ~~1446~~ Shipment into WCRR complete
1446 Denesting two drums
1531 Denesting complete Bagging off one daughter and one POC
Bagging on drum number 68966
CONTINUED ON ~~Page~~ Next page A Segovia

2-28-14 CONTINUED FROM PREVIOUS PAGE
1601 BAG OFF/ON COMPLETE
1620 STARTED INSIDE ROUNDS
1625 ~~STARTED~~ STARTED OUTSIDE ROUNDS
1628 SUBMITTED FSR # 118268 FOR FABRICATING NEW CATCH PAN FOR NEW DRUM LIFT
1633 ITEM #63 ON INSIDE ROUNDS OOS OK to PROCEED POD IN PLACE
1640 INSIDE ROUNDS COMPLETED AND SUBMITTED FSR 118270 FOR REPAIR AND PAINTING 50/196
1644 OUTSIDE ROUNDS COMPLETE
1702 SOS REVIEWED ROUNDS
1715 PERMISSION GRANTED FROM SOM to LEAVE DRUM BAGGED ON
1724 BAGGING ON/OFF / DAUGHTER
1735 BAG OFF/ON COMPLETE
1802 MODE CHANGE DECREAS FOR YARD AND 50/69 WARM STANDBY
2-28-14 1803 END OF DAY OPERATION CENTER SECURED

NO FURTHER ENTRYS THIS PAGE

PROJECT NAME WCRRF SOS Log Book NOTEBOOK NO

2/28/14

0600 Assuming SOS position. CA

0615 Starting Pre-Job, went over IPC ~~change~~ for our processing procedure, 1198. discussed schedule change for next 2 weeks while processing tritium and ~~beryllium~~ beryllium. 2-28-14

0643 Pre-Job complete.

0723 Signed off on the rounds.

0740 Mode change complete, WCRRF yard and 50-69 are now in Operations.

0742 Bagging on 68962

0755 Bag on complete.

0800 Starting movement out of 50-69.

0814 Starting shipment out of WCRRF. Movement out complete.

0850 Shipment out complete.

0920 Bagging off 1st daughter, bagging on a 2nd.

0935 Bag off/on complete.

1025 Starting shipment into WCRRF.

1028 Bagging off 2nd daughter, bagging on 68973.

1058 Bag off/on complete.

2-28-14 1155 Turning over SOS position to Jose Jerez. CA

1155 Assuming SOS position Jim Jy

1156 Bagging off one daughter Bagging on second daughter

1446 Starting to D-Vest 2 parents.

1531 D Vesting Complete, Bagging off one daughter and one Pot Bagging on 68966

1601 Bag on Bag off Complete

1705 Rounds Completed and signed off

1715 Operators notifying that they will not be able to finalize the parent that is bagged on. Permission received from the OM to leave it bagged on overnight.

1725 Operators bagging off one daughter and placing lid on the parent to leave in a safe configuration overnight.

1735 Bag off complete, placing Operations in a safe configuration.

1802 Mode Change Complete WCRR yard and 50-69 are in WRRA.

2-28-14 1810 Securing SOS position for the evening. Jim Jy

No further entries on this page.

NDERSTOOD DATE 20

DATE 20

2-28-14 WCRR SOM

0600 Reviewed shift turnover checklist and assumed the WCRR SOM position [illegible]

0641 Completed attending the pre-job brief conducted by the SOS: (Clayton). The safety topic was pay attention to detail, perform work methodically. Also watch out for wildlife, do not confront wildlife. There is one transfer out of 10 drums and 1 transfer in of 7 drums. The ICP change for 119B was reviewed and personnel signed off the roster. The priority drums to work are SP-72s. Shift orders were reviewed, briefed on. Currently in the facility there are 2-55 gallon drums prepped and ready.

0711 Completed the daily phone call to AREA G SOM updating WCRRF POD status.

0740 Mode Change: 50/69 and Yard transition from WARM/WARM to Operations/Operations.

0741 Inside operations initiate bag on of Parent Drum 68962 - SP-72.

0755 Bag on noted completed.

0800 Movement out is being initiated to the transfer truck - staging.

0849 The transfer out is noted completed and the Vehicle access gates are restored.

0920 Inside operators report bagging off one daughter and bagging on another.

0935 Bag on and bag off is noted completed

1025 Vehicle Barrier gates are approved by OCD to lower gates to receive transfer from AREA G.

1028 Inside operators report bagging off one daughter, bag on another and Parent 68973

1058 Bag on and Bag off were completed

1100 Completed obtaining SEDs and LEL's for the transfer arriving at WCRR - Seven drums total - RCTs are conducting surveys.

1156 Inside Operations report bag off of 1 daughter and bag on of another daughter.

1217 Bag off and bag on, noted completed.

1357 Operations completed the movement of 3 drums into 50/69 - SP-72, 21, and 3.

1434 Inside operations requested additional supplies and fork truck for de-nesting, while outside operations identified an 85 gallon drum while moving drums from the transfer truck 2-072 filters and a 13 filter. Per evaluation and following our shift order, the 13 filter is acceptable - also noted, the 08 filter is the long filter which was not on the drum. The SOM approved the transfer to the transportainer.

1447 Completed observing operations post the transportainer 50-75 with CAUTION - BE-Storage AREA also observed placement of drums into the transportainer and stanchions with signage noting Caution - BE Storage AREA - Transfers to the transportainers noted completed. Inside operations also initiate denesting.

1505 Discussed with the WMC (RP) the generation of waste profiles for the BE waste.

2-28-14 WCRR-SOM (cont)

1531 Inside Operations complete de-nesting, and initiate bag off of 1 daughter and 1 POC, and Bag On of Parent drum 68966-SP-72

1601 Bag off and bag on is noted as completed.

1715 Obtained approval from the OM to leave the current drum 68966 bagged on over night, if required.

1724 Inside operations initiate bag off of one daughter, and bag on of another daughter.

1730 RCRA inspections performed and rounds were reviewed.

1734 Inside operations complete the bag off and bag on of the daughter drums. The lid of the ~~Operations~~ 2-28-14 drum bagged on was put in place and the WCG was placed in a safe configuration.

1802 Mode Change: 50/69 and Yard transition from Operations/Operations to WARM/WARM

1810 The inside set point is set at 77°F.

1811 Secured the SOM position John Gnedlazek

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-HERTR-14-0030
Examination Date:	3/6/2014
Waste Container ID:	69402
Video/Audio Recorded Media Number:	LA-HERTR-14-0030 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.: 176.5 kg Tare Wt.: 33.4 kg Net Wt.: 143.1 kg
Rigid Liner and Liner Vent Description:	Liner: [X] No [ ] Yes Lid: [X] No [ ] Yes Type: [ ] 30-mil [ ] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [ ] Yes [X] N/A Punctured: [X] No [ ] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [ ] No [X] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 2 layers
Volume Utilization Percentage:	90 %

CCP Radiography Data Sheet

Waste Container ID: 69402

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):	6.0
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	8.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	129.1
Soils (S):	
Total WMP Weight:	143.1

Waste Container ID: 69402

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

RTR Operator:

Michael Simmons		3/6/2014
Print Name	Signature	Date

5823229

NDA 2000 Assay Report

Item Information

Item ID:	69402	Count Sequence Number:	24482
Operator:	D3PW2DK1\operator		
Assay Start:	3/6/2014 2:48:10 PM		
Description 1:	1LANDA1923		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 143.0 kg	Net:	143.0 kg
Container:	Volume: 208.0 l	Full:	90.0 %
Density:	0.760 kg /l		

System Configuration

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

Errors quoted at 1.000 sigma

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number:	24482	Batch Number:	1LANDA1923
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:	69402	Analysis Date:	3/6/2014

Net Weight	143000.0 g		
Pu mass	3.86E+001	+- 8.40E+000	g
TRU Alpha Activity	8.05E+000	+- 2.90E+000	Ci
TRU Activity Concentration	5.63E+004	+- 2.03E+004	nCi/g
Pu-239 Equivalent Activity	8.14E+000	+- 2.90E+000	Ci
Pu-239 FGE	3.64E+001	+- 7.88E+000	g
Decay heat	2.62E-001	+- 9.61E-002	W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	9.25E-002	6.52E-005	1.27E-005	3.56E-006
PU238	3.52E-003	6.02E-002	1.31E-002	3.30E-005
PU239	3.62E+001	2.25E+000	4.89E-001	1.23E-003
PU240	2.32E+000	5.26E-001	1.14E-001	2.89E-004
AM241	1.52E+000	5.22E+000	2.85E+000	7.93E-002
PU241	4.36E-002	4.49E+000	9.77E-001	2.47E-003
PU242	7.73E-003	3.05E-005	6.64E-006	0.00E+000
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	7.29E-007
U233	<LLD	<LLD	0.00E+000	6.89E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	2.08E-006
U238	<LLD	<LLD	0.00E+000	1.74E-005

Errors quoted at 1.000 sigma

Operator: Jim Barton Date: 3/10/14

ITR: [illegible] Date: 3.12.14

Automated Independent Technical Review

Count Sequence Number: 24482 Batch Number: 1LANDA1923
Counter ID: MCS HENC #1
Container ID: 69402
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 3/6/2014

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

Expert Review by: Sheri Chamberlin Date: 3-10-14

Waste Container ID: **69402**

BDR Number: **LA14FG2038**

Sampling Date: **3/13/2014**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	299.77	
74-82-8	Methane	142.14	U
67-56-1	Methanol	35.23	U
60-29-7	Ethyl Ether	0.96	U
75-35-4	1,1-Dichloroethylene	6.38	U
67-64-1	Acetone	18.08	U
75-34-3	1,1-Dichloroethane	4.08	U
156-59-2	cis-1,2-Dichloroethene	0.76	U
78-93-3	Methyl ethyl ketone	11.73	U
110-82-7	Cyclohexane	5.10	U
71-43-2	Benzene	4.25	
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\140313c\
Data File : 69402.D
Acq On : 13 Mar 2014 2:35 pm (#1); 13-Mar-14, 14:34:19 (#2)
Operator : SA
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 13 14:43:21 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	3.535	96	3157055	205.75 ppmv	0.02
15) Chlorobenzene-d5	5.842	117	2532140	177.50 ppmv	-0.02
Target Compounds					Qvalue
1) Hydrogen	1.613	GC1	2254m	299.77 ppmv	
12) Benzene	3.206	78	47401	4.25 ppmv	99

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

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-14-0027
Examination Date:	3/6/2014
Waste Container ID:	69445
Video/Audio Recorded Media Number:	LA-RTR2-14-0027 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.: 165.0 kg Tare Wt.: 33.4 kg Net Wt.: 131.6 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: 69445

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):	15.0
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	6.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	110.6
Soils (S):	
Total WMP Weight:	131.6

CCP Radiography Data Sheet

Waste Container ID: 69445

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

RTR Operator:

Thad Hasselstrom	Thad Hasselstrom	3/6/2014
Print Name	Signature	Date

S823229

NDA 2000 Assay Report

Item Information

Item ID:	69445	Count Sequence Number:	24478
Operator:	D3PW2DK1\operator		
Assay Start:	3/6/2014 11:08:42 AM		
Description 1:	1LANDA1923		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
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:	75.0 %
Density:	0.850 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:	24478	Batch Number:	1LANDA1923
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:	69445	Analysis Date:	3/6/2014

Net Weight	132000.0 g		
Pu mass	1.36E+002	+- 4.07E+001	g
TRU Alpha Activity	1.68E+001	+- 5.42E+000	Ci
TRU Activity Concentration	1.27E+005	+- 4.11E+004	nCi/g
Pu-239 Equivalent Activity	1.71E+001	+- 5.43E+000	Ci
Pu-239 FGE	1.28E+002	+- 4.06E+001	g
Decay heat	5.39E-001	+- 1.78E-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	9.18E-007
U233	<LLD	<LLD	0.00E+000	8.08E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	2.23E-006
NP237	1.27E-001	8.95E-005	1.86E-005	4.03E-006
PU238	1.24E-002	2.12E-001	7.26E-002	1.94E-003
U238	<LLD	<LLD	0.00E+000	2.09E-005
PU239	1.27E+002	7.90E+000	2.51E+000	7.25E-002
PU240	8.14E+000	1.85E+000	6.44E-001	1.70E-002
AM241	2.00E+000	6.85E+000	4.76E+000	2.32E-001
PU241	1.53E-001	1.58E+001	5.50E+000	1.45E-001
PU242	2.72E-002	1.07E-004	3.74E-005	0.00E+000

Errors quoted at 1.000 sigma

Operator: Jim Patton Date: 3/10/14

ITR: Marie Gu Date: 3.12.14

Automated Independent Technical Review

Count Sequence Number: 24478 Batch Number: 1LANDA1923
Counter ID: MCS HENC #1
Container ID: 69445
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 3/6/2014

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. Pu239 FGE >200g with 2*TMU but <325g.

Expert Review by: Sheri Chamberlin Date: 3-10-14

Waste Container ID: **69445**

BDR Number: **LA14FG2038**

Sampling Date: **3/13/2014**

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\140313c\
Data File : 69445.D
Acq On : 13 Mar 2014 2:57 pm (#1); 13-Mar-14, 14:56:45 (#2)
Operator : SA
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Mar 13 15:05:02 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	3254347	205.75	ppmv	0.06
15) Chlorobenzene-d5	5.874	117	2612586	177.50	ppmv	0.01

Target Compounds	Qvalue

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

S824181

S824181

Container Profile 748323

ile Options Reports Help

S824181

748323	TBD-TRU	T-TTRU-TEMP	Active	Decommissioned

- eneral Information
- Veights/Volumes
- ocation
- ccount Information
- Vaste Material Parameters
- ayers of Confinement
- rohibited Items
- PA Codes
- HC
- adioassay
- adiological Survey
- ayload Preparation
- ontainer Closure
- laterials Added
- RU Information
- RU Information (TSDF)
- adiological Calculations
- hipping Description
- ite Treatment Plan
- ending Tasks
- enealogy
- ontainer Tags
- ask History

Genealogy

- S824181
  - S824181
    - 88965 – Empty
    - 88957
      - 93517 – Empty
      - 93516
      - 93515

Task History

Transfer Details

Transfer Amo...	Transfer Unit	Item	Measured We...	Measured We...
49.99947775	%			

UET
Working Copy
Date: 4-19-13

ATTACHMENT 1
Page 1 of 4

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: 88957

6.2[4] Date Processed: 4-19-13

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

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

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

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

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

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

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

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

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

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

Performed By: Gerald Espinoza / [signature] / 1237720 / 4-19-13
Waste Handling Tech (print) Signature Z # Date

ATTACHMENT 1
Page 2 of 4

4.1[6][B]	Parent Waste Container No.: 88957	
5.[18]	Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable:	376.4 lb
6.2[5][A]	Parent Drum Lead Blanket Weight (lb):	240 lb
6.2[5][B]/ 6.2[6]	Total Parent Drum Weight (lb)	1616.4 lb
6.2[7]	($) Total Parent Drum Weight < 624 lb (SR 4.5.1):	☑ SAT ☐ UNSAT
6.2[28]	Approval to leave a parent drum attached to the WCG overnight:	

EWMO-FOD (print)	Signature	Z #	Date

ATTACHMENT 1
Page 3 of 4

4.1[6][B] Parent Waste Container No.: 88957

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	93515	93516		
10.1[4]	Daughter Drum Filter No.	KL 341	KL 328	N/A	
10.1[4]	Daughter Drum Bag Filter No.	L-6410	L-6244		
10.1[4]	Daughter Drum Purchase Order No.	501186	501186		
10.1[13][C]	WCG Fire Watch Stationed		☐ YES	☐ NO	☑ N/A
10.1[14][C][d]3/11.1[3]	WCG Fire Watch Secured		☐ YES	☐ NO	☑ N/A
10.2[4]	POC bag-on bag: Manufacturer				
	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)			N/A	
10.3[3][A]	Approx. Containerized Liquid Vol./Units	NA	NA		
10.3[5][A]	Free Liquid Volume/Units	Residual	Residual		
10.3[7][A]	Opaque/Non-penetrable Item Description:	lead Shielding	N/A		
10.3[9][A]	PCB-contaminated Waste Description	N/A			
10.3[9][B]	PCB Item ID No.				
10.3[10]	Remaining Waste Description	SEE COMMENTS	SEE COMMENTS		
10.3[13]/10.4[10]/ 10.5[4]/10.6[10]	Daughter Drum % Full (%)	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.: 88957

Comments: Salts, plastic, lead shielding,

11.1[1] Performed By: Gerald Espinoza, [signature] 123770 4-19-13
Waste Handling Tech (print) Signature Z# Date

11.1[7] Reviewed By: Jose Jerez, [signature] 122452, 4-21-13 1603
SOS or designee (print) Signature Z# Date/Time

Working Copy
Date: 3/27/13 B.F.

ATTACHMENT 2
Page 1 of 1

WCRRF OVERPACK DRUM ASSEMBLY PREPARATION DATA SHEET

5.[3] Overpack drum information:
- Purchase Order No.: 501012
- Lot No.: 0233 945
- Manufacture Date: 12

5.[8] Overpack filtered vent information:
- Manufacturer: NUFIL
- Model No.: 013
- Serial No.: EL-330
- Manufacture Date: 5/11

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

	Filtered Vent	2 in. Bung
M&TE No.:	040694	038369
Cal. Expiration Date:	09/06/13	12/19/13
Tolerance:	+/- 4% cw and +/- 6% ccw	+/- 3% cw and +/- 6% ccw

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

Performed By: Kevin Belascak / Kevin Belascak / 123[illegible] / 03/27/13
Waste Handling Technician (print) Signature Z # Date

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

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

Comments: N/C

8.1[1] Performed By: Kevin Belascak / Kevin Belascak / 123[illegible] / 03/27/13
Waste Handling Technician (print) Signature Z # Date

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

8.1[7] Reviewed By: Jose Perez / [signature] / 1214521 / 4-2-13
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 5
Page 1 of 1

Working Copy
Date: 4-19-13

WCRRF OVERPACK DRUM CLOSURE DATA SHEET

7.[18] Overpack Drum Unique Identifier No.: 93517

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: Gerald Espinoza 123772 ~~5-8-13~~ 4.19.13 GE
Waste Handling Technician (print) Signature Z# Date 4.19.13

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: 0190065
Platform scale calibration expiration date: 7.31.13

7.[35][D] 85-gal overpack drum gross weight (lb): 147.8 lb

Comments: N/C

8.1[1] Performed By: Gerald Espinoza 123772 ~~5-8-13~~ GE 4.19.13
Waste Handling Technician (print) Signature Z# Date 4.19.13

8.1[7] Reviewed By: Gilbert Martinez 14525 5/8/13
Supervisor or designee (print) Signature Z# Date

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

Drum ID#: 93515

1. Drum/Lid Assembly

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

RECORD drum information:

Purchase Request #: 501186
Lot #: 0734763
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 #: 6GOVC152SPK
Serial #: L-6410
Date of Manufacture: 11-12

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

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

4. Install Lid/Drum Filter

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

RECORD drum filter information:

Manufacturer: Nuc Fil
Model #: 01403
Serial #: RC-341
Date of Manufacture: 11-11

RECORD torque wrench information:

Filter torque wrench:		Jam Nut / Bung torque wrench:	
M&TE ID #:	040694	M&TE ID #:	038329
Cal Expiration Date:	9-26-13	Cal Expiration Date:	12-18-13
Range (ft-lbs or in-lbs):	10-200	Range (ft-lbs or in-lbs):	10-80
Tolerance:	±4960cn ±6960cn	Tolerance:	±3960cn ±6960cn

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

[x] Yes [ ] No

Print Name: Adam Segovia Signature: [signature] Z#: 276702

5. Weigh Drum Assembly

RECORD weight information

Tare wtght (lbs) 758
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: Adam Segovia Operator Sign: [signature] Z#: 276702 Date: 4-11-13

Verifier Print: Gerald Espinoza Verifier Sign: [signature] Z#: 237720 Date: 4-19-13

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

DRUM ID#: 93515

1. LID INSTALLATION

NOTE: Install lid per manufacturer's instructions

✓ Mount lid with filter directly over drum seam.

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

✓ Engage bolt and nut and torque per manufactures instructions.

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

✓ Tighten jam nut.

Record torque wrench information:

MT&E # : 038373

Cal expiration date: 9-11-13

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

--- Tolerance ±3% cw ±6% ccw

2. DRUM LABELING

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

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

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

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

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

RCRA Label:

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

OR

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

NOTE: Check only one of the above two boxes.

3. WEIGH DRUM ASSEMBLY

Record weight information:

Gross Weight(lbs): 352.0

Scale ID#: 019065

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

4. FINALIZE DOCUMENTATION

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

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

✓ Complete TWSR.

Operator Print/Sign: Gerald Espinosa Date: 4-19-13

Verifier Print/Sign: Clayton Mullins Date: 4/19/13

B

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

Drum ID#: 935160

1. Drum/Lid Assembly

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

RECORD drum information:

Purchase Request #: 501186
Lot #: 0234763
Date of Manufacture: 2012

2. Drum Liner Bag/Filter Assembly:

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

RECORD bag filter information:

Manufacturer: BOP
Model #: Gepac 1.525 pic
Serial #: L-6240
Date of Manufacture: 11-12

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

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

4. Install Lid/Drum Filter

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

RECORD drum filter information:

Manufacturer: NUCF
Model #: 01905
Serial #: KL-328
Date of Manufacture: 11-11

RECORD torque wrench information:

Filter torque wrench:		Jam Nut / Bung torque wrench:	
M&TE ID #:	040694	M&TE ID #:	038369
Cal Expiration Date:	9-26-13	Cal Expiration Date:	12-18-13
Range (ft-lbs or in-lbs):	40-200	Range (ft-lbs or in-lbs):	10-80
Tolerance:	±190cw ±680ccw	Tolerance:	±390cw ±690ccw

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

[x] Yes [ ] No

Print Name: Adam Segovia Signature: [signature] Z#: 276702

5. Weigh Drum Assembly

RECORD weight information

Tare witght (lbs) 75.8
File ID #: 019065

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

6. Label Drum Assembly

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

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

Operator Print: Adam Segovia Operator Sign: [signature] Z#: 276702 Date: 4-11-13

Verifier Print: Gerald Esparza Verifier Sign: [signature] Z#: 237720 Date: 4-19-13

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

DRUM ID#: 93516

1. LID INSTALLATION

NOTE: Install lid per manufacturer's instructions

✓ Mount lid with filter directly over drum seam.

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

✓ Engage bolt and nut and torque per manufactures instructions.

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

✓ Tighten jam nut.

Record torque wrench information:

MT&E # : 038373

Cal expiration date: 9-11-13

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

— Tolerance ±3% cw ±6% ccw

2. DRUM LABELING

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

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

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

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

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

RCRA Label:

NA 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): 174.5

Scale ID#: 019065

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

4. FINALIZE DOCUMENTATION

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

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

✓ Complete TWSR.

Operator Print/Sign: Gerald Esparza Date 4-17-13

Verifier Print/Sign: Clayton Millis Date: 4/19/13

1972 ~~21~~ 72

WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Production Control

Container ID: 88957 Container Type: 55-GAL Gross Weight (lbs): 371
Inner Seal #: None Filter Prefix: None Filter Serial #: AL-15
AK Waste Stream: LA-MHD01.001 Certified RTR BDR: LA-HERTR-12-0049
TWSR Comments: PARENT# S824181 → 9964
Total PE-Ci Activity: 9.56E+00 Equivalent Combustible PE-Ci: 3.59E+00 AM-241 PE-Ci: 7.74E-01
Total Fissile Gram Equivalents: 105.7 Total Surface Dose Rate (mrem/hr): 112
EPA Code(s): D008
NCR RTR/NDA Comment: LANL: remediate-Prohibited Item
RTR Pre-Screen Date: None Comment: None
Certified RTR Comment: >50% Homogeneous material, does not match AK; >1% liquid by volume of outermost container. Operator recommends closing existing NCR: NCR-LANL-2601-11 (Impenetrable)

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: Need to add EPA Codes D007 & D009
A minimum of 1.2 volumes of kitty litter/zeolite must be mixed with 1 volume of nitrate salts.

Performed By: R. W. Jones Susan S. Ramsey R. W. Jones 117434 7.18.12
Production Control (Print) Signature Z Number Date
Tony P. Ring 100681 9/19/12

WDP Engineering

Chemicals Present (e.g., pyrophorics, acids, bases, shock sensitive, organic liquids, peroxides, crown ethers): ☐ Yes ☒ No ☐ Unknown
Processing Determination: ☒ Accept ☐ Reject
WDP Engineering Comments: Nitrate Salts
Net Wt: 302 lb. SEDs for parent drum, S824181, attached for review; parent drum contained nitrate salts. Nitrate salts can contain undocumented liquids. HERTR BDR inventory for 88957 shows drum contains scrap metal, lead rubber apron (D008) spray bottle, + homogeneous solid material. No hazardous chemicals identified.
May require PWI for >1000 and [illegible] mrem/hr [illegible]

Performed By: Valerie Rhodes Valerie Rhodes 112609 7/25/12
WDP Engineering (Print) Signature Z Number Date

TRU Remediation Operations

☑ Waste Container Information Evaluated ☐ Less Than 170 lbs ☐ RTR Video Available
Other Specific Safety Concerns: Ensure liquids are solidified with kitty litter or proper absorbent. Use proper PPE for handling waste.
Processing Determination: ☑ Accept ☐ Reject
TRU Remediation Operations Comments: Use proper ratio of waste to kitty litter in accordance with the preceding §§ 1-9-13

Performed By: Jose Jerez Jose Jerez 221452 7-27-12
TRU Remediation Operations (Print) Signature Z Number Date
~~TRUCON 20 249 750 7/30/12~~
* Potential Stamp - utilize hazardous gloves & tools to handle waste. Do not press or push waste with hands.

Document No: EP-DIV-AP-0107 Robin Shuck RS 272995 1-14-13

HS REVIEW: AB 206362 7.30.12

Discernable Waste Log Sheet

DrumID: [illegible]

Item	ItemID	Net (kg)	Matrix	M Code	NM	MT	Auth	Remarks
1	DXPS 571 F1	12.75	NITRATE SALTS		16.98	52	5/11	
2	DXPS 572 FD	25	NITRATE SALTS		11.48	52	5/11	
3	DXPS 573 F1	20	NITRATE SALTS		5.57	52	5/11	
4	DXPS 574 F1	3.64	NITRATE SALTS		36.38	52	5/11	
5	DXPS 575 F1	23.41	NITRATE SALTS		15.99	52	5/11	
7	DXPS 577 FA	7.27	NITRATE SALTS		5.72	52	5/11	
		92.05 kg						

1772 7771

Best Available Copy

Attachment 2 – CCP Radiography Data Sheet

Page 1 of 3

Section 1: General Information	
☑ RTR Examination ☐ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-HERTR-12-0049
Examination Date:	06/14/12
Waste Container ID:	88957
Video/Audio Recorded Media Number:	LA-HERTR-12-0049 A
Procedure and Revision No.:	CCP-TP-053 Rev. 11
NCR(s) associated with the container? (e.g., Prohibited Items)	☑ NO ☐ YES NCR No.: NCR-LANL-1050-12 NCR No.: NCR-LANL-1051-12

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: 169.0 kg. Tare Wt: 36.1 kg. Net Wt: 132.9 kg.
Rigid Liner and Liner Vent Description: (e.g., "90 mil liner – NO Lid" or "NO Liner")	90mil Liner - No Liner Lid
Number of Layers of Confinement:	Appears to be 1 layer
Volume Utilization Percentage:	65 %

Attachment 2 – CCP Radiography Data Sheet (Continued)

Page 2 of 3

Waste Container ID: 88957

Section 3: Container Inventory and Comments (Detailed descriptions)
Scrap metal
Leaded rubber gloves apron MS 6/19/12
Plastic spray bottle
Homogeneous solid material

Section 4: Packaging Material and Waste Material Parameters	
Packaging Material:	Estimated Weight (kg)
Steel (ST):	27.7
Plastics (PP): Plastic Liner Bag and 90mil Liner	8.4
Others:	0.0
Total Packaging Weight:	36.1
Waste Material Parameter:	Estimated Weight (kg)
Iron-based Metal / Alloys (IM):	1.5
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	
Other Inorganic Materials (OI):	
Cellulosics (C):	
Rubber (R):	50.0
Plastics (waste materials) (XPM):	0.2
Organic Matrix (OR):	
Inorganic Matrix (IN):	81.2
Soils (S):	
Total WMP Weight:	132.9

Attachment 2 – CCP Radiography Data Sheet (Continued)

Page 3 of 3

Waste Container ID: 66957

Section 5: RTR Summary (Questions answered "YES" will be explained in the Comments block, except for Question 11)	Yes	No
Is there observable liquid?	☑	☐
Is there any observable liquid in internal containers, more than 60 milliliters or 3 percent by volume, whichever is greater?	☐	☑
Is the total volume of observable liquid in the outermost container **GREATER** than 1% of the container?	☑	☐
Is there observable liquid in payload containers with an EPA Hazardous Waste Number of U134?	☐	☑
Is there an indication of non-radionuclide pyrophoric materials, such as elemental potassium?	☐	☑
Is there an indication of hazardous wastes not occurring as co-contaminants with TRU mixed wastes (non-mixed hazardous wastes)?	☐	☑
Is there an indication of wastes incompatible with backfill, seal and panel closures materials, container and packaging materials, shipping container materials, or other wastes (i.e., waste does NOT match TRUCON Code(s))?	☐	☑
Is there an indication of wastes containing explosives or compressed gases?	☐	☑
Is there an indication of PCBs liquids?	☐	☑
Is there an indication of the waste exhibiting the characteristic of ignitability, corrosivity, or reactivity (EPA hazardous waste numbers of D001, D002, or D003)?	☐	☑
Is the physical form of the waste inconsistent with the Waste Stream Description or the Waste Matrix Code?	☑	☐
CH or RH TRAMPAC		
Are there heat-sealed bags (unvented) GREATER than 4 liters and LESS than 380 square inches in the waste, or heat sealed bags not authorized in the RH TRUCON Code?	☐	☑
Were there Non-approved Closure Methods used on liner bags or inner bags greater than 4 liters?	☐	☑
Are there sealed containers GREATER than 4 liters?	☐	☑
Are there indications of inadequate protection for heavy and/or sharp objects?	☐	☑

Comments: NCR-LANL-1050-12 - Container currently assigned to Waste Stream LA-MHD01.001. Waste appears to be greater than 50% homogeneous; therefore, the waste does not match the waste stream description or the waste matrix code. NCR-LANL-1051-12

RTR Operator:

Print Name	Signature	Date
Michael Simmons	Michael Simmons	06/14/12

SP 21
CCP
IM DR
6.10.12
72
9.9.12

ATTACHMENT 1
Page 1 of 2

HYDROGEN/VOC SAMPLING USING GAS CHROMATOGRAPHY DATA SHEET

5.[1] Sample Date: 6/17/11

5.[7] Certified CCP Technician:

CCP (Print)	Signature	Z #	Date
Michael Simmons	[signature]	295443	7/8/11
	/	/	/

Container No. (5.[1]):	88957 (?)	U1034 (12)	S870236 (12)
Container Type (SWB, 110/85/55-gal) (5.[1]):	55 gal.	55 gal.	55 gal.
Current Filtered Vent No. (5.[1]):	19ds	19ds	72
New Filtered Vent No.: (5.[8][A]):	19ds	19ds	72
WIPP-Approved Filtered Vent (5.[8][B]):	☒ SAT ☐ UNSAT	☒ SAT ☐ UNSAT	☒ SAT ☐ UNSAT
VOC	Value (ppm) (5.[10])		
Benzene	21.85		
Chlorobenzene			
Cyclohexane			
1,1-Dichloroethane			
1,2-Dichloroethane			
1,1-Dichloroethylene			
cis-1,2-Dichloroethylene			
Ethyl benzene			
Ethyl ether			
Toluene	7.12		
1,2,4-Trimethylbenzene			
1,3,5-Trimethylbenzene			
m- and p-Xylene			
o-Xylene			
Acetone			
1-Butanol			
Methanol	29.43		
Methyl ethyl ketone			
Methyl isobutyl ketone			
Total CCP VOC value (ppm) (5.[11]):	58.40	0	0

ATTACHMENT 1
Page 1 of 1

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

5.[1] Sample Date: 6/17/11

Container No. (5.[1])	88957					
Filtered Vent Type (5.[1])	gds					
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])	58.40 ppm	ppm	ppm	ppm	ppm	ppm
Hydrogen Reading (< 64,000 ppm) (5.[5])	Ø ppm	ppm	ppm	ppm	ppm	ppm
Methane Reading (< 16,000 ppm) (5.[5])	Ø ppm	ppm	ppm	ppm	ppm	ppm

No Thermal Events 7/26/12

5.[7] Certified CCP Technician:

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

Reviewed By: Gabe Romero (CCP (Print)), 230973 (Z #)

Comments: Re-do for Julie per telephone conversation

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

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

6.1[2][B]/ 6.1[3] Performed By: Alicia Herrera (Waste Handling Operator (print)), [signature] (Signature), 198450 (Z #), 7/26/12 (Date)

Best Available Copy

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\110617c\
Data File : 88957.D
Acq On : 17 Jun 2011 9:00 am (#1); 17 Jun 2011 8:59 am (#2)
Operator : SA
Sample :
InstName : Unit 8
Misc : 55 GALLON LFL DRUM FROM UNDER DRUM LID (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jun 17 09:38:29 2011
Quant Method : C:\msdchem\1\METHODS\Vocgas.m
Quant Title : Flammable Gas Analysis for Transportation
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
3) Fluorobenzene	3.256	96	3020185	206.75 ppm	0.00
15) Chlorobenzene-d5	5.933	117	2155176	183.50 ppm	0.00
Target Compounds					Qvalue
4) Methanol	0.782	31	9052	29.43 ppm	100
12) Benzene	2.864	78	143028	21.85 ppm	96
17) Toluene	4.766	92	31853	7.12 ppm	99

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

Vocgas.m Fri Jun 17 09:39:04 2011

4-19-13

0550 Assuming WCRR operations center - JCleemen
0620 Pre-job being conducted by SOS. Briefing to Shift order WCRR-SH-13-001, EP-WCRR-PO-DOP-0203 (Rounds) EP-WCRR-PO-DOP-0201 (mode change) and use of emergency break during forklift operations.
0650 Pre-job concluded.
0652 Beginning outside rounds.
0703 Item #3 on the rounds is unsat. FSR in place, okay to proceed.
0705 Beginning inside rounds.
0710 Outside rounds complete.
0722 Item #63 on the rounds is OOS. POD in place, okay to proceed.
0732 Inside rounds complete.
0740 Both rounds reviewed by SOS.
0743 Mode change complete. We are now in operations in WCRRF yard and 50-69.
0746 Bagging on drum #88957. PPE check is Sat.
0758 Bag on complete.
0914 Bagging off 1 daughter, bagging on another daughter. PPE Check is Sat.
0929 Bag on complete.
0950 LAFD tour of 50-69
1035 Bagging off 88957, bagging on S815301.
1100 Bag on complete.
1332 Initiating a drum movement from transportainer to 50-69.
1345 Drum movement into facility complete.
1442 Denesting 1 drum.
1450 Second LAFD tour of 50-69.
1516 Denesting complete. Bagging off second daughter, bagging on S871917. PPE check is Sat.
1604 Bag on complete.
1627 Beginning outside rounds
1633 Item #3 is unsat, okay to proceed.
1643 Outside rounds complete.
1700 Initiating a drum movement from 50-69 to a transportainer.
1706 Beginning inside rounds.
Continued on next page - JCleemen

4-19-13 Continued from previous page. KCleman
1714 Drum movement out of facility complete.
1719 Item #63 is OOS, okay to proceed.
1722 Inside rounds complete.
1728 Bagging off S871917. PPE checks Set.
1754 Bag off complete.
1807 Mode change complete. We are now in Warm Standby in WX yard and. 50-69.
4-19-13 1830 End of day. OCO position secured. KCleman.
HG
JJ

No further entries this page.

4/19/13 WCRR SOS Log Book

0600 Assuming SOS position for the day [illegible]

0615 Starting Pre-Job brief. Safety Topic, Discussed 2 man rule for lifting POC lids. Briefings, on Round sheets POP-0203, R31, WCRR & Bldg 50-69 TSR Mode Change POP-0201 R8, Shift order providing direction on the operation of the Inner Roll-up door in 50-69. Door maybe opened electrically, Must manually be lowered. No shipments in or out. Discussed contamination that operators had on previous shift

0640 Concluded Pre-Job brief.

0740 Rounds Reviewed and signed. Not able to start rounds first thing this morning due to briefing being conducted on rounds for new changes.

0743 Mode Change Complete WCRR yard and 50-69 are in Operations.

0746 Bagging on first drum for the day. Bagging on 88957. Parent is a priority to Close out Solution Package

0914 Bagging off first daughter and will be bagging on a second daughter

0930 Turning Over SOS position to Clayton Mullins [illegible]

0931 Assuming SOS position. [illegible]

0950 LAFD here to tour 50-69.

1100 ~~1035~~ CM 4-19-13 Bagged off/on, processing second drum.

1345 Movement into 50-69 complete.

1450 LAFD here for a second tour of 50-69.

1516 Bagged off/on as well as denested to process third drum.

1714 Movement out of 50-69 complete.

1739 ~~1744~~ CM 4-19-13 Signed off on the rounds.

1754 Bagged off final drum.

1807 Mode change complete, WCRR yard and 50-69 are now in Warm Standby.

1818 Securing SOS position. [illegible]

No Further Entries on this Page

0000 Assumed the WCRR SOM position. [signature]
0015 Attended the pre-job briefings conducted by the SOS. A very thorough pre-job conducted with incoming shift. Went over Shift order #WCRR-SH-13-001 "Inter Roll up Door Instructions". Operators also had to brief to new revision to round sheets. Rounds were not started until after operators are all briefed.
0700 TA54 SOM call in to status WCRRF. Safety Topic: Do not remove any postings without closing authorized.
0743 Mode change complete. WCRR YARD/50-69 from WARM/WARM to OPERATIONS/OPERATIONS.
0744 Operations bagging on first drum of the day from SP#72(A).
0915 Met with LAFD to tour WCRR YARD, 50-69 ARTIC operations. RP-1 briefed to RWP. SOM discussed escort visitor orientation.
1030 LAFD tour complete. Exiting facility.
1050 SOM going over to TA46 to sign facility work package.
1120 SOM returned back from TA46.
1210 Operations coming out for lunch. Processed parent (from SP#72A) resulted in 2 daughters. Second drum bagged on to KLCG.
1240 Labors on-site to pickup A frame gantry crane per B Walkers request.
1315 Meeting with LAFD to tour WCRR YARD 50-69 ARTIC operations RP-1 briefed to RWP. SOM discussed escort visitor orientation.
1415 Half of the LAFD tour got called out to respond will be back later.
1445 Second half of LAFD on-site to finish completing tour.
1515 Tour complete.
1800 Operations completed 3 parents producing 5 Parents.
1807 Mode change complete. WCRR YARD/50-69 from OPERATIONS/OPERATIONS to WARM/WARM.
1810 Turn over with the OM. Status of WCRR.
1835 Securing the SOM position. [signature]

JF 4-23-13

No further Entries this page.

SIGNATURE [signature] DATE 4-19 2013
READ AND UNDERSTOOD DATE 20

CCP Radiography Data Sheet

CCP-TP-053 Attachment 2

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0062
Examination Date:	4/25/2013
Waste Container ID:	93515
Video/Audio Recorded Media Number:	LA-RTR2-13-0062 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 12
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3110
Waste Stream I.D.:	LA-MIN02-V.001
Waste Container Weights:	Gross Wt.: 157.0 kg Tare Wt.: 33.4 kg Net Wt.: 123.6 kg
Rigid Liner and Liner Vent Description:	Liner: [X] No [ ] Yes Lid: [X] No [ ] Yes Type: [ ] 30-mil [ ] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [ ] Yes [X] N/A Punctured: [X] No [ ] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [ ] No [X] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 1 layer
Volume Utilization Percentage:	85 %

CCP Radiography Data Sheet

Waste Container ID: 93515

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):	4.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	99.6
Soils (S):	
Total WMP Weight:	123.6

CCP Radiography Data Sheet

Waste Container ID: 93515

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		4/25/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	93515	Count Sequence Number:	15630
Operator:	DCLTD231\Operator		
Assay Start:	4/26/2013 10:47:33 AM		
Description 1:	2LANDA1147		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gal Drum		
Weight:	Net: 124.0 kg	Net:	124.0 kg
Container:	Volume: 208.0 l	Full:	85.0 %
Density:	0.700 kg /l		

System Configuration

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

Errors quoted at 1.000 sigma

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number:	15630	Batch Number:	2LANDA1147
Assay Instrument:	HENC #2	Location:	LANL TA-54
Analysis Method:	CCP-TP-063 v 14	Software Version:	NDA 2000 V.4.0
Item ID:	93515	Analysis Date:	4/26/2013

Net Weight	124000.0 g		
Pu mass	8.26E+001	+- 1.70E+001	g
TRU Alpha Activity	1.98E+001	+- 7.48E+000	Ci
TRU Activity Concentration	1.60E+005	+- 6.03E+004	nCi/g
Pu-239 Equivalent Activity	2.00E+001	+- 7.48E+000	Ci
Pu-239 FGE	7.80E+001	+- 1.60E+001	g
Decay heat	6.48E-001	+- 2.50E-001	W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	2.06E-001	1.47E-004	2.72E-005	5.35E-006
PU238	7.58E-003	1.31E-001	2.71E-002	3.67E-005
PU239	7.76E+001	4.88E+000	1.01E+000	1.36E-003
PU240	4.96E+000	1.14E+000	2.35E-001	3.19E-004
AM241	3.93E+000	1.37E+001	7.41E+000	8.14E-002
PU241	9.73E-002	1.01E+001	2.09E+000	2.83E-003
PU242	1.65E-002	6.57E-005	1.35E-005	0.00E+000
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	1.02E-006
U233	<LLD	<LLD	0.00E+000	1.05E-002
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	3.25E-006
U238	<LLD	<LLD	0.00E+000	2.89E-005
AM243	6.63E-003	1.34E-003	2.48E-004	7.68E-006

Errors quoted at 1.000 sigma

Operator: Maria [signature] Date: 4.30.13

ITR: [signature] Date: 5-1-13

Automated Independent Technical Review

Count Sequence Number: 15630 Batch Number: 2LANDA1147
Counter ID: HENC #2
Container ID: 93515
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 4/26/2013

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

Expert Review by: Sheri Chamberlin Date: 4-30-13

J13

Waste Container ID: **93515**

BDR Number: **LA13FG2052**

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

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	90.37	U
74-82-8	Methane	142.14	U
67-56-1	Methanol	35.23	U
60-29-7	Ethyl Ether	0.96	U
75-35-4	1,1-Dichloroethylene	6.38	U
67-64-1	Acetone	18.08	U
75-34-3	1,1-Dichloroethane	4.08	U
156-59-2	cis-1,2-Dichloroethene	0.76	U
78-93-3	Methyl ethyl ketone	11.73	U
110-82-7	Cyclohexane	5.10	U
71-43-2	Benzene	4.15	
107-06-2	1,2-Dichloroethane	3.66	U
71-36-3	1-Butanol	1.84	U
108-10-1	Methyl isobutyl ketone	9.82	U
108-88-3	Toluene	8.02	U
108-90-7	Chlorobenzene	4.10	U
100-41-4	Ethylbenzene	3.57	U
108-38-3/106-42-3	m- and p-Xylene	1.92	U
95-47-6	o-Xylene	2.10	U
108-67-8	1,3,5-Trimethylbenzene	1.96	U
95-63-6	1,2,4-Trimethylbenzene	2.13	U

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

InstName : Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\130509c\
Data File : 93515.D
Acq On : 9 May 2013 3:27 pm (#1); 09-May-13, 15:26:39 (#2)
Operator : SA
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 09 15:35:34 2013
Quant Method : C:\msdchem\1\METHODS\vocgas.m
Quant Title : Flammable Gas Analysis
QLast Update : Thu Jan 24 09:52:49 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
3) Fluorobenzene	3.568	96	3738571	201.25	ppmv	0.00
15) Chlorobenzene-d5	5.900	117	3173508	177.00	ppmv	0.00
Target Compounds						Qvalue
12) Benzene	3.245	78	55553	4.15	ppmv	96

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

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0061
Examination Date:	4/24/2013
Waste Container ID:	93516
Video/Audio Recorded Media Number:	LA-RTR2-13-0061 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 12
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3110
Waste Stream I.D.:	LA-MIN02-V.001
Waste Container Weights:	Gross Wt.: 79.5 kg Tare Wt.: 33.4 kg Net Wt.: 46.1 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: 93516

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):	1.0
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	2.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	43.1
Soils (S):	
Total WMP Weight:	46.1

CCP Radiography Data Sheet

Waste Container ID: 93516

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

Comments: N/A

RTR Operator:

Benito Maestas		4/24/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	93516	Count Sequence Number:	22622
Operator:	D3PW2DK1\operator		
Assay Start:	4/25/2013 10:28:07 AM		
Description 1:	1LANDA1758		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 46.1 kg	Net:	46.1 kg
Container:	Volume: 208.0 l	Full:	45.0 %
Density:	0.490 kg /l		

System Configuration

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

Errors quoted at 1.000 sigma

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number:	22622	Batch Number:	1LANDA1758
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:	93516	Analysis Date:	4/25/2013

Net Weight	46100.0 g			
Pu mass	1.18E+001	+-	2.01E+000	g
TRU Alpha Activity	3.23E+000	+-	1.26E+000	Ci
TRU Activity Concentration	7.01E+004	+-	2.73E+004	nCi/g
Pu-239 Equivalent Activity	3.26E+000	+-	1.26E+000	Ci
Pu-239 FGE	1.11E+001	+-	1.88E+000	g
Decay heat	1.06E-001	+-	4.20E-002	W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	4.78E-002	3.42E-005	5.16E-006	1.70E-006
PU238	1.08E-003	1.88E-002	3.19E-003	3.41E-005
PU239	1.11E+001	6.97E-001	1.18E-001	1.27E-003
PU240	7.09E-001	1.63E-001	2.77E-002	2.97E-004
AM241	6.78E-001	2.35E+000	1.25E+000	3.59E-002
PU241	1.39E-002	1.45E+000	2.46E-001	2.63E-003
PU242	2.37E-003	9.39E-006	1.59E-006	0.00E+000
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	4.44E-007
U233	<LLD	<LLD	0.00E+000	3.39E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	9.71E-007
U238	<LLD	<LLD	0.00E+000	1.03E-005

Errors quoted at 1.000 sigma

Operator: _____ Date: 4.30.13

ITR: _____ Date: 5-1-13

Automated Independent Technical Review

Count Sequence Number: 22622 Batch Number: 1LANDA1758
Counter ID: MCS HENC #1
Container ID: 93516
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 4/25/2013

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; 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: 4-30-13

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **93516**

BDR Number: **LA13FG2048**

Sampling Date: **5/3/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	139.85	
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	3.34	
107-06-2	1,2-Dichloroethane	3.66	U
71-36-3	1-Butanol	1.84	U
108-10-1	Methyl isobutyl ketone	9.82	U
108-88-3	Toluene	8.02	U
108-90-7	Chlorobenzene	4.10	U
100-41-4	Ethylbenzene	3.57	U
108-38-3/106-42-3	m- and p-Xylene	1.92	U
95-47-6	o-Xylene	2.10	U
108-67-8	1,3,5-Trimethylbenzene	1.96	U
95-63-6	1,2,4-Trimethylbenzene	2.13	U

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

InstName : Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\130503c\
Data File : 93516.D
Acq On : 3 May 2013 11:10 am (#1); 03-May-13, 11:09:28 (#2)
Operator : SA
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 14 08:27:35 2013
Quant Method : C:\msdchem\1\METHODS\vocgas.m
Quant Title : Flammable Gas Analysis
QLast Update : Thu Jan 24 09:52:49 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
3) Fluorobenzene	3.597	96	4299495	201.25	ppmv	0.03
15) Chlorobenzene-d5	5.920	117	3703468	177.00	ppmv	0.02
Target Compounds						Qvalue
1) Hydrogen	1.596	GC1	994m	139.85	ppmv	
12) Benzene	3.274	78	51354	3.34	ppmv #	92

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

34

S824184

S824184

Container Profile 760803

File Options Reports Help

S824184

760803	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

S824184

- S824184
  - LA00000068644 – EMPTY
  - LA00000068624 – LANL
  - LA00000068628 – LANL
    - LASB50082
  - LA00000068620 – WCS
    - LASB50002

Task History

Transfer Details

Transfer Amount	Transfer Unit	Item	Measured Weight	Measured Weig...
33.33	%			

Working Copy
Date: 11/11/13 HS

ATTACHMENT 1
Page 1 of 4

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: S824184

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

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

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

4.1[6][B] Parent Waste Container RCRA Designations: D007 D009 D008 N/A 04 11-11-13

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

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

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

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

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

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

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

Performed By: Frederick Ashlock / [signature] / 122884 / 11-11-13
Waste Handling Tech (print) Signature Z # Date

ATTACHMENT 1
Page 2 of 4

4.1[6][B] Parent Waste Container No.: S824184

5.[18] Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable: 421.8 lb

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

6.2[5][B]/ 6.2[6] Total Parent Drum Weight (lb) 504.8 lb

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

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

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

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

ATTACHMENT 1
Page 3 of 4

4.1[6][B] Parent Waste Container No.: S824184

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	68624	68628		N/A
10.1[4]	Daughter Drum Filter No.	LM-841	LM-850		
10.1[4]	Daughter Drum Bag Filter No.	L-10351	L-10141		
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	B.O.P			
	Model No.	6CPRCIS-25816			
	Serial No.	L-6794			
	Date of Manufacture	1-13			
10.2[5]	POC ID No	68620		N/A	
10.2[7][B]/10.2[6]	POC Item Description	Nitrate Salts Kitty Litter			
10.2[13]	POC Assembly closed per Manufacturer's instructions. (Initial and Z#)	DB 276202			
10.2[14]	POC Assembly Gross Weight (lb)	402.8			
10.2[15]	POC Rad. Survey Results (mrem/hr)	1,100			
10.3[3][A]	Approx. Containerized Liquid Vol./Units	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	
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%			N/A
10.5[3]/10.6[2]	Description Waste Added During Processing	Kitty Litter	Kitty Litter Shoot bags		

ATTACHMENT 1
Page 4 of 4

4.1[6][B] Parent Waste Container No.: 5824184

Comments: 1 Poly Liner Lid, Hex ARMOR gloves, Nitrate Salts, Lead Shielding, Kitty Litter, Plastic, ab

11.1[1] Performed By: Adam Segovia, [signature] 2762021 11-11-13
Waste Handling Tech (print) Signature Z # Date

11.1[8] Reviewed By: Jose Jerez, [signature] 1221452, 11/12/13 0420
SOS or designee (print) Signature Z # Date/Time

Working Copy
Date: 11/7/13 HS

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
Manufacture Date: 2013

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

	Filtered Vent	2-in. Bung
M&TE No.:	100216	036245
Cal. Expiration Date:	12/18/13	8/5/14
Tolerance:	+/- 4% CW +/- 6% CCW	+/- 3% CW +/- 6% CCW

Overpack filtered vent information:

Manufacturer: NUCFIL
Model No.: 013
Serial No.: JL1036
Manufacture Date: 10/11

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

5. [11] Performed By: JOE QUINTANA / Joe Q 239987 / 11/7/13
Waste Handling Technician (print) Signature Z# Date

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

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

Comments: N/L

8.1[1] Performed By: JOE QUINTANA / Joe Q 239987 / 11/7/13
Waste Handling Technician (print) Signature Z# Date

8.1[6] Reviewed By: Jose Jerez / [signature] 1221452 / 11/12/13
Supervisor or designee (print) Signature Z# Date

Working Copy
Date: 11-11-13

ATTACHMENT 2
Page 1 of 2

WCRRF DRUM CLOSURE DATA SHEET

6.[3] Drum ID No.: 686414

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: Adam Scovia (Operator (print)) (Signature) Z762021 (Z #) 11-11-13 (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:	N in-lb	ft-lb
Tolerance (+/-):	A	

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

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

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

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

11-7-13 jc

ATTACHMENT 1
Page 1 of 2

WCRRF DRUM PREPARATION DATA SHEET

5.[34][E] Drum ID No.: 68624

5.[3] Drum information:
Purchase Order No.: 501578
Lot No.: 0240119
Manufacture Date: 13

5.[17] Drum Liner Bag/Filter Assembly:
Manufacturer: BOP
Model No.: 6CPVC1.5ZSPVC
Serial No.: L-10351
Manufacture Date: 6-13

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

	Filtered Vent	2 in. Bung
M&TE No.:	100216	036245
Cal. Expiration Date:	12-18-13	8-5-14
Range in ft-lb:	40-200	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] 2047112 / 11-7-13
Operator (print) Signature Z # Date

5.[23] Filtered vent information:
Manufacturer: NUCFIL
Model No.: 019DS
Serial No.: LM-841
Manufacture Date: 12-12

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

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

5.[30] Scale File ID number: 019065

ATTACHMENT 1
Page 2 of 2

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

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

5.[34][E] Drum ID No.: 686624

Comments: N/C

5.[35] Performed By: Brandon Chavez / [signature] 224712 / 11-7-13
Operator (print) Signature Z # Date

7.1[4] Reviewed By: Jose Torez / [signature] / 221452 / 11/12/13
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 2
Page 1 of 2

WCRRF DRUM CLOSURE DATA SHEET

6.[3] Drum ID No.: 68624

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

M&TE No.: 038369
Cal. Expiration Date: 12-18-13
Range in ft-lb: 16-80
Tolerance: +/-3%cw +/-6%ccw

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

Performed By: Adam Segovia (Operator (print)) [signature] (Signature) 076702 (Z #) 11-11-13 (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: 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.: 68624

6.[26] Scale File ID number: 019065

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

6.[28] Drum gross weight: 151.6 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: Adam Segovia (Operator (print)) | [signature] (Signature) | 276702 (Z #) | 11-11-13 (Date)

7.1[4] Reviewed By: Jose Jorez (Supervisor or designee (print)) | [signature] (Signature) | 221452 (Z #) | 11/12/13 (Date)

Working Copy
UET
Date: 11-7-13 gr

ATTACHMENT 1
Page 1 of 2

WCRRF DRUM PREPARATION DATA SHEET

5.[34][E] Drum ID No.: 68628

5.[3] Drum information:
Purchase Order No.: 501578
Lot No.: 0240119
Manufacture Date: 13

5.[17] Drum Liner Bag/Filter Assembly:
Manufacturer: BOP
Model No.: 6cpvc1.525pvc
Serial No.: L-10141
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	8-5-14
Range in ft-lb:	40-200	10-80
Tolerance:	±4%cw ±6%ccw	±3%cw ±6%ccw

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

Performed By: Brandon Chavez / [signature] BCH12 11-7-13
Operator (print) Signature Z # Date

5.[23] Filtered vent information:
Manufacturer: NUCFIL
Model No.: 019DS
Serial No.: LM-850
Manufacture Date: 12-17

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

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

5.[30] Scale File ID number: 019065

ATTACHMENT 1
Page 2 of 2

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

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

5.[34][E] Drum ID No.: 68628

Comments: N/C

5.[35] Performed By: Brandon Chavez / [signature] 122742 / 11-7-13
Operator (print) Signature Z # Date

7.1[4] Reviewed By: Jose Perez / [signature] 122452 / 11/12/13
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 2
Page 1 of 2

WCRRF DRUM CLOSURE DATA SHEET

6.[3] Drum ID No.: 68628

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

M&TE No.: D38369
Cal. Expiration Date: 12-18-13
Range in ft-lb: 16-80
Tolerance: +/-3% cw +/-6% ccw

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

Performed By: ADAM SEGOVIA / [signature] / Z267021 / 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.:		
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.: 68628

6.[26] Scale File ID number: 019065

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

6.[28] Drum gross weight: 370.0 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: Adam Segovia (Operator (print)) [signature] (Signature) 2376702 (Z #) 11-12-13 (Date)

7.1[4] Reviewed By: Joe Perez (Supervisor or designee (print)) [signature] (Signature) 1221152 (Z #) 11/12/13 (Date)

Working Copy
Date: 11/11/13 HS

ATTACHMENT 3
Page 1 of 1

WCRRF PARENT 55-GAL DRUM PREPARATION DATA SHEET

6.3[21] Prepared Parent 55-Gal Drum Number: S824184

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): 421.8

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

Comments: N/C

8.1[1] Performed By: Fredom Abbey / [signature] / 122874 / 11-11-13
Waste Handling Technician (print) Signature Z # Date

8.1[7] Reviewed By: Jose Jerez / [signature] / 122452 / 11/12/13
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 / 11/12/13 / 0423
SOS/SOM or designee (print) Signature Z # Date Time

72

ATTACHMENT 1

WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Production Control

Container ID: S824184 Container Type: 85-GAL Gross Weight (lbs): 427
Inner Seal #: 009786 Filter Prefix: LAVC Filter Serial #: 00143; 03703
AK Waste Stream: LA-MHD01.001 ✓ Certified RTR BDR: No BDR ✓
TWSR Comments: LEACHED SOLIDS NITRATE SALTS ✓
Total PE-Ci Activity: 2.87E+00 ✓ Equivalent Combustible PE-Ci: 1.08E+00 ✓ AM-241 PE-Ci: 2.33E-01
Total Fissile Gram Equivalents: 31.7 ✓ Total Surface Dose Rate (mrem/hr): 6 ✓
EPA Code(s): None ✓
NCR RTR/NDA Comment: None ✓
RTR Pre-Screen Date: 1/14/2007 ✓ Comment: Impenetrable Obj.
Certified RTR Comment: None ✓

Prohibited Items: ☐ Sealed > 4 Liters ☐ Liquid ☐ Pressurized Container ☑ Impenetrable Item ☐ Other
Security Determination: ☑ Green ☐ Yellow
Remediation Determination: ☐ VE ☐ PID ☐ Split ☑ Repack
Estimated 30-cm Dose Rate (mrem/hr): ☐ <100 ☑ >100 and <1,000 ☐ >1,000 and <10,000 ☐ >10,000
TRUCON Code: LA125M Production Control Comments: Ensure EPA Codes D007, D008, and D009 are on the label. A minimum of 1.2 volumes of kitty litter/zeolite must be mixed with 1.0 volume of nitrate salts.

Performed By: R. W. Jones / R. W. Jones / 117434 / 10.6.10
Production Control (Print) Signature Z Number Date
SUSAN S. RAMSEY / Susan S. Ramsey / 100481 / 11/28/12

WDP Engineering

Chemicals Present (e.g., pyrophorics, acids, bases, shock sensitive, organic liquids, peroxides, crown ethers): ☐ Yes ☒ No ☐ Unknown
Processing Determination: ☒ Accept ☐ Reject
WDP Engineering Comments: NITRATE SALTS. NET WT = 367 LBS IN 2 ITEMS. MAX ITEM WT = 66.59 KG (147 LBS). LIGHTER ITEM CONTAINS 25.19 GRAMS AUSZ AND MAY REQUIRE RWP FOR >100 MREM/HR. NO CURRENT RTR DATA. FAILED RTR PRE-SCREEN. NITRATE SALTS HAVE PREVIOUSLY CONTAINED UNDOCUMENTED FREE LIQUIDS. OPEN CAUTIOUSLY.

Performed By: ROBERT L. GRIFFIS / Robert L. Griffis / 130352 / 11-3-10
WDP Engineering (Print) Signature Z Number Date

TRU Remediation Operations

☑ Waste Container Information Evaluated ☐ Less Than 170 lbs ☐ RTR Video Available
Other Specific Safety Concerns: Do not push or press on waste with hands. Slide the 2 item over weight. Use Hexarmour gloves
Processing Determination: ☑ Accept ☑ Reject
TRU Remediation Operations Comments: Use proper ratio of kitty litter to waste in accordance with the procedure. 1-8-13

Performed By: Robert Rios / Robert Rios / 092205 / 12-8-10
TRU Remediation Operations (Print) Signature Z Number Date
Jose Jerez / Jose Jerez / 221452 / 1-8-13

IHS Review [illegible] CSO, No Concerns
12/4/12 ROBIN SHULT 282 272995 1-14-13

Noncertified TRU Waste Drum Item Information

DrumID: 009786

Item No	ItemID	Process Status	Net Wt (kg)	Matrix	Meas Code	SNM (g)	MT	Auth (Pg/Ln)	Comments
1	IXFS-591-FB	EV	43.630	NITRATE SALTS		25.19	52	5/11	
2	IXFS-592-F1		66.590	NITRATE SALTS		8.53	52	5/11	

Noncertified Waste Drum Material Summary

Gross Wt (kg): 193.6

Material Type	SNM (grams)	Items Net Wt (kg)
52	33.72	110.22
Totals	33.72	110.22

ATTACHMENT 1
Page 1 of 2

HYDROGEN/VOC SAMPLING USING GAS CHROMATOGRAPHY DATA SHEET

7.[1] Sample Date: 10.12.10

7.[7] Certified CCP Technician:

CCP (Print)	Signature	Z #	Date
Gabe Romero	[redacted]	1236973	10-20-10
	/	/	/

Container No. (7.[1]):	S803304	S804541	S804184
Container Type (SWB, 110/85/55-gal) (7.[1]):	55gal	55gal	55gal
Current Filter Vent No. (7.[1]):	72	72	72
New Filter Vent No.: (7.[8][A]):	72	72	72
WIPP-Approved Filter Vent (7.[8][B]):	☑ SAT ☐ UNSAT	☑ SAT ☐ UNSAT	☑ SAT ☐ UNSAT
VOC	Value (ppm) (7.[10])		
Benzene	1.78	5.85	11.08
Chlorobenzene			
Cyclohexane			
1,1-Dichloroethane			
1,2-Dichloroethane			
1,1-Dichloroethylene			
cis-1,2-Dichloroethylene			
Ethyl benzene			
Ethyl ether			
Toluene			
1,2,4-Trimethylbenzene			
1,3,5-Trimethylbenzene			
m- and p-Xylene			
o-Xylene			
Acetone			
1-Butanol			
Methanol			
Methyl ethyl ketone			
Methyl isobutyl ketone			
Total CCP VOC value (ppm) (7.[11]):	1.78	5.85	11.08

ATTACHMENT 1
Page 2 of 2

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

Container Number (7.[1]):	S823304	S824541	S824184
Hydrogen Reading (ppm) (7.[10]):	381.65 ppm	317.48 ppm	299.97 ppm
Methane Reading (ppm) (7.[10]):	Ø ppm	Ø ppm	Ø ppm
Total VOC Reading (ppm) (7.[11]):	1.78 ppm	5.85 ppm	11.08 ppm
Filter Type (7.[9][F][c]/7.[9][G][a]):	72	72	72
WIPP Approved (SAT/UNSAT) (7.[9][F][c]/7.[9][G][a]):	SAT	SAT	SAT
Torque Wrench M&TE/ID Number (7.[9][F][a]/7.[9][G][a]):	N/A	N/A	N/A
Torque Wrench Calibration Due Date (7.[9][F][a]/7.[9][G][a]):	N/A	N/A	N/A
Torque Wrench Tolerance (7.[9][F][a]/7.[9][G][a]):	N/A	N/A	N/A
VERIFY Torque Wrench is within acceptable range as specified on Cal Certificate. (7.[9][F][a]/7.[9][G][b])	☐ YES ☐ NO ☑ N/A	☐ YES ☐ NO ☑ N/A	☐ YES ☐ NO ☑ N/A
Filter Torque Value (7.[9][F][a]/7.[9][G][d]) *	N/A	N/A	N/A

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

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

11.1[1] Performed By: Alicia Herrera / [signature] 198480 / 10.13.10
Waste Handling Operator (print) Signature Z # Date

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

☑ No deficiencies

11.1[7][A] WCRRF waste container satisfies the following criteria: ☑ SAT ☐ UNSAT
- Hydrogen – less than or equal to 32,000 ppm
- VOC – less than or equal to 7,000 ppm

11.1[7][B]/ Reviewed By: Henry Romero [signature] 111886 / 10.27.10
11.1[8] Waste Handling Supervisor (print) Signature Z # Date

InstName : Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\101012c\
Data File : S824184.D
Acq On : 12 Oct 2010 3:09 pm (#1); 12-Oct-10, 15:08:53 (#2)
Operator : SA
Sample :
Misc : 55 GALLON SAMPLED FROM 85 GALLON OVERPACKED (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Oct 12 15:17:57 2010
Quant Method : C:\msdchem\1\METHODS\vocgas.m
Quant Title : Flammable Gas Analysis
QLast Update : Wed Aug 18 13:26:05 2010
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
3) Fluorobenzene	3.681	96	2584276	207.75	ppmv	0.04
15) Chlorobenzene-d5	6.007	117	1852799	180.75	ppmv	0.03
Target Compounds						Qvalue
1) Hydrogen	1.658	GC1	2299	299.99	ppmv	100
12) Benzene	3.345	78	130401	11.08	ppmv	96

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

vocgas.m Tue Oct 12 15:18:01 2010

11/11/13

0600 ASSUMING OPERATIONS CENTER - H SMITH
0600 STARTING OUTSIDE ROUNDS
0615 STARTING PRE-JOB BRIEFING
0635 PRE-JOB COMPLETED
0635 0620 LATE ENTRY - COMPLETED OUTSIDE ROUNDS - HS
0655 OPERATORS ENTERING FACILITY TO BEGIN PROCESSING
0713 STARTING INSIDE ROUNDS
0720 RCT SUPERVISION NOTIFIED OPS. CENTER PCM OUT OF SERVICE WILL HAVE TO MANUALLY SURVEY OUT.
0732 ITEM #63,008 INSIDE ROUNDS. OKAY TO PROCEED PER CSE DOCUMENTATION
0743 INSIDE ROUNDS COMPLETED
0745 INSIDE & OUTSIDE ROUNDS REVIEWED BY SOS
0755 MODE CHANGE WCRR YARD AND TA50-69 CHANGE TO OPERATIONS MODE
0757 BEGINNING MOVEMENT FROM TA50-194/75 TO TA-50/69 FACILITY
0829 MOVEMENT INTO TA 50-69 IS COMPLETED
0841 BAGGING ON S870381
0855 BAGGING ON COMPLETED
1051 BAGGING OFF - BAGGING ON DAUGHTER AND CONTINUING TO PROCESS
1109 BAG OF COMPLETE, AND CONTINUE TO PROCESS
1155 BAGGING OFF DAUGHTER, BAGGING ON DAUGHTER
1207 BAG OFF COMPLETED
1222 OPERATORS EXIT BUILDING FOR LUNCH, AND DISCUSSING SHIFT ALIGNMENT FOR HOLIDAYS
1335 OPERATORS RETURNING TO PROCESS
1400 STARTING OUTSIDE ROUNDS
1423 BEGINNING DENESTING AND BAGGING ON S870213
1424 COMPLETED OUTSIDE ROUNDS
1431 OPERATORS INFORMED OPERATIONS CENTER DRUM S870213 HAS BROKEN RING A AND WILL NOT BE PROCESS AT THIS TIME
1527 BAG ON - BAG OFF COMPLETE BAG ON S818449

CONTINUED ON NEXT PAGE HASMITH →

11/11/13 CONTINUED FROM PREVIOUS PAGE, H SMITH

1528 OPERATORS INFORMED OPS. CENTER HS 11/11/13 RING DISPLACE DRUM ALSO WET WITH FLUID. S870213 DID NOT PROCESS

1622 BAGGING OFF DAUGHTER BAGGING ON DAUGHTER

1640 BAG ON COMPLETE, CONTINUING THE PROCESS

1646 STARTING INSIDE ROUNDS, OKAY TO PROCEED, POD IN PLACE PER CSE DOCUMENTATION

1722 COMPLETED INSIDE ROUNDS

1734 BAGGING OFF AND BAGGING ON S824184

1740 INSIDE AND OUTSIDE ROUNDS REVIEWED BY SoS

11/11/13 HS 1800 BEING RELIEVED BY OCO TERI COLEMAN - H.SMITH

NO FURTHER ENTRIES ON THIS PAGE - H SMITH

11-11-13

1800 Assuming WCRR operations center. - JColeman

1805 Bag off/on complete.

1820 Pre-job and turnover with day shift being conducted.

1838 Pre-job concluded. Briefed to EP-WCRR-WO-DOP-0221 and EP-WCRR-WO-DOP-0222.

1858 Operators entering 5069 to begin operations on S824484.

1922 Initiating a drum movement from 5069 to a transportainer.

2002 Drum movement complete.

2004 Initiating a drum movement from transportainer to 5069.

2025 Drum movement complete.

2124 Bagging off 1 daughter, 1 POC, and bagging on another daughter.

2157 Bag off/on complete. Continuing to process S824484.

2315 S03 states that operators notified him of missing clips on the drum left. Operators beginning to detest 3 drums and will replace the clips after lunch.

11-12-13 0000 Denesting complete.

0013 Operators out for lunch.

0020 Beginning outside rounds.

0050 Outside rounds complete.

0125 Operators back from lunch.

0212 Bagging off 1 daughter, bagging on S825810

0239 Bag off/on complete.

0341 Bagging off 1 daughter, 1 POC, bagging on another POC.

0406 Bag off/on complete.

0430 Beginning inside rounds.

0452 Item #63-15005, okay to proceed per CSE documentation.

0453 Inside rounds complete.

0518 Both rounds reviewed by SOO.

11-12-13 0602 Being relieved by CCO Howard Smith - JColeman

HS

~~No further entries this page.~~

11-13 DAYSHIFT

0559 Reviewed shift turnover checklist and logbook entries and assumed the WCRR SOM position [signature]

0631 Completed attending the pre-job brief conducted by Chemirad the SOS. The safety topic was inspection of hoisting and rigging equipment. There are no transfers scheduled for today. A facility update was provided which included shift turnover information, the bottom of the glovebox requires taping and supplies are required for bag in. Shift Orders in effect were discussed WCRR-SH-13-003 R-2 - Manual Drum Movements and WCRR-SH-13-005 R0 - Precautions to prevent bag tears.

0721 RP-1 reported that the FCM-2 in Suite 69 was not functional. Messages were left for the radiological technicians - to support in repair.

0755 Mode Change: 50-69 /yard transition from cold/warm to Operations/Operations

0819 The transfer of 4 parent drums into the facility from the transportainers is completed. Observed operators wearing proper PPE, communication was adequate between the spotter and forktruck driver. Forktruck tires will require replacement.

0841 Operators initiated bag on of PARENT drum 5870381

0855 Operators completed bag on

1050 Inside operators report initiating bag off of 1 daughter, bag on another and continue.

1105 Operators initiate bag off of a daughter and bag on and continue processing.

1307 Operators complete bag on

1530 Energy Solutions PM (lead) completes discussing scheduled work for holidays.

1623 Inside Operators initiate denesting of 5870213

1731 Operators identify cracked ring therefore will hold off on 5870213 - not sling and will initiate denesting a different parent.

1527 Inside operators complete denesting, prepping and bagging on Parent 5818449

1622 Operators initiate bag off of a daughter drum and bag on of another

1640 Bag on is noted completed - and processing continues.

1735 Inside operators report bag off of daughter and bag on Parent 5824184

1801 Initiated shift turnover checklist with nightshift SOM.

1815 Relieved by R. Axtell as WCRR SOM [signature]

No further Entries this page

[signature]

11/11/13 Night Shift

1815 Reviewed shift turnover checklist, approved and posted WCRR Night shift watchbill. Assumed WCRR SOM position.

1840 Concluded pre job brief conducted by SOS. Operators briefed and signed shift orders WCRR-SH-003 R, Manual Drum Movements and SH-005 R.0 Precautions to prevent bag tears. Briefed workers to new revisions for EP-WCRR-WO-DOP-221 and 222. Safety topic was watch out for wildlife in roadways - one operator hit an Elk last week.

2002 Completed moving 6 drums from 50-69 to transportainers.

2025 Completed moving 3 drums from transportainers into 50-69 for processing.

2157 Operators completed bagging off 1 POC and 1 daughter, continuing to process

2315 SOS reported that operators identified a drum lift belly band clip missing. ML-2 custodian on shift will obtain a clip from storage when the break for lunch.

11/12/13 0000 Completed denesting 3 drums

0013 Operators breaking for lunch.

0125 Resuming operations.

0239 Completed all bag offs for parent # 5824184 (2 daughters, 1 POC total and bagged on drum # 5825810

0245 SOS reported that the belly band clip was replaced upon operators resuming operation. Also reported that denesting slings were located in 50-69.

~~0401~~ 11/12/13 0406 Completed bagging off 1 daughter and 1 POC. Continuing processing.

0520 Reviewed inside and outside round sheets.

0602 Completed review of compliance tracking schedule and updated status board.

11/12/13 0608 Relieved by J. Guadagnoli as SOM.

No further entries this page RLG

Best Available Copy

1-11-13
0600 Incoming ORRF SCS position - Orlando - starting outside
0615 Pre job briefing being conducted, performed briefing EP-WERR-WO-DOP-0222 and discussed Rigging safety
1620 Completed outside rounds
0713 Starting inside rounds
0724 Late entry pre job concluded at 0435 - Orlando
0721 Pit notified that PCM is not operable will need to manually survey operators when leaving.
0745 Rounds have been signed off
0755 Mode change performed to operations
0757 Starting movement into 50-69
0800 Late entry Operators entering 50-69 to perform rounds scale verification and retape of box outside operators moving in supplies and getting ready for reinventory of building 0455 Orlando
0829 Movement into 50-69 is complete.
0841 Bagging on 9870381
0857 Bag on complete.
1053 Bagging off 1 daughter, bagging on another daughter.
1109 Bag on, Bag off complete
1155 Bagging off 1 daughter
1207 Bag off is complete
1222 Operators exiting for lunch
1311 Operators meeting with ES on discussing shift work runs during holidays
1334 Operators entering 50-69 to continue processing
1423 Directing and bagging on 9870213
1433 Operators notifying ops center that the ring was broken on 9870213 and will not bag on in detect the problem
1515 directing of 2 drums complete, bagged on 9818449 9870213 ring is misplaced and drum is wet
1044 Starting inside rounds
1100 late entry Bagging off daughter, Bagging on a daughter at 1422 Orlando
1723 late entry Bag on, Bag off complete continuing to process 1440 - Orlando
1736 Bagging off, Bagging on 9824184
1740 Rounds have been signed off.
805 Bag on, Bag off complete.
1-11-13 1808 Being released by SCS Jose Lerez - Orlando

no further entries this page.

WORK 505 Log Book

11/11/13

1800 Assuming 505 position for the evening for Dr

1800 Performing turnover with off going 505 Clarissa Velarde

1815 Starting Pre-Job. PCM is down slow process in getting Parents out. RCO's having to do whole body task prior to them being released. Need to move out daughter and move in Parents. One Parent bagged on and ready to start. Safety Topic discussed while crossing the road, RCO hit Elk on the way home Friday morning. Briefed to two procedure 221 and 222, also briefed operator on shift events.

1840 Pre-Job complete.

1855 Operators entering 50-69 to start processing

1922 Starting cam movement out of 50-69 to Transportation, total of 6 cams being moved out

2002 Movement out Complete, starting movement into the facility of 3 Plants.

2005 Movement in Complete.

2024 Bagging off 1 daughter and 1 PC, bagging on another daughter and continuing to process.

2157 Bag off complete, continuing to process 582484

2315 Operator [illegible] that the clips for the cam fits are missing. We are about to replace those. I have them from ML-2, need to find out from operators how many are needed.

2340 Operators starting to D-Less three plants from 55 gallon overpacks.

11/11/13 2001 1900 D-Lessing to prep for lunch

11/11/13 2015 1915 Operators breaking for lunch

2015 Operators return to form crew, needed to replace 1 clip on the cam out and need to write note in the comment section of the form for inspection.

0137 Receive cam signal, cadaver leaves.

0212 Clip has been replaced. Starting to bag off 1 daughter and Parent cam no. 582588

0237 Bag on / Bag off complete

0344 Bagging off one daughter and 1 PC bagging on another PC

0446 Bag on Bag off Complete

0519 Removed tape rounds and signed.

0606 Unable to bag off last daughter and Parent due to [illegible] being locked too high, operators having to pull material out to comply. Crew will need to bag off PC per on another PC to terminate [illegible]

Hs 11/12/13 0615 Securing 505 position for the day, turning over to oncoming 505.

No further entries on this page

Best Available Copy

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0128
Examination Date:	11/14/2013
Waste Container ID:	68620
Video/Audio Recorded Media Number:	LA-RTR2-13-0128 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 14
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3110
Waste Stream I.D.:	LA-MIN02-V.001
Waste Container Weights:	Gross Wt.: 182.5 kg Tare Wt.: 145.1 kg Net Wt.: 37.4 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:	75 %

CCP Radiography Data Sheet

Waste Container ID: 68620

Section 3: Container Inventory and Comments (Detailed descriptions)

IM:

AM:

OM:

OI:

C:

R:

XPM: Plastic bags

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	109.0
Plastics (PP): Rigid Liner/Lid Liner Bag (Inside POC)	8.1
Other: Fiberboard (CP), Liner/Sleeve(Inside POC)	28.0
Total Packaging Weight	145.1
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	2.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	35.4
Soils (S):	
Total WMP Weight:	37.4

CCP Radiography Data Sheet

Waste Container ID: 68620

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

Comments: Standard Pipe Overpack Container (P.O.C.); There is separation between the liner and liner lid, therefore, the liner is vented.

RTR Operator:

Benito Maestas		11/14/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	68620	Count Sequence Number:	16722
Operator:	DCLTD231\Operator		
Assay Start:	11/15/2013 1:38:49 PM		
Description 1:	2LANDA1241		
Description 2:	POC 182.5		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gal Drum		
Weight:	Net: 37.4 kg	Net:	37.4 kg
Container:	Volume: 208.0 l	Full:	95.0 %
Density:	0.783 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:	16722	Batch Number:	2LANDA1241
Assay Instrument:	HENC #2	Location:	LANL TA-54
Analysis Method:	CCP-TP-063 v 15	Software Version:	NDA 2000 V.4.0
Item ID:	68620	Analysis Date:	11/15/2013

Net Weight	37400.0 g		
Pu mass	6.36E+000	+-	1.38E+000 g
TRU Alpha Activity	8.95E+000	+-	4.64E+000 Ci
TRU Activity Concentration	2.39E+005	+-	1.24E+005 nCi/g
Pu-239 Equivalent Activity	8.96E+000	+-	4.64E+000 Ci
Pu-239 FGE	6.04E+000	+-	1.37E+000 g
Decay heat	2.96E-001	+-	1.54E-001 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	7.27E-007
U233	<LLD	<LLD	0.00E+000	7.53E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	2.53E-006
NP237	1.21E-001	8.52E-005	1.69E-005	3.87E-006
PU238	5.81E-004	9.93E-003	2.68E-003	8.05E-004
U238	<LLD	<LLD	0.00E+000	1.89E-005
PU239	5.97E+000	3.70E-001	8.52E-002	3.00E-002
PU240	3.81E-001	8.66E-002	2.34E-002	7.02E-003
AM241	2.47E+000	8.48E+000	4.64E+000	6.46E-002
PU241	7.29E-003	7.51E-001	2.03E-001	6.08E-002
PU242	1.27E-003	5.03E-006	1.36E-006	0.00E+000

Errors quoted at 1.000 sigma

Operator: _____ Date: 11-22-13

ITR: _____ Date: 11-22-13

Automated Independent Technical Review

Count Sequence Number: 16722 Batch Number: 2LANDA1241
Counter ID: HENC #2
Container ID: 68620
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 11/15/2013

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

Comments	Disposition
Section 4 - MGA Analysis Results are marked as invalid.	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: 11/22/13

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **68620**

BDR Number: **LA13FG2130**

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

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	982.29	
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\131218c\
Data File : 68620.D
Acq On : 18 Dec 2013 3:28 pm (#1); 18-Dec-13, 15:27:26 (#2)
Operator : EL
Sample :
Misc : POC Through Filter (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Dec 18 15:36:38 2013
Quant Method : C:\msdchem\1\METHODS\VOCGAS.M
Quant Title : Flammable Gas Analysis
QLast Update : Mon Aug 26 13:12:56 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
3) Fluorobenzene	3.539	96	3329098	205.75 ppmv	0.02
15) Chlorobenzene-d5	5.848	117	2633328	177.50 ppmv	-0.01
Target Compounds					Qvalue
1) Hydrogen	1.619	GC1	7386	982.29 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-RTR2-13-0128
Examination Date:	11/14/2013
Waste Container ID:	68624
Video/Audio Recorded Media Number:	LA-RTR2-13-0128 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 14
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3110
Waste Stream I.D.:	LA-MIN02-V.001
Waste Container Weights:	Gross Wt.: 69.0 kg Tare Wt.: 33.4 kg Net Wt.: 35.6 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:	40 %

CCP Radiography Data Sheet

Waste Container ID: 68624

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

Section 4: Packaging Material and Waste Material Parameters	
Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP): Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	2.0
Plastics (waste materials) (XPM):	5.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	28.6
Soils (S):	
Total WMP Weight:	35.6

CCP Radiography Data Sheet

Waste Container ID: 68624

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

Comments: N/A

RTR Operator:

Benito Maestas		11/14/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	68624	Count Sequence Number:	16731
Operator:	DCLTD231\Operator		
Assay Start:	11/18/2013 12:31:04 PM		
Description 1:	2LANDA1242		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gal Drum		
Weight:	Net: 35.6 kg	Net:	35.6 kg
Container:	Volume: 208.0 l	Full:	40.0 %
Density:	0.430 kg /l		

System Configuration

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

Errors quoted at 1.000 sigma

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number:	16731	Batch Number:	2LANDA1242
Assay Instrument:	HENC #2	Location:	LANL TA-54
Analysis Method:	CCP-TP-063 v 15	Software Version:	NDA 2000 V.4.0
Item ID:	68624	Analysis Date:	11/18/2013

Net Weight	35600.0 g		
Pu mass	1.92E+000	+- 3.25E-001	g
TRU Alpha Activity	1.37E+000	+- 6.49E-001	Ci
TRU Activity Concentration	3.84E+004	+- 1.82E+004	nCi/g
Pu-239 Equivalent Activity	1.37E+000	+- 6.49E-001	Ci
Pu-239 FGE	1.81E+000	+- 3.24E-001	g
Decay heat	4.51E-002	+- 2.16E-002	W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	2.03E-007
U233	<LLD	<LLD	0.00E+000	2.06E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	6.59E-007
NP237	2.09E-002	1.47E-005	2.08E-006	1.12E-006
PU238	1.75E-004	2.99E-003	6.85E-004	2.37E-004
U238	<LLD	<LLD	0.00E+000	6.35E-006
PU239	1.80E+000	1.11E-001	2.01E-002	8.81E-003
PU240	1.15E-001	2.61E-002	5.97E-003	2.06E-003
AM241	3.57E-001	1.22E+000	6.49E-001	1.86E-002
PU241	2.20E-003	2.26E-001	5.18E-002	1.79E-002
PU242	3.84E-004	1.52E-006	3.47E-007	0.00E+000
AM243	3.15E-005	6.30E-006	1.10E-006	2.45E-006

Errors quoted at 1.000 sigma

Operator: _____ Date: 11/21/13

ITR: Jim Barton Date: 11/25/13

Automated Independent Technical Review

Count Sequence Number: 16731 Batch Number: 2LANDA1242
Counter ID: HENC #2
Container ID: 68624
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 11/18/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis Add-a-Source WARNINGS: Add-a-Source correction factor is less than one.	Ok
Section 2 - Passive Neutron Analysis Analysis Status: No errors.	Ok
Cosmic Ray Rejection Analysis complete with warnings. - The CRR High-Z mass Mass Variance is negative, High-Z mass Uncertainty set to zero so analysis could continue.	Ok
Section 3 - Data Combiner Analysis Override enabled; Gamma data specified as input. Results taken from Quantitative Gamma data. Results comparison test passed.	Results taken from quantitative gamma data.
Section 4 - MGA Analysis Results are marked as invalid.	MGA analysis failed. AK isotopics applied. The AK information utilized was provided by Steve Schafer, AKE, and consists of data from CCP-AK-LANL-006, AK Source Document M237. MT-52.
Section 5 - Gamma Analysis Analysis Status: No errors.	Ok
Miscellaneous	No additional nuclides contributing to 95% of the radiological hazard identified.

Expert Review by: Sheri Chandler Date: 11-19-13

Waste Container ID: **68624**

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 : 68624.D
Acq On : 25 Nov 2013 2:36 pm (#1); 25-Nov-13, 14:35:57 (#2)
Operator : EL
Sample :
Misc : 55 Gallon Drum Through Filter (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Nov 25 14:44:43 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	4133664	205.75	ppmv	0.05
15) Chlorobenzene-d5	5.861	117	3276500	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-RTR2-13-0128
Examination Date:	11/14/2013
Waste Container ID:	68628
Video/Audio Recorded Media Number:	LA-RTR2-13-0128 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 14
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3110
Waste Stream I.D.:	LA-MIN02-V.001
Waste Container Weights:	Gross Wt.: 168.0 kg Tare Wt.: 33.4 kg Net Wt.: 134.6 kg
Rigid Liner and Liner Vent Description:	Liner: [X] No [ ] Yes Lid: [X] No [ ] Yes Type: [ ] 30-mil [ ] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [ ] Yes [X] N/A Punctured: [X] No [ ] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [ ] No [X] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 2 layers
Volume Utilization Percentage:	80 %

CCP Radiography Data Sheet

Waste Container ID: 68628

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

Section 4: Packaging Material and Waste Material Parameters	
Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP): Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	8.0
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	4.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	122.6
Soils (S):	
Total WMP Weight:	134.6

CCP Radiography Data Sheet

Waste Container ID: 68628

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

RTR Operator:

Benito Maestas		11/14/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	68628	Count Sequence Number:	16724
Operator:	DCLTD231\Operator		
Assay Start:	11/15/2013 3:16:07 PM		
Description 1:	2LANDA1241		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gal Drum		
Weight:	Net: 135.0 kg	Net:	135.0 kg
Container:	Volume: 208.0 l	Full:	80.0 %
Density:	0.810 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:	16724	Batch Number:	2LANDA1241
Assay Instrument:	HENC #2	Location:	LANL TA-54
Analysis Method:	CCP-TP-063 v 15	Software Version:	NDA 2000 V.4.0
Item ID:	68628	Analysis Date:	11/15/2013

Net Weight	135000.0 g			
Pu mass	9.14E+000	+-	1.95E+000	g
TRU Alpha Activity	1.00E+001	+-	5.13E+000	Ci
TRU Activity Concentration	7.42E+004	+-	3.80E+004	nCi/g
Pu-239 Equivalent Activity	1.00E+001	+-	5.13E+000	Ci
Pu-239 FGE	8.67E+000	+-	1.94E+000	g
Decay heat	3.31E-001	+-	1.70E-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	8.35E-007
U233	<LLD	<LLD	0.00E+000	8.40E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	2.82E-006
NP237	1.53E-001	1.08E-004	2.18E-005	4.37E-006
PU238	8.35E-004	1.43E-002	3.81E-003	9.19E-004
U238	<LLD	<LLD	0.00E+000	2.12E-005
PU239	8.58E+000	5.32E-001	1.20E-001	3.42E-002
PU240	5.48E-001	1.24E-001	3.32E-002	8.01E-003
AM241	2.72E+000	9.34E+000	5.12E+000	7.55E-002
PU241	1.05E-002	1.08E+000	2.88E-001	6.94E-002
PU242	1.83E-003	7.23E-006	1.93E-006	0.00E+000
AM243	4.11E-005	8.21E-006	2.00E-006	7.84E-006

Errors quoted at 1.000 sigma

Operator: _____ Date: 11-22-13

ITR: _____ Date: 11·22·13

Automated Independent Technical Review

Count Sequence Number: 16724 Batch Number: 2LANDA1241
Counter ID: HENC #2
Container ID: 68628
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 11/15/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis No Add-a-Source warnings.	OK
Section 2 - Passive Neutron Analysis Analysis Status: No errors. Ones Rate Analysis complete with warnings. - Error calculating the Ones Rate Pu-240 Effective MDA.	OK Not data affecting.
Section 3 - Data Combiner Analysis Override enabled; Gamma data specified as input. Results taken from Quantitative Gamma data. Results comparison test passed.	Results taken from quantitative gamma data.
Section 4 - MGA Analysis Results are marked as invalid.	Isotopic analysis failed. AK isotopics applied. The AK information utilized was provided by Steve Schafer, AKE, and consists of data from CCP-AK-LANL-006, AK Source Document M237. MT-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: Jared F. Date: 11/22/13

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **68628**

BDR Number: **LA13FG2120**

Sampling Date: **11/25/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	232.21	
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 : 68628.D
Acq On : 25 Nov 2013 2:13 pm (#1); 25-Nov-13, 14:13:12 (#2)
Operator : EL
Sample :
Misc : 55 Gallon Drum Through Filter (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Nov 25 14:22:37 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	3.587	96	4220378	205.75	ppmv	0.07
15) Chlorobenzene-d5	5.884	117	3345590	177.50	ppmv	0.02
Target Compounds						Qvalue
1) Hydrogen	1.629	GC1	1746m	232.21	ppmv	

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

S824187

S824187

Container Profile 762184

File Options Reports Help

S824187

762184	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

S824187

S824187
- 93583 - EMPTY
- 93582
- 93581

Task History

Transfer Details

Transfer Amount	Transfer Unit	Item	Measured Weight	Measured Weig...
49.99947775	%			

Working Copy
Date: 4-28-13

ATTACHMENT 1
Page 1 of 4

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: S824187

6.2[4] Date Processed: 04-28-13

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

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

4.1[6][B] Parent Waste Container RCRA Designations: Non-Haz

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: 07-V-13

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

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

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

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

Performed By: [signature] [signature] 116662 / 05-02-13
Waste Handling Tech (print) Signature Z # Date

ATTACHMENT 1
Page 2 of 4

4.1[6][B]	Parent Waste Container No.: 5824187	
5.[18]	Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable:	394.2 lb
6.2[5][A]	Parent Drum Lead Blanket Weight (lb):	0 lb
6.2[5][B]/ 6.2[6]	Total Parent Drum Weight (lb)	394.2 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:	

N/A

EWMO-FOD (print) Signature Z # Date

ATTACHMENT 1
Page 3 of 4

4.1[6][B] Parent Waste Container No.: 3824187

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	93581	93582	N	A
10.1[4]	Daughter Drum Filter No.	LM-47	LM-33		
10.1[4]	Daughter Drum Bag Filter No.	L-6653	L-6656		
10.1[4]	Daughter Drum Purchase Order No.	501188	501186		
10.1[13][C]	WCG Fire Watch Stationed		☐ YES	☐ NO	☑ N/A
10.1[14][C][d]3/11.1[3]	WCG Fire Watch Secured		☐ YES	☐ NO	☑ N/A
10.2[4]	POC bag-on bag: Manufacturer				
	Model No.				
	Serial No.				
	Date of Manufacture				
10.2[5]	POC ID No.				
10.2[7][B]/10.2[6]	POC Item Description		N	A	
10.2[13]	POC Assembly closed per Manufacturer's instructions. (Initial and Z#)				
10.2[14]	POC Assembly Gross Weight (lb)				
10.2[15]	POC Rad. Survey Results (mrem/hr)				
10.3[3][A]	Approx. Containerized Liquid Vol./Units				
10.3[5][A]	Free Liquid Volume/Units				
10.3[7][A]	Opaque/Non-penetrable Item Description:	lead	N/A	N	A
10.3[9][A]	PCB-contaminated Waste Description		N	A	
10.3[9][B]	PCB Item ID No.				
10.3[10]	Remaining Waste Description	See Comments	See comments	N	A
10.3[13]/10.4[10]/ 10.5[4]/10.6[10]	Daughter Drum % Full (%)	70%	100%		
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.: S824187

Comments: Poly liner, Salt, Absorbent, 2 Gals of Acid Absorbed. And Plastic - Kitty litter

11.1[1] Performed By: James Sandoval / [signature] / 1116662 / 04-28-13
Waste Handling Tech (print) Signature Z # Date

11.1[7] Reviewed By: Jose Jerez / [signature] / 1221452 / 5-1-13 0815
SOS or designee (print) Signature Z # Date/Time

Working Copy
Date: 4-25-13 JL

ATTACHMENT 2
Page 1 of 1

WCRRF OVERPACK DRUM ASSEMBLY PREPARATION DATA SHEET

5.[3] Overpack drum information:

Purchase Order No.: 414996
Lot No.: 217570
Manufacture Date: 11

5.[8] Overpack filtered vent information:

Manufacturer: NUCFIL
Model No.: 013
Serial No.: 01-317
Manufacture Date: 5-11

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

	Filtered Vent	2 in. Bung
M&TE No.:	040694	038369
Cal. Expiration Date:	9-26-13	12-18-13
Tolerance:	±4% cw ±6% ccw	±3% cw ±6% ccw

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

Performed By: Clayton Mullins / [signature] / 2400921 / 4/25/13
Waste Handling Technician (print) Signature Z# Date

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

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

Comments: N/C

8.1[1] Performed By: Clayton Mullins / [signature] / 2400921 / 4/25/13
Waste Handling Technician (print) Signature Z# Date

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

8.1[7] Reviewed By: Jose Jerez / [signature] / 2214521 / 5-1-13
Supervisor or designee (print) Signature Z# Date

2A

Working Copy
Date: 4-26-13

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

Drum ID#: 93581

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: SC 4-26-13
Purchase Request #: Soto 501166
Lot #: 6234763
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: BQ
Model #: 6epvc-1.5-25pvc
Serial #: 26653
Date of Manufacture: 1-13

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

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

4. Install Lid/Drum Filter

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

RECORD drum filter information:
Manufacturer: NCGI
Model #: 019D3
Serial #: LH-97
Date of Manufacture: 12-12

RECORD torque wrench information:

Filter torque wrench:		Jam Nut / Bung torque wrench:	
M&TE ID #:	040694	M&TE ID #:	038369
Cal Expiration Date:	9-26-13	Cal Expiration Date:	12-18-13
Range (ft-lbs or in-lbs):	40-200	Range (ft-lbs or in-lbs):	10-80
Tolerance:	±4% or ±6%	Tolerance:	±3% or ±6%

Torque wrenches listed above are within the acceptable ranges as displayed on the calibration certificate.
[x] Yes [ ] No
Print Name: Justin Lopez Signature: [signature] Z#: 266436

5. Weigh Drum Assembly

RECORD weight information
Tare wight (lbs) 76.8
File ID #: 019066

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

6. Label Drum Assembly

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

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

Operator Print: Justin Lopez Operator Sign: [signature] Z#: 266436 Date: 4-26-13
Verifier Print: Brandon Chever Verifier Sign: [signature] Z#: 204742 Date: 4-28-13

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

DRUM ID#: 93581

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: 09-11-13

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:

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

OR

4-28-13 94

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.) 268.2

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: Brandon Travez Date 4-28-13

Verifier Print/Sign: [signature] Date: 4-28-13

#2B

Working Copy
Date 4-26-13

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

Drum ID#: 93582

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 #: 501086
Lot #: 0233413
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 #: 6CDUC-1.5-2SDUC
Serial #: L-6656
Date of Manufacture: 1-13

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

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

4. Install Lid/Drum Filter

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

RECORD drum filter information:
Manufacturer: NuCFI
Model #: 019DS
Serial #: ~~[illegible]~~ LM-33
Date of Manufacture: 12-12

RECORD torque wrench information:

Filter torque wrench:		Jam Nut / Bung torque wrench:	
M&TE ID #:	040694	M&TE ID #:	038369
Cal Expiration Date:	9-26-13	Cal Expiration Date:	12-18-13
Range (ft-lbs or in-lbs):	40-200	Range (ft-lbs or in-lbs):	10-80
Tolerance:	±4% cw ±6% ccw	Tolerance:	±3% cw ±6% ccw

Torque wrenches listed above are within the acceptable ranges as displayed on the calibration certificate.
[x] Yes [ ] No
Print Name: Justin Loper Signature: [signature] Z#: 266436

5. Weigh Drum Assembly

RECORD weight information
Tare witght (lbs) 75.8
File ID #: 019065

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

6. Label Drum Assembly

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

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

Operator Print: Justin Loper Operator Sign: [signature] Z#: 266436 Date: 4-26-13
Verifier Print: James Sutal Verifier Sign: [signature] Z#: 116662 Date: 4-28-13

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

DRUM ID#: 93582

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: 09-11-13

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): 422.0

Scale ID#: 019065

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

4. FINALIZE DOCUMENTATION

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

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

✓ Complete TWSR.

Operator Print/Sign: [signature] Date 04-28-13

Verifier Print/Sign: [signature] Date: 4-28-13

Working Copy
Date: 4-28-13

ATTACHMENT 3
Page 1 of 1

WCRRF PARENT 55-GAL DRUM PREPARATION DATA SHEET

6.3[21] Prepared Parent 55-Gal Drum Number: SBZ 4187

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: 07-31-13

6.3[18] Prepared parent 55-gal drum weight (lb): 394.2

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

Comments: N/A

8.1[1] Performed By: James S[illegible] [signature] 1116662 04-28-13
Waste Handling Technician (print) Signature Z # Date

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

8.1[7] Reviewed By: Jose Jerez [signature] 1221452 5-1-13
Supervisor or designee (print) Signature Z # Date

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

8.1[8][D] Approved by: Jose Jerez [signature] 1221452 5-1-13 0817
SOS/SOM or designee (print) Signature Z # Date Time

72

ATTACHMENT 1

WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Production Control

Container ID: S824187 Container Type: 85-GAL Gross Weight (lbs): 400
Inner Seal #: 009776 Filter Prefix: LAVC Filter Serial #: 03287; 3756
AK Waste Stream: LA-MHD01.001 Certified RTR BDR: No BDR
TWSR Comments: LEACHED SOLIDS NITRATE SALTS
Total PE-Ci Activity: 5.42E+00 Equivalent Combustible PE-Ci: 2.03E+00 AM-241 PE-Ci: 4.40E-01
Total Fissile Gram Equivalents: 59.9 Total Surface Dose Rate (mrem/hr): 190
EPA Code(s): None
NCR RTR/NDA Comment: None
RTR Pre-Screen Date: 1/16/2007 Comment: Impenetrable Obj. Liner Not Punctured.
Certified RTR Comment: None
Prohibited Items: ☐ Sealed > 4 Liters ☐ Liquid ☐ Pressurized Container ☑ Impenetrable Item ☐ Other
Security Determination: ☑ Green ☐ Yellow
Remediation Determination: ☑ VE ☐ PID ☐ Split ☑ Repack 12/8/10 CV
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 the 1.0 volume of nitrate salts.

Performed By: R. W. Jones (Production Control (Print)) / R. W. Jones (Signature) / 117434 (Z Number) / 10-6-10 (Date)
SUSAN S RAMSEY / Susan H Ramsey / 100681 / 11/28/12

WDP Engineering

Chemicals Present (e.g., pyrophorics, acids, bases, shock sensitive, organic liquids, peroxides, crown ethers): ☐ Yes ☒ No ☐ Unknown
Processing Determination: ☒ Accept ☐ Reject
WDP Engineering Comments: NITRATE SALTS. NET WT = 337 LBS. IN 6 ITEMS. MAX ITEM WT = 45.68 KG (101 LBS). NO CERT RTR DATA. FAILED RTR PRE-SCREEN. MAY REQUIRE RWP FOR >100 MREM/HR. NITRATE SALTS HAVE PREVIOUSLY EXHUMED AND PROCESSED SLUDGES.

Performed By: Robert L Grimes (WDP Engineering (Print)) / Robert L Griffith (Signature) / 136352 (Z Number) / 11-4-10 (Date)

TRU Remediation Operations

☑ Waste Container Information Evaluated ☐ Less Than 170 lbs ☐ RTR Video Available
Other Specific Safety Concerns: Do not push or press on waste with hands. Use hexamaxx gloves during processing.
Processing Determination: ☑ Accept ☐ Reject 1-8-13
TRU Remediation Operations Comments: 101 LBS one item. Use two man rule. Slide heavy items. Use proper ratio of kitty litter to waste.
Performed By: Robert Rios (TRU Remediation Operations (Print)) / Robert Rios (Signature) / 092205 (Z Number) / 12-8-10 (Date)
Joe Perez / Joe Perez / 221452 / 1-8-13

IHS Review Johnny Analyst CSP No concerns
12/4/12 ROBIN SHULT 8282 272995 1-14-13

Noncertified TRU Waste Drum Item Information

DrumID: 009776

Item No	ItemID	Process Status	Net Wt (kg)	Matrix	Meas Code	SNM (g)	MT	Auth (Pg/Ln)	Comments
1	IXFS-583-LR	EV	19.550	NITRATE SALTS		6.44	52	5/11	
2	IXFS-584-LR	EV	8.410	NITRATE SALTS		23.18	52	5/11	
3	IXFS-585-F1	EV	13.640	NITRATE SALTS		7.	52	5/11	
4	IXFS-588-F1	EV	24.090	NITRATE SALTS		14.14	52	5/12	
5	IXFS-589-F1	EV	11.590	NITRATE SALTS		7.16	52	5.11	
6	IXFS-591-FA	EV	45.680	NITRATE SALTS		5.71	52	5/11	

Noncertified Waste Drum Material Summary

Gross Wt (kg): 181.4

Material Type	SNM (grams)	Items Net Wt (kg)
52	63.63	122.96
Totals	63.63	122.96

ATTACHMENT 1
Page 1 of 2

HYDROGEN/VOC SAMPLING USING GAS CHROMATOGRAPHY DATA SHEET

7.[1] Sample Date: 10·12·10

7.[7] Certified CCP Technician:

CCP (Print)	Signature	Z #	Date
Gabe Romero	[redacted]	1286978	10-20-10
	/	/	/

Container No. (7.[1]):	S824187	S832176	S833261
Container Type (SWB, 110/85/55-gal) (7.[1]):	55gal	55gal	55gal
Current Filter Vent No. (7.[1]):	72	72	72
New Filter Vent No.: (7.[8][A]):	72	72	72
WIPP-Approved Filter Vent (7.[8][B]):	☑ SAT ☐ UNSAT	☑ SAT ☐ UNSAT	☑ SAT ☐ UNSAT
VOC	Value (ppm) (7.[10])		
Benzene	9.88	17.95	
Chlorobenzene			
Cyclohexane			
1,1-Dichloroethane			
1,2-Dichloroethane			
1,1-Dichloroethylene			
cis-1,2-Dichloroethylene			
Ethyl benzene			
Ethyl ether			
Toluene			
1,2,4-Trimethylbenzene			
1,3,5-Trimethylbenzene			
m- and p-Xylene			
o-Xylene			
Acetone		54.03	
1-Butanol			
Methanol			
Methyl ethyl ketone			
Methyl isobutyl ketone			
Total CCP VOC value (ppm) (7.[11]):	9.88	71.98	Ø

ATTACHMENT 1
Page 2 of 2

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

Container Number (7.[1]):	S884187	S832716	S833261
Hydrogen Reading (ppm) (7.[10]):	1988.24 ppm	159.83 ppm	Ø ppm
Methane Reading (ppm) (7.[10]):	Ø ppm	Ø ppm	Ø ppm
Total VOC Reading (ppm) (7.[11]):	9.88 ppm	71.98 ppm	Ø ppm
Filter Type (7.[9][F][c]/7.[9][G][a]):	72	72	72
WIPP Approved (SAT/UNSAT) (7.[9][F][c]/7.[9][G][a]):	SAT	SAT	SAT
Torque Wrench M&TE/ID Number (7.[9][F][a]/7.[9][G][a]):	N/A	N/A	N/A
Torque Wrench Calibration Due Date (7.[9][F][a]/7.[9][G][a]):	N/A	N/A	N/A
Torque Wrench Tolerance (7.[9][F][a]/7.[9][G][a]):	N/A	N/A	N/A
VERIFY Torque Wrench is within acceptable range as specified on Cal Certificate. (7.[9][F][a]/7.[9][G][b])	☐ YES ☐ NO ☑ N/A	☐ YES ☐ NO ☑ N/A	☐ YES ☐ NO ☑ N/A
Filter Torque Value (7.[9][F][a]/7.[9][G][d]) *	N/A	N/A	N/A

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

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

11.1[1] Performed By: Alicia Herrera, [signature] 198450, 10-13-10
Waste Handling Operator (print) Signature Z # Date

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

☑ No deficiencies

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

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

11.1[7][B]/ 11.1[8] Reviewed By: Kenny Romero Kenny Romero 111[illegible] 10.27.10
Waste Handling Supervisor (print) Signature Z # Date

InstName : Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\101012c\
Data File : S824187.D
Acq On : 12 Oct 2010 3:21 pm (#1); 12-Oct-10, 15:20:24 (#2)
Operator : SA
Sample :
Misc : 55 GALLON SAMPLED FROM 85 GALLON OVERPACKED (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Oct 12 15:29:59 2010
Quant Method : C:\msdchem\1\METHODS\vocgas.m
Quant Title : Flammable Gas Analysis
QLast Update : Wed Aug 18 13:26:05 2010
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
3) Fluorobenzene	3.737	96	2707868	207.75 ppmv	0.09
15) Chlorobenzene-d5	6.050	117	1924415	180.75 ppmv	0.08
Target Compounds					Qvalue
1) Hydrogen	1.657	GC1	15237m	1988.24 ppmv	
12) Benzene	3.407	78	121730	9.88 ppmv	98

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

vocgas.m Tue Oct 12 15:30:07 2010

4-28-13
0600 Assuming WCRRF Operations center - Clearance.
0607 Starting outside rounds.
0615 Pre job being conducted by SOS.
0616 Starting inside rounds.
0619 Item # 3 is unsat, FSR in place OK to proceed.
0630 Item # 63 is OOS, POD in place, OK to proceed.
0640 Completed inside rounds.
0650 Rounds signed off by SOS.
0655 Mode changed to operations in TA50-69 and WCRRF yard.
0821 Bagging on 3870475
0837 Bag on complete.
1023 Bagging off One daughter
1044 Bag on, Bag off complete.
1146 Starting to dump drum 3824187
1214 Denesting completed.
1400 Bagging on 3824187, Bagging off 3824187.
1428 Bag off complete.
1513 Starting ~~4-28-13~~ 4-28-13 outside rounds
1516 Item # 3 is unsat FSR in place OK to proceed
1535 Starting inside rounds. Completed outside rounds
1553 Item 63 is OOS, POD in place OKay to proceed.
1555 Completed inside rounds
1610 Bagging off daughter.
1626 Bag on, Bag off complete.
1720 Bagging off 3824187
1747 Bag off complete.
1754 Starting movement ~~to~~ 4-28-13 Out of 50-69.
1810 ~~1810~~ 4-28-13 Completed movement out of 50-69.
1815 Mode change performed TA50-69 and WCRRF yard in warm standby.
1830 End of day WCRRF Operations center secure check

No further entries this page.

4/28/13 WCRR SOS LOG BOOK

0600 Assuming SOS Position

0615 Conducted shift brief Discussed putting Down Plastic on floor where magnetic paint is Showing

0635 Shift brief Conducted

0650 Reviewed Inside And outside Rounds

0655 Mode change Complete WCRRF In operations.

0659 Operators will be putting Down plastic as directed by RP.1 personal

0824 Bagging on S870475

0837 Bagging on Complete

1023 Bagging off one daughter

1044 Bag off Complete

1115 Turning over position to Jose Jerez.

1115 Completed turnover with Gilbert Martinez, Assuming SOS position for

1145 Operators starting to D-West 1 Parent from 85 gallon overpa

1215 D-Nesting Complete.

1245 Operators breaking for lunch.

1345 Operators returning from lunch

1400 Starting to Bag on second drum and Bag off first drum

1430 Bag on, Bag off Complete First drum generated two daughter PPE check SAT

4/28/13

1610 Bagging off one daughter, bagging on second daughter

1720 Bagging off final drum.

1810 Signed and Reviewed inside Rounds

1815 Mode Change Complete WCRR yard and 50-69 are in WARM

4/28/13 1825 Securing SOS position for the day.

AM

no further entries on this page

100 PROJECT NAME T-20-10 NOTEBOOK NO

0000 Assumed the WCRR SOM position. Jeanine D Menendez
0015 Attended the pre-job briefing conducted by SOS. Discussed maintenance performed on drum lift. RPI discussed laying down plastic where paint is coming off on contaminated areas. Smears/Sweeps were taken on 4.27.13 on these areas and no contamination detected. E.S IH was asked by SOM to follow up on SWP and availability of paint to allow operations to conduct painting possibly on next maintenance day.
0055 Mode change complete. WCRR GARD/50-69 from WARM/WARM to OPERATIONS/OPERATIONS.
0825 Bagging on first drum of the day. Operations had to lay down plastic on areas of concern where paint was showing per RPI requirements.
1044 Bag offs complete for first parent drum, resulting in two daughters.
1146 Starting to de-nest 85 gallon over-pack.
1214 Denesting complete.
1220 Operations coming out for lunch.
1225 Late entry 1015 field operations in ARTIC met with operator #513 to discuss concerns with the Nuchal 190s filters. There is a screw like part on the filter that has popped off/loosened on a couple of occasions. Operations were instructed to pull those filters to the side and notify their supervisor next time this occurs. SOM will follow up with QA for a pathforward.
1306 SOM left at Nuchal 190s filter for incoming SOM to follow up with QA on Monday 4.29.13. An e-mail was also sent to incoming SOM explaining issues with filter.
1400 Begin complete of second parent. 4.28.13
1720 Bag offs ~~complete of second parent~~ getting started on second parent and daughters.
1741 Bag offs complete. Operations completed processing two parent drums producing four daughters both from LP #72.
1754 Movements taking place within the building and yard.
1810 All movements complete.
1815 Mode change complete. WCRR YARD/50-69 from OPERATIONS/OPERATIONS to WARM/WARM.
1835 Securing the SOM position. Jeanine D Menendez

5-4-13

No further entries this page.

SIGNATURE Jeanine D Menendez DATE 4.28 2013
READ AND UNDERSTOOD DATE 20

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0065
Examination Date:	5/1/2013
Waste Container ID:	93581
Video/Audio Recorded Media Number:	LA-RTR2-13-0065 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 12
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3110
Waste Stream I.D.:	LA-MIN02-V.001
Waste Container Weights:	Gross Wt.: 121.5 kg Tare Wt.: 33.4 kg Net Wt.: 88.1 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:	60 %

CCP Radiography Data Sheet

Waste Container ID: 93581

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):	15.0
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	6.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	67.1
Soils (S):	
Total WMP Weight:	88.1

CCP Radiography Data Sheet

Waste Container ID: 93581

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

Comments:
N/A

RTR Operator:

Benito Maestas	[signature]	5/1/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	93581	Count Sequence Number:	22695
Operator:	D3PW2DK1\operator		
Assay Start:	5/2/2013 3:44:02 PM		
Description 1:	1LANDA1763		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 88.1 kg	Net:	88.1 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:	22695	Batch Number:	1LANDA1763
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:	93581	Analysis Date:	5/2/2013

Net Weight	88100.0 g		
Pu mass	3.95E+000	+-	8.67E-001 g
TRU Alpha Activity	1.01E+001	+-	5.34E+000 Ci
TRU Activity Concentration	1.15E+005	+-	6.06E+004 nCi/g
Pu-239 Equivalent Activity	1.01E+001	+-	5.34E+000 Ci
Pu-239 FGE	3.78E+000	+-	8.65E-001 g
Decay heat	3.37E-001	+-	1.78E-001 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	1.49E-006
U233	<LLD	<LLD	0.00E+000	9.58E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	2.83E-006
NP237	1.64E-001	1.17E-004	2.19E-005	4.96E-006
PU238	3.62E-004	6.27E-003	1.67E-003	1.27E-003
U238	<LLD	<LLD	0.00E+000	2.36E-005
PU239	3.71E+000	2.33E-001	5.44E-002	4.73E-002
PU240	2.37E-001	5.45E-002	1.49E-002	1.11E-002
AM241	2.83E+000	9.82E+000	5.34E+000	1.22E-001
PU241	4.65E-003	4.83E-001	1.32E-001	9.80E-002
PU242	7.91E-004	3.14E-006	8.56E-007	0.00E+000

Errors quoted at 1.000 sigma

Operator: Marta Eu Date: 5-7-13

ITR: [illegible] Date: 5-7-13

Automated Independent Technical Review

Count Sequence Number: 22695 Batch Number: 1LANDA1763
Counter ID: MCS HENC #1
Container ID: 93581
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 5/2/2013

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; Gamma data specified as input. Analysis Status: Override enabled; data marked not available but were used. Results taken from Quantitative Gamma data. Results comparison test passed.	Results taken from quantitative gamma data.
Section 4 - MGA Analysis Results are marked as invalid.	MGA analysis failed. AK isotopics applied. The AK information utilized was provided by Steve Schafer, AKE, and consists of data from CCP-AK-LANL-006, AK Source Document M237. MT-52.
Section 5 - Gamma Analysis Analysis Status: No errors. MCA Deadtime greater than the upper limit of 50.0%. Spectrum Validity Check engine has suggested data review.	Ok MCA deadtime = 55.79% No spectral distortion observed.

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

Expert Review by: Sheri Chamberlain Date: 5-6-13

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **93581**

BDR Number: **LA13FG2056**

Sampling Date: **5/15/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	155.89	
74-82-8	Methane	142.14	U
67-56-1	Methanol	35.23	U
60-29-7	Ethyl Ether	0.96	U
75-35-4	1,1-Dichloroethylene	6.38	U
67-64-1	Acetone	18.08	U
75-34-3	1,1-Dichloroethane	4.08	U
156-59-2	cis-1,2-Dichloroethene	0.76	U
78-93-3	Methyl ethyl ketone	11.73	U
110-82-7	Cyclohexane	5.10	U
71-43-2	Benzene	3.22	
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\130515c\
Data File : 93581.D
Acq On : 15 May 2013 11:55 am (#1); 15-May-13, 11:54:39 (#2)
Operator : GR
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER. (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 15 12:04:05 2013
Quant Method : C:\msdchem\1\METHODS\vocgas.m
Quant Title : Flammable Gas Analysis
QLast Update : Thu Jan 24 09:52:49 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
3) Fluorobenzene	3.542	96	4384970	201.25	ppmv	-0.03
15) Chlorobenzene-d5	5.881	117	3725769	177.00	ppmv	-0.02
Target Compounds						Qvalue
1) Hydrogen	1.602	GC1	1108	155.89	ppmv	100
12) Benzene	3.222	78	50480	3.22	ppmv #	93

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

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination	[ ] RTR Replicate Scan [ ] RTR Independent Observation
Site ID:	LANL
Batch Number:	LA-RTR2-13-0065
Examination Date:	5/1/2013
Waste Container ID:	93582
Video/Audio Recorded Media Number:	LA-RTR2-13-0065 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 12
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3110
Waste Stream I.D.:	LA-MIN02-V.001
Waste Container Weights:	Gross Wt.: 191.5 kg Tare Wt.: 33.4 kg Net Wt.: 158.1 kg
Rigid Liner and Liner Vent Description:	Liner: [X] No [ ] Yes Lid: [X] No [ ] Yes Type: [ ] 30-mil [ ] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [ ] Yes [X] N/A Punctured: [X] No [ ] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [ ] No [X] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 2 layers
Volume Utilization Percentage:	100 %

CCP Radiography Data Sheet

Waste Container ID: 93582

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):	3.0
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	4.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	151.1
Soils (S):	
Total WMP Weight:	158.1

CCP Radiography Data Sheet

Waste Container ID: 93582

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

Comments:
N/A

RTR Operator:

Benito Maestas		5/1/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	93582	Count Sequence Number:	22679
Operator:	D3PW2DK1\operator		
Assay Start:	5/1/2013 2:15:29 PM		
Description 1:	1LANDA1762		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 158.0 kg	Net:	158.0 kg
Container:	Volume: 208.0 l	Full:	100.0 %
Density:	0.760 kg /l		

System Configuration

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

Errors quoted at 1.000 sigma

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number: 22679
Assay Instrument: MCS HENC #1
Analysis Method: CCP-TP-063 v 14
Item ID: 93582

Batch Number: 1LANDA1762
Location: LANL TA-54
Software Version: NDA 2000 V.4.0
Analysis Date: 5/1/2013

Net Weight	158000.0 g		
Pu mass	6.20E+001	+- 3.47E+001	g
TRU Alpha Activity	1.63E+001	+- 8.38E+000	Ci
TRU Activity Concentration	1.03E+005	+- 5.31E+004	nCi/g
Pu-239 Equivalent Activity	1.64E+001	+- 8.38E+000	Ci
Pu-239 FGE	5.85E+001	+- 3.47E+001	g
Decay heat	5.34E-001	+- 2.79E-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	1.47E-006
U233	<LLD	<LLD	0.00E+000	1.09E-002
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	3.18E-006
NP237	2.19E-001	1.56E-004	3.04E-005	5.77E-006
PU238	5.69E-003	9.84E-002	5.99E-002	1.61E-003
U238	<LLD	<LLD	0.00E+000	2.63E-005
PU239	5.82E+001	3.66E+000	2.18E+000	5.98E-002
PU240	3.72E+000	8.55E-001	5.23E-001	1.40E-002
AM241	3.36E+000	1.17E+001	8.08E+000	3.68E-001
PU241	7.29E-002	7.58E+000	4.64E+000	1.24E-001
PU242	1.24E-002	4.92E-005	3.01E-005	0.00E+000

Errors quoted at 1.000 sigma

Operator: _____ Date: 5-6-13

ITR: _____ Date: 5-7-13

Automated Independent Technical Review

Count Sequence Number: 22679 Batch Number: 1LANDA1762
Counter ID: MCS HENC #1
Container ID: 93582
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 5/1/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis No Add-a-Source warnings.	Ok
Section 2 - Passive Neutron Analysis Analysis Status: No errors. 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. Spectrum Validity Check engine has suggested data review.	Ok After EA review, spectrum valid.
Miscellaneous	No additional nuclides contributing to 95% of the radiological hazard identified.

Expert Review by: Sheri Chamberlin Date: 5-2-13

Waste Container ID: **93582**

BDR Number: **LA13FG2054**

Sampling Date: **5/13/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	582.77	
74-82-8	Methane	142.14	U
67-56-1	Methanol	35.23	U
60-29-7	Ethyl Ether	0.96	U
75-35-4	1,1-Dichloroethylene	6.38	U
67-64-1	Acetone	18.08	U
75-34-3	1,1-Dichloroethane	4.08	U
156-59-2	cis-1,2-Dichloroethene	0.76	U
78-93-3	Methyl ethyl ketone	11.73	U
110-82-7	Cyclohexane	5.10	U
71-43-2	Benzene	4.96	
107-06-2	1,2-Dichloroethane	3.66	U
71-36-3	1-Butanol	1.84	U
108-10-1	Methyl isobutyl ketone	9.82	U
108-88-3	Toluene	8.02	U
108-90-7	Chlorobenzene	4.10	U
100-41-4	Ethylbenzene	3.57	U
108-38-3/106-42-3	m- and p-Xylene	1.92	U
95-47-6	o-Xylene	2.10	U
108-67-8	1,3,5-Trimethylbenzene	1.96	U
95-63-6	1,2,4-Trimethylbenzene	2.13	U

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

InstName : Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\130513C\
Data File : 93582.D
Acq On : 13 May 2013 10:59 am (#1); 13-May-13, 10:58:42 (#2)
Operator : ~~RO~~ 5-13-13 EL
Sample : EL
Misc : 55 Gallon Drum through Filter (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 13 11:07:35 2013
Quant Method : C:\msdchem\1\METHODS\vocgas.m
Quant Title : Flammable Gas Analysis
QLast Update : Thu Jan 24 09:52:49 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
3) Fluorobenzene	3.503	96	4035737	201.25	ppmv	-0.07
15) Chlorobenzene-d5	5.845	117	3442984	177.00	ppmv	-0.06
Target Compounds						Qvalue
1) Hydrogen	1.607	GC1	4142m	582.77	ppmv	
12) Benzene	3.186	78	71603	4.96	ppmv	95

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

29

S824188

S824188

Container Profile 760624

File Options Reports Help

S824188

760624	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

S824188

- S824188
  - 93575 - EMPTY
  - 93574
  - 93573
  - 93572
  - 93571
  - 93568
    - LASB02080

Task History

Transfer Details

Transfer Amount	Transfer Unit	Item	Measured Weight	Measured Weig...
100.0	%	93568	0.0	kg

UET Working Copy
Date: 4-26-13 jc

ATTACHMENT 1
Page 1 of 4

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: S824188

6.2[4] Date Processed: 04/26/13

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] ($) 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: ~~019065~~ 07/31/13
KB 4-30-13

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

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

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

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

Performed By: Kevin Belusczak / Kevin Belusczak / 1238144 / 04/26/13
Waste Handling Tech (print) Signature Z # Date

ATTACHMENT 1
Page 2 of 4

4.1[6][B] Parent Waste Container No.: S824188

5.[18] Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable: 457.4 lb

120.0

6.2[5][A] Parent Drum Lead Blanket Weight (lb): KB 4-26-13 ~~577.4~~ lb

6.2[5][B] Total Parent Drum Weight (lb): 577.4 lb
6.2[6]

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

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

FWMO-FOD (print)	Signature	Z #	Date
	R/H		

ATTACHMENT 1
Page 3 of 4

4.1[6][B] Parent Waste Container No.: S824188

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	93568	93571	93572	93573
10.1[4]	Daughter Drum Filter No.	LM-58	LM-69	LM-38	LM-32
10.1[4]	Daughter Drum Bag Filter No.	L-6588	L-6576	L-6548	L-6646
10.1[4]	Daughter Drum Purchase Order No.	501186	501186	501186	501186
10.1[13][C]	WCG Fire Watch Stationed		☐ YES	☐ NO	☑ N/A
10.1[14][C][d]3/11.1[3]	WCG Fire Watch Secured		☐ YES	☐ NO	☑ N/A
10.2[4]	POC bag-on bag: Manufacturer	DOP 4-26-13			
	Model No.	3CPVB-152-SPW			
	Serial No.	L-6550			
	Date of Manufacture	1/13			
10.2[5]	POC ID No	D-2327/93574			
10.2[7][B]/10.2[6]	POC Item Description	plastics, nitrate salts, kitty liter		N/A	
10.2[13]	POC Assembly closed per Manufacturer's instructions. (Initial and Z#)	cm 240092			
10.2[14]	POC Assembly Gross Weight (lb)	376.4			
10.2[15]	POC Rad. Survey Results (mrem/hr)	900.8			
10.3[3][A]	Approx. Containerized Liquid Vol./Units	N/A	N/A	N/A	N/A
10.3[5][A]	Free Liquid Volume/Units	4 oz	1 oz	1 oz	1 L
10.3[7][A]	Opaque/Non-penetrable Item Description:	Lead shielding		N/A	Lead shielding
10.3[9][A]	PCB-contaminated Waste Description	N/A			N/A
10.3[9][B]	PCB Item ID No.				
10.3[10]	Remaining Waste Description	See comments	see comments	See cm 4-26-13 ~~comments~~ comments	see comments
10.3[13]/10.4[10]/ 10.5[4]/10.6[10]	Daughter Drum % Full (%)	60%	40%	60%	cm 4-26-13 70% 100%
10.5[3]/10.6[2]	Description Waste Added During Processing	plastic stuff outs kitty liter	plastic kitty liter	plastic kitty liter	plastic kitty liter

ATTACHMENT 1
Page 4 of 4

4.1[6][B] Parent Waste Container No.: S824188

Comments: plastic, nitrate salts

11.1[1] Performed By: Kevin Belusciak, Kevin Belusciak, 238XH, 04/26/13
Waste Handling Tech (print) Signature Z # Date

11.1[7] Reviewed By: SOC elec, [signature], 221452, 5/13 0828
SOS or designee (print) Signature Z # Date/Time

ATTACHMENT 2
Page 1 of 1

WCRRF OVERPACK DRUM ASSEMBLY PREPARATION DATA SHEET

5.[3] Overpack drum information:

Purchase Order No.: 501012
Lot No.: 0233945
Manufacture Date: 12

5.[8] Overpack filtered vent information:

Manufacturer: NUCFIL
Model No.: 013
Serial No.: JL-1852
Manufacture Date: 10-11

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

	Filtered Vent	2 in. Bung
M&TE No.:	040694	038369
Cal. Expiration Date:	9-26-13	12-18-13
Tolerance:	±4%cw ± 6%ccw	±3%cw ± 6%ccw

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

Performed By: Clayton Mullins / [signature] / 240092 / 4/25/13
Waste Handling Technician (print) Signature Z# Date

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

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

Comments: N/C

8.1[1] Performed By: Clayton Mullins / [signature] / 240092 / 4/25/13
Waste Handling Technician (print) Signature Z# Date

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

8.1[7] Reviewed By: Jose Jerez / [signature] / 224452 / 5-1-13
Supervisor or designee (print) Signature Z# Date

Working Copy
Date: 4-26-13

ATTACHMENT 5
Page 1 of 1

WCRRF OVERPACK DRUM CLOSURE DATA SHEET

7.[19] Overpack Drum Unique Identifier No.: 93575

7.[25] Overpack drum closure ring torque wrench information:
M&TE No.: 038373
Cal. Expiration Date: 09/11/13
Range in ft-lb: 10-80
Tolerance: +/-3% cw and +/-6% ccw

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

Performed By: Gerald Esparza [signature] 1251720 4-26-13
Waste Handling Technician (print) Signature Z# Date

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

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

7.[36][B] Platform scale serial number: 0190065
Platform scale calibration expiration date: 7-31-13

7.[36][D] 85-gal overpack drum gross weight (lb): 172.4 lb

Comments: N/C

8.1[1] Performed By: Clayton Mullins [signature] 1240096 4/26/13
Waste Handling Technician (print) Signature Z# Date

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

8.1[7] Reviewed By: Jose Jerez [signature] 1221452 5-1-13
Supervisor or designee (print) Signature Z# Date

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

Drum ID#: 93568

1. Drum/Lid Assembly

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

RECORD drum information:

Purchase Request #: 501186
Lot #: 02 34763
Date of Manufacture: 12

2. Drum Liner Bag/Filter Assembly:

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

RECORD bag filter information:

Manufacturer: BOP
Model #: 6CPVC 1.5-2 SPVC
Serial #: L-6588
Date of Manufacture: 1-13

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

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

4. Install Lid/Drum Filter

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

RECORD drum filter information:

Manufacturer: NUCFil
Model #: 0190S
Serial #: LM-58
Date of Manufacture: 12-12

RECORD torque wrench information:

Filter torque wrench:		Jam Nut / Bung torque wrench:	
M&TE ID #:	040694	M&TE ID #:	038369
Cal Expiration Date:	9-26-13	Cal Expiration Date:	12-18-13
Range (ft-lbs or in-lbs):	40-200	Range (ft-lbs or in-lbs):	10-80
Tolerance:	±4%cw ±6%ccw	Tolerance:	±3%cw ±6%ccw

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

[x] Yes [ ] No

Print Name: Adam Segovia Signature: [signature] Z#: 276702

5. Weigh Drum Assembly

RECORD weight information

Tare wtght (lbs) 75.6
File ID #: 0190605

- [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: Adam Segovia Operator Sign: [signature] Z#: 276702 Date: 4-18-13

Verifier Print: Gerald Espinoza Verifier Sign: [signature] Z#: 237720 Date: 4-26-13

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

DRUM ID#: 83568

1. LID INSTALLATION

NOTE: Install lid per manufacturer's instructions

✓ Mount lid with filter directly over drum seam.

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

✓ Engage bolt and nut and torque per manufactures instructions.

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

✓ Tighten jam nut.

Record torque wrench information:

MT&E #: 038373

Cal expiration date: 9.11.13

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

Tolerance ±3/cw ±6% CCW

2. DRUM LABELING

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

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

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

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

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

RCRA Label:

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

OR

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

NOTE: Check only one of the above two boxes.

3. WEIGH DRUM ASSEMBLY

Record weight information:

Gross Weight (lbs): 204.4

Scale ID#: 0F9085

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

4. FINALIZE DOCUMENTATION

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

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

✓ Complete TWSR.

Operator Print/Sign: Clayton Mullins Date: 4/26/13

Verifier Print/Sign: John Cole Date: 4-26-13

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

Drum ID#: 93571

1. Drum/Lid Assembly

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

RECORD drum information:

Purchase Request #: 501186
Lot #: 02342 63
Date of Manufacture: 12

2. Drum Liner Bag/Filter Assembly:

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

RECORD bag filter information:

Manufacturer: BUP
Model #: GCPVC-1-5-2-5PVC
Serial #: L G5 7 6
Date of Manufacture: 1/13

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

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

4. Install Lid/Drum Filter

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

RECORD drum filter information:

Manufacturer: NUCFIL
Model #: 019DS
Serial #: LM 69
Date of Manufacture: 12/12

RECORD torque wrench information:

Filter torque wrench:
M&TE ID #: 040694
Cal Expiration Date: 09/26/13
Range (ft-lbs or in-lbs): 40-200
Tolerance: +/-4% cw and +/-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 and +/-6% ccw

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

[x] Yes [ ] No

Print Name: Kevin Belosoak Signature: Kevin Bel Z#: 238199

5. Weigh Drum Assembly

RECORD weight information

Tare wtight (lbs) 75.8
File ID #: 019065

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

6. Label Drum Assembly

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

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

Operator Print: Clayton Mullins Operator Sign: Z#: 240091 Date: 4/19/13

Verifier Print: Miguel Gonzalez Verifier Sign: Z#: 239985 Date: 4/26/13

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

DRUM ID#: 935,71

1. LID INSTALLATION

NOTE: Install lid per manufacturer's instructions

☑ Mount lid with filter directly over drum seam.

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

☑ Engage bolt and nut and torque per manufactures instructions.

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

☑ Tighten jam nut.

Record torque wrench information:

MT&E #: 038373

Cal expiration date: 9/11/13

Range/ Value (ft-lbs): 10-80 / 60

--- Tolerance ±3% CW / ±6% CCW

2. DRUM LABELING

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

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

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

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

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

RCRA Label:

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

OR

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

NOTE: Check only one of the above two boxes.

3. WEIGH DRUM ASSEMBLY

Record weight information:

Gross Weight (lbs): 158.2

Scale ID#: 01[illegible]5

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

4. FINALIZE DOCUMENTATION

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

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

☑ Complete TWSR.

Operator Print/Sign: Clyde Mullins Clyde Date 9/26/13

Verifier Print/Sign: [illegible] Date 9-26-13

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

Drum ID#: 93572

1. Drum/Lid Assembly

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

RECORD drum information:

Purchase Request #: 501186
Lot #: 0234763
Date of Manufacture: 2012

2. Drum Liner Bag/Filter Assembly:

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

RECORD bag filter information:

Manufacturer: BOP
Model #: 6CPVC-1.5-2-SPVC
Serial #: 2-6548
Date of Manufacture: 1/13

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

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

4. Install Lid/Drum Filter

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

RECORD drum filter information:

Manufacturer: Nucfil
Model #: 01905
Serial #: LM-38
Date of Manufacture: 12/12

RECORD torque wrench information:

Filter torque wrench:		Jam Nut / Bung torque wrench:	
M&TE ID #:	040694	M&TE ID #:	038369
Cal Expiration Date:	9/26/13	Cal Expiration Date:	12/18/13
Range (ft-lbs or in-lbs):	40-200	Range (ft-lbs or in-lbs):	10-80
Tolerance:	±4% cw / ±6% ccw	Tolerance:	±3% cw / ±6% ccw

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

[x] Yes [ ] No

Print Name: Clayta Mullins Signature: [signature] Z#: 240092

5. Weigh Drum Assembly

RECORD weight information

Tare wtight (lbs)
File ID #:

- [ ] 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: Clayta Mullins Operator Sign: [signature] Z#: 240092 Date: 4/26/13

Verifier Print: Miguel Gonzalez Verifier Sign: [signature] Z#: 239985 Date: 4/26/13

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

DRUM ID#: 93572

1. LID INSTALLATION

NOTE: Install lid per manufacturer's instructions

✓Mount lid with filter directly over drum seam.

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

✓Engage bolt and nut and torque per manufactures instructions

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

✓Tighten jam nut.

Record torque wrench information:

MT&E #: 038373

Cal expiration date: 9/11/13

Range/ Value (ft-lbs): 10-80 / 60

Tolerance ± 3% cw / ±6% ccw

2. DRUM LABELING

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

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

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

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

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

RCRA Label:

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

OR

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

NOTE: Check only one of the above two boxes.

3. WEIGH DRUM ASSEMBLY

Record weight information:

Gross Weight(lbs): 210.2

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: Clayton Mullins Date 4/26/13

Verifier Print/Sign: Miguel Rosales Date: 4/26/13

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

Drum ID#: 93573

1. Drum/Lid Assembly

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

RECORD drum information:
Purchase Request #: 501186
Lot #: 0134763
Date of Manufacture: 2012

2. Drum Liner Bag/Filter Assembly:

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

RECORD bag filter information:
Manufacturer: BOP
Model #: 6CPVC-1.5-25PVC
Serial #: 1-6646
Date of Manufacture: 1-13

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

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

4. Install Lid/Drum Filter

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

RECORD drum filter information:
Manufacturer: Nucfil
Model #: 0190S
Serial #: CM-32
Date of Manufacture: 12-12

RECORD torque wrench information:

Filter torque wrench:		Jam Nut / Bung torque wrench:	
M&TE ID #:	040694	M&TE ID #:	038369
Cal Expiration Date:	9-26-13	Cal Expiration Date:	12-19-13
Range (ft-lbs or in-lbs):	40-200	Range (ft-lbs or in-lbs):	10-80
Tolerance:	±47.cw ± 6ccw	Tolerance:	± 3x.cw ± 6x.ccw

Torque wrenches listed above are within the acceptable ranges as displayed on the calibration certificate.
☑ Yes ☐ No
Print Name: Justin Lopez Signature: [signature] Z#: 266436

5. Weigh Drum Assembly

RECORD weight information
Tare wight (lbs) 75.10
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: Justin Lopez Operator Sign: [signature] Z#: 266436 Date: 4-26-13
Verifier Print: Clayton Mullins Verifier Sign: [signature] Z#: 240092 Date: 4/26/13

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

DRUM ID#: 93573

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-~~ 4-26-13 10- 80 / 60

Tolerance ±3% cw / ±6% ccw

2. DRUM LABELING

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

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

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

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

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

RCRA Label:

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

OR

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

NOTE: Check only one of the above two boxes.

3. WEIGH DRUM ASSEMBLY

Record weight information:

Gross Weight(lbs): 359.6

Scale ID#: 019065

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

4. FINALIZE DOCUMENTATION

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

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

✓ Complete TWSR.

Operator Print/Sign: Clayton Mullins Date: 4/26/13

Verifier Print/Sign: Miguel Gonzales Date: 4/26/13

WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Production Control

Container ID: S824188 Container Type: 55-GAL Gross Weight (lbs): 453

Inner Seal #: 009342 Filter Prefix: LAVC Filter Serial #: 03830

AK Waste Stream: LA-MHD01.001 Certified RTR BDR: LA-RTR2-11-0142

TWSR Comments: LEACHED SOLIDS NITRATE SALTS

Total PE-Ci Activity: 9.12E+00 Equivalent Combustible PE-Ci: 3.42E+00 AM-241 PE-Ci: 7.40E-01

Total Fissile Gram Equivalents: 100.7 Total Surface Dose Rate (mrem/hr): 36

EPA Code(s): None

NCR RTR/NDA Comment: None

RTR Pre-Screen Date: 5/2/2007 Comment: Liquids, Impenetrable Obj, Liner Not Punctured, Liquid Location: 19

Certified RTR Comment: Impenetrable Items, Liquid greater than 1% by volume

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

Security Determination: ☑ Green ☐ Yellow

Remediation Determination: ☑ VE ☑ PID ☐ Split ☑ Repack

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

TRUCON Code: LA125M Production Control Comments: Ensure EPA Codes D007, D008, and D009 are on the label. A minimum of 1:2 volumes of kitty litter/zeolite must be mixed with 1.0 volume of nitrate salts

Performed By: R. W. Jones (Production Control (Print)) R. W. Jones (Signature) 117434 (Z Number) 1-2-12 (Date)

WDP Engineering

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

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

Processing Determination: ☑ Accept ☐ Reject

WDP Engineering Comments: Nitrate salts
Net Wt: 393 lb. Historical information shows 3 items of nitrate salts; they weigh 134 lb, 40 lb, and 17 lb. RTR inventory shows 55 gallon (w/90 mil liner) containing scrap lead, plastic bags, + homogeneous solid material. Nitrate salts may contain undocumented liquids
May require RWP for >1000 and <10,000 mrem/hr @ 30 cm

Performed By: Valerie Rhodes (WDP Engineering (Print)) Valerie Rhodes (Signature) 112609 (Z Number) 12/6/12 (Date)

TRU Remediation Operations

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

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

Processing Determination: ☑ Accept ☐ Reject

TRU Remediation Operations Comments: Use proper ratio of kitty litter to waste, follow the procedure.

Performed By: Clarissa Velarde (TRU Remediation Operations (Print)) Clarissa Velarde (Signature) 234079 (Z Number) 2/8/12 (Date)

Jose Perez — Robin Shutt — 272955 1-14-13 — 221452 1/7/13

IHS Review Johnny Smallwood CSP, No Concerns 12/4/12

Noncertified TRU Waste Drum Item Information

DrumID: 009342

Item No	ItemID	Process Status	Net Wt (kg)	Matrix	Meas Code	SNM (g)	MT	Auth (Pg/Ln)	Comments
1	IXFS-594-FB		60.910	NITRATE SALTS		28.77	52	5/11	
2	IXFS-591-F1		7.730	NITRATE SALTS		2.02	52	5/11	
3	IXFS-596-FD		18.180	NITRATE SALTS		76.22	52	5/11	

Noncertified Waste Drum Material Summary

Gross Wt (kg): 205.5

Material Type	SNM (grams)	Items Net Wt (kg)
52	107.01	86.82
Totals	107.01	86.82

Attachment 2 – CCP Radiography Data Sheet

Section 1: General Information	
☑ RTR Examination ☐ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-11-0147
Examination Date:	11/15/2011
Waste Container ID:	S824188
Video/Audio Recorded Media Number:	LA-RTR2-11-0147 A
Procedure and Revision No.:	CCP-TP-053 Rev. 11
NCR(s) associated with the container? (e.g., Prohibited Items)	☐ NO ☑ YES NCR No.: NCR-LANL-3837-11 NCR No.: NCR-LANL-3993-11

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA225
Waste Matrix Code:	S5400
Waste Stream I.D.	LA-MHD01.001
Waste Container Weights:	Gross Wt: 192.0 kg. Tare Wt: 35.1 kg. Net Wt: 156.9 kg.
Rigid Liner and Liner Vent Description: (e.g., "90 mil liner – NO Lid" or "NO Liner")	90mil Liner - Mechanical Vent
Number of Layers of Confinement:	~~Appears to be 1 layer~~ PO 12/1/11 Cannot verify PO 12/1/11
Volume Utilization Percentage:	95 %

Attachment 2 – CCP Radiography Data Sheet (Continued)

Page 2 of 3

Waste Container ID: S824188

Section 3: Container Inventory and Comments (Detailed descriptions)
Scrap lead
Plastic bags, horsetail
homogeneous solid material

Section 4: Packaging Material and Waste Material Parameters	
Packaging Material:	Estimated Weight (kg)
Steel (ST):	27.7
Plastics (PP): Rigid Liner	7.4
Others:	0.0
Total Packaging Weight:	35.1
Waste Material Parameter:	Estimated Weight (kg)
Iron-based Metal / Alloys (IM):	80.5
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	
Other Inorganic Materials (OI):	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	2.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	74.4
Soils (S):	
Total WMP Weight:	156.9

Attachment 2 – CCP Radiography Data Sheet (Continued)

Page 3 of 3

Waste Container ID: S824188

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

Comments: NCR-LANL-3837-11
NCR-LANL-3993-11

RTR Operator:

Print Name	Signature	Date
Philip Dillard		11/15/11
		12/1/11

ATTACHMENT 1
Page 1 of 1

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

5.[1] Sample Date: 1/26/12

Container No. (5.[1])	S824188	S870475	S891513			
Filtered Vent Type (5.[1])	72	72	72			
WIPP-Approved Filtered Vent (5.[2])	☑ SAT ☐ UNSAT	☑ SAT ☐ UNSAT	☑ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT	☐ SAT ☐ UNSAT
Total CCP VOC value (< 7,000 ppm) (5.[4])	2.61 ppm	Ø ppm	Ø ppm	ppm	ppm	ppm
Hydrogen Reading (< 64,000 ppm) (5.[5])	447.58 ppm	Ø ppm	Ø ppm	ppm	ppm	ppm
Methane Reading (< 16,000 ppm) (5.[5])	Ø ppm	Ø ppm	Ø ppm	ppm	ppm	ppm

No Inventory Entries 1/30/12

5.[7] Certified CCP Technician:

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

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

Comments: N/C

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

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

6.1[2][B]/ 6.1[3] Performed By: Alicia Herrera (Waste Handling Operator (print)) Alicia Herrera (Signature) 198450 (Z#) 1/30/12 (Date)

InstName : Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\120126c\
Data File : S824188.D
Acq On : 26 Jan 2012 4:03 pm (#1); 26-Jan-12, 16:03:20 (#2)
Operator : SA
Sample :
Misc : 55 GAL LFL SAMPLED UNDER DRUM LID -072 FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jan 26 16:13:02 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	3.638	96	6925647m	209.00 ppmv	0.00
15) Chlorobenzene-d5	5.951	117	5772465	185.50 ppmv	0.00
Target Compounds					Qvalue
1) Hydrogen	1.626	GC1	3523m	447.58 ppmv	
12) Benzene	3.256	78	45918	2.61 ppmv	95

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

vocgas.m Thu Jan 26 16:13:11 2012

4-26-13
0555 Assuming WCRR operations center. - JColeman
0615 Pre-job being conducted by SOS. Beginning outside rounds.
0620 Beginning inside rounds. Item #3 on the rounds is unsat. Okay to proceed.
0630 Outside rounds complete.
0637 Item #63 on the rounds is OOS, okay to proceed.
0642 Inside rounds complete.
0645 Pre-job concluded.
0705 Notified by operator that the RCT states that while performing daily RMI surveys, they find that station 4, (L) glove needs to be changed out due to a small cut. SOS, SOM notified.
0717 Both rounds reviewed by SOS.
0722 Operators entering 50-69 to begin the glove change on station 4
0808 Beginning glove change at this time.
0838 Glove change complete.
0850 Mode change completed. We are now in operations in WCRRF yard and 50-69.
0851 Resuming operations on drum # S815139.
0934 Bagging off 1 daughter and 1 POC, bagging on S824188.
1025 Bag off complete. PPE check is Sat.
1124 Bagging off 1 daughter and 1 POC at this time.
1315 LAFD are in a briefing for the tour of 50-69.
1434 LAFD tour complete.
1435 Bagging off 1 daughter at this time.
1445 Bag off complete. PPE check is Sat.
1551 Bagging off 1 daughter, bagging on last daughter.
1600 Bag off complete. PPE check is Sat.
1612 Beginning outside rounds.
1623 Item #3 is unsat, okay to proceed.
1630 Beginning inside rounds.
1637 Outside rounds complete.
1651 Item #63 is OOS, okay to proceed.
1652 Inside rounds complete
1712 Both rounds reviewed by SOS.
1724 RCT's state station 7 (L) + (R) gloves need to be changed out
Continued on next page. JColeman

73576 & 73577
Rad Drum: [redacted]
S18 70475

4-26-13 (Continued) from previous page
in the morning before going into operations.
1727 Bagging off the last daughter of 5824188. PPE check is Sat.
1752 Bag off completed.
1759 Mode change complete. We are now in warm standby in WCRRF yard and 5069.
4-26-13 1830 End of day. OCO position secure. J Coleman

No further entries this page.

4-26-13 WCRR SOS Log Book

0600 Assuming SOS position for Jay

0615 Starting Pre-Job. Discussing Paper Plates or items being placed in Microwaves. Ensure that items are microwave safe. Lesson Learned. Discussed events from yesterday's suspect bulging drum, actions taken and a good job all the way around, notifications made and having a questioning attitude. Processing Parent drum that was bagged on overnight. There will be processing Solution Package 72. Solution Package 72 will need to be tracke on operating time, dose rates and kitty litter to waste ratio in accordance with the procedure for processing Nitrate Salts. Also processing to minimize amount of TOC's being used however keep ALARA and RCT instructions

0645 Pre Job Complete

0705 Operator reporting that Per RCT performing RMI's this morning Station 4 left hand glove will need to be changed out prior to processing.

0717 Inside and outside rounds have been reviewed and signed.

0808 Starting glove change on left hand of station 4.

0838 Glove Change Complete

0850 Mode Change complete WCRR yard and 50-69 are in Operations. Will start to process remainder of Parent that was left bagged on overnight.

0933 Bagging off Parent drum that was bagged on overnight

1024 Bag on and Bag off is complete

1124 Bagging off one daughter and 1 POC, continuing to process parent.

1155 Bag off Complete

1205 Operator breaking for lunch

1305 Operators going back in from lunch.

1712 Signed off on inside and outside Rounds.

1720 ~~1730~~ Operators notifying Ops Center that Station 1 Right and left hand will need to be changed out first thing in the morning prior to changing

WCRR 505 Log Book

4-6-13

modes

1731 Operator starting to bag off final daughter for the day. SP72 Parent generated 4 daughters and 1 POC Parent that was left bagged on overnight was completed this morning and generated 1 POC and two daughters

1759 Mode change complete. WCRR Yard and 50-69 are in WARM.

1820 Securing 505 position for the day. Jim Fry

4-20-13 AM

Do further entries on this page.

0600 Assumed WCRR SOM position.

0615 Attended pre job brief conducted by SOS. Discussed lessons learned from yesterdays evolutions w/ potential bulging container, FE-002 status, DRE-001 operation. Safety topic was use of non-microwavable plates causing a fire.

0700 Called into daily TA-54 SOM briefing.

0705 OCO notified by RP-1 that station #4 (L) glove needs to be changed out. Will perform WCG maintenance prior to changing modes.

0830 Submitted FSR to have wooden deck repaired outside 50-84 OpsCo

0838 Completed WCG maintenance.

0850 Completed Mode Change: WCRR Yard / Bldg 50-69 from Warm / Warm to Operations / Operations.

0920 Met LAFD and EM&R personnel @ 50-196 for tour brief - total # of people in tour = 9.

1040 Completed tour of LAFD personnel.

1200 Operators breaking for lunch.

1205 Late Entries 1025 Drum left bagged on from yesterdays operations completed and bagged on next drum.

1315 LAFD and EM&R personnel onsite for tour - 9 total.

1435 Completed tour w/ LAFD and EM&R.

1724 Operators identified station #7 both (R) & (L) gloves will require replacement prior to going into Operations.

1752 All bag offs completed.

1759 Completed Mode Change: WCRR Yard / Bldg 50-69 from Operations / Operations to Warm / Warm.

1830 Secured SOM position.

4/24/13

No further entries this page

SIGNATURE DATE 4/24 20 13

READ AND UNDERSTOOD DATE 20

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0065
Examination Date:	5/1/2013
Waste Container ID:	93568
Video/Audio Recorded Media Number:	LA-RTR2-13-0065 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 12
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3110
Waste Stream I.D.:	LA-MIN02-V.001
Waste Container Weights:	Gross Wt.: 92.5 kg Tare Wt.: 33.4 kg Net Wt.: 59.1 kg
Rigid Liner and Liner Vent Description:	Liner: [X] No [ ] Yes Lid: [X] No [ ] Yes Type: [ ] 30-mil [ ] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [ ] Yes [X] N/A Punctured: [X] No [ ] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [ ] No [X] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 2 layers
Volume Utilization Percentage:	55 %

CCP Radiography Data Sheet

Waste Container ID: 93568

Section 3: Container Inventory and Comments (Detailed descriptions)

IM: Hardware, scrap metal

AM:

OM: Scrap lead

OI:

C:

R:

XPM: Plastic bags

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP):Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	2.0
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	5.0
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	5.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	47.1
Soils (S):	
Total WMP Weight:	59.1

CCP Radiography Data Sheet

Waste Container ID: 93568

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

Comments:
N/A

RTR Operator:

Benito Maestas		5/1/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	93568	Count Sequence Number:	22683
Operator:	D3PW2DK1\operator		
Assay Start:	5/1/2013 3:58:25 PM		
Description 1:	1LANDA1762		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 59.1 kg	Net:	59.1 kg
Container:	Volume: 208.0 l	Full:	55.0 %
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:	22683	Batch Number:	1LANDA1762
Assay Instrument:	MCS HENC #1	Location:	LANL TA-54
Analysis Method:	CCP-TP-063 v 14	Software Version:	NDA 2000 V.4.0
Item ID:	93568	Analysis Date:	5/1/2013

Net Weight	59100.0 g			
Pu mass	8.41E+000	+-	1.83E+000	g
TRU Alpha Activity	3.54E+000	+-	1.56E+000	Ci
TRU Activity Concentration	5.99E+004	+-	2.64E+004	nCi/g
Pu-239 Equivalent Activity	3.56E+000	+-	1.56E+000	Ci
Pu-239 FGE	7.94E+000	+-	1.72E+000	g
Decay heat	1.17E-001	+-	5.21E-002	W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	5.16E-002	3.69E-005	5.77E-006	2.03E-006
PU238	7.71E-004	1.33E-002	2.90E-003	3.61E-005
PU239	7.89E+000	4.96E-001	1.08E-001	1.34E-003
PU240	5.04E-001	1.16E-001	2.52E-002	3.13E-004
AM241	8.39E-001	2.91E+000	1.56E+000	4.50E-002
PU241	9.89E-003	1.03E+000	2.24E-001	2.78E-003
PU242	1.68E-003	6.68E-006	1.45E-006	0.00E+000
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	5.60E-007
U233	<LLD	<LLD	0.00E+000	3.88E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	1.16E-006
U238	<LLD	<LLD	0.00E+000	1.15E-005

Errors quoted at 1.000 sigma

Operator: _____ Date: 5-6-13

ITR: _____ Date: 5-7-13

Automated Independent Technical Review

Count Sequence Number: 22683 Batch Number: 1LANDA1762
Counter ID: MCS HENC #1
Container ID: 93568
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 5/1/2013

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

Expert Review by: Sheri Chamberlin Date: 5-2-13

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **93568**

BDR Number: **LA13FG2053**

Sampling Date: **5/10/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	288.85	
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\130510c\
Data File : 93568.D
Acq On : 10 May 2013 10:09 am (#1); 10-May-13, 10:08:44 (#2)
Operator : NW
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 10 10:17:38 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	3.542	96	3856997	201.25 ppmv	-0.03
15) Chlorobenzene-d5	5.881	117	3332550	177.00 ppmv	-0.02
Target Compounds					Qvalue
1) Hydrogen	1.603	GC1	2053m	288.85 ppmv	

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

18

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0065
Examination Date:	5/1/2013
Waste Container ID:	93571
Video/Audio Recorded Media Number:	LA-RTR2-13-0065 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 12
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3110
Waste Stream I.D.:	LA-MIN02-V.001
Waste Container Weights:	Gross Wt.: 72.0 kg Tare Wt.: 33.4 kg Net Wt.: 38.6 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: 93571

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

Section 4: Packaging Material and Waste Material Parameters	
Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP):Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	4.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	34.6
Soils (S):	
Total WMP Weight:	38.6

CCP Radiography Data Sheet

Waste Container ID: 93571

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

Comments:
N/A

RTR Operator:

Benito Maestas	[signature]	5/1/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	93571	Count Sequence Number:	22693
Operator:	D3PW2DK1\operator		
Assay Start:	5/2/2013 2:16:49 PM		
Description 1:	1LANDA1763		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 38.6 kg	Net:	38.6 kg
Container:	Volume: 208.0 l	Full:	40.0 %
Density:	0.460 kg /l		

System Configuration

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

Errors quoted at 1.000 sigma

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number:	22693	Batch Number:	1LANDA1763
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:	93571	Analysis Date:	5/2/2013

Net Weight	38600.0 g			
Pu mass	5.08E+000	+-	1.34E+000	g
TRU Alpha Activity	3.28E+000	+-	1.55E+000	Ci
TRU Activity Concentration	8.51E+004	+-	4.00E+004	nCi/g
Pu-239 Equivalent Activity	3.30E+000	+-	1.55E+000	Ci
Pu-239 FGE	4.81E+000	+-	1.25E+000	g
Decay heat	1.09E-001	+-	5.16E-002	W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	5.21E-002	3.72E-005	5.44E-006	1.82E-006
PU238	4.66E-004	8.07E-003	2.12E-003	3.39E-005
PU239	4.77E+000	3.00E-001	7.88E-002	1.26E-003
PU240	3.05E-001	7.01E-002	1.84E-002	2.95E-004
AM241	8.37E-001	2.91E+000	1.54E+000	4.10E-002
PU241	5.98E-003	6.21E-001	1.63E-001	2.61E-003
PU242	1.02E-003	4.04E-006	1.06E-006	0.00E+000
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	5.49E-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	1.05E-006
U238	<LLD	<LLD	0.00E+000	9.65E-006

Errors quoted at 1.000 sigma

Operator: Maria [illegible] Date: 5.7.13

ITR: [illegible] Date: 5-7-13

Automated Independent Technical Review

Count Sequence Number: 22693 Batch Number: 1LANDA1763
Counter ID: MCS HENC #1
Container ID: 93571
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 5/2/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis No Add-a-Source warnings.	Ok
Section 2 - Passive Neutron Analysis Analysis Status: No errors.	Ok
Ones Rate Analysis complete with warnings. - Error calculating the Ones Rate Pu-240 Effective MDA.	Not data affecting.
Section 3 - Data Combiner Analysis Override enabled; 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: 5-6-13

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **93571**

BDR Number: **LA13FG2056**

Sampling Date: **5/15/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	273.38	
74-82-8	Methane	142.14	U
67-56-1	Methanol	35.23	U
60-29-7	Ethyl Ether	0.96	U
75-35-4	1,1-Dichloroethylene	6.38	U
67-64-1	Acetone	18.08	U
75-34-3	1,1-Dichloroethane	4.08	U
156-59-2	cis-1,2-Dichloroethene	0.76	U
78-93-3	Methyl ethyl ketone	11.73	U
110-82-7	Cyclohexane	5.10	U
71-43-2	Benzene	1.77	U
107-06-2	1,2-Dichloroethane	3.66	U
71-36-3	1-Butanol	1.84	U
108-10-1	Methyl isobutyl ketone	9.82	U
108-88-3	Toluene	8.02	U
108-90-7	Chlorobenzene	4.10	U
100-41-4	Ethylbenzene	3.57	U
108-38-3/106-42-3	m- and p-Xylene	1.92	U
95-47-6	o-Xylene	2.10	U
108-67-8	1,3,5-Trimethylbenzene	1.96	U
95-63-6	1,2,4-Trimethylbenzene	2.13	U

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

InstName : Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\130515c\
Data File : 93571.D
Acq On : 15 May 2013 11:42 am (#1); 15-May-13, 11:41:57 (#2)
Operator : GR
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER. (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 15 11:52:32 2013
Quant Method : C:\msdchem\1\METHODS\vocgas.m
Quant Title : Flammable Gas Analysis
QLast Update : Thu Jan 24 09:52:49 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
3) Fluorobenzene	3.552	96	4815836	201.25	ppmv	-0.02
15) Chlorobenzene-d5	5.900	117	4021021	177.00	ppmv	0.00
Target Compounds						Qvalue
1) Hydrogen	1.606	GC1	1943	273.38	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-RTR2-13-0065
Examination Date:	5/1/2013
Waste Container ID:	93572
Video/Audio Recorded Media Number:	LA-RTR2-13-0065 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 12
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3110
Waste Stream I.D.:	LA-MIN02-V.001
Waste Container Weights:	Gross Wt.: 95.5 kg Tare Wt.: 33.4 kg Net Wt.: 62.1 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: 93572

Section 3: Container Inventory and Comments (Detailed descriptions)

IM:

AM:

OM:

OI:

C:

R:

XPM: Plastic bags

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP):Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	4.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	58.1
Soils (S):	
Total WMP Weight:	62.1

CCP Radiography Data Sheet

Waste Container ID: 93572

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	B. Maestas	5/1/2013

NDA 2000 Assay Report

Item Information

Item ID:	93572	Count Sequence Number:	15746
Operator:	DCLTD231\Operator		
Assay Start:	5/10/2013 9:05:50 AM		
Description 1:	2LANDA1156		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gal Drum		
Weight:	Net: 62.1 kg	Net:	62.1 kg
Container:	Volume: 208.0 l	Full:	50.0 %
Density:	0.600 kg /l		

System Configuration

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

Errors quoted at 1.000 sigma

CS 6/17/14

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number: 15746
Assay Instrument: HENC #2
Analysis Method: CCP-TP-063 v 15
Item ID: 93572

Batch Number: 2LANDA1156
Location: LANL TA-54
Software Version: NDA 2000 V.4.0
Analysis Date: 5/10/2013

Net Weight	62100.0 g		
Pu mass	9.15E+000	+-	2.68E+000 g
TRU Alpha Activity	8.57E+000	+-	2.32E+000 Ci
TRU Activity Concentration	1.38E+005	+-	3.73E+004 nCi/g
Pu-239 Equivalent Activity	8.59E+000	+-	2.32E+000 Ci
Pu-239 FGE	8.67E+000	+-	2.52E+000 g
Decay heat	2.83E-001	+-	7.70E-002 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	1.37E-001	9.68E-005	1.64E-005	4.44E-006
PU238	8.40E-004	1.44E-002	4.21E-003	3.56E-005
PU239	8.59E+000	5.33E-001	1.56E-001	1.32E-003
PU240	5.49E-001	1.25E-001	3.65E-002	3.09E-004
AM241	2.30E+000	7.90E+000	2.31E+000	1.96E-002
PU241	1.08E-002	1.11E+000	3.25E-001	2.75E-003
PU242	1.83E-003	7.24E-006	2.12E-006	0.00E+000
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	8.04E-007
U233	<LLD	<LLD	0.00E+000	7.76E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	2.62E-006
U238	<LLD	<LLD	0.00E+000	1.81E-005
AM243	1.81E-003	3.62E-004	6.22E-005	5.76E-006

Errors quoted at 1.000 sigma

Operator: [signature] Date: 6-5-14

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

007
CJ 6/17/14

Automated Independent Technical Review

Count Sequence Number: 15746
Batch Number: 2LANDA1156
Counter ID: HENC #2
Container ID: 93572
Waste Matrix Code: Homo Sol. S3000
Count Type:
Sequence Type:
Assay Date: 5/10/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis Add-a-Source WARNINGS: Add-a-Source correction factor is less than one.	Ok
Section 2 - Passive Neutron Analysis Analysis Status: No errors. Ones Rate Analysis complete with warnings. - Error calculating the Ones Rate Pu-240 Effective MDA.	Ok Not data affecting.
Section 3 - Data Combiner Analysis Override enabled; 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.

008
CS 6/17/14

Comments	Disposition
Section 5 - Gamma Analysis	
Analysis Status: No errors.	Ok
MCA Deadtime greater than the upper limit of 50.0%.	MCA deadtime =50.52%
Miscellaneous	No additional nuclides contributing to 95% of the radiological hazard identified. Am-241 direct reported from gamma results.

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

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: **93572**

BDR Number: **LA13FG2055**

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

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	222.02	
74-82-8	Methane	142.14	U
67-56-1	Methanol	35.23	U
60-29-7	Ethyl Ether	0.96	U
75-35-4	1,1-Dichloroethylene	6.38	U
67-64-1	Acetone	18.08	U
75-34-3	1,1-Dichloroethane	4.08	U
156-59-2	cis-1,2-Dichloroethene	0.76	U
78-93-3	Methyl ethyl ketone	11.73	U
110-82-7	Cyclohexane	5.10	U
71-43-2	Benzene	1.77	U
107-06-2	1,2-Dichloroethane	3.66	U
71-36-3	1-Butanol	1.84	U
108-10-1	Methyl isobutyl ketone	9.82	U
108-88-3	Toluene	8.02	U
108-90-7	Chlorobenzene	4.10	U
100-41-4	Ethylbenzene	3.57	U
108-38-3/106-42-3	m- and p-Xylene	1.92	U
95-47-6	o-Xylene	2.10	U
108-67-8	1,3,5-Trimethylbenzene	1.96	U
95-63-6	1,2,4-Trimethylbenzene	2.13	U

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

InstName : Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\130514c\
Data File : 93572.D
Acq On : 14 May 2013 3:01 pm (#1); 14-May-13, 15:00:21 (#2)
Operator : SA
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 14 15:41:06 2013
Quant Method : C:\msdchem\1\METHODS\vocgas.m
Quant Title : Flammable Gas Analysis
QLast Update : Thu Jan 24 09:52:49 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
3) Fluorobenzene	3.506	96	3801021	201.25	ppmv	-0.06
15) Chlorobenzene-d5	5.848	117	3258775	177.00	ppmv	-0.05
Target Compounds						Qvalue
1) Hydrogen	1.608	GC1	1578m	222.02	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-RTR2-13-0065
Examination Date:	5/1/2013
Waste Container ID:	93573
Video/Audio Recorded Media Number:	LA-RTR2-13-0065 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 12
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3110
Waste Stream I.D.:	LA-MIN02-V.001
Waste Container Weights:	Gross Wt.: 160.5 kg Tare Wt.: 33.4 kg Net Wt.: 127.1 kg
Rigid Liner and Liner Vent Description:	Liner: [X] No [ ] Yes Lid: [X] No [ ] Yes Type: [ ] 30-mil [ ] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [ ] Yes [X] N/A Punctured: [X] No [ ] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [ ] No [X] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 2 layers
Volume Utilization Percentage:	90 %

CCP Radiography Data Sheet

Waste Container ID: 93573

Section 3: Container Inventory and Comments (Detailed descriptions)

IM: Scrap metal

AM:

OM: Scrap lead

OI:

C:

R:

XPM: Plastic bags

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP):Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	0.2
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):	117.9
Soils (S):	
Total WMP Weight:	127.1

CCP Radiography Data Sheet

Waste Container ID: 93573

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

Comments:
N/A

RTR Operator:

Benito Maestas	[signature]	5/1/2013
Print Name	Signature	Date

60 ~~59~~ BM 5.2.13

NDA 2000 Assay Report

Item Information

Item ID:	93573	Count Sequence Number:	15749
Operator:	DCLTD231\Operator		
Assay Start:	5/10/2013 11:12:57 AM		
Description 1:	2LANDA1156		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gal Drum		
Weight:	Net: 127.0 kg	Net:	127.0 kg
Container:	Volume: 208.0 l	Full:	90.0 %
Density:	0.680 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: 15749
Assay Instrument: HENC #2
Analysis Method: CCP-TP-063 v 14
Item ID: 93573

Batch Number: 2LANDA1156
Location: LANL TA-54
Software Version: NDA 2000 V.4.0
Analysis Date: 5/10/2013

Net Weight	127000.0 g		
Pu mass	7.20E+001	+-	1.75E+001 g
TRU Alpha Activity	1.88E+001	+-	9.33E+000 Ci
TRU Activity Concentration	1.48E+005	+-	7.35E+004 nCi/g
Pu-239 Equivalent Activity	1.90E+001	+-	9.33E+000 Ci
Pu-239 FGE	6.79E+001	+-	1.64E+001 g
Decay heat	6.17E-001	+-	3.12E-001 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	1.93E-001	1.38E-004	2.51E-005	5.37E-006
PU238	6.60E-003	1.14E-001	2.78E-002	3.60E-005
PU239	6.76E+001	4.25E+000	1.03E+000	1.34E-003
PU240	4.32E+000	9.93E-001	2.41E-001	3.13E-004
AM241	3.88E+000	1.35E+001	9.27E+000	2.36E-001
PU241	8.46E-002	8.79E+000	2.14E+000	2.77E-003
PU242	1.44E-002	5.72E-005	1.39E-005	0.00E+000
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	9.99E-007
U233	<LLD	<LLD	0.00E+000	9.89E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	3.12E-006
U238	<LLD	<LLD	0.00E+000	2.43E-005
AM243	4.70E-003	9.49E-004	1.73E-004	7.26E-006

Errors quoted at 1.000 sigma

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

ITR: [illegible] Date: 5-15-13

Automated Independent Technical Review

Count Sequence Number: 15749 Batch Number: 2LANDA1156
Counter ID: HENC #2
Container ID: 93573
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 5/10/2013

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

Comments	Disposition
Section 4 - MGA Analysis Results are marked as invalid.	MGA analysis failed. AK isotopics applied. The AK information utilized was provided by Steve Schafer, AKE, and consists of data from CCP-AK-LANL-006, AK Source Document M237. MT-52.
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: 5-14-13

Waste Container ID: **93573**

BDR Number: **LA13FG2055**

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

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	242.42	
74-82-8	Methane	142.14	U
67-56-1	Methanol	35.23	U
60-29-7	Ethyl Ether	0.96	U
75-35-4	1,1-Dichloroethylene	6.38	U
67-64-1	Acetone	18.08	U
75-34-3	1,1-Dichloroethane	4.08	U
156-59-2	cis-1,2-Dichloroethene	0.76	U
78-93-3	Methyl ethyl ketone	11.73	U
110-82-7	Cyclohexane	5.10	U
71-43-2	Benzene	1.77	U
107-06-2	1,2-Dichloroethane	3.66	U
71-36-3	1-Butanol	1.84	U
108-10-1	Methyl isobutyl ketone	9.82	U
108-88-3	Toluene	8.02	U
108-90-7	Chlorobenzene	4.10	U
100-41-4	Ethylbenzene	3.57	U
108-38-3/106-42-3	m- and p-Xylene	1.92	U
95-47-6	o-Xylene	2.10	U
108-67-8	1,3,5-Trimethylbenzene	1.96	U
95-63-6	1,2,4-Trimethylbenzene	2.13	U

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

InstName : Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\130514c\
Data File : 93573.D
Acq On : 14 May 2013 2:49 pm (#1); 14-May-13, 14:49:04 (#2)
Operator : SA
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 14 15:39:20 2013
Quant Method : C:\msdchem\1\METHODS\vocgas.m
Quant Title : Flammable Gas Analysis
QLast Update : Thu Jan 24 09:52:49 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
3) Fluorobenzene	3.503	96	3820499	201.25	ppmv	-0.07
15) Chlorobenzene-d5	5.848	117	3259657	177.00	ppmv	-0.05
Target Compounds						Qvalue
1) Hydrogen	1.608	GC1	1723m	242.42	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-RTR2-13-0065
Examination Date:	5/1/2013
Waste Container ID:	93574
Video/Audio Recorded Media Number:	LA-RTR2-13-0065 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 12
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3110
Waste Stream I.D.:	LA-MIN02-V.001
Waste Container Weights:	Gross Wt.: 171.0 kg Tare Wt.: 145.1 kg Net Wt.: 25.9 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:	60 %

CCP Radiography Data Sheet

Waste Container ID: 93574

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):	25.9
Soils (S):	
Total WMP Weight:	25.9

CCP Radiography Data Sheet

Waste Container ID: 93574

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

Comments:
Standard Pipe Overpack Container (P.O.C.); There is separation between the liner and liner lid, therefore, the liner is vented.

RTR Operator:

Benito Maestas		5/1/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	93574	Count Sequence Number:	22701
Operator:	D3PW2DK1\operator		
Assay Start:	5/3/2013 9:14:58 AM		
Description 1:	1LANDA1764		
Description 2:	POC, 171.0		
Location:	LANL TA-54		
Comment:	AK-6, Not Precision		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 25.9 kg	Net:	25.9 kg
Container:	Volume: 208.0 l	Full:	95.0 %
Density:	0.725 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: 22701
Assay Instrument: MCS HENC #1
Analysis Method: CCP-TP-063 v 14
Item ID: 93574

Batch Number: 1LANDA1764
Location: LANL TA-54
Software Version: NDA 2000 V.4.0
Analysis Date: 5/3/2013

Net Weight	25900.0 g		
Pu mass	5.70E+001	+-	1.76E+001 g
TRU Alpha Activity	7.72E+000	+-	1.31E+000 Ci
TRU Activity Concentration	2.98E+005	+-	5.05E+004 nCi/g
Pu-239 Equivalent Activity	7.93E+000	+-	1.31E+000 Ci
Pu-239 FGE	5.37E+001	+-	1.76E+001 g
Decay heat	2.48E-001	+-	4.13E-002 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
SR90	6.67E-009	9.21E-007	5.75E-007	0.00E+000
CS137	1.05E-008	9.21E-007	5.75E-007	5.74E-007
U233	<LLD	<LLD	0.00E+000	5.28E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	1.58E-006
NP237	5.26E-002	3.76E-005	7.14E-006	2.64E-006
PU238	5.11E-002	8.84E-001	3.51E-001	1.12E-002
U238	<LLD	<LLD	0.00E+000	1.17E-005
PU239	5.33E+001	3.35E+000	1.10E+000	4.25E-002
PU240	3.41E+000	7.83E-001	3.27E-001	9.93E-003
AM241	7.77E-001	2.70E+000	5.15E-001	1.36E-001
PU241	1.48E-001	1.54E+001	5.35E+000	1.96E-001
PU242	7.38E-002	2.93E-004	1.03E-004	0.00E+000

Errors quoted at 1.000 sigma

Operator: _____ Date: 5-8-13

ITR: _____ Date: 5-13-2013

Automated Independent Technical Review

Count Sequence Number: 22701 Batch Number: 1LANDA1764
Counter ID: MCS HENC #1
Container ID: 93574
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 5/3/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis	
No Add-a-Source warnings.	Ok
Section 2 - Passive Neutron Analysis	
Analysis Status: No errors.	Ok
Ones Rate Analysis complete with warnings.	
- Error calculating the Ones Rate Pu-240 Effective MDA.	Not data affecting.
Section 3 - Data Combiner Analysis	
Override enabled; Gamma data specified as input.	Results taken from quantitative gamma data.
Results taken from Quantitative Gamma data.	
Results comparison test passed.	
Section 4 - MGA Analysis	
Expert review is recommended; the following validity tests failed:	MGA valid.
FWHM of 122 keV peak (857 eV) is greater than allowed (800 eV).	After EA review, FWHM value acceptable.
Uncertainty in Pu240 effective (23.9%) is greater than allowed (20.0%).	After EA review, uncertainty value acceptable.
Section 5 - Gamma Analysis	
Analysis Status: No errors.	Ok

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

Expert Review by: Sheri Chambers Date: 5-7-13

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **93574**

BDR Number: **LA13FG8032**

Sampling Date: **5/22/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	894.12	
74-82-8	Methane	213.40	U
67-56-1	Methanol	27.87	U
60-29-7	Ethyl Ether	1.25	U
75-35-4	1,1-Dichloroethylene	5.71	U
67-64-1	Acetone	16.90	U
75-34-3	1,1-Dichloroethane	4.24	U
156-59-2	cis-1,2-Dichloroethene	0.55	U
78-93-3	Methyl ethyl ketone	9.86	U
110-82-7	Cyclohexane	5.84	U
71-43-2	Benzene	0.71	U
107-06-2	1,2-Dichloroethane	1.51	U
71-36-3	1-Butanol	1.36	U
108-10-1	Methyl isobutyl ketone	9.34	U
108-88-3	Toluene	5.16	
108-90-7	Chlorobenzene	1.69	U
100-41-4	Ethylbenzene	2.62	U
108-38-3/106-42-3	m- and p-Xylene	1.48	U
95-47-6	o-Xylene	1.76	U
108-67-8	1,3,5-Trimethylbenzene	3.14	U
95-63-6	1,2,4-Trimethylbenzene	3.92	U

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\130522C\
Data File : 93574.D
Acq On : 22 May 2013 3:54 pm
Operator : RJ
Sample :
InstName : Unit 8
Misc : POC through filter (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 22 16:01:54 2013
Quant Method : C:\msdchem\1\METHODS\Vocgas.m
Quant Title : Flammable Gas Analysis for Transportation
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
3) Fluorobenzene	3.256	96	2227766	206.00 ppm	0.00
15) Chlorobenzene-d5	5.939	117	1987696	179.50 ppm	0.00
Target Compounds					Qvalue
1) Hydrogen	5.275	GC1	220922	894.12 ppm	100
17) Toluene	4.776	92	23700	5.16 ppm	98

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

S824208

S824208

Container Profile 754058

File Options Reports Help

S824208

754058	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

S824208

S824208
- LA00000068532 - EMPTY
- LA00000068422 - WIPP
- LA00000068424 - WIPP
- LA00000068423 - WIPP
- LA00000068425 - LANL
  - LASB50036
- LA00000068558 - WIPP
- LA00000068560 - WIPP

Task History

Transfer Details

Transfer Amount	Transfer Unit	Item	Measured Weight	Measured Weig...
16.59	%			

Date: ~~10-30-13~~ 10-31-13 AS 10-31-13 AS

ATTACHMENT 1
Page 1 of 4

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: 58241208

6.2[4] Date Processed: 10-31-13

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

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

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

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

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

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

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

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

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

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

Performed By: Adam Segovia / Adam Segovia 127670 / 10-31-13
Waste Handling Tech (print) Signature Z # Date

ATTACHMENT 1
Page 2 of 4

4.1[6][B] Parent Waste Container No.: 5824208

5.[18] Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable: 458.4 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) 458.4 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.

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.: 5824208

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	68558	68560		
10.1[4]	Daughter Drum Filter No.	KM-762	KM-767	N/A	
10.1[4]	Daughter Drum Bag Filter No.	L-10281	L-10325		
10.1[4]	Daughter Drum Purchase Order No.	501578	501578		
10.1[13][C]	WCG Fire Watch Stationed		☐ YES	☐ NO	☑ N/A
10.1[14][C][d]3/11.1[3]	WCG Fire Watch Secured		☐ YES	☐ NO	☑ N/A
10.2[4]	POC bag-on bag: Manufacturer	BOP	BOP	BOP	BOP
	Model No.	GCPC 15-23PC	GCPC 15-23PC	GCPC 15-23PC	GCPC 15-23PC
	Serial No.	L-6778	L-6775	L-10525	L-6779
	Date of Manufacture	1-13	1-13	6-13	1-13
10.2[5]	POC ID No	68422	68424	68423	68425
10.2[7][B]/10.2[6]	POC Item Description	Nitrate Salts & Plastic	Plastic N. Nitrate Salts	Plastic N. Nitrate Salts	Plastic, Nitrate Salts
10.2[13]	POC Assembly closed per Manufacturer's instructions. (Initial and 2#)	22 22x26	22 22x26	22 22x26	22 22x26
10.2[14]	POC Assembly Gross Weight (lb)	416.6	405.0	397.0	386.0
10.2[15]	POC Rad. Survey Results (mrem/hr)	1R	2R	2R	170 mR
10.3[3][A]	Approx. Containerized Liquid Vol./Units			N/A	
10.3[5][A]	Free Liquid Volume/Units				
10.3[7][A]	Opaque/Non-penetrable Item Description:	Lead shielding	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 (%)	50%	50%		
10.5[3]/10.6[2]	Description Waste Added During Processing	Kitty litter Stab out bags	Kitty litter Stab out Bags		

ATTACHMENT 1
Page 4 of 4

4.1[6][B] Parent Waste Container No.: 5924208

Comments: Nitrate salts, Rem trash, plastic, kitty litter, lead shielding, plastic stab out bags.

11.1[1] Performed By: Frederick Robbins / [signature] 1226824 / 10-31-13
Waste Handling Tech (print) Signature Z # Date

11.1[8] Reviewed By: Gilbert Martinez / [signature] 1149235 / 11/4/13 0900
SOS or designee (print) Signature Z # Date/Time

Working Copy
Date: 10-4-13

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	038369
Cal. Expiration Date:	12-18-13	12-18-13
Tolerance:	±.1% cw ±.6% ccw	±.3% cw ±.6% ccw

Overpack filtered vent information:

Manufacturer: NucFil
Model No.: 013
Serial No.: SC-1048
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: Justin Cofer / [signature] 1486481 10-4-13
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: Justin Cofer / [signature] 1486481 10-4-13
Waste Handling Technician (print) Signature Z# Date

8.1[6] Reviewed By: Gilbert Martinez / [signature] 1482135 10/4/13
Supervisor or designee (print) Signature Z# Date

ATTACHMENT 5
Page 1 of 1

Working Copy
Date: 10-31-13

WCRRF OVERPACK DRUM CLOSURE DATA SHEET

7.[17] Overpack Drum Unique Identifier No.: 68532

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: Frederico Arellano / [signature] / [illegible] / 10-31-13
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): 145.6 lb

Comments: N/A

8.1[1] Performed By: Frederico Arellano / [signature] / [illegible] / 10-31-13
Waste Handling Technician (print) Signature Z# Date

8.1[7] Reviewed By: Gilbert Mir / [signature] / 146255 / 11/4/13
Supervisor or designee (print) Signature Z# Date

Working Copy
Date: 10/24/13

ATTACHMENT 1
Page 1 of 2

WCRRF DRUM PREPARATION DATA SHEET

5.[34][E] Drum ID No.: 68558

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.: 6cpuc-1.525pvc
Serial No.: L-10281
Manufacture Date: 05/13

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

	Filtered Vent	2 in. Bung
M&TE No.:	100216	038369
Cal. Expiration Date:	12/18/13	12/18/13
Range in ft-lb:	40-200 in lbs	10-80
Tolerance:	±4% 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] 1287724 10-24-13
Operator (print) Signature Z # Date

5.[23] Filtered vent information:
Manufacturer: NUCFIL
Model No.: 019DS JM 10-31-13
Serial No.: ~~L-10281~~ KM-762
Manufacture Date: ~~05/13~~ 11-12
JM 10-31-13

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.: 68558

Comments: N/C

5.[35] Performed By: GERALD ESPINOZA (Operator (print)) [signature] (Signature) 1231724 (Z #) 10-24-13 (Date)

7.1[4] Reviewed By: Gilbert Martin (Supervisor or designee (print)) [signature] (Signature) 1495351 (Z #) 11/4/13 (Date)

ATTACHMENT 2
Page 1 of 2

WCRRF DRUM CLOSURE DATA SHEET

6.[3] Drum ID No.: 68558

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 +/- 16% CCW

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

Performed By: Fredericks Mabuleta / [signature] / 1220026 / 10-31-13
Operator (print) Signature Z # Date

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

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

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

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

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

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

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

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

ATTACHMENT 2
Page 2 of 2

6.[3] Drum ID No.: 68558

6.[26] Scale File ID number: 0190165

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

6.[28] Drum gross weight: 228.4 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: Frederico Arabeloto / [signature] / 1220826 / 10-31-13
Operator (print) Signature Z # Date

7.1[4] Reviewed By: Gilbert Marsh / [signature] / 149235 / 11/4/13
Supervisor or designee (print) Signature Z # Date

Working Copy
Date: 102413

ATTACHMENT 1
Page 1 of 2

WCRRF DRUM PREPARATION DATA SHEET

5.[34][E] Drum ID No.: 685560

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 cpvc 1.5-2 spvc
Serial No.: L-10325
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 in. lbs.	10-80
Tolerance:	±4% ±6% ccw	±3% cw ±6% ccw

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

Performed By: Steven Mandragon / Steven Mandragon 1108201 10-24-13
Operator (print) Signature Z # Date

5.[23] Filtered vent information:
Manufacturer: Nucfil
Model No.: 019 05
Serial No.: KM-767
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.: 68560

Comments: N/C

5.[35] Performed By: Steven Mondragon / Steven Mondragon / 1047141 / 10-24-13
Operator (print) Signature Z # Date

7.1[4] Reviewed By: Gilbert Martinez / [signature] / 1049231 / 11/4/13
Supervisor or designee (print) Signature Z # Date

ATTACHMENT 2
Page 1 of 2

WCRRF DRUM CLOSURE DATA SHEET

6.[3] Drum ID No.: 68560

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

M&TE No.: 038369
Cal. Expiration Date: 12-18-13
Range in ft-lb: 16 - 80
Tolerance: +/- 3% cw +/- 6% ccw

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

Performed By: Frederick [illegible] / [illegible] 1228826 / 10-31-13
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.: 685160

6.[26] Scale File ID number: 019065

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

6.[28] Drum gross weight: 245.0 lbs

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

Comments: MC

6.[32] Performed By: Federico Arbolada | [signature] | 1228676 | 10-31-13
Operator (print) Signature Z # Date

7.1[4] Reviewed By: Gilbert Martinez | [signature] | 1149257 | 11/4/13
Supervisor or designee (print) Signature Z # Date

WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Production Control

Container ID: S824208 Container Type: 55-GAL Gross Weight (lbs): 478
Inner Seal #: 009791 Filter Prefix: LAVC Filter Serial #: 03807
AK Waste Stream: LA-MHD01.001 Certified RTR BDR: No BDR
TWSR Comments: LEACHED SOLIDS NITRATE SALTS
Total PE-Ci Activity: 2.15E+00 Equivalent Combustible PE-Ci: 8.05E-01 AM-241 PE-Ci: 1.74E-01
Total Fissile Gram Equivalents: 23.7 Total Surface Dose Rate (mrem/hr): 8
EPA Code(s): None
NCR RTR/NDA Comment: None
RTR Pre-Screen Date: 6/25/2007 Comment: Impenetrable Obj,
Certified RTR Comment: None

Prohibited Items: ☐ Sealed > 4 Liters ☒ Liquid ☒ Pressurized Container ☑ Impenetrable Item ☒ Other
Security Determination: ☑ Green ☐ Yellow
Remediation Determination: ☑ VB ☐ PID ☐ Split ☐ Repack
Estimated 30-cm Dose Rate (mrem/hr): ☐ <100 ☑ >100 and <1,000 ☐ >1,000 and <10,000 ☐ >10,000
TRUCON Code: LA125M Production Control Comments: Ensure EPA Codes D007, D008, and D009 are on the label. A minimum of 1.2 volumes of kitty litter ~~zeolite~~ must be mixed with 1.0 volume of nitrate salts.

Performed By: R. W. Jones — Production Control (Print) — Signature: R. W. Jones — Z Number: 117434 — Date: 12.8.11
SUSAN S RAMSEY — Signature: Susan S. Ramsey — Z Number: 100681 — Date: 11/28/12

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: Leached solids- nitrate salts
Net Wt: 418 lb. Two items; heaviest weighs 280 lb and other weighs 60 lb.

Drums w/ nitrate salts may contain undocumented liquids

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

Drum may have lead liner

Performed By: Valerie Rhodes — WDP Engineering (Print) — Signature: Valerie Rhodes — Z Number: 112009 — Date: 12/15/11

TRU Remediation Operations

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

Performed By: Jessica Velarde — TRU Remediation Operations (Print) — Signature: Velarde — Z Number: 234079 — Date: 1/24/12
Jose Jerez — Signature: Jose Jerez — Z Number: 272995 — Date: 1-14-13
Robert Shutt — Signature: [illegible] — Z Number: 221452 — Date: 1-7-13

Q 11ts Review - Johnny Amaral CSP. No concerns
12/4/12

Noncertified TRU Waste Drum Item Information

DrumID: 009791

Item No	ItemID	Process Status	Net Wt (kg)	Matrix	Mass Code	SNM (g)	MT	Auth (Pg/Ln)	Comments
1	IMPS-593-F1	EV	127.040	NITRATE SALTS		21.66	52	5/11	
2	IMPS-594-F1		27.270	NITRATE SALTS		3.51	52	5/11	

Noncertified Waste Drum Material Summary

Gross Wt (kg): 216.8

Material Type	SNM (grams)	Items Net Wt (kg)
52	25.17	154.31
Totals	25.17	154.31

1172 0155

ATTACHMENT 1
Page 1 of 2

HYDROGEN/VOC SAMPLING USING GAS CHROMATOGRAPHY DATA SHEET

5.[1] Sample Date: 1/9/12

5.[7] Certified CCP Technician:

CCP (Print)	Signature	Z#	Date
Dave Aragon	Dave Aragon	1337175	1-11-12
	/	/	/

Container No. (5.[1]):	S824208	S832178	S824091
Container Type (SWB, 110/85/55-gal) (5.[1]):	55gal	55gal	55gal
Current Filtered Vent No. (5.[1]):	72	72	72
New Filtered Vent No.: (5.[8][A]):	72	72	72
WIPP-Approved Filtered Vent (5.[8][B]):	☑ SAT ☐ UNSAT	☑ SAT ☐ UNSAT	☑ SAT ☐ UNSAT
VOC	Value (ppm) (5.[10])		
Benzene	16.09		2.70
Chlorobenzene			
Cyclohexane			
1,1-Dichloroethane			
1,2-Dichloroethane			
1,1-Dichloroethylene			
cis-1,2-Dichloroethylene			
Ethyl benzene			
Ethyl ether			
Toluene			
1,2,4-Trimethylbenzene			
1,3,5-Trimethylbenzene			
m- and p-Xylene			
o-Xylene			
Acetone			
1-Butanol			
Methanol			
Methyl ethyl ketone			
Methyl isobutyl ketone			
Total CCP VOC value (ppm) (5.[11]):	16.09	Ø	2.70

ATTACHMENT 1
Page 2 of 2

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

Container Number (5.[1]):	S824208	S832178	S824091
Hydrogen Reading (ppm) (5.[10]):	1303.35 ppm	25.85 ppm	6314.88 ppm
Methane Reading (ppm) (5.[10]):	Ø ppm	Ø ppm	Ø ppm
Total VOC Reading (ppm) (5.[11]):	16.09 ppm	Ø ppm	2.70 ppm
Filtered Type (5.[9][F][c]/5.[9][G][a]):	72	72	72
WIPP Approved (SAT/UNSAT) (5.[9][F][c]/5.[9][G][a]):	SAT	SAT	SAT
Torque Wrench M&TE/ID Number (5.[9][F][a]/5.[9][G][a]):	N/A	N/A	N/A
Torque Wrench Calibration Due Date (5.[9][F][a]/5.[9][G][a]):	N/A	N/A	N/A
Torque Wrench Tolerance (5.[9][F][a]/5.[9][G][a]):	N/A	N/A	N/A
VERIFY Torque Wrench is within acceptable range as specified on Cal Certificate. (7.[9][F][a]/7.[9][G][b])	☐ YES ☐ NO ☑ N/A	☐ YES ☐ NO ☑ N/A	☐ YES ☐ NO ☑ N/A
Filter Torque Value (5.[9][F][a]/5.[9][G][d]) *	N/A	N/A	N/A

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

Comments: N/C

8.1[1] Performed By: Alia Herrera / [signature] / 198450 / 1/10/12
Waste Handling Operator (print) Signature Z # Date

8.1[5] ☐ Deficiencies identified and submitted (e.g., PCR or FSR system).

☑ No deficiencies

8.1[7][A] ($) WCRRF waste container satisfies the following criteria: ☑ SAT ☐ UNSAT

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

8.1[7][B]/ 8.1[8] Reviewed By: Juan Garcia / [signature] / 169840 / 1-10-12
Waste Handling Supervisor (print) Signature Z # Date

InstName : Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\120109c\
Data File : S824208.D
Acq On : 9 Jan 2012 11:43 am (#1); 09-Jan-12, 11:43:05 (#2)
Operator : WBM
Sample :
Misc : 55 GAL LFL DRUM FROM UNDER LID - NFT-072 (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jan 09 11:57:57 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	3.700	96	6193540	209.00	ppmv	0.07
15) Chlorobenzene-d5	6.016	117	4650154	185.50	ppmv	0.07
Target Compounds						Qvalue
1) Hydrogen	1.617	GC1	10259	1303.35	ppmv	100
12) Benzene	3.334	78	252624	16.09	ppmv	99

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

vocgas.m Mon Jan 09 11:58:12 2012

10-31-13 Continued from previous page. JColeman

0321 ~~10~~ JC 10-31-13 Bag off/on complete.

0338 Outside rounds complete.

0423 Beginning inside rounds.

0440 Item #63 is 005, okay to proceed per CSE documentation

0443 Inside rounds complete.

0503 Both rounds reviewed by SOS.

0505 Bagging off 1 daughter, bagging on S824208.

0539 Bag off/on complete.

0558 Air quality has arrived to perform weekly stack monitoring.

10-31-13 0605 Being relieved by oco, Clarissa Velarde, JColeman

No further entries this page

10-31-13
0605 Assuming DCRPF Operations under Orlando
0615 Pre job being conducted by SOS.
0645 Pre job concluded.
0700 Operators entering 50-69 to process.
0830 Starting to stage drums for shipment to area G shipment.
0855 Bagging off 1 daughter, 1 PCC and bagging on 1 daughter continuing to process.
0856 Permission to lower vehicle across gates
1120 Vehicle across gates have been restored movement to transport vehicle is complete.
1154 Bagging off 3 PCCs and 1 daughter
1250 Bag offs are complete
1444 Bagging off and bagging on 3818382
1500 Bag on, Bag off is complete.
1445 Starting movement out of 50-69.
1449 Starting inside rounds
1714 Item 63 is SOS POD in place, okay to proceed per CSE documentation.
1724 Inside round complete
1735 movement out of 50-69 is complete.
1738 Starting outside rounds.
1747 Starting movement into 50-69.
1759 Outside rounds complete.
1815 Relieved by LCL Terrie Coleman - Orlando

no further entries this page

Best Available Copy

10/31/13

1800 ~~0600~~ Assuming SOS position for the day. Turnover completed with on-going SOS Daniel Blain. [illegible]

1820 ~~0620~~ Starting Pre-Job, Prepping Mode to WRM Due to not having enough personnel to complete a watchbill, one operator running late to fill the Tech 1 spot on the watchbill. Turnover completed with outgoing crew and discussions on the broken window inside the glove box and what was done to mitigate the issue. Two pallets one in the high bay needing to be prepared and pushed in. Everything inside has been prepped and ready for us to operate once Mode change into operations is complete. Will need to go into COD at the end of the shift for maintenance scheduled for tomorrow. RWP brief to be conducted at lunch time for the monthly RWP.

1845 ~~0645~~ Pre-Job Completed.

1930 ~~0730~~ Operator on site to fill Tech 1 position on the watchbill will be able to go into operations to start processing.

1948 Mode Change WRM pad and 50-69 are in Operations.

2224 Bagging off first daughter and bagging on second daughter to continue processing. Parent drum being processed is 5818382

2235 Bag on/off complete.

~~0100~~ Operators breaking for lunch

0110 Operators being briefed to monthly RWP briefing

0130 RWP Briefing Complete, Operator returning from lunch to continue processing, Parent 5818382.

0210 Removed and stored outside rounds

0350 ~~0340~~ Bagging off last daughter and Parent for the shift. Operators will be performing glove box maintenance, glove inspections, clean out the sink and replacing of the tape in preparation of the glove box.

0351 Bag off complete, Red cover has been placed on the glove box. Starting glovebox maintenance.

0510 Initiation removal of waste material out of 50-69.

0520 Removed Trash rounds and signs

0535 Movement out of 50-69 is complete.

0541 Mode Change complete 50-69 in COD WRM pad is in WRM

1605 Performing turnover with on-coming SOS Daniel Blain. Securing SOS position for the day. [illegible]

[illegible] Continue on Blue Page.

10/31/13 WXYZ SOS LOG BOOK

0600 Assuming SOS Position [illegible]

0605 Conducted shift brief

0645 Shift brief Conducted

0700 Operators entering 50-69

0855 Bagging off / daughter PPOC and bagging on Another Daughter

0856 Starting shipment out of 50-69

1020 Shipment out ~~of~~ Complete

1154 Bagging off ~~[illegible]~~ 58/8382 3 POC's And 1 daughter

1250 Bag off complete

1444 Bagging off / on 58/8382

1500 Bag on / off Complete.

1610 Relieved by Darell Blain [illegible]

1610 Assumed ~~SOS~~ Position from Gilbert Martinez [illegible]

1615 Moved 12 empty LLW drums from the transportaness to the outside LLW Storage area.

1620 Received 12 empty 55 gallon drums and 12 empty 85 gallon drums.

1710 LATE Entry 1335 RCT's and Operators brought to our attention that the small lead window on Station 2 was cracked and missing a piece. After calls to the CSE, Jack Vigil and others it was determined to find out some bigger windows to get cut to size. A small lead window was found in the HPL 2 storage and a plan was put together with CSE's approval to tape this window to station 2 over the cracked window. Crew is having difficulty in getting the tape to stick. One operators EPD alarmed while ~~1715 Started~~ moved out of 15 drums [illegible] 31-13 working around station #2.

1715 Started movement out of 15 drums.

1780 Movement out complete

1750 Moving in 2 drums to the high bay.

1805 Move in 2 drums to high bay completed.

1815 Rounds completed. Inside and outside

1820 Turn over SOS position to Jose Jerez [illegible]

No further entries on this page

[illegible]

10/30/13 Night Shift continued

2347 Completed all bag offs for parent # 5832320 (2 daughters and 1 POC total). Bagged on 5816692.

10/31/13 0000 Operators breaking for lunch.

0111 Resuming operations.

0321 Completed bag off of 1 daughter - continuing to process

0539 Completed bagoffs for parent # 5816692 (2 daughters total) Bagged on 5824208.

10/31/13 0610 Relieved by J. Gandagnole as WCIR SOM.

No further entries this page

10-31-13 DAYSHIFT

0605 Reviewed the shift turnover checklist and assumed the SOM position [illegible]

0619 Reviewed the dayshift watch bill and approved.

0648 Completed attending the pre-job brief conducted by the SOS (Gilbert) The safety message was: take time to scrape the windshields when ice forms, for safety of self and others. Roles and responsibilities were assigned, and the SOS briefed operators on the current shift orders. The ES/PM discussed mode changes and when maintenance is allowed. One transfer is scheduled to AREA 6

0705 Completed the daily call in - statusing the POD daily activities with AREA 6

0710 One Operator reported to the SOS, OCD, and RP-1, that he left his Dosimeter Badge on the board the prior night for change out (End of the month). the SOS had witnessed the placement on the board. Currently the October badge was missing and RP-1 did not exchange for the November badge until evaluation and discussion takes place with RP-1 management. Additional follow up is required with RP-1 supervisor upon return from discussion with their upper management.

0815 P&T arrives to perform inspection of drums for transfer out.

0858 Completed obtaining additional information from production control for SEDs to allow operators to process one of the drums staged in 52/69. Production control procedure (new SED form) notes all information except close estimate and security color. The SOS noted, and will initiate changes in WCRRF procedure to match production control. In the meantime additional info from OLD SEDs will be obtained to continue compliance with current procedure EP-WRR-WO-DEP-0233.

0933 LAFD arrives to your facility 52/69 and YARD. RWP brief provided, SOM escorts individuals (2 total) No impact to operations processing.

1024 ~~1028~~ LAFD EXITS facility/yard and exits WCRRF.

1030 P&T completes the transfer with Operators and exits WCRRF.

1155 Inside Operator reports initiating bag off of 1 daughter and 3 POCs

1201 Participated in the Noon phone call with PM, ES/PM, and Cleft Coordinator.

1335 RP-1 Supervisor notifies SOM and ES/PM that an EPD was set off (alarmed) when processing the previous drum. The RCTs believe the root cause was a broken lead window - missing pieces. Coordinator - JV - is procuring new lead windows per CSE specifications, however vendor is evaluating if they can deliver. RP-1 will evaluate EPD if RPD is required.

(Continued on Next Page)

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0123
Examination Date:	11/5/2013
Waste Container ID:	68422
Video/Audio Recorded Media Number:	LA-RTR2-13-0123 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 14
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3110
Waste Stream I.D.:	LA-MIN02-V.001
Waste Container Weights:	Gross Wt.: 189.0 kg Tare Wt.: 145.1 kg Net Wt.: 43.9 kg
Rigid Liner and Liner Vent Description:	Liner: [ ] No [X] Yes Lid: [ ] No [X] Yes Type: [ ] 30-mil [X] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [X] Yes [ ] N/A Punctured: [ ] No [X] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [X] No [ ] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 1 layer
Volume Utilization Percentage:	95 %

CCP Radiography Data Sheet

Waste Container ID: 68422

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):	43.9
Soils (S):	
Total WMP Weight:	43.9

CCP Radiography Data Sheet

Waste Container ID: 68422

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

Comments: Standard Pipe Overpack Container (P.O.C.)
There is separation between liner lid and liner therefore liner is vented.

RTR Operator:

Thad Hasselstrom	Thad Hasselstrom	11/5/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	68422	Count Sequence Number:	23783
Operator:	D3PW2DK1\operator		
Assay Start:	11/5/2013 1:57:02 PM		
Description 1:	1LANDA1859		
Description 2:	POC, 189.0		
Location:	LANL TA-54		
Comment:	AK-6, Not Precision		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 43.9 kg	Net:	43.9 kg
Container:	Volume: 208.0 l	Full:	95.0 %
Density:	0.816 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:	23783	Batch Number:	1LANDA1859
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:	68422	Analysis Date:	11/5/2013

Net Weight	43900.0 g		
Pu mass	5.49E+000	+-	1.32E+000 g
TRU Alpha Activity	6.58E+000	+-	3.40E+000 Ci
TRU Activity Concentration	1.50E+005	+-	7.74E+004 nCi/g
Pu-239 Equivalent Activity	6.59E+000	+-	3.40E+000 Ci
Pu-239 FGE	5.20E+000	+-	1.31E+000 g
Decay heat	2.18E-001	+-	1.13E-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	8.24E-007
U233	<LLD	<LLD	0.00E+000	6.48E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	1.95E-006
NP237	9.58E-002	6.76E-005	1.37E-005	3.26E-006
PU238	5.01E-004	8.57E-003	2.44E-003	8.88E-004
U238	<LLD	<LLD	0.00E+000	1.78E-005
PU239	5.15E+000	3.19E-001	8.14E-002	3.31E-002
PU240	3.29E-001	7.47E-002	2.18E-002	7.74E-003
AM241	1.80E+000	6.18E+000	3.40E+000	7.00E-002
PU241	6.30E-003	6.48E-001	1.89E-001	6.72E-002
PU242	1.10E-003	4.34E-006	1.26E-006	0.00E+000

Errors quoted at 1.000 sigma

Operator: D E R Date: 11.6.13

ITR: Jim Barton Date: 11/11/13

Automated Independent Technical Review

Count Sequence Number: 23783 Batch Number: 1LANDA1859
Counter ID: MCS HENC #1
Container ID: 68422
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 11/5/2013

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

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: Sheri Chandler Date: 11-6-13

Waste Container ID: **68422**

BDR Number: **LA13FG2130**

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

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	1226.73	
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 : 68422.D
Acq On : 18 Dec 2013 1:48 pm (#1); 18-Dec-13, 13:48:15 (#2)
Operator : EL
Sample :
Misc : POC Through Filter (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Dec 18 13:57:24 2013
Quant Method : C:\msdchem\1\METHODS\VOCGAS.M
Quant Title : Flammable Gas Analysis
QLast Update : Mon Aug 26 13:12:56 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
3) Fluorobenzene	3.568	96	3418511	205.75 ppmv	0.05
15) Chlorobenzene-d5	5.868	117	2714315	177.50 ppmv	0.00
Target Compounds					Qvalue
1) Hydrogen	1.617	GC1	9224m	1226.73 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-RTR2-13-0123
Examination Date:	11/5/2013
Waste Container ID:	68423
Video/Audio Recorded Media Number:	LA-RTR2-13-0123 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 14
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3110
Waste Stream I.D.:	LA-MIN02-V.001
Waste Container Weights:	Gross Wt.: 180.0 kg Tare Wt.: 145.1 kg Net Wt.: 34.9 kg
Rigid Liner and Liner Vent Description:	Liner: [ ] No [X] Yes Lid: [ ] No [X] Yes Type: [ ] 30-mil [X] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [X] Yes [ ] N/A Punctured: [ ] No [X] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [X] No [ ] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 1 layer
Volume Utilization Percentage:	95 %

CCP Radiography Data Sheet

Waste Container ID: 68423

Section 3: Container Inventory and Comments (Detailed descriptions)

IM:

AM:

OM:

OI:

C:

R:

XPM:

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	109.0
Plastics (PP): Rigid Liner/Lid, Liner Bag (Inside POC)	8.1
Other: Fiberboard (CP), Liner/Sleeve (Inside POC)	28.0
Total Packaging Weight	145.1
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	
Organic Matrix (OR):	
Inorganic Matrix (IN):	34.9
Soils (S):	
Total WMP Weight:	34.9

CCP Radiography Data Sheet

Waste Container ID: 68423

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

Comments: Standard Pipe Overpack Container (P.O.C.)
There is separation between liner lid and liner therefore liner is vented.

RTR Operator:

Thad Hasselstrom	Thad Hasselstrom	11/5/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	68423	Count Sequence Number:	23784
Operator:	D3PW2DK1\operator		
Assay Start:	11/5/2013 2:39:01 PM		
Description 1:	1LANDA1859		
Description 2:	POC, 180.0		
Location:	LANL TA-54		
Comment:	AK-6, Not Precision		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 34.9 kg	Net:	34.9 kg
Container:	Volume: 208.0 l	Full:	95.0 %
Density:	0.771 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:	23784	Batch Number:	1LANDA1859
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:	68423	Analysis Date:	11/5/2013

Net Weight	34900.0 g		
Pu mass	8.44E-001	+-	2.77E-001 g
TRU Alpha Activity	4.01E+000	+-	2.16E+000 Ci
TRU Activity Concentration	1.15E+005	+-	6.19E+004 nCi/g
Pu-239 Equivalent Activity	4.01E+000	+-	2.16E+000 Ci
Pu-239 FGE	8.18E-001	+-	2.77E-001 g
Decay heat	1.33E-001	+-	7.18E-002 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	6.77E-007
U233	<LLD	<LLD	0.00E+000	4.77E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	1.46E-006
NP237	6.31E-002	4.45E-005	8.74E-006	2.48E-006
PU238	7.71E-005	1.32E-003	4.90E-004	5.53E-004
U238	<LLD	<LLD	0.00E+000	1.31E-005
PU239	7.92E-001	4.91E-002	1.71E-002	2.06E-002
PU240	5.07E-002	1.15E-002	4.33E-003	4.82E-003
AM241	1.15E+000	3.95E+000	2.16E+000	5.19E-002
PU241	9.69E-004	9.98E-002	3.76E-002	4.19E-002
PU242	1.69E-004	6.68E-007	2.51E-007	0.00E+000

Errors quoted at 1.000 sigma

Operator: [illegible] Date: 11·6·13

ITR: [illegible] Date: 11/11/13

Automated Independent Technical Review

Count Sequence Number: 23784 Batch Number: 1LANDA1859
Counter ID: MCS HENC #1
Container ID: 68423
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 11/5/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis No Add-a-Source warnings.	Ok
Section 2 - Passive Neutron Analysis Analysis Status: No errors.	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: 11-6-13

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **68423**

BDR Number: **LA13FG2130**

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

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	826.15	
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 : 68423.D
Acq On : 18 Dec 2013 1:59 pm (#1); 18-Dec-13, 13:59:09 (#2)
Operator : EL
Sample :
Misc : POC Through Filter (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Dec 18 14:07:53 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	3.584	96	3443919	205.75 ppmv	0.07
15) Chlorobenzene-d5	5.881	117	2741961	177.50 ppmv	0.02
Target Compounds					Qvalue
1) Hydrogen	1.617	GC1	6212m	826.15 ppmv	

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

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0124
Examination Date:	11/6/2013
Waste Container ID:	68424
Video/Audio Recorded Media Number:	LA-RTR2-13-0124 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 14
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3110
Waste Stream I.D.:	LA-MIN02-V.001
Waste Container Weights:	Gross Wt.: 181.0 kg Tare Wt.: 145.1 kg Net Wt.: 35.9 kg
Rigid Liner and Liner Vent Description:	Liner: [ ] No [X] Yes Lid: [ ] No [X] Yes Type: [ ] 30-mil [X] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [X] Yes [ ] N/A Punctured: [ ] No [X] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [X] No [ ] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 1 layer
Volume Utilization Percentage:	95 %

CCP Radiography Data Sheet

Waste Container ID: 68424

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):	35.9
Soils (S):	
Total WMP Weight:	35.9

CCP Radiography Data Sheet

Waste Container ID: 68424

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

RTR Operator:

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

NDA 2000 Assay Report

Item Information

Item ID:	68424	Count Sequence Number:	16682
Operator:	DCLTD231\Operator		
Assay Start:	11/6/2013 2:03:01 PM		
Description 1:	2LANDA1238		
Description 2:	POC 181.0		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gal Drum		
Weight:	Net: 35.9 kg	Net:	35.9 kg
Container:	Volume: 208.0 l	Full:	95.0 %
Density:	0.776 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: 16682
Assay Instrument: HENC #2
Analysis Method: CCP-TP-063 v 15
Item ID: 68424

Batch Number: 2LANDA1238
Location: LANL TA-54
Software Version: NDA 2000 V.4.0
Analysis Date: 11/6/2013

Net Weight	35900.0 g		
Pu mass	2.44E+000	+-	5.90E-001 g
TRU Alpha Activity	7.84E+000	+-	4.19E+000 Ci
TRU Activity Concentration	2.18E+005	+-	1.17E+005 nCi/g
Pu-239 Equivalent Activity	7.84E+000	+-	4.19E+000 Ci
Pu-239 FGE	2.35E+000	+-	5.89E-001 g
Decay heat	2.60E-001	+-	1.39E-001 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	7.05E-007
U233	<LLD	<LLD	0.00E+000	6.74E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	2.27E-006
NP237	1.03E-001	7.25E-005	1.43E-005	3.74E-006
PU238	2.23E-004	3.82E-003	1.12E-003	6.78E-004
U238	<LLD	<LLD	0.00E+000	1.81E-005
PU239	2.29E+000	1.42E-001	3.65E-002	2.52E-002
PU240	1.47E-001	3.33E-002	9.75E-003	5.91E-003
AM241	2.23E+000	7.66E+000	4.19E+000	5.79E-002
PU241	2.80E-003	2.89E-001	8.46E-002	5.13E-002
PU242	4.89E-004	1.93E-006	5.66E-007	0.00E+000

Errors quoted at 1.000 sigma

Operator: _____ Date: 11/11/13

ITR: Jim Barton Date: 11/11/13

Automated Independent Technical Review

Count Sequence Number: 16682
Batch Number: 2LANDA1238
Counter ID: HENC #2
Container ID: 68424
Waste Matrix Code: Homo Sol. S3000
Count Type:
Sequence Type:
Assay Date: 11/6/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis Add-a-Source WARNINGS: Add-a-Source correction factor is less than n-sigma * the correction factor error.	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: 11-7-13

Waste Container ID: **68424**

BDR Number: **LA13FG2123**

Sampling Date: **12/5/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	857.67	
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\131218c\
Data File : 67224.D
Acq On : 18 Dec 2013 12:53 pm (#1); 18-Dec-13, 12:53:00 (#2)
Operator : EL
Sample :
Misc : POC Through Filter (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Dec 18 13:02:06 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	3478031	205.75 ppmv	0.05
15) Chlorobenzene-d5	5.868	117	2752306	177.50 ppmv	0.00

Target Compounds	Qvalue

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

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0123
Examination Date:	11/5/2013
Waste Container ID:	68425
Video/Audio Recorded Media Number:	LA-RTR2-13-0123 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 14
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3110
Waste Stream I.D.:	LA-MIN02-V.001
Waste Container Weights:	Gross Wt.: 174.5 kg Tare Wt.: 145.1 kg Net Wt.: 29.4 kg
Rigid Liner and Liner Vent Description:	Liner: [ ] No [X] Yes Lid: [ ] No [X] Yes Type: [ ] 30-mil [X] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [X] Yes [ ] N/A Punctured: [ ] No [X] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [X] No [ ] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 1 layer
Volume Utilization Percentage:	80 %

CCP Radiography Data Sheet

Waste Container ID: 68425

Section 3: Container Inventory and Comments (Detailed descriptions)

IM: Hardware

AM:

OM: Scrap lead

OI:

C:

R:

XPM:

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	109.0
Plastics (PP): Rigid Liner/Lid, Liner Bag (Inside POC)	8.1
Other: Fiberboard (CP), Liner/Sleeve (Inside POC)	28.0
Total Packaging Weight	145.1
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	0.1
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	0.2
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	
Organic Matrix (OR):	
Inorganic Matrix (IN):	29.1
Soils (S):	
Total WMP Weight:	29.4

CCP Radiography Data Sheet

Waste Container ID: 68425

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

Comments: Standard Pipe Overpack Container (P.O.C.)
There is separation between liner lid and liner therefore liner is vented.

RTR Operator:

Thad Hasselstrom	Thad Hasselstrom	11/5/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	68425	Count Sequence Number:	23785
Operator:	D3PW2DK1\operator		
Assay Start:	11/5/2013 4:01:18 PM		
Description 1:	1LANDA1859		
Description 2:	POC, 174.5		
Location:	LANL TA-54		
Comment:	AK-6, Not Precision		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 29.4 kg	Net:	29.4 kg
Container:	Volume: 208.0 l	Full:	95.0 %
Density:	0.743 kg /l		

System Configuration

Counter:	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:	23785	Batch Number:	1LANDA1859
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:	68425	Analysis Date:	11/5/2013

Net Weight	29400.0 g		
Pu mass	7.77E-001	+-	1.93E-001 g
TRU Alpha Activity	2.82E+000	+-	5.35E-001 Ci
TRU Activity Concentration	9.59E+004	+-	1.82E+004 nCi/g
Pu-239 Equivalent Activity	2.82E+000	+-	5.35E-001 Ci
Pu-239 FGE	7.48E-001	+-	1.93E-001 g
Decay heat	9.36E-002	+-	1.78E-002 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
SR90	7.32E-009	1.01E-006	5.84E-007	0.00E+000
CS137	1.16E-008	1.01E-006	5.84E-007	5.44E-007
U233	<LLD	<LLD	0.00E+000	3.93E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	1.19E-006
NP237	4.71E-002	3.32E-005	6.39E-006	2.00E-006
PU238	7.10E-005	1.21E-003	3.56E-004	4.54E-004
U238	<LLD	<LLD	0.00E+000	1.11E-005
PU239	7.29E-001	4.52E-002	1.19E-002	1.69E-002
PU240	4.66E-002	1.06E-002	3.17E-003	3.95E-003
AM241	8.05E-001	2.76E+000	5.35E-001	4.30E-002
PU241	8.92E-004	9.18E-002	2.75E-002	3.43E-002
PU242	1.56E-004	6.14E-007	1.84E-007	0.00E+000

Errors quoted at 1.000 sigma

Operator: [signature] Date: 11-6-13

ITR: [signature] Date: 11/11/13

Automated Independent Technical Review

Count Sequence Number: 23785 Batch Number: 1LANDA1859
Counter ID: MCS HENC #1
Container ID: 68425
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 11/5/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis No Add-a-Source warnings.	Ok
Section 2 - Passive Neutron Analysis Analysis Status: No errors.	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: 11-6-13

Waste Container ID: **68425**

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 : 68425.D
Acq On : 18 Dec 2013 2:10 pm (#1); 18-Dec-13, 14:10:11 (#2)
Operator : EL
Sample :
Misc : POC Through Filter (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Dec 18 14:19:10 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	3462788	205.75 ppmv	0.06
15) Chlorobenzene-d5	5.881	117	2749539	177.50 ppmv	0.02

Target Compounds	Qvalue

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

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0124
Examination Date:	11/6/2013
Waste Container ID:	68558
Video/Audio Recorded Media Number:	LA-RTR2-13-0124 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 14
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3110
Waste Stream I.D.:	LA-MIN02-V.001
Waste Container Weights:	Gross Wt.: 103.5 kg Tare Wt.: 33.4 kg Net Wt.: 70.1 kg
Rigid Liner and Liner Vent Description:	Liner: [X] No [ ] Yes Lid: [X] No [ ] Yes Type: [ ] 30-mil [ ] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [ ] Yes [X] N/A Punctured: [X] No [ ] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [ ] No [X] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be ~~1~~ 2 layer BM 11.7.13 E.R. 11-7-13
Volume Utilization Percentage:	55 %

CCP Radiography Data Sheet

Waste Container ID: 68558

Section 3: Container Inventory and Comments (Detailed descriptions)

IM: Scrap metal

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):	1.0
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	4.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	65.1
Soils (S):	
Total WMP Weight:	70.1

CCP Radiography Data Sheet

Waste Container ID: 68558

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 Benito Maestas.

AFTER RENEWING THE RECORDING I AGREE THERE IS 2 LAYERS OF CONTINEMENT. BM 11-7-13 E.R. 11-7-13

RTR Operator: 11-7-13 11-7-13

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

NDA 2000 Assay Report

Item Information

Item ID:	68558	Count Sequence Number:	23795
Operator:	D3PW2DK1\operator		
Assay Start:	11/7/2013 9:15:48 AM		
Description 1:	1LANDA1861		
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: 70.1 kg	Net:	70.1 kg
Container:	Volume: 208.0 l	Full:	55.0 %
Density:	0.610 kg /l		

System Configuration

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

Errors quoted at 1.000 sigma

~~009~~
006
11-12-13

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number: 23795
Assay Instrument: MCS HENC #1
Analysis Method: CCP-TP-063 v 15
Item ID: 68558

Batch Number: 1LANDA1861
Location: LANL TA-54
Software Version: NDA 2000 V.4.0
Analysis Date: 11/7/2013

Net Weight	70100.0 g		
Pu mass	4.44E+000	+-	8.81E-001 g
TRU Alpha Activity	7.96E+000	+-	4.11E+000 Ci
TRU Activity Concentration	1.14E+005	+-	5.87E+004 nCi/g
Pu-239 Equivalent Activity	7.97E+000	+-	4.11E+000 Ci
Pu-239 FGE	4.22E+000	+-	8.79E-001 g
Decay heat	2.64E-001	+-	1.37E-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	1.19E-006
U233	<LLD	<LLD	0.00E+000	8.04E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	2.43E-006
NP237	1.46E-001	1.03E-004	1.76E-005	4.15E-006
PU238	4.05E-004	6.93E-003	1.71E-003	1.15E-003
U238	<LLD	<LLD	0.00E+000	2.35E-005
PU239	4.16E+000	2.58E-001	5.45E-002	4.30E-002
PU240	2.66E-001	6.04E-002	1.53E-002	1.01E-002
AM241	2.23E+000	7.64E+000	4.11E+000	1.04E-001
PU241	5.09E-003	5.24E-001	1.33E-001	8.73E-002
PU242	8.88E-004	3.51E-006	8.91E-007	0.00E+000

Errors quoted at 1.000 sigma

Operator: Jim Barton Date: 11/11/13

ITR: Mark Egan Date: 11.12.13

~~006~~
007
11.12.13

Automated Independent Technical Review

Count Sequence Number: 23795 Batch Number: 1LANDA1861
Counter ID: MCS HENC #1
Container ID: 68558
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 11/7/2013

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

~~007~~
008

Comments	Disposition
Section 3 - Data Combiner Analysis Override enabled; Gamma data specified as input. Analysis Status: Override enabled; data marked not available but were used. Results taken from Quantitative Gamma data. Results comparison test passed.	Results taken from quantitative gamma data.
Section 4 - MGA Analysis Results are marked as invalid.	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
MCA Deadtime greater than the upper limit of 50.0%.	No spectral distortion observed.
Spectrum Validity Check engine has suggested data review.	After EA review, spectrum valid.
Miscellaneous	No additional nuclides contributing to 95% of the radiological hazard identified.

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

~~008~~
009
11-17-13

Waste Container ID: **68558**

BDR Number: **LA13FG2117**

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

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	126.21	
74-82-8	Methane	142.14	U
67-56-1	Methanol	35.23	U
60-29-7	Ethyl Ether	0.96	U
75-35-4	1,1-Dichloroethylene	6.38	U
67-64-1	Acetone	18.08	U
75-34-3	1,1-Dichloroethane	4.08	U
156-59-2	cis-1,2-Dichloroethene	0.76	U
78-93-3	Methyl ethyl ketone	11.73	U
110-82-7	Cyclohexane	5.10	U
71-43-2	Benzene	1.77	U
107-06-2	1,2-Dichloroethane	3.66	U
71-36-3	1-Butanol	1.84	U
108-10-1	Methyl isobutyl ketone	9.82	U
108-88-3	Toluene	8.02	U
108-90-7	Chlorobenzene	4.10	U
100-41-4	Ethylbenzene	3.57	U
108-38-3/106-42-3	m- and p-Xylene	1.92	U
95-47-6	o-Xylene	2.10	U
108-67-8	1,3,5-Trimethylbenzene	1.96	U
95-63-6	1,2,4-Trimethylbenzene	2.13	U

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

InstName : Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\131115c\
Data File : 68558.D
Acq On : 15 Nov 2013 9:23 am (#1); 15-Nov-13, 09:23:14 (#2)
Operator : SA
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Nov 15 09:31:59 2013
Quant Method : C:\msdchem\1\METHODS\VOCGAS.M
Quant Title : Flammable Gas Analysis
QLast Update : Mon Aug 26 13:12:56 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
3) Fluorobenzene	3.558	96	4676015	205.75 ppmv	0.04
15) Chlorobenzene-d5	5.864	117	3528003	177.50 ppmv	0.00
Target Compounds					Qvalue
1) Hydrogen	1.604	GC1	949m	126.21 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-RTR2-13-0123
Examination Date:	11/5/2013
Waste Container ID:	68560
Video/Audio Recorded Media Number:	LA-RTR2-13-0123 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 14
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3110
Waste Stream I.D.:	LA-MIN02-V.001
Waste Container Weights:	Gross Wt.: 110.5 kg Tare Wt.: 33.4 kg Net Wt.: 77.1 kg
Rigid Liner and Liner Vent Description:	Liner: [X] No [ ] Yes Lid: [X] No [ ] Yes Type: [ ] 30-mil [ ] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [ ] Yes [X] N/A Punctured: [X] No [ ] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [ ] No [X] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 2 layers
Volume Utilization Percentage:	80 %

CCP Radiography Data Sheet

Waste Container ID: 68560

Section 3: Container Inventory and Comments (Detailed descriptions)

IM:

AM:

OM: Scrap lead

OI:

C:

R:

XPM: Plastic bags

OR:

IN: HOMOGENEOUS TSH 11-13-13 ~~Heterogeneous~~ 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):	10.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	47.1
Soils (S):	
Total WMP Weight:	77.1

CCP Radiography Data Sheet

Waste Container ID: 68560

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	11/5/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	68560	Count Sequence Number:	16676
Operator:	DCLTD231\Operator		
Assay Start:	11/5/2013 3:10:31 PM		
Description 1:	2LANDA1237		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gal Drum		
Weight:	Net: 77.1 kg	Net:	77.1 kg
Container:	Volume: 208.0 l	Full:	80.0 %
Density:	0.460 kg /l		

System Configuration

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

Errors quoted at 1.000 sigma

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number: 16676
Assay Instrument: HENC #2
Analysis Method: CCP-TP-063 v 15
Item ID: 68560

Batch Number: 2LANDA1237
Location: LANL TA-54
Software Version: NDA 2000 V.4.0
Analysis Date: 11/5/2013

Net Weight	77100.0 g		
Pu mass	2.36E+000	+-	4.19E-001 g
TRU Alpha Activity	6.11E+000	+-	3.15E+000 Ci
TRU Activity Concentration	7.92E+004	+-	4.09E+004 nCi/g
Pu-239 Equivalent Activity	6.11E+000	+-	3.15E+000 Ci
Pu-239 FGE	2.26E+000	+-	4.18E-001 g
Decay heat	2.03E-001	+-	1.05E-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	8.01E-007
U233	<LLD	<LLD	0.00E+000	4.96E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	1.59E-006
NP237	1.04E-001	7.35E-005	1.07E-005	2.69E-006
PU238	2.15E-004	3.68E-003	8.69E-004	5.25E-004
U238	<LLD	<LLD	0.00E+000	1.39E-005
PU239	2.21E+000	1.37E-001	2.59E-002	1.95E-002
PU240	1.41E-001	3.21E-002	7.57E-003	4.57E-003
AM241	1.73E+000	5.94E+000	3.15E+000	4.44E-002
PU241	2.71E-003	2.79E-001	6.57E-002	3.97E-002
PU242	4.72E-004	1.86E-006	4.40E-007	0.00E+000

Errors quoted at 1.000 sigma

Operator: _____ Date: 11/12/13

ITR: _____ Date: 11/11/13

Automated Independent Technical Review

Count Sequence Number: 16676 Batch Number: 2LANDA1237
Counter ID: HENC #2
Container ID: 68560
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 11/5/2013

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: _____ Date: 11/7/13

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **68560**

BDR Number: **LA13FG2117**

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

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	90.37	U
74-82-8	Methane	142.14	U
67-56-1	Methanol	35.23	U
60-29-7	Ethyl Ether	0.96	U
75-35-4	1,1-Dichloroethylene	6.38	U
67-64-1	Acetone	18.08	U
75-34-3	1,1-Dichloroethane	4.08	U
156-59-2	cis-1,2-Dichloroethene	0.76	U
78-93-3	Methyl ethyl ketone	11.73	U
110-82-7	Cyclohexane	5.10	U
71-43-2	Benzene	2.47	
107-06-2	1,2-Dichloroethane	3.66	U
71-36-3	1-Butanol	1.84	U
108-10-1	Methyl isobutyl ketone	9.82	U
108-88-3	Toluene	8.02	U
108-90-7	Chlorobenzene	4.10	U
100-41-4	Ethylbenzene	3.57	U
108-38-3/106-42-3	m- and p-Xylene	1.92	U
95-47-6	o-Xylene	2.10	U
108-67-8	1,3,5-Trimethylbenzene	1.96	U
95-63-6	1,2,4-Trimethylbenzene	2.13	U

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

InstName : Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\131115c\
Data File : 68560.D
Acq On : 15 Nov 2013 10:52 am (#1); 15-Nov-13, 10:51:47 (#2)
Operator : SA
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Nov 15 12:22:46 2013
Quant Method : C:\msdchem\1\METHODS\VOCGAS.M
Quant Title : Flammable Gas Analysis
QLast Update : Mon Aug 26 13:12:56 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
3) Fluorobenzene	3.568	96	4414845	205.75 ppmv	0.05
15) Chlorobenzene-d5	5.871	117	3490044	177.50 ppmv	0.00
Target Compounds					Qvalue
12) Benzene	3.252	78	38607	2.47 ppmv	96

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

S824468

S824468

Container Profile 758454

File Options Reports Help

S824468

758454	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

S824468

S824468
- 94077 - EMPTY
- 94076
- 94075
- 94074

Task History

Transfer Details

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

Working Copy
Date: 7.25.13 ME

ATTACHMENT 1
Page 1 of 4

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: 5824468

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 / 2671291 / 7-25-13
Waste Handling Tech (print) Signature Z # Date

ATTACHMENT 1
Page 2 of 4

4.1[6][B] Parent Waste Container No.: 5824468

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): 120.0 lb

6.2[5][B]/ 6.2[6] Total Parent Drum Weight (lb) 499.4 lb

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

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

N/A

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

ATTACHMENT 1
Page 3 of 4

4.1[6][B] Parent Waste Container No.: 5824468

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	9407			
10.1[4]	Daughter Drum Filter No.	KL-508	N		
10.1[4]	Daughter Drum Bag Filter No.	L-8198		A	
10.1[4]	Daughter Drum Purchase Order No.	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	BOP	BOP		
	Model No.	6CPVC1.5-2SAC	6CPVC1.5-2SAC		
	Serial No.	L-8169	L-8164		
	Date of Manufacture	03/13	03/13		
10.2[5]	POC ID No	94075	94076		
10.2[7][B]/10.2[6]	POC Item Description	SLUDGE, PLASTICS	NITRATE SALTS		
10.2[13]	POC Assembly closed per Manufacturer's instructions. (Initial and Z#)	BG 267129	BG 267129		
10.2[14]	POC Assembly Gross Weight (lb)	387.2	420.4	N	
10.2[15]	POC Rad. Survey Results (mrem/hr)	940	780		
10.3[3][A]	Approx. Containerized Liquid Vol./Units	N/A	N		A
10.3[5][A]	Free Liquid Volume/Units	5 GALLONS	A		
10.3[7][A]	Opaque/Non-penetrable Item Description:	LEAD SHIELDING			
10.3[9][A]	PCB-contaminated Waste Description	N A			
10.3[9][B]	PCB Item ID No.				
10.3[10]	Remaining Waste Description	SEE COMMENTS			
10.3[13]/10.4[10]/ 10.5[4]/10.6[10]	Daughter Drum % Full (%)	100%			
10.5[3]/10.6[2]	Description Waste Added During Processing	STUB OUT BAGS			

ATTACHMENT 1
Page 4 of 4

4.1[6][B] Parent Waste Container No.: 8824468

Comments: ROOM TRASH, PLASTICS, NITRATE SALTS, 3 GALLONS OF LIQUID THAT WAS UNABLED TO BE NEAUTRALIZED BUT WAS ABSORBED WITH KITTY LITTER, LEAD SHIELDING.

11.1[1] Performed By: BRIAN GALLEGOS / B. Gallegos / 1247129 / 7-25-13
Waste Handling Tech (print) Signature Z # Date

11.1[7] Reviewed By: G Mk / G Mk / 1492351 / 5/15 1105
SOS or designee (print) Signature Z # Date/Time

ATTACHMENT 2
Page 1 of 1

Working Copy
Date: 7-26-13a

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-1823
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 / [signature] / 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 / [signature] / 267129 7-24-13
Waste Handling Technician (print) Signature Z # Date

8.1[6] Reviewed By: GMk / [signature] / 149275 8/5/13
Supervisor or designee (print) Signature Z # Date

Working Copy
Date: 7-25-13 [illegible]

ATTACHMENT 5
Page 1 of 1

WCRRF OVERPACK DRUM CLOSURE DATA SHEET

7.[18] Overpack Drum Unique Identifier No.: 94077

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: Brian Gallegos / [illegible] / 267129 7-25-13
Waste Handling Technician (print) Signature Z # Date

7.[27] Overpack drum closure ring torque value: 60 ft-lb

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

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

7.[35][D] 85-gal overpack drum gross weight (lb): 146.7 lb

Comments: N/C

8.1[1] Performed By: Brian Gallegos / [illegible] / 267129 7-25-13
Waste Handling Technician (print) Signature Z # Date

8.1[7] Reviewed By: G [illegible] / [illegible] / 14925, 8/5/13
Supervisor or designee (print) Signature Z # Date

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

Drum ID#: 94074

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 #: 92347664
Date of Manufacture: 2012

2. Drum Liner Bag/Filter Assembly:

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

RECORD bag filter information:
Manufacturer: BOP
Model #: 6CPVC1.5-2.5PVC
Serial #: L-8198
Date of Manufacture: 03/13

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

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

4. Install Lid/Drum Filter

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

RECORD drum filter information:
Manufacturer: NUCFIL
Model #: 019DS
Serial #: KL-508
Date of Manufacture: 11/11

RECORD torque wrench information:

Filter torque wrench:		Jam Nut / Bung torque wrench:	
M&TE ID #:	100216	M&TE ID #:	033349
Cal Expiration Date:	12-19-13	Cal Expiration Date:	12-18-13
Range (ft-lbs or in-lbs):	40-200	Range (ft-lbs or in-lbs):	10-20
Tolerance:	±4% CW/6% CCW	Tolerance:	±3% CW/6% CCW

Torque wrenches listed above are within the acceptable ranges as displayed on the calibration certificate.
[x] Yes [ ] No
Print Name: BRIAN GALLEGOS Signature: [signature] Z#: 207129

5. Weigh Drum Assembly

RECORD weight information
Tare wtight (lbs) 75.6
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: BRIAN GALLEGOS Operator Sign: [signature] Z#: 207129 Date: 7-24-13
Verifier Print: Justin Cofer Verifier Sign: [signature] Z#: 266436 Date: 7-25-13

Best Available Copy

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

DRUM ID#: 94074

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:

BG 7-25-13

MT&E #: ~~014906~~ 038373

Cal expiration date: 9-11-13

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

Tolerance ±3% cw ±6% ccw

2. DRUM LABELING

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

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

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

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

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

RCRA Label:

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

OR

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

NOTE: Check only one of the above two boxes.

3. WEIGH DRUM ASSEMBLY

Record weight information:

Gross Weight(lbs): 310.6

Scale ID#: 017D65

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

4. FINALIZE DOCUMENTATION

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

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

✓ Complete TWSR.

Operator Print/Sign: B. Nalley Date 7-25-13

Verifier Print/Sign: Justin Cooper Date: 7-25-13

WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Production Control

Container ID: S824468 Container Type: 55-GAL Gross Weight (lbs): 397

Inner Seal #: 009432 Filter Prefix: LAVC Filter Serial #: 03953

AK Waste Stream: LA-CIN01.001 Certified RTR BDR: LA-HERTR-12-0055

TWSR Comments: LEACHED SOLIDS

Total PE-Ci Activity: 9.48E+00 Equivalent Combustible PE-Ci: 5.88E-02 AM-241 PE-Ci: 7.69E-01

Total Fissile Gram Equivalents: 104.7 Total Surface Dose Rate (mrem/hr): 25

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

NCR RTR/NDA Comment: LANL: remediate-Prohibited Item

RTR Pre-Screen Date: 5/1/2012 Comment: >4 L Sealed Container, Slip Top Cans

Certified RTR Comment: > 1% liquid in Drum, Sealed container >4L Liner

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: None Production Control Comments: Apply Kitty Litter/zeolite mixture VR 11/29/12

Performed By: Julie Gallegos (Production Control (Print)) Julie Gallegos (Signature) 176905 (Z Number) 9.11.12 (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: 337# Generator info shows 6 items of nitrate salts; weights range from 5-97# RTR BDR shows plastic bags + homogeneous solids. It also shows prohibited liquids, >4L sealed containers + unvented drum liner. Nitrate salts require repack w/ admixture. No chemicals identified; nitrate salts carry waste codes for chromium, 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 hand. Use hexamax gloves during processing.

Processing Determination: ✓ Accept Reject

TRU Remediation Operations Comments: USE of Poly PPE and Kitty litter Retain

Performed By: G Mh (TRU Remediation Operations (Print)) J M (Signature) 149255 (Z Number) 6/28/13 (Date)

Jose Perez 221452 7/2/13

IHS REVIEW: NB 206362 12.17.12

Noncertified TRU Waste Drum Item Information

DrumID: 009432

Item No	ItemID	Process Status	Net Wt (kg)	Matrix	Mass Code	SNM (g)	MT	Auth (Pg/Ln)	Comments
1	IXFS-610-F1		16.140	NITRATE SALTS		5.4	52	5/11	G468
3	IXFS-612-F1		38.630	NITRATE SALTS		27.9	52	5/11	G468
4	IXFS-612-F1		8.640	NITRATE SALTS		14.12	52	5/11	G468
5	IXFS-614-F1		43.860	NITRATE SALTS		29.55	52	5/11	G468
6	IXFS-615-F1		2.270	NITRATE SALTS		1.6	52	5/11	G468
7	IXFS-616-FD		2.730	NITRATE SALTS		32.67	52	5/11	G468

Noncertified Waste Drum Material Summary

Gross Wt (kg): 180.

Material Type	SNM (grams)	Items Net Wt (kg)
52	111.24	112.27
Totals	111.24	112.27

Attachment 2 – CCP Radiography Data Sheet

Section 1: General Information	
☑ RTR Examination ☐ RTR Replicate Scan ☐ RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-HERTR-12-0055
Examination Date:	07/03/12
Waste Container ID:	S8244687 TSH 7-11-12
Video/Audio Recorded Media Number:	LA-HERTR-12-0055 E
Procedure and Revision No.:	CCP-TP-053 Rev. 11
NCR(s) associated with the container? (e.g., Prohibited Items)	☐ NO ☑ YES NCR No.: NCR-LANL-1194-12 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: 173.0 kg. Tare Wt: 60.1 kg. Net Wt: 112.9 kg.
Rigid Liner and Liner Vent Description: (e.g., "90 mil liner – NO Lid" or "NO Liner")	90mil Liner - Unvented
Number of Layers of Confinement:	Appears to be 2 layers
Volume Utilization Percentage:	60 %

Attachment 2 – CCP Radiography Data Sheet (Continued)

Waste Container ID: S8244687 7SH 7-11-12

Section 3: Container Inventory and Comments (Detailed descriptions)
Plastic bags
Homogeneous solids

Section 4: Packaging Material and Waste Material Parameters		
Packaging Material		Estimated Weight (kg)
Steel (ST):		27.7
Plastics (PP):	Plastic Liner Bag and 90mil Liner	9.4
Others:	Lead Liner	23.0
Total Packaging Weight:		60.1
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):		4.8
Organic Matrix (OR):		
Inorganic Matrix (IN):		108.1
Soils (S):		
Total WMP Weight:		112.9

Attachment 2 – CCP Radiography Data Sheet (Continued)

Page 3 of 3

Waste Container ID: ~~S9244687~~ TJH 7-11-12

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

Comments: NCR-LANL-1194-12

RTR Operator:		7-11-12
Thad Hasselstrom	Thad Hasselstrom	07/03/12
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: Feb 21 2013

Container No. (5.[1])	S824468					
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])	0 ppm	ppm	ppm	ppm	ppm	ppm
Methane Reading (< 16,000 ppm) (5.[5])	0 ppm	ppm	ppm	ppm	ppm	ppm

5.[7] Certified CCP Technician:

Performed By: Nathan Wales (CCP (Print)) 1238666 (Z#)

Reviewed By: Sara Aragon (CCP (Print)) 1237975 (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) 1176945 (Z#) 2-21-13 (Date)

Quantitation Report (QT Reviewed)

InstName : FGA Unit 12

Data Path : C:\msdchem\1\DATA\130221c\
Data File : S824468.D
Acq On : 21 Feb 2013 2:08 pm (#1); 21 Feb 2013 2:06 pm (#2)
Operator : NW
Sample :
Misc : 55 GAL LFL THROUGH UNOBSTRUCTED 72 (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Feb 21 14:12:27 2013
Quant Method : C:\msdchem\1\METHODS\H2-CH4.M
Quant Title : Flammable Gas Analysis for Transportation Only
QLast Update : Thu Feb 21 08:46:27 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

Target Compounds Qvalue

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

H2-CH4.M Thu Feb 21 14:12:33 2013 UNIT12

7 25 13
0405 Assuming WCRR operations center - Orlando
0415 Pre job briefing ~~conducted~~ CO 7-25-13 performed by SOS
0417 Rounds have been signed off by SOS.
0734 Permission granted to lower vehicle access gates for loading of ~~this~~ CO 7-25-13 transport vehicle. Operators inside are continuing to process S851852
0816 Transportainer doors have been closed and latched
0829 Vehicle access gates have been restored, movement to transportainer 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 S851852, Bagging on S833923
1056 Bag on Bag off complete.
1230 Operators leaving 50-69 for lunch.
1316 Operators continuing to process.
1415 Bagging off 1 daughter and POC, Bagging on S824468
1441 Starting outside rounds.
1444 Item #3 is unsat, FSR in place ok to proceed.
1450 Bag off, Bag on complete.
1457 Completed outside rounds.
1508 Starting inside rounds.
1520 Item #13 is OOS, POD in place okay to proceed.
1535 Inside rounds complete.
1553 Starting movement ~~into~~ CO 7-25-13 out of 50-69.
1622 movement is complete out 50-69.
1647 Rounds have been signed off by SOS.
1722 Bagging off 1 daughter 2 pocs, Bagging on S833537
1810 Bag on, Bag off is complete.
1812 Relinquishing shift turnover with CCO Gerald Espinoza
MM
no further entries

7/25/15 WCRR SOS LOGBOOK

0600 Assuming SOS Position [illegible]

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

[illegible] 7-25-15

0640 Concluded shift brief

0700 Continuing operations on drum 5851852

0734 starting shroud out.

0823 Shroud out complete

0848 Bagging off 1 daughter Bagging on another

0901 Bag off complete

1018 Bagging off 5851852 Bagging on 1833523

1056 Bag on/off Comp Lete

Gun 7-25-15 1230 Operator Leaving to lunch

1326 operator's Continuing operations

1415 Bagging off 1 daughter and POC Bagging on 5824616

1441 Starting out 35th 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 [illegible]

no further entries on this page.

7-25-13 ~~Thu~~ Day Shift

0609 Received, Reviewed Shift Turnover Checklist and assumed WCRR SOM Position. John Guadagnol

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

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

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

0820 Operations transfers 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 at 1 Daughter from Parent 5851852

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

1015 Completed attending back in Meeting TA-54.

1018 Inside Operations completed bag off of another daughter (Parent 5851852 generated 2 daughters) Parent 5833923 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 from~~ DOC generated from Parent drum 5833923. Also Parent drum 5824468 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 Guadagnol

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-HERTR-13-0090
Examination Date:	8/5/2013
Waste Container ID:	94074
Video/Audio Recorded Media Number:	LA-HERTR-13-0090 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.: 144.5 kg Tare Wt.: 33.4 kg Net Wt.: 111.1 kg
Rigid Liner and Liner Vent Description:	Liner: [X] No [ ] Yes Lid: [X] No [ ] Yes Type: [ ] 30-mil [ ] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [ ] Yes [X] N/A Punctured: [X] No [ ] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [ ] No [X] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 2 layers
Volume Utilization Percentage:	80 %

CCP Radiography Data Sheet

Waste Container ID: 94074

Section 3: Container Inventory and Comments (Detailed descriptions)

IM: Metal lids, 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):	2.0
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	12.0
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	6.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	91.1
Soils (S):	
Total WMP Weight:	111.1

CCP Radiography Data Sheet

Waste Container ID: 94074

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

RTR Operator:

Benito Maestas		8/5/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	94074	Count Sequence Number:	16319
Operator:	DCLTD231\Operator		
Assay Start:	8/6/2013 11:51:12 AM		
Description 1:	2LANDA1206		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gal Drum		
Weight:	Net: 111.0 kg	Net:	111.0 kg
Container:	Volume: 208.0 l	Full:	80.0 %
Density:	0.670 kg /l		

System Configuration

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

Errors quoted at 1.000 sigma

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number:	16319	Batch Number:	2LANDA1206
Assay Instrument:	HENC #2	Location:	LANL TA-54
Analysis Method:	CCP-TP-063 v 14	Software Version:	NDA 2000 V.4.0
Item ID:	94074	Analysis Date:	8/6/2013

Net Weight	111000.0 g		
Pu mass	6.02E+001	+-	1.28E+001 g
TRU Alpha Activity	1.46E+001	+-	2.00E+000 Ci
TRU Activity Concentration	1.32E+005	+-	1.81E+004 nCi/g
Pu-239 Equivalent Activity	1.48E+001	+-	2.00E+000 Ci
Pu-239 FGE	5.68E+001	+-	1.20E+001 g
Decay heat	4.78E-001	+-	6.60E-002 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	1.37E-001	9.67E-005	1.74E-005	2.40E-006
PU238	5.51E-003	9.42E-002	2.01E-002	3.53E-005
PU239	5.65E+001	3.50E+000	7.46E-001	1.31E-003
PU240	3.61E+000	8.20E-001	1.75E-001	3.07E-004
AM241	2.98E+000	1.02E+001	1.85E+000	2.01E-001
PU241	6.99E-002	7.20E+000	1.53E+000	2.70E-003
PU242	1.21E-002	4.76E-005	1.01E-005	0.00E+000
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	1.13E-006
U233	<LLD	<LLD	0.00E+000	8.89E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	2.83E-006
U238	<LLD	<LLD	0.00E+000	2.04E-005
AM243	1.09E-004	2.18E-005	4.91E-006	1.14E-005

Errors quoted at 1.000 sigma

Operator: _____ Date: 8-8-13

ITR: _____ Date: 8-8-13

Automated Independent Technical Review

Count Sequence Number: 16319 Batch Number: 2LANDA1206
Counter ID: HENC #2
Container ID: 94074
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 8/6/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis Add-a-Source WARNINGS: Add-a-Source correction factor is less than one.	Ok
Section 2 - Passive Neutron Analysis Analysis Status: No errors. 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 Chamberlin Date: 8-7-13

Attachment 4 – Flammable Gas Analysis Form

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

Waste Container ID: **94074**

BDR Number: **LA13FG12074**

Sampling Date: **8/7/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	344.92	
74-82-8	Methane	9.63	U
67-56-1	Methanol	N/A	U
60-29-7	Ethyl Ether	N/A	U
75-35-4	1,1-Dichloroethylene	N/A	U
67-64-1	Acetone	N/A	U
75-34-3	1,1-Dichloroethane	N/A	U
156-59-2	cis-1,2-Dichloroethene	N/A	U
78-93-3	Methyl ethyl ketone	N/A	U
110-82-7	Cyclohexane	N/A	U
71-43-2	Benzene	N/A	U
107-06-2	1,2-Dichloroethane	N/A	U
71-36-3	1-Butanol	N/A	U
108-10-1	Methyl isobutyl ketone	N/A	U
108-88-3	Toluene	N/A	U
108-90-7	Chlorobenzene	N/A	U
100-41-4	Ethylbenzene	N/A	U
108-38-3/106-42-3	m- and p-Xylene	N/A	U
95-47-6	o-Xylene	N/A	U
108-67-8	1,3,5-Trimethylbenzene	N/A	U
95-63-6	1,2,4-Trimethylbenzene	N/A	U

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

Quantitation Report (QT Reviewed)

InstName : FGA Unit 12

Data Path : C:\msdchem\1\DATA\130807c\
Data File : 94074.D
Acq On : 7 Aug 2013 10:16 am (#1); 7 Aug 2013 10:14 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 07 10:24:53 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	98389	344.92	ppmv	100

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

11

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0096
Examination Date:	7/30/2013
Waste Container ID:	94075
Video/Audio Recorded Media Number:	LA-RTR2-13-0096 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.: 175.5 kg Tare Wt.: 145.1 kg Net Wt.: 30.4 kg
Rigid Liner and Liner Vent Description:	Liner: [ ] No [X] Yes Lid: [ ] No [X] Yes Type: [ ] 30-mil [X] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [X] Yes [ ] N/A Punctured: [ ] No [X] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [X] No [ ] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 1 layer
Volume Utilization Percentage:	100 %

CCP Radiography Data Sheet

Waste Container ID: 94075

Section 3: Container Inventory and Comments (Detailed descriptions)

IM: Metal hardware

AM:

OM: Scrap lead

OI:

C:

R:

XPM:

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	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):	0.3
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	6.0
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	
Organic Matrix (OR):	
Inorganic Matrix (IN):	24.1
Soils (S):	
Total WMP Weight:	30.4

CCP Radiography Data Sheet

Waste Container ID: 94075

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

Comments: Standard Pipe Overpack Container (P.O.C.); There is separation between the liner and liner lid, therefore, the liner is vented.

RTR Operator:

Michael Simmons		7/30/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	94075	Count Sequence Number:	23342
Operator:	D3PW2DK1\operator		
Assay Start:	7/31/2013 2:52:19 PM		
Description 1:	1LANDA1819		
Description 2:	POC - GW=175.5 kg		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gallon drum		
Weight:	Net: 30.4 kg	Net:	30.4 kg
Container:	Volume: 208.0 l	Full:	95.0 %
Density:	0.748 kg /l		

System Configuration

Counter:	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:	23342	Batch Number:	1LANDA1819
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:	94075	Analysis Date:	7/31/2013

Net Weight	30400.0 g		
Pu mass	2.72E+001	+- 4.59E+000	g
TRU Alpha Activity	5.86E+000	+- 2.68E+000	Ci
TRU Activity Concentration	1.93E+005	+- 8.83E+004	nCi/g
Pu-239 Equivalent Activity	5.92E+000	+- 2.68E+000	Ci
Pu-239 FGE	2.56E+001	+- 4.30E+000	g
Decay heat	1.91E-001	+- 8.92E-002	W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	6.42E-002	4.53E-005	8.75E-006	2.72E-006
PU238	2.49E-003	4.25E-002	7.18E-003	3.35E-005
PU239	2.55E+001	1.58E+000	2.67E-001	1.25E-003
PU240	1.63E+000	3.70E-001	6.25E-002	2.92E-004
AM241	1.13E+000	3.86E+000	2.67E+000	1.74E-001
PU241	3.16E-002	3.25E+000	5.49E-001	2.56E-003
PU242	5.44E-003	2.15E-005	3.63E-006	0.00E+000
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	6.60E-007
U233	<LLD	<LLD	0.00E+000	5.26E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	1.54E-006
U238	<LLD	<LLD	0.00E+000	1.35E-005

Errors quoted at 1.000 sigma

Operator: Brit Tupholt Date: 8-2-13

ITR: Jim Barton Date: 8/5/13

Automated Independent Technical Review

Count Sequence Number: 23342 Batch Number: 1LANDA1819
Counter ID: MCS HENC #1
Container ID: 94075
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 7/31/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis No Add-a-Source warnings.	Ok
Section 2 - Passive Neutron Analysis Analysis Status: No errors. 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 Chamberlin Date: 8-1-13

Waste Container ID: **94075**

BDR Number: **LA13FG12070**

Sampling Date: **8/1/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	24.62	
74-82-8	Methane	9.63	U
67-56-1	Methanol	N/A	U
60-29-7	Ethyl Ether	N/A	U
75-35-4	1,1-Dichloroethylene	N/A	U
67-64-1	Acetone	N/A	U
75-34-3	1,1-Dichloroethane	N/A	U
156-59-2	cis-1,2-Dichloroethene	N/A	U
78-93-3	Methyl ethyl ketone	N/A	U
110-82-7	Cyclohexane	N/A	U
71-43-2	Benzene	N/A	U
107-06-2	1,2-Dichloroethane	N/A	U
71-36-3	1-Butanol	N/A	U
108-10-1	Methyl isobutyl ketone	N/A	U
108-88-3	Toluene	N/A	U
108-90-7	Chlorobenzene	N/A	U
100-41-4	Ethylbenzene	N/A	U
108-38-3/106-42-3	m- and p-Xylene	N/A	U
95-47-6	o-Xylene	N/A	U
108-67-8	1,3,5-Trimethylbenzene	N/A	U
95-63-6	1,2,4-Trimethylbenzene	N/A	U

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

Quantitation Report (QT Reviewed)

InstName : FGA Unit 12

Data Path : C:\msdchem\1\DATA\130801c\
Data File : 94075.D
Acq On : 1 Aug 2013 2:21 pm (#1); 1 Aug 2013 2:19 pm (#2)
Operator : SA
Sample :
Misc : POC THROUGH DRUM FILTER-NucFil-019DS (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Aug 01 14:30:30 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	7024m	24.62	ppmv	

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

14

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-HERTR-13-0090
Examination Date:	8/5/2013
Waste Container ID:	94076
Video/Audio Recorded Media Number:	LA-HERTR-13-0090 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.: 191.0 kg Tare Wt.: 145.1 kg Net Wt.: 45.9 kg
Rigid Liner and Liner Vent Description:	Liner: [ ] No [X] Yes Lid: [ ] No [X] Yes Type: [ ] 30-mil [X] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [X] Yes [ ] N/A Punctured: [ ] No [X] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [X] No [ ] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 1 layer
Volume Utilization Percentage:	95 %

CCP Radiography Data Sheet

Waste Container ID: 94076

Section 3: Container Inventory and Comments (Detailed descriptions)

IM: Hardware, scrap metal

AM:

OM: Scrap lead

OI:

C:

R:

XPM:

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	109.0
Plastics (PP):Rigid Liner/Lid, 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):	1.0
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	3.0
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	
Organic Matrix (OR):	
Inorganic Matrix (IN):	41.9
Soils (S):	
Total WMP Weight:	45.9

CCP Radiography Data Sheet

Waste Container ID: 94076

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

Comments: Standard Pipe Overpack Container (P.O.C.) There is separation between the liner and liner lid, therefore, the liner is vented.

RTR Operator:

Benito Maestas		8/5/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	94076	Count Sequence Number:	16320
Operator:	DCLTD231\Operator		
Assay Start:	8/6/2013 12:36:10 PM		
Description 1:	2LANDA1206		
Description 2:	POC - GW = 191.0 Kg		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gal Drum		
Weight:	Net: 45.9 kg	Net:	45.9 kg
Container:	Volume: 208.0 l	Full:	95.0 %
Density:	0.826 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:	16320	Batch Number:	2LANDA1206
Assay Instrument:	HENC #2	Location:	LANL TA-54
Analysis Method:	CCP-TP-063 v 14	Software Version:	NDA 2000 V.4.0
Item ID:	94076	Analysis Date:	8/6/2013

Net Weight	45900.0 g			
Pu mass	5.61E+001	+-	1.12E+001	g
TRU Alpha Activity	1.21E+001	+-	5.60E+000	Ci
TRU Activity Concentration	2.64E+005	+-	1.22E+005	nCi/g
Pu-239 Equivalent Activity	1.23E+001	+-	5.60E+000	Ci
Pu-239 FGE	5.29E+001	+-	1.05E+001	g
Decay heat	3.95E-001	+-	1.86E-001	W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	1.07E-001	7.57E-005	1.55E-005	4.11E-006
PU238	5.13E-003	8.78E-002	1.75E-002	3.47E-005
PU239	5.26E+001	3.26E+000	6.51E-001	1.29E-003
PU240	3.36E+000	7.64E-001	1.52E-001	3.02E-004
AM241	2.34E+000	8.02E+000	5.56E+000	1.79E-001
PU241	6.51E-002	6.71E+000	1.34E+000	2.65E-003
PU242	1.12E-002	4.44E-005	8.84E-006	0.00E+000
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	9.85E-007
U233	<LLD	<LLD	0.00E+000	7.85E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	2.53E-006
U238	<LLD	<LLD	0.00E+000	1.95E-005

Errors quoted at 1.000 sigma

Operator: _____ Date: 8-8-13

ITR: D E R _____ Date: 8-8-13

Automated Independent Technical Review

Count Sequence Number: 16320 Batch Number: 2LANDA1206
Counter ID: HENC #2
Container ID: 94076
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 8/6/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis Add-a-Source WARNINGS: Add-a-Source correction factor is less than one.	Ok
Section 2 - Passive Neutron Analysis Analysis Status: No errors. 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: 8-7-13

Waste Container ID: **94076**

BDR Number: **LA13FG12103**

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

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	258.96	
74-82-8	Methane	9.63	U
67-56-1	Methanol	N/A	U
60-29-7	Ethyl Ether	N/A	U
75-35-4	1,1-Dichloroethylene	N/A	U
67-64-1	Acetone	N/A	U
75-34-3	1,1-Dichloroethane	N/A	U
156-59-2	cis-1,2-Dichloroethene	N/A	U
78-93-3	Methyl ethyl ketone	N/A	U
110-82-7	Cyclohexane	N/A	U
71-43-2	Benzene	N/A	U
107-06-2	1,2-Dichloroethane	N/A	U
71-36-3	1-Butanol	N/A	U
108-10-1	Methyl isobutyl ketone	N/A	U
108-88-3	Toluene	N/A	U
108-90-7	Chlorobenzene	N/A	U
100-41-4	Ethylbenzene	N/A	U
108-38-3/106-42-3	m- and p-Xylene	N/A	U
95-47-6	o-Xylene	N/A	U
108-67-8	1,3,5-Trimethylbenzene	N/A	U
95-63-6	1,2,4-Trimethylbenzene	N/A	U

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

Quantitation Report (QT Reviewed)

InstName : FGA Unit 12

Data Path : C:\msdchem\1\DATA\130926c\
Data File : 94076.D
Acq On : 26 Sep 2013 2:02 pm (#1); 26 Sep 2013 2:00 pm (#2)
Operator : SA
Sample :
Misc : POC THROUGH DRUM FILTER-NucFil-019DS (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Sep 26 14:05:46 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	73869m	258.96	ppmv	

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

S824508

S824508

Container Profile 747145

File Options Reports Help

S824508

747145	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

S824508

S824508
- 93612 _EMPTY
- 93611
- 93610
- 93609

Task History

Transfer Details

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

ATTACHMENT 1
Page 1 of 4

Working Copy
Date: 5-3-13 gr

WCRRF WCG WASTE PROCESSING DATA SHEET

4.1[6][B] Parent Waste Container No.: 5824508

6.2[4] Date Processed: 5/3/13

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~~ CM 5-3-13 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: 5/3/13

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

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

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

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

Performed By: Brian Gallegos / [signature] / 2671229 5-03-13
Waste Handling Tech (print) Signature Z # Date

ATTACHMENT 1
Page 2 of 4

4.1[6][B]	Parent Waste Container No.:	5824508
5.[18]	Prepared Parent Drum Weight (lb) including items secured to drum top, as applicable:	412.2 lb
6.2[5][A]	Parent Drum Lead Blanket Weight (lb):	120.0 lb
6.2[5][B]/ 6.2[6]	Total Parent Drum Weight (lb)	532.2 lb
6.2[7]	($) Total Parent Drum Weight < 624 lb (SR 4.5.1):	☑ SAT ☐ UNSAT
6.2[28]	Approval to leave a parent drum attached to the WCG overnight:	

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

ATTACHMENT 1
Page 3 of 4

4.1[6][B] Parent Waste Container No.: 5824508

Daughter Drums					
10.1[4]/10.2[4]	Daughter Drum No.	93609	93610	93611	
10.1[4]	Daughter Drum Filter No.	LM-45	LM-50	LM-63	N/A
10.1[4]	Daughter Drum Bag Filter No.	L-6635	L-6608	L-6598	
10.1[4]	Daughter Drum Purchase Order No.	501186	501186	501186	
10.1[13][C]	WCG Fire Watch Stationed		☐ YES	☐ NO	☑ N/A
10.1[14][C][d]3/11.1[3]	WCG Fire Watch Secured		☐ YES	☐ NO	☑ N/A
10.2[4]	POC bag-on bag: Manufacturer				
	Model No.				
	Serial No.				
	Date of Manufacture				
10.2[5]	POC ID No				
10.2[7][B]/10.2[6]	POC Item Description		N/A		
10.2[13]	POC Assembly closed per Manufacturer's instructions. (Initial and Z#)				
10.2[14]	POC Assembly Gross Weight (lb)				
10.2[15]	POC Rad. Survey Results (mrem/hr)				
10.3[3][A]	Approx. Containerized Liquid Vol./Units	N/A	N/A		
10.3[5][A]	Free Liquid Volume/Units	2 oz	2 L	8 oz.	N/A
10.3[7][A]	Opaque/Non-penetrable Item Description:	lead shielding	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 (%)	70%	65%	90%	
10.5[3]/10.6[2]	Description Waste Added During Processing	plastic & kitty litter + hex. drums	plastic & kitty litter	plastic & kitty litter	

ATTACHMENT 1
Page 4 of 4

4.1[6][B] Parent Waste Container No.: 5824508

Comments: plastic, nitrate salts, poly-liner lid

11.1[1] Performed By: Clayton Mullins [signature] 240092 5/3/13
Waste Handling Tech (print) Signature Z# Date

11.1[7] Reviewed By: Gilbert Martin [signature] 149335 5/3/13 1035
SOS or designee (print) Signature Z# Date/Time

ATTACHMENT 2
Page 1 of 1

WCRRF OVERPACK DRUM ASSEMBLY PREPARATION DATA SHEET

5.[3] Overpack drum information:
- Purchase Order No.: 414996
- Lot No.: 219285
- Manufacture Date: 11

5.[8] Overpack filtered vent information:
- Manufacturer: NUCFIL
- Model No.: 015
- Serial No.: EX-305
- Manufacture Date: 5-11

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

	Filtered Vent	2 in. Bung
M&TE No.:	040694	038509
Cal. Expiration Date:	9-26-13	10-18-13
Tolerance:	±4% cw ± 6% ccw	±3% cw ± 6% ccw

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

Performed By: Clayton Mullins, [signature], 240092, ~~4/25/13~~ cm 4-25-13 4/25/13
Waste Handling Technician (print) Signature Z# Date

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

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

Comments: N/C

8.1[1] Performed By: Clayton Mullins, [signature], 240092 4/25/13
Waste Handling Technician (print) Signature Z# Date

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

8.1[7] Reviewed By: [signature], [signature], 14923 5/8/13
Supervisor or designee (print) Signature Z# Date

Working Copy
Date: 5-3-13

ATTACHMENT 5
Page 1 of 1

WCRRF OVERPACK DRUM CLOSURE DATA SHEET

7.[18] Overpack Drum Unique Identifier No.: 93612

7.[24] Overpack drum closure ring torque wrench information:
M&TE No.: 038373
Cal. Expiration Date: 9/11/13
Range in ft-lb: 10-80
Tolerance: ±3% cw / ±6% ccw

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

Performed By: Clayton Mullins, [signature] 1240091 5/3/13
Waste Handling Technician (print) Signature Z # Date

7.[27] Overpack drum closure ring torque value: 60 ft-lb

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

7.[35][B] Platform scale serial number: 019065
Platform scale calibration expiration date: 7/31/13

7.[35][D] 85-gal overpack drum gross weight (lb): 169.8 lb

Comments: N/C

8.1[1] Performed By: Brian Gallegos, [signature] 1261129 5-03 13
Waste Handling Technician (print) Signature Z # Date

8.1[7] Reviewed By: Gilbert Martinez, [signature] 1149235 5/8/13
Supervisor or designee (print) Signature Z # Date

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

Drum ID#: 93609

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 #: 5011896
Lot #: 02347 ea3
Date of Manufacture: 12

2. Drum Liner Bag/Filter Assembly:

- [x] Place yellow vinyl tape, with smear centered on tape, over filter
- [x] Fill bag with air from compressed air source
- [x] Inspect bag for damage, cuts, or leaks by looking, listening, and feeling
  - NOTE: Reject or repair damaged, cut, or leaking bags
- [x] Stretch bag's bungee cord
- [x] Inspect bungee cord
  - NOTE: Reject bag if bungee cord is broken or damaged

RECORD bag filter information:

Manufacturer: BOP
Model #: GCPVC 1.5-2 SPVC
Serial #: L-16635
Date of Manufacture: 01-13

3. Cardboard Liner/Plastic Liner Drum Liner Bag/Filter Assembly:

- [x] Inspect cardboard liner/plastic liner (circle type of liner used)
  - NOTE: Reject any damaged liners
- [x] Place cardboard/plastic liner into drum liner bag/filter assembly
- [x] Line up filter with drum seam
- [x] Place liner/bag/filter assembly into drum
- [x] Roll excess liner bag into cardboard liner/plastic liner

4. Install Lid/Drum Filter

- [x] Place lid and ring onto drum
- [x] Tighten ring sufficiently to simply hold lid in place
- [x] Torque 2" bung plug
- [x] Apply sealant to filter threads, screw in ¾" bung hole, and torque
- [x] Place this Attachment and blank Attachment 2 into a protective sleeve and tape to top of drum

RECORD drum filter information:

Manufacturer: NUCFIL
Model #: 019DS
Serial #: LM-95
Date of Manufacture: 12-12

RECORD torque wrench information:

Filter torque wrench:		Jam Nut / Bung torque wrench:	
M&TE ID #:	100216	M&TE ID #:	038369
Cal Expiration Date:	12/18/13	Cal Expiration Date:	12-18-13
Range (ft-lbs or in-lbs):	40-200	Range (ft-lbs or in-lbs):	10-80
Tolerance:	+/- 4% cw +/- 6% ccw	Tolerance:	± 3% cw ± 6% ccw

Torque wrenches listed above are within the acceptable ranges as displayed on the calibration certificate.

[x] Yes [ ] No

Print Name: Joe Quintana Signature: Joe Q Z#: 239987

5. Weigh Drum Assembly

RECORD weight information

Tare wight (lbs) 75.0
File ID #: 019065

- [x] Write the tare weight on drum using permanent marker

6. Label Drum Assembly

- [x] Place 1 barcode drum ID label to the left of the drum seam, ~6" from drum bottom
- [x] Place 1 barcode drum ID label in the center of the drum lid

RECORD drum ID# at the top of Attachments 1 and 2

Operator Print: JOE QUINTANA Operator Sign: Joe Q Z#: 239987 Date: 5/1/13

Verifier Print: Clayton Mullins Verifier Sign: CM Z#: 240092 Date: 5/3/13

Attachment 2. Checklist for the Closing of a 55-Gallon Drum Assembly

DRUM ID#: 93609

1. LID INSTALLATION

NOTE: Install lid per manufacturer's instructions

✓ Mount lid with filter directly over drum seam.

✓ Install ring with bolt positioned downward and directly over drum seam.

✓ Engage bolt and nut and torque per manufactures instructions.

NOTE Seal the ring while tightening using a rubber hammer or dead-blow mallet or a drum lid press.

✓ Tighten jam nut.

Record torque wrench information:

MT&E #: 038373

Cal expiration date: 9/11/13

Range/ Value (ft-lbs): 10-80 / 60

Tolerance ±3% cw / ±6% ccw

2. DRUM LABELING

NOTE: Do not cover the drum seam with any labels.

✓ Place two barcode drum ID labels ~6" from the bottom of the drum ~120° from previously placed ID label.

✓ Place one barcode drum ID label to the right of drum seam between the top two rolling hoops.

✓ Place one yellow radioactive waste label between the top two rolling hoops

✓ Place one yellow radioactive waste label in the center of the drum lid.

RCRA Label:

✓ 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): 156.6

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: Chris Mullins Date: 5/3/13

Verifier Print/Sign: M. Gonzales Date: 5/3/13

Attachment 1. Checklist for the preparation of a new 55-Gallon Drum Assembly

Drum ID#: 93610

1. Drum/Lid Assembly

- ☑ Remove and discard ¾" bung from lid
- ☑ Remove Lid
- ☑ Inspect drum, lid, and gasket, ring bolt and nut, chines, and paint
  - NOTE: Reject damaged drum/lid assembly
- ☑ Place 2" duct tape on vertical seam on interior of drum

RECORD drum information:

Purchase Request #: 501186
Lot #: 0234763
Date of Manufacture: 2012

2. Drum Liner Bag/Filter Assembly:

- ☑ Place yellow vinyl tape, with smear centered on tape, over filter
- ☑ Fill bag with air from compressed air source
- ☑ Inspect bag for damage, cuts, or leaks by looking, listening, and feeling
  - NOTE: Reject or repair damaged, cut, or leaking bags
- ☑ Stretch bag's bungee cord
- ☑ Inspect bungee cord
  - NOTE: Reject bag if bungee cord is broken or damaged

RECORD bag filter information:

Manufacturer: Bep
Model #: Locpac LF-2 30VC
Serial #: L-6608
Date of Manufacture: 01/13

3. Cardboard Liner/Plastic Liner Drum Liner Bag/Filter Assembly:

- ☑ Inspect Cardboard liner/plastic liner (circle type of liner used)
  - NOTE: Reject any damaged liners
- ☑ Place cardboard/plastic liner into drum liner bag/filter assembly
- ☑ Line up filter with drum seam
- ☑ Place liner/bag/filter assembly into drum
- ☑ Roll excess liner bag into Cardboard liner/plastic liner

4. Install Lid/Drum Filter

- ☑ Place lid and ring onto drum
- ☑ Tighten ring sufficiently to simply hold lid in place
- ☑ Torque 2" bung plug
- ☑ Apply sealant to filter threads, screw in ¾" bung hole, and torque
- ☑ Place this Attachment and blank Attachment 2 into a protective sleeve and tape to top of drum

RECORD drum filter information:

Manufacturer: Nucfil
Model #: 019DS
Serial #: LM-50
Date of Manufacture: 12/12

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: ~~+/- 3% cw/ccw~~ +/- 4% cw +/- 6% ccw 5/1/13

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 and +/- 6% ccw

Torque wrenches listed above are within the acceptable ranges as displayed on the calibration certificate.

☑ Yes ☐ No

Print Name: JOE QUINTANA Signature: Joe Q Z#: 239986

5. Weigh Drum Assembly

RECORD weight information

Tare witght (lbs) 75.6
File ID #: 019065

- ☑ Write the tare weight on drum using permanent marker

6. Label Drum Assembly

- ☑ Place 1 barcode drum ID label to the left of the drum seam, ~6" from drum bottom
- ☑ Place 1 barcode drum ID label in the center of the drum lid

RECORD drum ID# at the top of Attachments 1 and 2

Operator Print: Kevin Beluscak Operator Sign: Kevin Beluscak Z#: 238199 Date: 04/30/13

Verifier Print: Clayton Mullins Verifier Sign: CM Z#: 248042 Date: 5/3/13

Attachment 2. Checklist for the Closing of a 55-Gallon Drum Assembly

DRUM ID#: 913410

1. LID INSTALLATION

NOTE: Install lid per manufacturer's instructions

✓ Mount lid with filter directly over drum seam.

✓ Install ring with bolt positioned downward and directly over drum seam.

✓ Engage bolt and nut and torque per manufactures instructions.

NOTE Seal the ring while tightening using a rubber hammer or dead-blow mallet or a drum lid press.

✓ Tighten jam nut.

Record torque wrench information:

MT&E #: 038373

Cal expiration date: 9/11/13

Range/ Value (ft-lbs): 10-80 / 60

--- Tolerance ±3% cw / ±6% ccw

2. DRUM LABELING

NOTE: Do not cover the drum seam with any labels.

✓ Place two barcode drum ID labels ~6" from the bottom of the drum ~120° from previously placed ID label.

✓ Place one barcode drum ID label to the right of drum seam between the top two rolling hoops.

✓ Place one yellow radioactive waste label between the top two rolling hoops

✓ Place one yellow radioactive waste label in the center of the drum lid.

RCRA Label:

✓ 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): 277.0

Scale ID#: 019005

✓ Using a permanent marker, write the gross weight on the drum lid.

4. FINALIZE DOCUMENTATION

✓ Have RCT monitor drum prior to moving to storage area.

✓ Place attachment 1 and 2 and HMPT Tag into a protective sleeve.

✓ Complete TWSR.

Operator Print/Sign: Clyde Mullins CMT Date: 9/3/13

Verifier Print/Sign: [illegible] Date: 5-03-13

Attachment 1. Checklist for the preparation of a new 55-Gallon Drum Assembly

Drum ID#: 93611

1. Drum/Lid Assembly

- [x] Remove and discard ¾" bung from lid
- [x] Remove Lid
- [x] Inspect drum, lid, and gasket, ring bolt and nut, chines, and paint
  - NOTE: Reject damaged drum/lid assembly
- [x] Place 2" duct tape on vertical seam on interior of drum

RECORD drum information:
Purchase Request #: 501186
Lot #: 12234763
Date of Manufacture: 12

2. Drum Liner Bag/Filter Assembly:

- [x] Place yellow vinyl tape, with smear centered on tape, over filter
- [x] Fill bag with air from compressed air source
- [x] Inspect bag for damage, cuts, or leaks by looking, listening, and feeling
  - NOTE: Reject or repair damaged, cut, or leaking bags
- [x] Stretch bag's bungee cord
- [x] Inspect bungee cord
  - NOTE: Reject bag if bungee cord is broken or damaged

RECORD bag filter information:
Manufacturer: BOP
Model #: GC8VC-1-5-2CPVC
Serial #: L-6599
Date of Manufacture: 1-13

3. Cardboard Liner/Plastic Liner Drum Liner Bag/Filter Assembly:

- [x] Inspect cardboard liner/plastic liner (circle type of liner used)
  - NOTE: Reject any damaged liners
- [x] Place cardboard/plastic liner into drum liner bag/filter assembly
- [x] Line up filter with drum seam
- [x] Place liner/bag/filter assembly into drum
- [x] Roll excess liner bag into cardboard liner/plastic liner

4. Install Lid/Drum Filter

- [x] Place lid and ring onto drum
- [x] Tighten ring sufficiently to simply hold lid in place
- [x] Torque 2" bung plug
- [x] Apply sealant to filter threads, screw in ¾" bung hole, and torque
- [x] Place this Attachment and blank Attachment 2 into a protective sleeve and tape to top of drum

RECORD drum filter information:
Manufacturer: NOC Fil
Model #: 019DS
Serial #: L09-63
Date of Manufacture: 12-12

RECORD torque wrench information:

Filter torque wrench:
M&TE ID #: 040694
Cal Expiration Date: 4-26-13
Range (ft-lbs or in-lbs): 40-200
Tolerance: ±2%cw±4%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±2%ccw

Torque wrenches listed above are within the acceptable ranges as displayed on the calibration certificate.
[x] Yes [ ] No
Print Name: Adam Segovia Signature: [signature] ZH: 276702

5. Weigh Drum Assembly

RECORD weight information
Tare Wight (lbs) 75.6
File ID #: 019065

- [x] Write the tare weight on drum using permanent marker

6. Label Drum Assembly

- [x] Place 1 barcode drum ID label to the left of the drum seam, ~6" from drum bottom
- [x] Place 1 barcode drum ID label in the center of the drum lid

RECORD drum ID# at the top of Attachments 1 and 2

Operator Print: Adam Segovia Operator Sign: [signature] ZH: 276702 Date: 4-18-13
Verifier Print: Brian Gallegos Verifier Sign: [signature] ZH: 267119 Date: ~~5-03-13~~ 5-03-13

Attachment 2. Checklist for the Closing of a 55-Gallon Drum Assembly

DRUM ID#: 93611

1. LID INSTALLATION

NOTE: Install lid per manufacturer's instructions

☑ Mount lid with filter directly over drum seam.

☑ Install ring with bolt positioned downward and directly over drum seam.

☑ Engage bolt and nut and torque per manufactures instructions.

NOTE: Seal the ring while tightening using a rubber hammer or dead-blow mallet or a drum lid press.

☑ Tighten jam nut.

Record torque wrench information:

MT&E #: 038373

Cal expiration date: 9/11/13

Range/ Value (ft-lbs): 10-80 / 60

Tolerance: ±3% cw / ±6% ccw

2. DRUM LABELING

NOTE: Do not cover the drum seam with any labels.

☑ Place two barcode drum ID labels ~6" from the bottom of the drum ~120° from previously placed ID label.

☑ Place one barcode drum ID label to the right of drum seam between the top two rolling hoops.

☑ Place one yellow radioactive waste label between the top two rolling hoops

☑ Place one yellow radioactive waste label in the center of the drum lid.

RCRA Label:

☑ 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): 330.0

Scale ID#: 018065

☑ Using a permanent marker, write the gross weight on the drum lid.

4. FINALIZE DOCUMENTATION

☑ Have RCT monitor drum prior to moving to storage area.

☑ Place attachment 1 and 2 and HMPT Tag into a projective sleeve.

☑ Complete TWSR.

Operator Print/Sign: [illegible] Date: 5/3/13

Verifier Print/Sign: [illegible] Date: 5-03-13

Working Copy
Date: 5-3-13

ATTACHMENT 3
Page 1 of 1

WCRRF PARENT 55-GAL DRUM PREPARATION DATA SHEET

6.3[21] Prepared Parent 55-Gal Drum Number: 5824508

6.3[15] ($) 55-gal drum wrapped in protective covering: (ISI 6.3.6) ☑ SAT ☐ UNSAT

6.3[16] Platform scale serial number: 019065
Platform scale calibration expiration date: 7/31/13

6.3[18] Prepared parent 55-gal drum weight (lb): 412.2

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: Clayton Mullins, [signature] 240081, 5/3/13
Waste Handling Technician (print) Signature Z # Date

8.1[7] Reviewed By: Gilbert Mk, [signature] 149225 5/3/13
Supervisor or designee (print) Signature Z # Date

8.1[8][B] Acceptance criteria satisfied: ☑ YES ☐ NO

8.1[8][D] Approved by: Gilbert Mk, [signature] 149225 5/3/13 1030
SOS/SOM or designee (print) Signature Z # Date Time

HOLD FOR WRTR 6.1.1 Rev

WDP TRU Waste Container Management Operations

UET

Document No: EP-DIV-AP-0107
Attachment: 1
Revision: 1
Effective Date: 12/22/2009

SR 72 NC 6.10.17

ATTACHMENT 1

WDP WASTE REMEDIATION SAFETY EVALUATION DATA SHEET

Production Control

Container ID: S824508 Container Type: 85-GAL Gross Weight (lbs): 422
Inner Seal #: 009425 Filter Prefix: LAVC Filter Serial #: 00163; 03776
AK Waste Stream: LA-MHD01.001 Certified RTR BDR: No BDR
TWSR Comments: LEACHED SOLIDS
Total PE-Ci Activity: 1.53E+01 Equivalent Combustible PE-Ci: 5.74E+00 AM-241 PE-Ci: 1.24E+00
Total Fissile Gram Equivalents: 169.2 Total Surface Dose Rate (mrem/hr): 2
EPA Code(s): None
NCR RTR/NDA Comment: None
RTR Pre-Screen Date: 1/13/2007 Comment: Impenetrable Obj.
Certified RTR Comment: None
Prohibited Items: ☐ Sealed > 4 Liters ☐ Liquid ☐ Pressurized Container ☑ Impenetrable Item ☐ Other
Security Determination: ☑ Green ☐ Yellow
Remediation Determination: ☑ VE ☐ PID ☐ Split ☐ Repack
Estimated 30-cm Dose Rate (mrem/hr): ☐ <100 ☐ >100 and <1,000 ☑ >1,000 and <10,000 ☐ >10,000
TRUCON Code: LA125M Production Control Comments: Ensure EPA Codes D007, D008, and D009 are on the label. A minimum of 1.2 volumes of kitty litter/zeolite must be mixed with 1 volume of nitrate salts.

Performed By: R. W. Jones / R. W. Jones / 117434 / 10.6.10
Production Control (Print) Signature Z Number Date

WDP Engineering

SUSAN S RAMSEY / Susan S. Ramsey / 100681 / 11/28/12

Chemicals Present (e.g., pyrophorics, acids, bases, shock sensitive, organic liquids, peroxides, crown ethers): ☐ Yes ☑ No ☐ Unknown
Processing Determination: ☑ Accept ☐ Reject
WDP Engineering Comments: NITRATE SALTS. NET WASTE WT = 268 LBS IN 5 ITEMS. MAX ITEM WT = 53.4 KG (118 LBS). ONE ITEM REPORTS 94.87 GRAMS PUZ (>1000 MREM/HR). NO CURR RTR DATA FAILED RTR PRE-SCREEN. NITRATE SALT DRUMS HAVE PREVIOUSLY CONTAINED SIGNIFICANT VOLUME OF UNDOCUMENTED LIQUID. HOLD FOR MOP-DOSE CAMPAIGN.

Performed By: ROBERT L GRIFFIS / Robert L. Griffis / 1303526 / 11-4-10
WDP Engineering (Print) Signature Z Number Date

TRU Remediation Operations

☑ Waste Container Information Evaluated ☐ Less Than 170 lbs ☐ RTR Video Available
Other Specific Safety Concerns: Use Heavyweight gloves when processing waste. Do not push or press on waste with hands.
Processing Determination: ☑ Accept ☐ Reject
TRU Remediation Operations Comments: Use proper ratio of kitty litter to waste in accordance with the procedure.

Performed By: [illegible] / [illegible] / 123079 / 12/4/11
TRU Remediation Operations (Print) Signature Z Number Date

TRUCON SHUT 12 — 272895 1/14/13

IHS Opening Analysis CSR, No Concerns 12/4/12

ISSUE

Noncertified TRU Waste Drum Item Information

DrumID: 009425

Item No	ItemID	Process Status	Net Wt (kg)	Matrix	Meas Code	SNM (g)	NT	Auth (Pg/Ln)		Comments
1	IXFS-604-FD		5.000	NITRATE SALTS		4.17	52	5/11	468	
2	IX605-OX16		18.640	NITRATE SALTS		94.87	52	5/11	468	
3	IXFS-606-F1		53.400	NITRATE SALTS		48.3	52	5/11	468	
4	IXFS-607-F1		13.180	NITRATE SALTS		15.61	52	5/11	468	
5	IXFS-608-F1		31.140	NITRATE SALTS		16.69	52	5/11	468	

Noncertified Waste Drum Material Summary

Gross Wt (kg): 191.4

Material Type	SNM (grams)	Items Net Wt (kg)
52	179.64	121.36
Totals	179.64	121.36

ATTACHMENT 1
Page 1 of 2

HYDROGEN/VOC SAMPLING USING GAS CHROMATOGRAPHY DATA SHEET

7.[1] Sample Date: 10.14.10

7.[7] Certified CCP Technician:

CCP (Print)	Signature	Z #	Date
[illegible]	[redacted]	[illegible]	10-20-10

Container No. (7.[1]):	S824616	S825837	S824508
Container Type (SWB, 110/85/55-gal) (7.[1]):	55gal	55gal	55gal
Current Filter Vent No. (7.[1]):	72	72	72
New Filter Vent No.: (7.[8][A]):	72	72	72
WIPP-Approved Filter Vent (7.[8][B]):	☑ SAT ☐ UNSAT	☑ SAT ☐ UNSAT	☑ SAT ☐ UNSAT
VOC	Value (ppm) (7.[10])		
Benzene			13.77
Chlorobenzene			
Cyclohexane			
1,1-Dichloroethane			
1,2-Dichloroethane			
1,1-Dichloroethylene			
cis-1,2-Dichloroethylene			
Ethyl benzene			
Ethyl ether			
Toluene			
1,2,4-Trimethylbenzene			
1,3,5-Trimethylbenzene			
m- and p-Xylene			
o-Xylene			
Acetone			
1-Butanol			
Methanol			
Methyl ethyl ketone			
Methyl isobutyl ketone			
Total CCP VOC value (ppm) (7.[11]):	Ø	Ø	13.77

ATTACHMENT 1
Page 2 of 2

NOTE *Filtered vent data may be captured on a support organization data sheet.*

Container Number (7.[1]):	S824616	S825837	S824508
Hydrogen Reading (ppm) (7.[10]):	Ø ppm	Ø ppm	893.58 ppm
Methane Reading (ppm) (7.[10]):	Ø ppm	Ø ppm	Ø ppm
Total VOC Reading (ppm) (7.[11]):	Ø ppm	Ø ppm	13.77 ppm
Filter Type (7.[9][F][c]/7.[9][G][a]):	72	72	72
WIPP Approved (SAT/UNSAT) (7.[9][F][c]/7.[9][G][a]):	SAT	SAT	SAT
Torque Wrench M&TE/ID Number (7.[9][F][a]/7.[9][G][a]):	N/A	N/A	N/A
Torque Wrench Calibration Due Date (7.[9][F][a]/7.[9][G][a]):	N/A	N/A	N/A
Torque Wrench Tolerance (7.[9][F][a]/7.[9][G][a]):	N/A	N/A	N/A
VERIFY Torque Wrench is within acceptable range as specified on Cal Certificate. (7.[9][F][a]/7.[9][G][b])	☐ YES ☐ NO ☑ N/A	☐ YES ☐ NO ☑ N/A	☐ YES ☐ NO ☑ N/A
Filter Torque Value (7.[9][F][a]/7.[9][G][d]) *	N/A	N/A	N/A

* No torque value required for 072 or 073 filters – Record N/A as applicable

Comments:
All 55 gallon drums were sampled from inside an 85 gallon overpack.

11.1[1] Performed By: Alicia Herrera / [signature] 198450 / 10.19.10
Waste Handling Operator (print) Signature Z # Date

11.1[5] ☐ Deficiencies identified and submitted (e.g., PCR or FSR system).

☑ No deficiencies

11.1[7][A] WCRRF waste container satisfies the following criteria: ☑ SAT ☐ UNSAT

- Hydrogen – less than or equal to 32,000 ppm
- VOC – less than or equal to 7,000 ppm

11.1[7][B]/ 11.1[8] Reviewed By: Kenny Romero / [signature] 117884 / 10.27.10
Waste Handling Supervisor (print) Signature Z # Date

InstName : Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\101014c\
Data File : S824508.D
Acq On : 14 Oct 2010 2:28 pm (#1); 14-Oct-10, 14:27:19 (#2)
Operator : RG
Sample :
Misc : 55 GAL. SAMPLE INSIDE 85 GAL. OVERPACK (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Oct 14 14:36:55 2010
Quant Method : C:\msdchem\1\METHODS\vocgas.m
Quant Title : Flammable Gas Analysis
QLast Update : Wed Aug 18 13:26:05 2010
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
3) Fluorobenzene	3.638	96	2536742	207.75	ppmv	0.00
15) Chlorobenzene-d5	5.961	117	1822268	180.75	ppmv	-0.01
Target Compounds						Qvalue
1) Hydrogen	1.650	GC1	6848m	893.58	ppmv	
12) Benzene	3.309	78	158998	13.77	ppmv	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

vocgas.m Thu Oct 14 14:37:07 2010

5-3-13

0545 Assuming WCRR ~~operating~~ JC 5-3-13 Operations center. JColeman
0610 Beginning inside rounds.
0615 Beginning outside rounds.
0624 Item #63 is OOS, POD in place, okay to proceed.
0628 Item # 3 is unsat, FSR in place, okay to proceed.
0629 Inside rounds complete.
0646 Outside rounds complete.
0708 Pre-job concluded. Briefed to monthly RWP.
0710 Notified that while performing daily RMI's by RCT's they detected 105 DPM alpha. They will be performing smears and surveys on the catch pan and decon it. No ~~oper~~ JC 5-3-13 operators allowed in the area at this time. SOS notified by SOM. SOM notified OM.
0726 Both rounds reviewed by SOS.
0803 Permission granted to leave the vehicle access gates to load the transfer vehicle for a shipment to Area G.
0825 Late entry at 0740, mode change completed. We are now in operations in WCRRF yard and 50-69. JC
0826 Completed wipe down of the catch pan on the WCG.
0843 RCT reports post job of decon NDA.
0906 The transfer vehicle is loaded.
0911 Vehicle access gates restored. Transportainers secured.
0921 Denesting, then bagging on S824508.
0958 Denesting and bag on complete. LAFD beginning tour of WCRRF.
1015 Operators pausing work per SOM while LAFD tour of 50-69
1027 Resuming operations.
1030 LAFD tour has ended.
1130 Bagging off 1 daughter, bagging on another daughter.
1224 Bagging off 1 daughter, bagging on another daughter.
1245 Operators out for lunch.
1325 Second LAFD tour entering WCRRF.
1350 Resuming operations. LAFD tour complete.
1521 Bagging off S824508.
1550 Bag off complete.

Continued on next page JColeman

5-3-13 Continued from previous page. JOleman

1600 Beginning outside rounds.

1602 Item #3 is unsat, okay to proceed.

1603 Late entry at 1601, began inside rounds. JC

1610 Outside rounds complete.

1627 Initiating a drum movement from 50-69 to a transportainer. Item #63 is OOS, okay to proceed.

1630 Inside rounds complete.

1636 Both rounds reviewed by SOS.

1644 The drum movement out of 50-69 complete. All inventory has been removed from 50-69.

1645 Mode change complete. We are now in COLD in 50-69 and warm standby in WCRRF yard.

1655 Beginning glove changes on Station 1 (L)+(R), station 2 (L)+(R).

1746 Glove changes complete.

5-3-13 1830 End of day. OCO position secured. JOleman.

HG

No further entries this page.

0600 Assumed the WCRR SOM position. [signature]
0615 Attended the PU job briefing conducted by the SOS. Discussed new shift order with incoming shift and FE002 (load noises and pathforward). Good turnover discussion.
0700 Call in to daily T454 shift brief. Safety topic snakes have been spotted at Area of Be Cautions.
0710 RP-1 notified SOM that during the morning RMI's 105 dpm alpha was discovered on the cotton pan. No operations are allowed inside until further investigations are conducted.
0730 RP-1 supervisor briefing RCTs and operators to RWP to allow decontamination efforts.
0740 Mode change complete. WCRR YARD/50.69 from WARM/WARM to OPERATIONS/OPERATIONS.
0742 Late entry 0715 - SOM making notifications to MSS on getting 55 gallon drum gasket re-tightened. Left several messages. [signature]
0800 MSS manager called and is getting in contact with Orlando Archuleta.
0843 RP-1 reported all decon efforts are complete and the RCTs ~~leaving~~ have turned over facility.
0920 Beginning LAFD tour.
1000 Half of LAFD got an emergency call and had to respond.
1035 LAFD tour complete.
1100 LAFD personnel who had to respond earlier are on-site to complete tour.
1120 LAFD tour complete.
1300 Second crew LAFD on-site.
1355 LAFD tour complete.
1550 Bagging off daughters from S824508 resulting in 3 daughters Ø POCs.
1627 Initiating a movement out.
1644 Movement complete. All inventory has been moved out of facility.
1645 Mode change complete WCRR YARD/50.69 from OPERATIONS/OPERATIONS to WARM/~~WARM~~ COLD. Glovebox maintenance will be conducted.
1655 Operations beginning ~~weight~~ glovebox maintenance on Stations #1 (R) and (L) and Stations #2 (R) and (L).
1746 Glovebox maintenance complete.
1750 RP-1 performing post smears/survey.
1822 RP-1 completed post smears/survey. [signature]
1830 Securing the SOM position. [signature]

5-4-13

no further entries this page.

[signature]

WCRR SOS LOG BOOK

5/3/13
0000 Assuming SOS Position
0000 Conducted shift brief. Went over shift order WCRR-SH-13-002. All
0015 training on IC-W2. Reviewed monthly RWPs.
0020 Conducted shift brief.
0020 Reviewed inside and outside rounds. All noted by Sam
0220 That PCTs have found contamination on catch pan.
0240 Mode change complete except for operations.
0240 Completed Decon of catch pan
0340 PCTs noted all results of post surveys NDM or to resume
0343 operations
0421 Remeshing and bag on complete 582456 P
0515 Operators pausing work due to IAFD tour
0527 Resuming operations
0536 IAFD tour complete
0636 Bagging off 1 daughter bagging on another Daughter
0724 bagging off 1 daughter bagging on another Daughter
1205 Operators breaking for lunch.
1325 Second IAFD tour entering area
1350 Resuming operations tour complete
1500 Turning over SOS Position to clayton mullins.

1500 Assuming SOS position.
1549 Bagged off first and final drum of day. Operators will be performing glovebox maintenance and going into cold for tomorrow's maintenance.
1630 Operators will be changing both gloves on stations 1 and 2.
1634 Signed off on the rounds.
1644 Movement out of 50-69 complete.
1645 Mode change complete, WCRR yard in Warm Standby and 50-69 in Cold Standby.
1655 Starting glove changes.
1746 glove changes complete
1805 Securing SOS position.

No Further Entries on this Page

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-RTR2-13-0068
Examination Date:	5/8/2013
Waste Container ID:	93609
Video/Audio Recorded Media Number:	LA-RTR2-13-0068 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 12
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3110
Waste Stream I.D.:	LA-MIN02-V.001
Waste Container Weights:	Gross Wt.: 71.0 kg Tare Wt.: 33.4 kg Net Wt.: 37.6 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: 93609

Section 3: Container Inventory and Comments	(Detailed descriptions)
IM:	
AM:	
OM:	
OI:	
C:	Cloth material
R:	Rubber gloves
XPM:	Plastic bags, 90 mil liner lid
OR:	
IN:	Homogeneous solids
S:	

Section 4: Packaging Material and Waste Material Parameters	
Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP): Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	
Other Inorganic Materials (OI)	
Cellulosics (C):	4.2
Rubber (R):	2.0
Plastics (waste materials) (XPM):	6.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	25.4
Soils (S):	
Total WMP Weight:	37.6

CCP Radiography Data Sheet

Waste Container ID: 93609

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		5/8/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	93609	Count Sequence Number:	22770
Operator:	D3PW2DK1\operator		
Assay Start:	5/14/2013 9:41:33 AM		
Description 1:	1LANDA1770		
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: 37.6 kg	Net:	37.6 kg
Container:	Volume: 208.0 l	Full:	40.0 %
Density:	0.450 kg /l		

System Configuration

Counter:	MCS HENC #1
Count Type:	Item Count
Collimator/Geometry Setting:	All Banks On (GE - 0

Errors quoted at 1.000 sigma

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number:	22770	Batch Number:	1LANDA1770
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:	93609	Analysis Date:	5/14/2013

Net Weight	37600.0 g		
Pu mass	9.80E+000	+-	1.61E+000 g
TRU Alpha Activity	2.60E+000	+-	9.97E-001 Ci
TRU Activity Concentration	6.91E+004	+-	2.65E+004 nCi/g
Pu-239 Equivalent Activity	2.62E+000	+-	9.97E-001 Ci
Pu-239 FGE	9.24E+000	+-	1.51E+000 g
Decay heat	8.51E-002	+-	3.33E-002 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	3.95E-002	2.82E-005	4.08E-006	1.59E-006
PU238	8.98E-004	1.55E-002	2.56E-003	3.45E-005
PU239	9.19E+000	5.78E-001	9.52E-002	1.28E-003
PU240	5.88E-001	1.35E-001	2.22E-002	3.00E-004
AM241	5.38E-001	1.87E+000	9.92E-001	3.59E-002
PU241	1.15E-002	1.20E+000	1.97E-001	2.66E-003
PU242	1.96E-003	7.78E-006	1.28E-006	0.00E+000
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	4.37E-007
U233	<LLD	<LLD	0.00E+000	3.07E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	9.02E-007
U238	<LLD	<LLD	0.00E+000	8.66E-006

Errors quoted at 1.000 sigma

Operator: _____ Date: 5-16-13

ITR: _____ Date: 5.16.13

Automated Independent Technical Review

Count Sequence Number: 22770 Batch Number: 1LANDA1770
Counter ID: MCS HENC #1
Container ID: 93609
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 5/14/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis No Add-a-Source warnings.	Ok
Section 2 - Passive Neutron Analysis Analysis Status: No errors. No Warnings Reported.	Ok
Section 3 - Data Combiner Analysis Override enabled; Passive Neutron Pu and Gamma U data specified as input. Pu results taken from Passive Neutron data, U from Quantitative Gamma data. Results comparison test passed.	Passive Neutron Pu and Gamma U data specified as input.
Section 4 - MGA Analysis Results are marked as invalid.	MGA analysis failed. AK isotopics applied. The AK information utilized was provided by Steve Schafer, AKE, and consists of data from CCP-AK-LANL-006, AK Source Document M237. MT-52.
Section 5 - Gamma Analysis Analysis Status: No errors.	Ok
Miscellaneous	No additional nuclides contributing to 95% of the radiological hazard identified.

Expert Review by: Sheri Chambers Date: 5-15-13

Waste Container ID: **93609**

BDR Number: **LA13FG2057**

Sampling Date: **5/17/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	112.98	
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	3.64	
107-06-2	1,2-Dichloroethane	3.66	U
71-36-3	1-Butanol	1.84	U
108-10-1	Methyl isobutyl ketone	9.82	U
108-88-3	Toluene	8.02	U
108-90-7	Chlorobenzene	4.10	U
100-41-4	Ethylbenzene	3.57	U
108-38-3/106-42-3	m- and p-Xylene	1.92	U
95-47-6	o-Xylene	2.10	U
108-67-8	1,3,5-Trimethylbenzene	1.96	U
95-63-6	1,2,4-Trimethylbenzene	2.13	U

CAS Number	IDENTIFIED TIC COMPOUND	Est. Amount ppmv
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

InstName : Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\130517c\
Data File : 93609.D
Acq On : 17 May 2013 1:08 pm (#1); 17-May-13, 13:08:01 (#2)
Operator : NW
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 17 13:16:21 2013
Quant Method : C:\msdchem\1\METHODS\vocgas.m
Quant Title : Flammable Gas Analysis
QLast Update : Thu Jan 24 09:52:49 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
3) Fluorobenzene	3.601	96	4484548	201.25	ppmv	0.03
15) Chlorobenzene-d5	5.927	117	3975891	177.00	ppmv	0.03
Target Compounds						Qvalue
1) Hydrogen	1.616	GC1	803	112.98	ppmv	100
12) Benzene	3.287	78	58370	3.64	ppmv	97

(#) = 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-RTR2-13-0068
Examination Date:	5/8/2013
Waste Container ID:	93610
Video/Audio Recorded Media Number:	LA-RTR2-13-0068 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 12
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3110
Waste Stream I.D.:	LA-MIN02-V.001
Waste Container Weights:	Gross Wt.: 126.0 kg Tare Wt.: 33.4 kg Net Wt.: 92.6 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: 93610

Section 3: Container Inventory and Comments (Detailed descriptions)

IM: Hand tools, scrap metal

AM:

OM: Scrap lead

OI:

C:

R:

XPM: Plastic bags

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP): Plastic Liner Bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	0.8
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	3.5
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	6.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	82.3
Soils (S):	
Total WMP Weight:	92.6

CCP Radiography Data Sheet

Waste Container ID: 93610

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:

Michael Simmons		5/8/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	93610	Count Sequence Number:	15776
Operator:	DCLTD231\Operator		
Assay Start:	5/14/2013 3:26:55 PM		
Description 1:	2LANDA1158		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gal Drum		
Weight:	Net: 92.6 kg	Net:	92.6 kg
Container:	Volume: 208.0 l	Full:	65.0 %
Density:	0.690 kg /l		

System Configuration

Counter:	HENC #2
Count Type:	Item Count
Collimator/Geometry Setting:	All Banks on GEO - 0

Errors quoted at 1.000 sigma

Radioassay Data Sheet

Engine Version: MMRes. Cmb. V1.2

Count Sequence Number:	15776	Batch Number:	2LANDA1158
Assay Instrument:	HENC #2	Location:	LANL TA-54
Analysis Method:	CCP-TP-063 v 14	Software Version:	NDA 2000 V.4.0
Item ID:	93610	Analysis Date:	5/14/2013

Net Weight	92600.0 g		
Pu mass	1.57E+001	+- 3.15E+000	g
TRU Alpha Activity	6.16E+000	+- 2.64E+000	Ci
TRU Activity Concentration	6.65E+004	+- 2.85E+004	nCi/g
Pu-239 Equivalent Activity	6.18E+000	+- 2.64E+000	Ci
Pu-239 FGE	1.47E+001	+- 2.94E+000	g
Decay heat	2.03E-001	+- 8.80E-002	W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
NP237	8.45E-002	6.04E-005	1.11E-005	3.05E-006
PU238	9.53E-003	1.65E-001	3.31E-002	2.22E-004
PU239	1.47E+001	9.22E-001	1.85E-001	1.24E-003
PU240	9.78E-001	2.25E-001	4.51E-002	3.02E-004
AM241	1.40E+000	4.85E+000	2.63E+000	5.08E-002
PU241	1.66E-002	1.72E+000	3.46E-001	2.32E-003
PU242	3.50E-002	1.39E-004	2.79E-005	0.00E+000
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	2.80E-007
U233	<LLD	<LLD	0.00E+000	5.93E-003
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	1.97E-006
U238	<LLD	<LLD	0.00E+000	1.49E-005
AM243	1.61E-003	3.25E-004	5.98E-005	4.44E-006

Errors quoted at 1.000 sigma

Operator: [signature] Date: 5-20-13

ITR: [signature] Date: 5-22-13

Automated Independent Technical Review

Count Sequence Number: 15776 Batch Number: 2LANDA1158
Counter ID: HENC #2
Container ID: 93610
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 5/14/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis Add-a-Source WARNINGS: Add-a-Source correction factor is less than one.	OK
Section 2 - Passive Neutron Analysis Analysis Status: No errors. Ones Rate Analysis complete with warnings. - Error calculating the Ones Rate Pu-240 Effective MDA.	OK Not data affecting.
Section 3 - Data Combiner Analysis Override enabled; Passive Neutron Pu and Gamma U data specified as input. Pu results taken from Passive Neutron data, U from Quantitative Gamma data. Results comparison test passed.	Pu results taken from Passive Neutron data, U from Quantitative Gamma data.
Section 4 - MGA Analysis Results are marked as invalid.	MGA analysis failed. FRAM results applied. FRAM results attached.
Section 5 - Gamma Analysis Analysis Status: No errors.	OK
Miscellaneous	No additional nuclides contributing to 95% of the radiological hazard identified.

Expert Review by: _____ Date: 5/20/13

Attachment 4 – Flammable Gas Analysis Form

SCO 1049 Add 4 - Win XP SP3/Win 7 SP1
Excel 2003/2007/2010

Waste Container ID: **93610**

BDR Number: **LA13FG2057**

Sampling Date: **5/17/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	231.31	
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	24.22	
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	4.29	
107-06-2	1,2-Dichloroethane	3.66	U
71-36-3	1-Butanol	1.84	U
108-10-1	Methyl isobutyl ketone	9.82	U
108-88-3	Toluene	8.02	U
108-90-7	Chlorobenzene	4.10	U
100-41-4	Ethylbenzene	3.57	U
108-38-3/106-42-3	m- and p-Xylene	1.92	U
95-47-6	o-Xylene	2.10	U
108-67-8	1,3,5-Trimethylbenzene	1.96	U
95-63-6	1,2,4-Trimethylbenzene	2.13	U

CAS Number	IDENTIFIED TIC COMPOUND	Est. Amount ppmv
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

InstName : Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\130517c\
Data File : 93610.D
Acq On : 17 May 2013 9:53 am (#1); 17-May-13, 09:53:02 (#2)
Operator : NW
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: May 17 10:02:37 2013
Quant Method : C:\msdchem\1\METHODS\vocgas.m
Quant Title : Flammable Gas Analysis
QLast Update : Thu Jan 24 09:52:49 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
3) Fluorobenzene	3.535	96	5010110	201.25 ppmv	-0.03
15) Chlorobenzene-d5	5.881	117	4213026	177.00 ppmv	-0.02
Target Compounds					Qvalue
1) Hydrogen	1.609	GC1	1644m	231.31 ppmv	
7) Acetone	1.376	58	41341	24.22 ppmv	79
12) Benzene	3.216	78	76782	4.29 ppmv #	92

(#) = qualifier out of range (m) = manual integration (+) = signals summed

CCP Radiography Data Sheet

Section 1: General Information	
[X] RTR Examination [ ] RTR Replicate Scan [ ] RTR Independent Observation	
Site ID:	LANL
Batch Number:	LA-HERTR-13-0052
Examination Date:	5/9/2013
Waste Container ID:	93611
Video/Audio Recorded Media Number:	LA-HERTR-13-0052 A&B
Procedure and Revision No.:	CCP-TP-053 Rev. 12
NCR(s) associated with the container? (e.g., Prohibited Items)	[X] No [ ] Yes NCR No.: N/A NCR No.: N/A

Section 2: Waste Container Data	
Container Type:	55 Gallon Drum
TRUCON Code:	LA226
Waste Matrix Code:	S3110
Waste Stream I.D.:	LA-MIN02-V.001
Waste Container Weights:	Gross Wt.: 149.5 kg Tare Wt.: 33.4 kg Net Wt.: 116.1 kg
Rigid Liner and Liner Vent Description:	Liner: [X] No [ ] Yes Lid: [X] No [ ] Yes Type: [ ] 30-mil [ ] 90-mil [ ] 110-mil [ ] 125-mil Vented: [ ] No [ ] Yes [X] N/A Punctured: [X] No [ ] Yes Mechanical Vent: [X] No [ ] Yes Fiberboard Liner: [ ] No [X] Yes Lead Lined: [X] No [ ] Yes
Number of Layers of Confinement:	Appears to be 1 layer
Volume Utilization Percentage:	75 %

CCP Radiography Data Sheet

Waste Container ID: 93611

Section 3: Container Inventory and Comments (Detailed descriptions)

IM:

AM:

OM: Scrap lead

OI:

C:

R:

XPM: Plastic bags

OR:

IN: Homogeneous solids

S:

Section 4: Packaging Material and Waste Material Parameters

Packaging Material:	**Estimated Weight (kg)**
Steel (ST):	27.7
Plastics (PP): Plastic liner bag	2.0
Other: Fiberboard (CP)	3.7
Total Packaging Weight	33.4
Waste Material Parameter:	**Estimated Weight (kg)**
Iron-based Metal / Alloys (IM):	
Aluminum-based Metals / Alloys (AM):	
Other Metals (OM):	8.0
Other Inorganic Materials (OI)	
Cellulosics (C):	
Rubber (R):	
Plastics (waste materials) (XPM):	4.0
Organic Matrix (OR):	
Inorganic Matrix (IN):	104.1
Soils (S):	
Total WMP Weight:	116.1

CCP Radiography Data Sheet

Waste Container ID: 93611

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		5/9/2013
Print Name	Signature	Date

NDA 2000 Assay Report

Item Information

Item ID:	93611	Count Sequence Number:	15772
Operator:	DCLTD231\Operator		
Assay Start:	5/14/2013 12:25:05 PM		
Description 1:	2LANDA1158		
Description 2:	N/A		
Location:	LANL TA-54		
Comment:	AK-6		
Matrix Type:	Homo Sol. S3000		
Container Type:	55 gal Drum		
Weight:	Net: 116.0 kg	Net:	116.0 kg
Container:	Volume: 208.0 l	Full:	75.0 %
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: 15772
Assay Instrument: HENC #2
Analysis Method: CCP-TP-063 v 14
Item ID: 93611

Batch Number: 2LANDA1158
Location: LANL TA-54
Software Version: NDA 2000 V.4.0
Analysis Date: 5/14/2013

Net Weight	116000.0 g	
Pu mass	9.07E+001 +-	1.82E+001 g
TRU Alpha Activity	2.51E+001 +-	1.01E+001 Ci
TRU Activity Concentration	2.17E+005 +-	8.69E+004 nCi/g
Pu-239 Equivalent Activity	2.53E+001 +-	1.01E+001 Ci
Pu-239 FGE	8.56E+001 +-	1.81E+001 g
Decay heat	8.24E-001 +-	3.36E-001 W

Nuclide	Mass g	Activity Ci	Activity Uncert. Ci	MDA Ci
SR90	<LLD	<LLD	0.00E+000	0.00E+000
CS137	<LLD	<LLD	0.00E+000	1.31E-006
U233	<LLD	<LLD	0.00E+000	1.33E-002
U234	<LLD	<LLD	0.00E+000	0.00E+000
U235	0.00E+000	0.00E+000	0.00E+000	4.05E-006
NP237	2.56E-001	1.83E-004	3.49E-005	7.07E-006
PU238	8.32E-003	1.44E-001	3.68E-002	1.63E-003
U238	<LLD	<LLD	0.00E+000	3.43E-005
PU239	8.51E+001	5.35E+000	1.14E+000	6.07E-002
PU240	5.44E+000	1.25E+000	3.20E-001	1.42E-002
AM241	5.29E+000	1.84E+001	1.00E+001	9.75E-002
PU241	1.07E-001	1.11E+001	2.83E+000	1.26E-001
PU242	1.82E-002	7.21E-005	1.84E-005	0.00E+000
AM243	7.16E-005	1.45E-005	3.41E-006	8.95E-006

Errors quoted at 1.000 sigma

Operator: _____ Date: 5-20-13

ITR: _____ Date: 5-22-13

Automated Independent Technical Review

Count Sequence Number: 15772 Batch Number: 2LANDA1158
Counter ID: HENC #2
Container ID: 93611
Waste Matrix Code: Homo Sol. S3000 Count Type:
Sequence Type: Assay Date: 5/14/2013

Comments	Disposition
Section 1 - Add-A-Source Analysis	
Add-a-Source WARNINGS:	
Add-a-Source correction factor is less than one.	OK
Add-a-Source correction factor was set to one.	OK
Add-a-Source correction factor is less than n-sigma * the correction factor error.	OK
Section 2 - Passive Neutron Analysis	
Analysis Status: No errors.	OK
Ones Rate Analysis complete with warnings.	
- Error calculating the Ones Rate Pu-240 Effective MDA.	Not data affecting.
Curium/Californium Neutron Analysis complete with warnings.	
- The Cm/Cf Mass Variance is negative, Cm/Cf Mass Uncertainty set to zero so analysis could continue.	OK
- The Pu-240 Eff. Mass Variance is negative, Pu-240 Eff. Mass Uncertainty set to zero so analysis could continue.	OK
Cosmic Ray Rejection Analysis complete with warnings.	
- The CRR High-Z mass Mass Variance is negative, High-Z mass Uncertainty set to zero so analysis could continue.	OK

Comments	Disposition
Section 3 - Data Combiner Analysis Override enabled; Gamma data specified as input. Results taken from Quantitative Gamma data. Results comparison test passed.	Results taken from quantitative gamma data.
Section 4 - MGA Analysis Results are marked as invalid.	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: _____ Date: 5/20/13

Waste Container ID: **93611**

BDR Number: **LA13FG2088**

Sampling Date: **7/29/2013**

CAS NUMBER	COMPOUND	Measured ppmv	Reporting Flag
1333-74-0	Hydrogen	262.40	
74-82-8	Methane	142.14	U
67-56-1	Methanol	35.23	U
60-29-7	Ethyl Ether	0.96	U
75-35-4	1,1-Dichloroethylene	6.38	U
67-64-1	Acetone	18.08	U
75-34-3	1,1-Dichloroethane	4.08	U
156-59-2	cis-1,2-Dichloroethene	0.76	U
78-93-3	Methyl ethyl ketone	11.73	U
110-82-7	Cyclohexane	5.10	U
71-43-2	Benzene	1.77	U
107-06-2	1,2-Dichloroethane	3.66	U
71-36-3	1-Butanol	1.84	U
108-10-1	Methyl isobutyl ketone	9.82	U
108-88-3	Toluene	8.02	U
108-90-7	Chlorobenzene	4.10	U
100-41-4	Ethylbenzene	3.57	U
108-38-3/106-42-3	m- and p-Xylene	1.92	U
95-47-6	o-Xylene	2.10	U
108-67-8	1,3,5-Trimethylbenzene	1.96	U
95-63-6	1,2,4-Trimethylbenzene	2.13	U

CAS Number	IDENTIFIED TIC COMPOUND	Est. Amount ppmv
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

InstName : Unit-2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\130729c\
Data File : 93611.D
Acq On : 29 Jul 2013 3:31 pm (#1); 29-Jul-13, 15:30:19 (#2)
Operator : GR
Sample :
Misc : 55 GALLON DRUM THROUGH FILTER (Sig #1); (Sig #2)
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 29 15:39:06 2013
Quant Method : C:\msdchem\1\METHODS\vocgas.m
Quant Title : Flammable Gas Analysis
QLast Update : Mon Jun 24 14:13:48 2013
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
3) Fluorobenzene	3.503	96	3719537	205.75	ppmv	-0.02
15) Chlorobenzene-d5	5.845	117	2965902	177.50	ppmv	-0.02
Target Compounds						Qvalue
1) Hydrogen	1.605	GC1	1973m	262.40	ppmv	

(#) = qualifier out of range (m) = manual integration (+) = signals summed